



**China Council for International Cooperation on
Environment and Development**

**Progress on Environment and Development Policies in
China and Impact of CCICED's Policy Recommendations
(2022-2023)**

About the Report

As a high-level policy advisory body approved by the Chinese government, the China Council for International Cooperation on Environment and Development (CCICED) is mainly tasked with studying and proposing policy recommendations on major issues of environment and development. As the highest form of policy consultation, CCICED's Annual General Meeting (AGM) invites Chinese and international members, invited advisors and experts from home and abroad to have policy discussions on major environmental and development issues based on CCICED's SPS reports, focusing on urgent and long-term domestic issues while responding to major concerns of the international community and building consensus on ideas. On this basis, annual policy recommendations will be formed and submitted to the State Council and relevant departments of the central government.

Since 2008, CCICED Chief Advisors and Expert Support Group have led the formulation of the report on "Progress on Environment and Development Policies in China and Impact of CCICED's Policy Recommendations". This report reviews China's major environment and development policies introduced in the previous year and the related progress, as well as the inclusion of the main policy recommendations of CCICED in recent years, especially in the previous year, in China's relevant legislation and policies. This report itself is not, however, an assessment of the impact of CCICED. By reviewing and comparing China's policies and practices and CCICED's policy recommendations, this report is prepared to show the relevance of CCICED' SPSs and policy recommendations to the policy progress. This is the 16th report presented by CCICED Chief Advisors' Expert Support Group and the Chinese Associates¹.

This report reviews the progress of China's environment and development policies since 2022. Using the same writing style as previous ones, the report is divided into several parts. Each part sums up the policy recommendations of CCICED and the corresponding measures taken at home. A comparison of policy recommendations with policy progress is made at the end of the report for reference.

¹ The Chinese supporting team mainly includes Mr. Zhang Huiyong and Ms. Tang Huaqing.

Contents

I. Environmental and Development Planning	5
(I) Strengthening the institutional foundation for ecological civilization and fostering modernization featured by harmony between humanity and nature	5
(II) Accelerating green transition in all respects driven by the <i>Outline of the 14th Five-Year Plan and Long-range Objectives Through The Year 2035</i>	8
(III) Improving ecological and environmental governance propelled by green urbanization	9
(IV) Pursuing high-quality development fueled by major river basin development plans	10
(V) CCICED policy recommendations	14
II. Governance and Rule of Law	15
(I) Supporting ecological and environmental governance from the judicial level	15
(II) Introducing pollutant discharge permits	16
(III) Further improving environmental laws and placing climate legislation on the agenda	18
(IV) Deepening the green financial system	20
(V) Incorporating carbon emissions from key industries into the EIA system	23
(VI) Developing a sound environmental credit system	24
(VII) Fostering green and low-carbon lifestyles	25
(VIII) CCICED policy recommendations	27
III. Energy, Environment and Climate	27
(I) Making concerted efforts to cut carbon emissions, reduce pollution, expand green development, and pursue economic growth	27
(II) Continuously adjusting and optimizing the energy structure	29
(III) Continuing to promote energy conservation and energy efficiency improvement	31
(IV) Enhancing climate action and adaptation	34
(V) Steadily advancing the building of China's national ETS	35
(VI) CCICED policy recommendations	37
IV. Pollution Prevention and Control	38
(I) Further advancing air pollution prevention and control	错误!未定义书签。
(II) Reinforcing water pollution prevention and control	39

(III) Accomplishing preliminary results in soil pollution prevention and control.....	42
(IV) Strengthening marine pollution prevention and control.....	43
(V)CCICED policy recommendations	46
V. Ecosystem and Biodiversity Conservation	47
(I) Intensifying integrated ecosystem management.....	47
(II) Strengthening of the protection system of mountains, rivers, forests, farmlands, lakes, grasslands and deserts	51
(III) Further exploring ways to realize the value of ecological products	52
(IV) Increasing awareness of wildlife protection	54
(V)Deepening the building of a management system for national parks	54
(VI)CCICED policy recommendations	56
VI. Regional and International Engagement	56
(I)Leading the global biodiversity conservation process into a new phase.....	56
(II) Actively participating in international efforts to address climate change	57
(III) Making steady progress in South-South cooperation	59
(IV) Building green and low-carbon “Belt and Road Initiative” in depth	60
Appendix: Progress on China’s Environmental and Development Policies and CCICED Policy Recommendations in 2022	67

Foreword

The past year has been extraordinary and momentous. In the face of an intricate international environment and the arduous task of domestic reform, development and stability, the Chinese Government has adhered to the principle of seeking progress while maintaining stability, planned and organized the various undertakings of socialist modernization, and actively created a new situation of high-quality development. At the historical intersection of the two centenary goals, the 20th CPC National Congress was successfully convened, depicting a grand blueprint for advancing the great rejuvenation of the Chinese nation by means of Chinese modernization in an all-round way. The report to the 20th CPC National Congress clearly sets out the historical direction of environment and development, and makes the harmony between humanity and nature one of the important features and essential requirements of Chinese modernization, reflecting the Chinese government's responsibility to promote sustainable development and its historical courage in exploring a new development path.

Over the past year, Xi Jinping's Thought on Ecological Civilization has been further enriched and developed, the new development concept has shown strong vitality in practice, green, low-carbon and circular development has been vigorously advanced, innovations in modernized eco-environmental governance systems have been explored, and the eco-environmental governance system has been continuously improved. Continued efforts have been made to fight for blue skies, lucid water and clean soil, leading to improved ecological environment quality; steadily push forward energy conservation and carbon reduction, promote the clean and efficient utilization of energy and technology research and development, accelerate the building of a new energy system, increase the share of renewable energy, and advance energy conservation, carbon abatement and pollution reduction in key areas; form the "1+N" carbon neutrality policy system, and carry out the "Ten Actions to Achieve Carbon Peak" in earnest; coordinate the safe and stable energy supply with green and low-carbon development, and advance carbon peaking and carbon neutrality in a scientific and orderly manner.

Over the past year, China has continued to strengthen integrated watershed management, enhanced the development of urban and rural environmental infrastructure, and further implemented major projects for the protection and restoration of important ecosystems; improved policies and financial instruments to support green

development, developed circular economy, and promoted the economical and intensive utilization of resources; strengthened pollution control and ecological conservation; carried out extensive pollution control in a precise, scientific and law-based manner; promoted joint efforts to protect the Yangtze River and implemented a 10-year fishing ban in key waters of the Yangtze River Basin with emphasis on multi-pollutant coordinated control and regional joint prevention and control; enhanced biodiversity conservation and improved the compensation system for ecological protection.

Over the past year, China has unswervingly carried out high-quality international economic and trade cooperation through high-quality opening up to the outside world. In the face of a changing external environment, it has pursued a more proactive opening-up strategy. New progress has been made in the high-quality building of the Belt and Road, and cooperation in international production capacity and third-party markets has further deepened. To date, China has signed more than 200 cooperation documents with more than 150 countries and 32 international organizations.

At the major historical turning point for sustainable development in China, CCICED has given full play to its role as a major platform for international cooperation on environment and development, and made a large number of policy recommendations for implementing the "dual carbon" goals and promoting ecological progress by pooling the ideas of top-notch experts at home and abroad. The policy recommendations have been either consulted or adopted by the Chinese government, giving a strong impetus to China's sustainable development.

I. Environmental and Development Planning

(I) Strengthening the institutional foundation for ecological civilization and building the modernization featured by harmony between humanity and nature

Since the 18th CPC National Congress, the CPC Central Committee, with Comrade Xi Jinping at its core, has deepened the reform in systems and mechanisms for ecological civilization in all respects, emphasized the "ecological and environmental protection with the strictest system and the tightest rule of law", accelerated institutional innovations, strengthened system implementation, and formed an increasingly scientific and rigorous system of ecological civilization for the new era, providing a basic institutional safeguard for the apparent improvement of China's ecological

environment, and laying an important institutional foundation for China's efforts to open up a new era for ecological civilization. Ecological civilization has been enshrined in the CPC Constitution and the Constitution. 25 ecology and environment-related laws covering the areas of air, water, soil, solid waste, noise pollution control, as well as the protection of the Yangtze River and wetlands, have been formulated and amended. The Central Government has issued two programmatic documents: the *Opinions on Accelerating the Advancement of Ecological Civilization* and the *Integrated Reform Plan for Promoting Ecological Progress*, and has introduced a series of innovative systems. The central ecological and environmental protection supervision, ecological redlines, national parks, ecological environment zoning control, river & lake chief system, forest chief system, pollutant discharge permits, centralization of environmental quality monitoring authority, comprehensive ban on the entry of "foreign garbage" into the country, carbon emissions trading, new pollutant management, river and sea outfalls setting management, etc., have provided important institutional safeguards for ecological and environmental protection.

During the 14th Five-Year Plan (FYP) period, China's ecological civilization has entered a critical period in which efforts shall be made to promote synergies in reducing pollution and cutting carbon emissions, foster the transition to green economic and social development in all respects, and realize quantitative to qualitative improvements in ecological and environmental quality with carbon reduction as a key strategic direction. With regard to the realization of the "dual-carbon" goals, the Chinese Government has established a 1+N policy system, namely, a top-level design document: *Working Guidance for Carbon Dioxide Peaking and Carbon Neutrality in Full and Faithful Implementation of the New Development Philosophy*; and "N", which includes the *Action Plan for Carbon Dioxide Peaking Before 2030* (hereinafter referred to as the "Action Plan"), implementation plans for carbon peaking in the fields of energy, industry, transportation, and urban and rural development, as well as support plans in terms of scientific and technological support, energy supply, carbon sequestration capacity, fiscal, financial and pricing policies, standards and measurement system, and supervision and assessment. In June 2022, the Ministry of Ecology and Environment (MEE) and six other departments issued a circular on printing and distributing the *Implementation Plan for Achieving Synergies from Reducing Pollution and Cutting Carbon Emissions*. The *Implementation Plan* proposes that by 2025, a working pattern of making concerted efforts to reduce pollution and cut carbon emissions will be

basically formed; structural optimization and adjustment and green low-carbon development in key regions and areas will achieve significant results; a number of typical experiences that can be replicated and scaled up will be formed; and the degree of synergy in reducing pollution and cutting carbon emissions will be effectively enhanced. By 2030, the capacity to make concerted efforts to reduce pollution and cut carbon emissions will be significantly enhanced, contributing to carbon peaking; the coordinated efforts in carbon peaking and air quality improvement in key areas will achieve remarkable results; and the level of coordinated governance in pollution prevention and control of water, soil and solid waste, etc. will be significantly improved.

The report to the 20th CPC National Congress puts forward the ambitious goal of “promoting the modernization of harmony between humanity and nature”, marking that the ecological civilization has entered a new stage of development. It is proposed to implement the new development concept in a complete, accurate and comprehensive manner, maintain strategic focus, plan economic and social development from the height of harmony between humanity and nature, uphold the basic national policy of conserving resources and protecting the environment, give priority to conservation, protection and natural restoration, develop a spatial pattern, industrial structure, modes of production and lifestyles that conserve resources and protect the environment, make coordinated efforts in pollution control, ecological protection and addressing climate change, foster the sustained improvement of the ecological environment, and strive for the modernization of harmony between humanity and nature. This is of great significance to both China and the world in its quest for sustainable development. In the future, a major ecological civilization system focusing on “the modernization of harmony between humanity and nature” will be further introduced and gradually improved.

In the context of integrating ecological civilization into the five-sphere integrated plan, the principle that “lucid waters and lush mountains are invaluable assets” has been put into practice in various places, and ideological concepts such as tree planting and greenery protection, garbage sorting, water and electricity conservation, and the "Clean Your Plate" campaign have been deeply rooted in people's hearts and minds. The green economy has accelerated its development, energy and material consumption has been reduced, smoke and haze have been effectively curbed, urban and rural environments have become more livable, and the building of a beautiful China has made solid strides,

with the principle of “lucid waters and lush mountains are invaluable assets” becoming the consensus and action of the whole Party and society.

(II) Accelerating green transition in all respects driven by the *Outline of the 14th Five-Year Plan and Long-range Objectives Through The Year 2035*

Green development is the most distinctive feature of development in contemporary China. The *Outline of the 14th Five-Year Plan and Long-range Objectives Through the Year 2035* begins by stating the need to foster green development and harmony between humanity and nature. By 2025, new progress will be achieved in ecological conservation, with continued improvement of the ecological environment. By 2035, the ecological environment will be fundamentally improved, and the goal of building a beautiful China will be basically realized. In the first year of the 14th FYP period, a new journey to build a beautiful China is underway.

During the 13th FYP period, green development was written into the country's five-year plan for the first time, pollution prevention and control efforts have been stepped up, resource utilization efficiency has increased notably, and the ecological environment has been significantly improved. Entering a new stage of development, the 14th FYP puts green development at the strategic center of China's overall modernization drive, and we should advance the transition to green and low-carbon development in all respects with "the modernization of harmony between humanity and nature" as the strategic goal.

The Outline of the 14th FYP elaborates on accelerating the transition to a model of green development in four aspects, namely, resource utilization efficiency, utilization system, green economy, and policy system, and institutional innovation is particularly important for the realization of these goals. The national ETS was officially launched on July 16, 2021, leveraging market-based mechanisms to stimulate technological innovations by enterprises and reduce carbon emissions intensity. In addition, pollution prevention and control actions will be carried out in depth, to basically eliminate heavily polluted weather, the inferior Class V state-controlled sections and urban black and smelly water bodies. The 14th FYP shows the plan for constructing important ecological barriers in China in the next five years, and we should advance sustainable ecological civilization in an in-depth manner with the enhancement of ecosystem quality and stability as the benchmark.

(III) Improving ecological and environmental governance propelled by green urbanization

In October 2021, the General Office of the CPC Central Committee and the General Office of the State Council issued the *Opinions on Promoting Green Development in Urban and Rural Areas*. In accordance with the decisions and arrangements made by the CPC Central Committee and the State Council, we should base ourselves on the new development stage, implement the new development concept, develop a new development pattern, adopt the people-centered approach, give priority to ecology, conservation and protection, adhere to the systematic concept, integrate development and security, simultaneously promote material progress and ecological progress, implement the goal and task of carbon peaking and carbon neutrality, promote urban renewal and rural development, accelerate the transformation of urban and rural development patterns, and advance the transition to green economic and social development in all respects, thus laying a solid foundation for comprehensively building a modern socialist country.

According to the *Opinions*, by 2025, the institutional mechanism and policy system for green development in urban and rural areas will be basically established; the transition to a model of green development will achieve remarkable success; carbon abatement will be implemented in a solid manner; cities will become more integrated, systematic and growth-oriented; the problem of "urban maladies" will be mitigated; the overall quality of the urban and rural ecological environment will be improved; the quality of urban and rural development and the carrying capacity of the resources and environment will be significantly upgraded; the integrated governance capacity will be dramatically improved; and green lifestyles will be generally promoted. By 2035, urban and rural development will fully realize green development; the carbon emission reduction level will be rapidly raised; the quality of cities and villages will be comprehensively upgraded; the living environment will be better; the governance system and governance capacity in urban and rural development will be basically modernized; and a beautiful China will be basically built.

Cities and towns are both the main carriers of energy and resource consumption and the main sources of carbon emissions. Realizing the transition to the green development of cities and towns in all respects can drive the green development of society as a whole. In the process of green urbanization, we should adhere to the

harmony between humanity and nature, respect nature, conform to nature and protect nature, and promote the building of a community with a shared future for man and nature; adhere to overall and local coordination, integrate the three major links of planning, development and management, and coordinate the development of towns and villages; attach equal importance to efficiency and balance, promote the economical and intensive utilization of resources and energy in urban and rural areas, and realize the coordination of population, economic development and ecological resources; integrate equity and inclusiveness, improve urban and rural infrastructure, and promote equal access to basic public services; balance protection and development, carry forward the excellent traditional Chinese culture, and foster creative transformation and innovative development; combine party building with co-construction, co-governance and sharing of the public, improve the public participation mechanism, and jointly create a better environment.

(IV) Pursuing high-quality development fueled by major river basin development plans

The planning and implementation of the major national strategies for coordinated regional development in the new era, including “Development of the Yangtze River Economic Belt (YREB)” and the "Ecological Protection and High-Quality Development of the Yellow River Basin", have stimulated the relevant provinces and regions of the two river basins to thoroughly implement the new development concept for the green development, with significant achievements made. On the new journey towards comprehensively building socialist modernization, the two river basins have continued to make new progress in green, low-carbon and high-quality development.

1. Achieving initial results in green and high-quality development of the Yangtze River Basin

The Yangtze River is the mother river of the Chinese nation and an important support for the development of the Chinese nation. In September 2022, MEE, the National Development and Reform Commission (NDRC) and 15 other departments jointly issued the *Action Plan to Further Advance the Ecological and Environmental Protection and Restoration of the Yangtze River Basin*, focusing on solving outstanding ecological and environmental problems in the Yangtze River protection, and solidly advancing the task of protecting and restoring Yangtze River.

The pattern of green and high-quality development in the Yangtze River Basin has taken initial shape. Firstly, a "1+N" development planning system with the *Outline of the Yangtze River Economic Belt Development Plan* as the programmatic document has been established, the *Yangtze River Protection Law* has been introduced and implemented, and a management system of negative lists for YREB development has been developed. Secondly, the ecological environment has been significantly improved. In January-May 2023, the proportion of sections with excellent water quality (Class I-II) in YREB increased to 94%, state-controlled sections of the main stream of the Yangtze River reached Class II water quality for three consecutive years, green ecological corridors were gradually formed on both sides of the Yangtze River, and the "ten-year fishing ban" was fully implemented. Thirdly, green, low-carbon and circular development has been further advanced. The scale of electronic information, equipment manufacturing and other industries in YREB accounted for more than 50% nationwide. Fourthly, the building of a comprehensive three-dimensional transportation network has accelerated. The mileage of trunk and branch high-grade waterways has reached tens of thousands of kilometers. Fifthly, the level of opening up to the outside world has been significantly upgraded. YREB has become more integrated with the building of the Belt and Road, and new land-sea corridors in the western part of the country are being formed at an accelerated pace.

A "ten-year fishing ban" has been implemented in the key waters of the Yangtze River Basin, with 11,000 fishing boats and 231,000 fishermen returning to shore. As a result, the Yangtze River has been able to recuperate and the condition of its biological resources has gradually improved. The amount of fish resources in the Chishui River has reached 1.95 times of that before the fishing ban, and migratory aquatic resources such as coilia ectenes and Eriocheir sinensis are obviously recovering. The provinces and municipalities along the Yangtze River have enhanced systematic thinking, coordinated the development of the upper, middle and lower reaches, and facilitated interaction and cooperation between the eastern, middle and western regions, so as to make YREB as a golden economic belt with better ecology, smoother transportation, more coordinated economy, more unified market, and more scientific mechanisms. The Yangtze River Basin has established a sound inter-provincial joint prevention and control mechanism covering upstream and downstream, left and right banks, main and branch streams of the Yangtze River; successively set up 5 inter-provincial ecological protection compensation mechanisms; and explored inter-provincial and municipal

trading of carbon emission rights, pollutant discharge rights, water rights, and energy rights... The provinces and municipalities along the Yangtze River have made joint efforts to protect the Yangtze River. Five of the six large hydropower stations along the Yangtze River (Gezhouba, Three Gorges, Xiangjiaba, Xiluodu, Baihetan and Wu Dongde) have been among the world's top 12 hydropower stations, making the Yangtze River Basin the world's largest clean energy corridor. The West-to-East Power Transmission Project starts from here, and the Yangtze River lights up half of China; the South-to-North Water Diversion Project also starts from here, and the Yangtze River saturates the land of China. Guizhou "Digital Valley", relying on rich hydropower resources, has introduced the big data industry; Wuhan "Optical Valley" has been developed into a national optoelectronics industry base; there are also Wuxi "Smart Valley", Hefei "Sound Valley", Zhuzhou "Power Valley", etc. The provinces and municipalities along the Yangtze River have cultivated a number of competitive and influential industrial clusters through innovations.

2. Depicting the blueprint for high-quality development of the Yellow River Basin

Since the 18th CPC National Congress, the CPC Central Committee with Comrade Xi Jinping as the core has proposed that the protection of the Yellow River is a major plan for the great rejuvenation of the Chinese nation, and the ecological protection and high-quality development of the Yellow River Basin is a major national strategy. At present, China's ecological civilization is advancing in an all-round way, and the principle of "lucid waters and lush mountains are invaluable assets" has been deeply rooted in people's hearts, and the people along the Yellow River have an even stronger desire to pursue lush mountains, lucid water, blue skies and clean land. On October 30, 2022, the 37th Session of the 13th NPC Standing Committee passed the *Yellow River Protection Law*, providing a strong legal guarantee for ecological and environmental protection and high-quality development in the Yellow River Basin. Through this law, the legal status of basin-specific and regional plans, as well as their leading, guiding and binding roles, has been clarified. With the *Yellow River Protection Law* coming into force on April 1, 2023, the protection and utilization of cultural relics and monuments and intangible cultural heritage across the Yellow River Basin will continue to be strengthened, and the Yellow River Cultural Tourism Belt will attract more people to experience the cultural and natural beauty of the Yellow River.

The *Yellow River Basin Ecological and Environmental Protection Plan* issued by MEE and other departments in June 2022, is a special plan to implement the “1+N+X” requirements of the *Outline of the Yellow River Basin Ecological Protection and High-quality Development Plan*, which is of great importance in advancing the ecological protection and high-quality development of the Yellow River Basin.

In August 2022, MEE and other 11 departments jointly issued the *Action Plan for Yellow River Ecological Protection and Governance*, which takes maintaining the ecological security of the Yellow River as the goal and improving the quality of the ecological environment as the core. The *Action Plan* specifies a number of 2025 targets, including the forest coverage rate of the Yellow River Basin, rate of soil and water conservation, area of restoration of degraded natural forests, the area of desertified land under comprehensive remediation, the proportion of water bodies with surface water quality at or better than Class III, proportion of water bodies with surface water quality at inferior Class V, the water quality of the upper and middle reaches of the main stream of the Yellow River (above Huayuankou), proportion of centralized drinking water sources with water quality at or better than Class III in county-level and above cities, and proportion of eliminated black and smelly water bodies in built-up areas of county-level cities.

To protect the Yellow River, we must rely on the system and the rule of law to protect the mother river. 2022 *The Yellow River Protection Law of the People’s Republic of China* was promulgated in October 2022, providing comprehensive regulations on water conservation, soil and water conservation, estuarine regulation, and ecological flow. The *Yellow River Protection Law* will be implemented in line with the decisions and arrangements made by the CPC Central Committee with Comrade Xi Jinping as the core by transforming it into the national will and social code of conduct for the protection, governance and high-quality development of the Yellow River, which will be conducive to the effective governance of the Yellow River Basin.

In terms of ecological protection and management of the Yellow River, as of 2022, sections with surface water quality from Class I to Class III in the Yellow River Basin accounted for 87.5%, the number of days with good air quality in cities at the prefecture level and above in the river basin accounted for 80.3%, and the ecological economy, including specialized agriculture and animal husbandry and clean energy, was developing healthily in various places along the Yellow River.

(V) CCICED policy recommendations

For ecological civilization, CCICED recommended in 2022 that China should unremittably hold firm in its strategic determination towards Ecological Civilization, by prioritizing and stabilizing expectations for a green, low-carbon transition, and move from securing short-term economic, energy, food and other security to unleashing win-win short and long-term green economic stimulus, innovation, low-carbon growth in which science links short, interim and longer-term green development targets and timetables. In this way, China will open a new green chapter for high-quality development.

For green urbanization, CCICED recommended in 2019 that the 14th FYP should formulate an urbanization strategy based on ecological civilization. The strategy should move away from the quantity-based model to a quality-based model where green urbanization becomes a key driver of China's high-quality economic development. CCICED recommended in 2020 and 2021 that it will be vital to advance urban green transition in line with the principles of green prosperity, low-carbon, intensive and circular development, equity and inclusiveness, as well as security and health; China should intensify the transformation to green, low-carbon urban infrastructure, improve rural and county green development, and adhere to the "one pole and multiple wings" rural integrated development model dominated by green development and supported by diversified development.

For green development of major river basins, CCICED recommended in 2022 integrated climate-resilient management for low-carbon and resilient river basins shall be strengthened. To be specific, it is advised to improve climate resilience in the integrated management of important river basins; implement the requirements of the *Yangtze River Protection Law* and develop a cooperative governance mechanism based on large-scale spatial planning and the co-management of pollution, ecosystem protection, low-carbon development and climate adaptation. Detailed climate vulnerability assessments should be made throughout the Yangtze River basin, from upstream to downstream areas, major tributaries, key urban and rural agglomerations, river coastlines, estuarine deltas, flood storage areas, and agriculture and natural ecological zones. A risk early warning system should be implemented at the basin level for extreme climate-related weather events, with special attention to flooding, wildfires, drought and heat waves.

II. Governance and Rule of Law

(I) Supporting ecological and environmental governance from the judicial level

A well-established legal system requires a strong judicial system to enforce it, while standardized and strict judicial action is an indispensable part of ecological and environmental governance, as well as an important means to support the effective implementation of systems and regulations.

In July 2022, the State Council's *Legislative Work Plan for 2022* proposed to request the NPC Standing Committee to deliberate the draft *Energy Law* and the draft amendment to the *Mineral Resources Law*, with focus on strengthening ecological and environmental protection and building a beautiful China; formulate regulations on ecological protection compensation and provisional regulations on the administration of carbon emissions trading, and revise regulations on the safety and protection of radioisotopes and radiation devices; and submit to the NPC Standing Committee for consideration the draft *Law on the Protection of Arable Land* and the draft amendment to the *Law on the Entry and Exit Animal and Plant Quarantine*.

In November 2022, MEE published the *Measures for the Administration of Lists of Major Entities under Environmental Regulation* (hereinafter referred to as the “Measures”), which came into effect on January 1, 2023, replacing the *Provisions on the Administration of the List of Key Pollutant Discharging Entities (Trial)*, which had been in use for five years. The *Measures* will guide localities in screening and categorizing key entities in a more targeted and operational manner, and their categorization results will have a significant impact on the day-to-day environmental management of the enterprises concerned.

In May 2023, MEE issued the newly revised *Measures on Administrative Penalties for the Ecological Environment*, making adjustments to the types of penalties, time limits, authorities, procedures, enforcement methods, etc., to ensure that the ecology and environment enforcement team carries out enforcement activities in a strictly standardized manner and in accordance with the law, and it came into force on July 1, 2023.

Since 2022, local ecology and environment departments at all levels have continued to implement the *Guiding Opinions on Optimizing Enforcement Methods for*

Ecological and Environmental Protection and Improving Enforcement Effectiveness, implemented a package of policies and measures to stabilize the economy, and made optimizing environmental supervision methods one of the five key measures to support the smooth operation of the economy in the field of ecological and environmental protection. For example, Jiangsu Province issued the *Opinions on Accelerating Off-site Supervision of the Ecological Environment*, with a view to constructing a “1+5+N” off-site supervision work system, and developing innovative off-site inspections, off-site enforcement and off-site management. Chongqing has gradually expanded the scope of enterprises on the positive list, strengthened off-site supervision by integrating various means, and reduced unnecessary on-site inspections. An additional 485 enterprises were included in the positive list in 2022, most of which were enterprises with excellent or good environmental credit assessment results. There are currently 3,011 positive-list enterprises in Chongqing, an increase of 12.2% from the end of 2021. In the first quarter, 4,614 off-site enforcement inspections were conducted on positive-list enterprises, effectively reducing the frequency of on-site inspections on law-abiding enterprises. Heilongjiang has included in the positive list 75 enterprises in the province that meet the conditions of having complete pollution prevention and control facilities and implementing standardized operation and management, not having been subject to ecological and environmental administrative penalties within one year, not having had any environmental emergencies, and disclosing environmental information in a timely manner in accordance with the law.

(II) Introducing pollutant discharge permits

The full implementation of pollutant discharge licensing is an important measure to implement the spirit of the 20th CPC National Congress and enhance the modernization of the ecological and environmental governance system and governance capacity. The pollutant discharge licensing is an important basis for self-attestation of compliance of pollutant discharging entities, and an important starting point for enforcement and supervision of regulators, and its quality is a major cornerstone to bring into play its effectiveness and to establish the core status of the supervision system of stationary pollution sources.

The *Work Plan for Improving the Quality and Efficiency Through Pollutant Discharge Licensing of the Ministry of Ecology and Environment (2022-2024)* proposes to effectively improve the issuance quality of pollutant discharge permits, strengthen

the quality inspection of pollutant discharge permits, enhance the entity responsibility, reinforce the joint supervision, and develop a closed-loop quality management mode of pollutant discharge permits featured by “source control, process management, ex-post supervision”, so as to improve the efficiency of post-permit supervision, enhance the effectiveness of the core system, and give full play to the role of the “one permit-based” management. It is proposed to develop a sound quality management mechanism for pollutant discharge permits, upgrade the dynamic update mechanism for pollutant discharge licensing, and continuously optimize the platform system by the end of 2022; complete the key work of rectification and "zero clearing" within the deadline, fully complete the “two centenary” tasks and goals, and realize permit-based pollutant discharge by all pollutant discharging entities by the end of 2023; further carry out regular quality inspection of pollutant discharge permits, comprehensively improve the quality of pollutant discharge licensing management, and support the “one permit-based” management of pollutant discharge licensing by the end of 2024.

On March 29, 2022, the MEE General Office released the *Guiding Opinions on Strengthening the Enforcement and Supervision of Pollutant Discharge Licensing*, which requires that by the end of 2023, key industries shall implement the checklist-based enforcement and inspection of pollutant discharge licensing, the daily management of pollutant discharge licensing, environmental monitoring, and enforcement and supervision shall be effectively linked, and the enforcement and supervision system for stationary pollution sources, with pollutant discharge licensing at its core, shall basically take shape. By the end of 2025, the checklist-based enforcement and inspection of pollutant discharge licensing shall achieve full coverage, the enforcement and supervision of pollutant discharge licensing shall be carried out in a systematic, scientific, legalized, refined, and information-based manner, and the enforcement and supervision system for stationary pollution sources, with pollutant discharge licensing at its core, shall be fully established.

On April 2, 2022, the MEE General Office issued the *Implementation Plan for Environmental Impact Assessment and Pollutant Discharge Licensing during the 14th Five-Year Plan Period*, to further consolidate the core system of pollutant discharge licensing. It is stipulated that the total-element and full-cycle management of pollutant discharge licensing for stationary pollution sources shall be basically realized; the enforcement and supervision system and the self-monitoring and supervision mechanism of pollutant discharge licensing for stationary pollution sources shall be

fully established; the “one permit-based” management of pollutant discharge licensing shall be fully implemented; and the supervision system for stationary pollution sources, with pollutant discharge licensing at its core, shall basically take shape.

The quality of pollutant discharge permits is the lifeline of "permit-based pollutant discharge ", " permit-based supervision" and "public oversight". In order to improve the technical support system for pollutant discharge licensing, standardize the technical methods for quality inspection of pollutant discharge permits nationwide, and harmonize the standards for determining the quality of pollutant discharge permits, MEE issued the *Technical Specification for Quality Inspection of Pollutant Discharge Permit* (HJ1299-2023) in June 2023. The *Technical Specification* will guide the ecology and environment authorities to carry out quality inspection of pollutant discharge permits, further enhance the quality of pollutant discharge permits, further improve the standardization, authenticity and usability of pollutant discharge permits, and achieve enhanced quality and efficiency of pollutant discharge licensing.

(III)Further improving environmental laws and placing climate legislation on the agenda

The report of the 20th CPC National Congress clearly proposes to "work actively and prudently toward the goals of reaching peak carbon emissions and carbon neutrality". Addressing climate change is a comprehensive and holistic task, and realizing the "dual carbon" goals still faces enormous challenges under the existing legal system and action pathways. To strengthen the legal safeguards for addressing climate change, it is necessary to accelerate the climate change legislation while advancing legislation on ecological and environmental protection.

In 2022, a number of environmental laws were formally implemented, providing strong support for the administration and management of environmental protection in China. On June 1, 2022, China's first law dedicated to protecting wetlands, the *Wetland Protection Law*, came into effect. As the first law specializing in the protection of wetlands in China, the *Wetland Protection Law* consists of 7 chapters and 65 articles. Centering on the holistic protection and restoration of wetland ecosystems, the *Wetland Protection Law* establishes the principles of "protection priority, strict management, systematic remediation, scientific restoration and reasonable utilization", and develops a legal system for wetland protection with comprehensive coverage, a coordinated system and complete functions, leading China's wetland protection to enter a law-based

track in an all-round manner. In June 5, 2022, the *Law of the People's Republic of China on Prevention and Control of Noise Pollution* came into force. This is the first comprehensive amendment to the Law after more than 20 years of implementation. It has closely combined with the current situation of noise pollution prevention and control in China, scientifically summarized the law and practical experience of noise pollution prevention and control, with strong relevance, operability and foresight. On October 30, 2022, the *Yellow River Protection Law of the People's Republic of China* was formally adopted, which came into force on April 1, 2023. This Law shall apply to all types of activities for the ecological protection and high-quality development of the Yellow River Basin, and the Yellow River Basin, as referred to in this Law, refers to the relevant county-level administrative areas in Qinghai, Sichuan, Gansu, Ningxia Hui Autonomous Region, Inner Mongolia Autonomous Region, Shanxi, Shaanxi, Henan and Shandong Provinces covered by the catchment areas of the Yellow River's main streams, tributaries and lakes.

In addition, in 2022, China has accelerated the legislation related to addressing climate change, and studied the construction of a legal framework for addressing climate change; carried out thematic demonstration on the integration of GHG control into the EIA of construction projects, and studied the proposed amendment to the *Environmental Impact Assessment Law*; revised and issued the *Technical Guidelines for Planning Environmental Impact Assessment: Industrial Parks*, which puts forward the assessment requirements with reducing pollution and cutting carbon emissions as the goal; actively pushed forward the legislative process of the *Provisional Regulations on the Administration of Carbon Emission Trading*, and endeavored to improve the legislative safeguards for the national carbon trading market; guided and stimulated the formulation of relevant local laws and regulations at the local level; stepped up the revision of the *Regulations on the Administration of Ozone-Depleting Substances* to include HFCs and other ozone-depleting substances with greenhouse effect in the environmental protection control system; continued to improve the standards system related to addressing climate change and strengthened the integration with the existing standards system; approved 2 carbon emission-related national measurement benchmarks and 57 carbon emission-related measurement standards, developed 229 carbon emission-related standard substances, and approved and issued a number of national and industry standards in the fields of energy conservation, high-standard farmland and ecological protection and restoration.

At the local level, many local governments have issued local government regulations and normative documents related to addressing climate change. For example, Jiangsu Provincial People's Congress (including its Standing Committee) issued the *Decision on Advancing Carbon Peaking and Carbon Neutrality* (2022) centering on the "dual carbon" goals. Almost all of the seven pilot provinces and municipalities of Beijing, Shanghai, Tianjin, Chongqing, Guangdong, Shenzhen and Hubei, as well as the regions participating in carbon emissions trading, such as Sichuan and Fujian, have issued local government regulations or normative documents related to carbon emissions trading. The above administrative regulations, departmental rules and local legislation have standardized and promoted domestic efforts to address climate change, and have also laid a sufficient foundation for the introduction of the law on addressing climate change.

(IV) Deepening the green financial system

The “domestically harmonized and internationally compatible” green financial standard has been deepening. It is proposed in the report to the 20th CPC National Congress that “fiscal, taxation, financial, investment, and pricing policies and systems of standards will be improved to support green development”, highlighting the importance of building a green financial system. In 2022, the financial industry steadfastly contributed to the "dual-carbon" goals and established a sound green finance standard system. “Green is the distinctive color of high-quality development” has gradually become the general consensus of the financial industry.

Based on China's experience in the rapid development of green finance, a harmonized policy framework and incentive mechanism will be further improved in the future. Under the guidance of “accelerating the transition to a model of green development” as specified in the report to the 20th CPC National Congress, it is expected that the transition finance-related system and the green directory will be improved to support the low-carbon transition plans of high-carbon enterprises. At the same time, the development of criteria for defining green activities can prevent "greenwashing" and effectively channel funds into truly green industries.

In February 2022, the People's Bank of China (PBOC), together with the State Administration for Market Regulation (SAMR), the China Banking and Insurance Regulatory Commission (CBIRC) and the China Securities Regulatory Commission (CSRC), jointly issued the *Development Plan for Financial Standardization during the*

14th Five-Year Plan Period. It is proposed to further improve the green financial standards, standardize the green bond standards, enrich the standards for green financial products and services, accelerate the formulation of environmental information disclosure standards for listed companies and bond-issuing enterprises, and establish a system of environmental, social and governance (ESG) assessment standards, etc. In 2022, 49 out of 54 listed banks in China had made environmental and climate information disclosure in the form of social responsibility reports, sustainability reports or more explicit ESG reports. According to the 2022 ESG ratings published by MSCI, the ESG ratings of China's banking sector rose as a whole. Among them, all six large state-owned banks were rated A, the highest level for domestic listed banks at present.

In April 2022, CSRC published the *financial industry standard-Carbon Financial Products*. On a certain basis, carbon financial products were divided and detailed provisions were made. In the course of development, various innovative financial instruments for carbon sinks have been emerging in China. The *Carbon Financial Products* will assist financial institutions in developing, formulating, implementing and standardizing carbon financial products, contribute to the healthy development of various carbon financial products, enhance the public awareness of carbon finance, help institutions identify, utilize and manage carbon financial products, and channel financial resources into environmental protection, thus facilitating green and low-carbon development.

In May 2022, CBIRC issued the *Plan for Standardization of China's Insurance Industry during the 14th Five-Year Plan Period*, which calls for the establishment of index standards for green insurance statistics, green capital utilization, and green insurance assessment, so as to contribute to the building of a green financial system.

MEE, NDRC and seven other departments jointly issued the *Circular on the Pilot Work on Climate Investment and Financing* in December 2021, guiding the pilot places to actively participate in the building of the national carbon trading market, and to study and promote the development and alignment of carbon financial products. At the same time, financial institutions in the pilot places are encouraged to explore carbon financial services, including carbon funds, carbon asset pledge loans and carbon insurance, in a steady and orderly manner, on the premise of legal compliance and risk control. In August 2022, 23 places, including Beijing Miyun District, Tongzhou District, Baoding of Hebei Province and Taiyuan of Shanxi Province, were selected to carry out pilot

climate investment and financing by taking into full account of factors such as the work basis, willingness to implement and the scale-up and demonstration effects of applicants.

In October 2022, SAMR and eight other departments jointly issued the *Implementation Plan for Establishing a Sound Standards and Measurement System for Carbon Peaking and Carbon Neutrality*. As one of the supporting plans for the national carbon peaking and carbon neutrality "1+N" system, the *Implementation Plan* will provide the basis for developing measurement systems for carbon peaking and carbon neutrality by relevant industries, sectors, localities and enterprises. It is proposed to expeditiously formulate basic common standards such as terms related to green and sustainable finance, and develop sound standards for green financial products and services, green credit system, green bond credit rating system, carbon neutrality bond rating system, green finance information disclosure system and green finance statistical system.

In March 2023, MEE issued the *Letter on Openly Soliciting Proposals on Methodologies for GHG Voluntary Emission Reduction Projects* (HBBH [2023] No. 95). Methodologies are the main basis for guiding the development, implementation, validation and verification of GHG voluntary emission reduction projects, and play a key normative role in the identification of baselines, demonstration of additionality, accounting of emission reductions and development of monitoring plans for emission reduction projects. In July 2023, MEE prepared the *Measures for Administration of GHG Voluntary Emission Reduction Trading (Trial) (Draft for Comments)*, which stipulates the basic management requirements for GHG voluntary emission reduction trading and its related activities in terms of the validation and registration of voluntary emission reduction projects, verification and registration of emission reductions, trading of emission reductions, and management of the validation and verification institutions, and clarifies the rights and responsibilities of each market player.

At the local level, China Construction Bank (CCB) Guangdong Branch has systematically promoted green finance centering on the "four pillars": first, defining green standards; second, carrying out information disclosure; third, enriching product shelves; and fourth, improving incentive mechanisms. As of the end of May 2023, green financial loans of CCB Guangdong Branch amounted to RMB 366.8 billion, increased by RMB 84.7 billion compared with the beginning of the year. The balance and

incremental amount of green loans ranked first in the bank-wide system, and the share of green loans in all loans and in public loans remained the first among the four local banks. Moreover, it continued to maintain the full coverage of the six key areas of the PBOC's Green Credit Catalog. The PBOC Jinan Branch issued the *Special Action Plan for the Year of Deepening Green Finance* (hereinafter referred to as the “Action Plan”), which sets 2023 as the “Year of Deepening Green Finance”. On the basis of the full take-off of green finance work in Shandong Province in 2022, the PBOC Jinan Branch will further strengthen the foundation of green financial development, deepen the building of a green financial service system, and contribute to the green, low-carbon and high-quality development in Shandong Province. In August 2022, PBOC, in conjunction with NDRC and five other departments, jointly issued the *Overall Program for Building a Green Financial Reform and Innovation Pilot Zone in Chongqing*, officially including Chongqing in the scope of the national green financial reform pilot zone. In addition, since 2022, diversified green financial products such as green insurance, green funds and green trusts have been developed with the support of PBOC and other financial departments. Green finance is playing an increasingly important role in implementing major national regional development strategies such as the Beijing-Tianjin-Hebei coordinated development, the construction of Guangdong-Hong Kong-Macao Greater Bay Area, and the integrated development of the Yangtze River Delta.

(V) Incorporating carbon emissions from key industries into the EIA system

On May 31, 2021, MEE issued the *Guiding Opinions on Strengthening Prevention and Control from the Source in Energy-Intensive and High-Emission Projects for Ecological and Environmental Protection* (HP [2021] No. 45), which explicitly proposes to “incorporate carbon emission impact assessment into the EIA system”, and stipulates that environmental authorities and administrative approval departments at all levels should actively advance the pilot EIA program for these “two-high” projects.

On July 27, 2021, MEE issued the *Notice on Pilot Carbon Emission Environmental Impact Assessment for Construction Projects in Key Industries* (HP [2021] No. 346), to carry out pilot carbon emission environmental impact assessment for construction projects in key industries such as electric power, iron and steel, building materials, nonferrous metals, petrochemicals, and chemicals, in Hebei, Jilin, Zhejiang, Shandong, Guangdong, Chongqing, and Shaanxi.

On December 2, 2022, MEE issued the *Notice on Printing and Distributing the Principles for Approval of Environmental Impact Assessment Documents for Construction Projects in Four Industries: Iron and Steel/Coking, Modern Coal Chemical Industry, Petrochemical Industry, and Thermal Power* (HP [2022] No. 31). It adds the requirement for GHG emissions in Article 6 related to the approval of EIAs for the four industries: “incorporating GHG emissions into the environmental impact assessment for construction projects, accounting for GHG emissions from construction projects, achieving synergies from reducing pollution and cutting carbon emissions, and advancing the demonstration and application of innovative carbon reduction technologies”.

(VI) Developing a sound environmental credit system

In order to “improve our systems for credibility assessment based on environmental protection performance, for mandatory release of environmental information, and for imposing severe punishment for environmental violations”, MEE and NDRC have continuously improved the system for credibility assessment based on environmental protection performance, actively built an environmental credit information sharing platform and guided localities to develop new approaches to application of assessment results, with positive results achieved.

In March 2022, the General Office of the CPC Central Committee and the General Office of the State Council issued the *Opinions on Advancing the High-quality Development of the Construction of the Social Credit System in Furtherance of the Shaping of a New Development Pattern* (hereinafter referred to as the “Opinions”), which improves the credit system for ecological and environmental protection. The *Opinions* stipulates that credit evaluation shall be fully implemented in the fields of environmental protection and soil and water conservation, and the sharing and application of credit evaluation results shall be strengthened. The reform of the system for legal disclosure of environmental information shall be deepened, and relevant enterprises and public institutions shall be promoted to disclose environmental information in accordance with the law. With a focus on achieving carbon emissions peaking and carbon neutrality requirements, the national carbon emissions trading market system shall be improved, and credit regulation in registration, trading, settlement, checks and other steps shall be strengthened. Government regulation and industry self-regulation shall be brought into play, and an effective mechanism for

administration of and restraints on violations of laws and regulations, such as falsification by emitters and issuance of false reports by intermediaries shall be established and improved.

(VII) Fostering green and low-carbon lifestyles

General Secretary Xi Jinping stressed at the 36th collective study session of the Political Bureau of the CPC Central Committee on January 24, 2022 that “we should advocate simple and moderate, green and low-carbon, civilized and healthy lifestyles, guide green and low-carbon consumption, encourage green mobility, carry out the demonstration of green and low-carbon social actions, and enhance the public awareness of conservation as well as ecological and environmental protection”.

The report to the 20th CPC National Congress specifies that a green and low-carbon economy and society are crucial to high-quality development. We must work faster to adjust and improve the industrial structure, the energy mix, and the composition of the transportation sector. We will implement a comprehensive conservation strategy, conserve resources of all types and use them efficiently, and move faster to put in place a system for recycling waste and used materials. Fiscal, taxation, financial, investment, and pricing policies and systems of standards will be improved to support green development. We will boost green and low-carbon industries and improve the system for market-based allocation of resources and environmental factors. We will accelerate the R&D, promotion, and application of advanced energy-saving and carbon emission reduction technologies, encourage green consumption, and promote green and low-carbon ways of production and life.

In January 2022, NDRC and other ministries issued the *Implementation Plan for Promoting Green Consumption*, which proposes that by 2025, the concept of green consumption will gain ground, extravagance and waste will be effectively curbed, the market share of green and low-carbon products will be raised sharply, marked results will be achieved in the transition to green consumption in key sectors, green ways of consumption will be generally adopted and a consumption system for green, low-carbon and circular development will take shape. By 2030, green consumption will become a conscious option of the public, green and low-carbon products will be mainstreamed in the market, a green and low-carbon development model for consumption will be substantially formed in key sectors, and green consumption systems, policies and mechanisms will be basically established.

June 15, 2022 is the 10th “National Low-Carbon Day”. MEE and the People's Government of Shandong Province jointly organized the main event of the “National Low-Carbon Day 2022” in Jinan, Shandong Province. With the theme of “Implementing 'Dual Carbon' Actions, Building a Beautiful Homeland”, the event aimed to promote the formation of green, low-carbon, circular and sustainable production and living styles in the whole society, and bring together the concerted efforts of the whole society for green and low-carbon transition, so as to build a beautiful China, as well as a clean and beautiful world.

On August 30, 2022, the State Council issued the *Opinions on Supporting Shandong to Further Replace Old Driving Forces with New Ones for Green, Low-Carbon, and High-Quality Development* (GF [2022] No. 18), which requires the in-depth implementation of the “Green and Low-Carbon Initiative for All”, and the establishment of incentive mechanisms for green consumption, such as individual carbon accounts. Carbon Justice is an incentive mechanism established to give value to the energy-saving and carbon-reducing behaviors of the general public and small and micro-enterprises, which has been piloted in some provinces and cities in China in recent years.

The implementation plans for carbon peaking issued by provinces propose to foster green and low-carbon lifestyles. Hainan Province issued the *Implementation Plan for Carbon Peaking in Hainan Province* in August 2022, which proposes to promote energy saving and carbon reduction for all through whole-process carbon control, pursue one network for island-wide smart transportation, build a green mobility system, study and develop a systematic, scientific, open and integrated carbon justice mechanism in line with the characteristics of Hainan's ecological products. The *Implementation Plan for Carbon Peaking in Shanghai* proposes to guide citizens to travel in a green and low-carbon manner, with the share of green mobility in central urban areas reaching 75% in 2025 and 85% in 2035; strengthen ecological civilization publicity and education, guide citizens to comprehensively and deeply practice green consumption concepts and green lifestyles, and carry out green and low-carbon actions for all. The *Implementation Plan for Carbon Peaking in Jiangsu Province* proposes to vigorously advocate simple, moderate, green, low-carbon, civilized and healthy lifestyles, and resolutely curb extravagance, wastefulness and unreasonable consumption; actively drive green consumption, promote green and low-carbon

products, implement green standards, certification and labeling, and further increase the share of green products consumed by the whole society.

(VIII) CCICED policy recommendations

In terms of the rule of law and governance, CCICED recommended in 2022 that efforts should be made to develop a sound governance system for green and low-carbon transition and strengthen innovative and flexible institutional capacity building; prioritize the development of a dedicated climate change law to set the necessary legal basis for China's climate transition, and explore to include dual carbon targets and climate adaptation into the scope of public interest litigation by procurators; create an ongoing working dialogue between financial regulators and relevant government departments, and develop and implement ESG standards. Moreover, it is suggested that China should integrate digitalization with sustainable development and promote green technology innovation and green digital governance, and engage the public in linking digital platforms with low-carbon, green lifestyles.

III. Energy, Environment and Climate

(I) Making concerted efforts to cut carbon emissions, reduce pollution, expand green development, and pursue economic growth

The CPC Central Committee and State Council released the *Opinions on Comprehensively Strengthening Ecological and Environmental Protection and Resolutely Fighting the Tough Battle Against Pollution* on April 17, 2018. The *Opinions* emphasizes the importance of reducing pollution, cutting carbon emissions, and expanding green development, and put forward a series of policy measures and targets, including specific requirements for strengthening environmental regulation and pursuing green development. By 2022, China's share of coal in total energy consumption would be reduced from 72.4% in 2005 to 56.2%, and non-fossil energy consumption would account for about 25.9%.

Since the 14th FYP period, China's ecological civilization has entered a critical period in which efforts shall be made to promote synergies in reducing pollution and cutting carbon emissions, foster the transition to green economic and social development in all respects, and realize quantitative to qualitative improvements in ecological and environmental quality with carbon reduction as a key strategic direction. In June 2022, under the guidance and support of NDRC, the Ministry of Industry and

Information Technology (MIIT), and MEE, the China Association of Environmental Protection Industry (CAEPI) issued the *Action Plan for Accelerating High-Quality Development of the Ecological and Environmental Protection Industry and Deepening Pollution Prevention and Control to Support Carbon Peaking and Carbon Neutrality (2021-2030)*. The *Action Plan* makes it clear that by 2030, a modern eco-environmental protection industry system will be basically established to meet the needs of environmental pollution prevention and control, ecological protection and restoration, efficient recycling and utilization of resources, and carbon peaking, with a key role to play in pursuing the transition to green economic and social development in all respects.

In July 2022, MEE and six other departments jointly issued the *Implementation Plan for Achieving Synergies from Reducing Pollution and Cutting Carbon Emissions*, which, as an important part of the "1+N" policy system of carbon peaking and carbon neutrality, is of great significance to further optimize ecological and environmental governance, form a working pattern of making concerted efforts to cut carbon emissions and reduce pollution, and help build a beautiful China and realize carbon peaking and carbon neutrality. The concept of "green and low-carbon, energy saving first" has long been integrated into the practice of development across China.

Locally, the Wuhan Municipal Government took the lead in issuing an implementation plan. On November 16, 2022, the Wuhan Municipal Government issued the *Implementation Plan for the Top 10 Actions to Cut Carbon Emissions, Reduce Pollution, Expand Green Development, and Pursue Economic Growth in the Yangtze River Economic Belt in Wuhan*. The *Implementation Plan* deploys work in ten areas, including promoting synergies from reducing pollution and cutting carbon emissions, establishing a sound mechanism for realizing the value of ecological products, constructing a green manufacturing system, strengthening the leadership of green technological innovation, upgrading the level of conservation and intensive utilization of water resources, advancing the green development of integrated transportation, boosting the coordinated development of the city clusters in the middle reaches of the Yangtze River, deepening the practice of financial innovation in the Yangtze River protection, improving urban and rural green living environments, and accelerating the development of cultural tourism on the Yangtze River.

At present, the development of green industry has become a major priority for Hangzhou's low-carbon transition. Not long ago, Hangzhou formulated and issued the *Opinions on Implementing the New Development Concept in a Complete, Accurate and*

Comprehensive Way to Achieve Carbon Peak and Carbon Neutrality, which provides top-level institutional design for achieving carbon peaking and carbon neutrality in a high-quality way. It is proposed to implement the green industry development plan, make every effort to seize the high ground of the green industry, create nine iconic industrial chains such as visual intelligence and integrated circuits (IC), promote the development of advanced manufacturing clusters such as new fiber materials and intelligent connected vehicles, and plan for future industries such as carbon capture and storage. In fact, Hangzhou has achieved certain development results in the above industrial areas, laying a good industrial foundation for future low-carbon development. According to the data, in 2022, the added value of the "three new" economy in Hangzhou, which is mainly characterized by new industries, new business forms and new modes, accounted for 36.2% of GDP. Among them, the added value of AI, IC and electronic information product manufacturing grew by 26.9%, 21.9% and 16.2% respectively.

(II) Continuously adjusting and optimizing the energy structure

In May 2022, the General Office of the State Council issued the *Implementation Plan on Promoting the High-Quality Development of New Energy in the New Era*, which calls for improving the compensation mechanism for peak-frequency regulation power supply, stepping up flexibility retrofits of coal-fired power units, hydropower expansion, pumped storage and solar thermal power projects, facilitating the rapid development of new energy storage, studying the energy storage cost recovery mechanism, and encouraging the use of solar thermal power as a peaking power source in areas with good light conditions such as the western region.

As for the high-quality development of the new energy industry, power supply construction is also facing new challenges. To this end, the National Energy Administration (NEA) revised and issued the *Regulations on the Administration of Grid-connected Operation of Electric Power* (GNFJGG [2021] No. 60) and the *Measures for the Administration of Auxiliary Services of Electric Power* (GNFJGG [2021] No. 61). The *Measures* further expands the scope of entities providing auxiliary services, emphasizes the determination of compensation modalities and sharing mechanisms in accordance with the principle of “who provides, who profits; who benefits, who pays”, and proposes the gradual establishment of a sharing mechanism for power users to participate in auxiliary services and a sound mechanism for cross-provincial and cross-regional auxiliary services. In terms of flexibility retrofits of coal-

fired power units, in order to further advance the “coordinated three retrofits” in coal-fired power units, NDRC and NEA jointly issued the *Implementation Plan for Retrofitting and Upgrading of Coal-fired Power Units Nationwide* in November 2021, which puts forward flexibility retrofits of 200 million kW during the 14th FYP period. With regard to pumped storage, NEA issued the *Medium- and Long-term Development Plan for Pumped Storage (2021-2035)* in September 2021, which specifies that, by 2025, the total scale of pumped storage in operation will reach more than 62 million kW; by 2030, the total scale of pumped storage in operation will reach about 120 million kW. In terms of new energy storage, NDRC and NEA issued the *Guiding Opinions on Accelerating the Development of New Energy Storage* (FGNYG [2021] No. 1051), the *Implementation Plan for the Development of New Energy Storage During the 14th Five-Year Plan Period* (FGNY [2022] No. 209), and the *Notice on Further Promoting the Participation of New Energy Storage in the Electricity Market and Dispatching Application* (FGBYX [2022] No. 475), to accelerate the large-scale and market-based development of new energy storage.

In January 2022, General Secretary Xi Jinping stressed at the 36th session of the collective study of the CPC Political Bureau that we shall step up efforts to plan and build a new energy supply and consumption system based on large-scale wind and solar power bases, supported by clean, efficient, advanced and energy-saving coal-fired power in their vicinity, and carried by stable, safe and reliable EHV transmission and transformation lines. General Secretary Xi Jinping's important speeches and instructions put forward new higher requirements and provided a fundamental guideline for new energy development in the new era. On May 14, 2022, NDRC and NEA issued the *Notice on the Implementation Plan for Promoting High-Quality Development of New Energy in the New Era*. It points out that in recent years, China's new energy development, represented by wind power and photovoltaic power, has achieved remarkable results, with installed capacity ranking first in the world, share of generating capacity steadily increasing, and cost fallen rapidly, and has basically entered a new stage of affordable and subsidy-free development. At the same time, the development and utilization of new energy sources are still subject to such constraints as the lack of adaptability of the power system to large-scale and high-share new energy sources for grid connection and consumption, and obvious constraints on land resources. To realize the goal of reaching a total installed capacity of more than 1.2 billion kW of wind and solar power by 2030, and to accelerate the building of a clean, low-carbon, safe and

efficient energy system, we shall uphold Xi Jinping's Thoughts on Socialism with Chinese Characteristics in the New Era, implement the new development concept in a complete, accurate and comprehensive manner, coordinate development and security, and adhere to overall planning, so as to better bring into play the role of new energy resources in maintaining and increasing energy supply, and make solid efforts to achieve carbon peaking and carbon neutrality.

It is also suggested that we shall reduce the financing cost of renewable energy (RE) companies and further increase support for RE development in terms of early queuing for initial public offerings (IPOs), targeted lending, equity financing and lowering the reserve ratio. Regional RE pilot projects shall focus on exploring solutions to problems such as poor provincial consumption and export, insufficient synergistic development of regional power grids, and lagging price transfer mechanisms; increasing the flexibility, connectivity and storage of power grids, and enhancing the capacity for stable RE supply.

(III) Continuing to promote energy conservation and energy efficiency improvement

In February 2022, NDRC and three other departments jointly issued the *Implementation Guidelines for Energy Saving and Carbon Reduction Retrofitting and Upgrading in Key Areas of Energy-Consuming Industries (2022 Edition)* (hereinafter referred to as the “Implementation Guidelines”), which puts forward the direction of energy-saving and carbon reduction retrofitting and upgrading, and the specific targets by 2025 for 17 industries such as oil refining, cement, iron and steel and non-ferrous metal smelting.

Centering on retrofitting and upgrading and technological breakthroughs, the *Implementation Guidelines* proposes that, enterprises with energy efficiency below the benchmark level, especially the baseline level, should actively adopt the advanced technologies and equipment as specified in the *Implementation Guidelines*, strengthen the optimization of the energy system, the utilization of residual heat and pressure, the reduction of pollutant emissions, the comprehensive utilization of solid wastes and the renovation of public and auxiliary facilities, and raise the greening level of the production process, technologies and equipment. In the meantime, efforts shall be made to study and develop green common key technologies, leading-edge technologies and

related facilities and equipment for achieving synergies from saving energy, reducing pollution and cutting carbon emissions.

On November 17, 2022, NDRC and other departments jointly issued the *Circular on the Release of Advanced Levels of Energy Efficiency, Energy Saving Levels, and Access Levels of Key Energy-Using Products and Equipment (2022 Edition)*, which focuses on key energy-using products and equipment, and makes the relevant arrangements for saving energy and cutting carbon emissions. Several experts believe that this measure is of great significance in strengthening the energy efficiency management of key energy-using products and equipment, realizing carbon peaking and carbon neutrality, and improving quality of and upgrading the manufacturing industry.

In order to mobilize the industry's energy saving, carbon reduction, green and low-carbon transition, and to continuously improve the industry's energy efficiency, the Departments of Industry and Information Technology in many places have publicly solicited opinions on the action plans for energy saving, energy consumption reduction and energy efficiency improvement in petrochemical and chemical industries. National standards for petrochemical and chemical industries have become more stringent. The *Several Opinions on Strict Energy Efficiency Constraints to Promote Energy Conservation and Carbon Reduction in Key Areas* issued by NDRC and other departments sets forth that: by 2025, through the implementation of energy saving and carbon reduction actions, the proportion of production capacity in the cement and flat glass industries with energy efficiency reaching the benchmark level will exceed 30%, the overall energy efficiency level of the building materials industry will be significantly improved, the intensity of carbon emissions will be significantly reduced, and the capacity for green and low-carbon development will be obviously enhanced. For example, in 2022, Zhejiang Province introduced the *General Technical Guidelines for Source Replacement of Raw and Auxiliary Materials with Low VOC Content in Zhejiang Province (Trial)*, which encourages and guides enterprises to produce and use coatings, inks, adhesives, cleaning agents and other products and raw and auxiliary materials with low VOC content to replace solvent-based products and raw and auxiliary materials, to prevent and control VOC pollution, and to advance the transition to green and high-quality development of manufacturing in Zhejiang Province. In 2022, Fujian Province strictly implemented the provisions of the *Industrial Structure*

Adjustment Catalog, which stipulates that we shall prohibit the construction and expansion of restricted process equipment and products, and advance the elimination and phase-out of backward production capacity as soon as possible; step up efforts to dispose of idle capacity and zombie capacity, and press ahead with mergers and restructuring of enterprises; carry out special actions for energy efficiency benchmarking, release the list of energy efficiency “frontrunners”, and guide enterprises in benchmarking.

In order to ensure the safe and stable power supply, enhance the core competitiveness of the energy industry, NEA issued the *Guiding Opinions for Energy Work 2022* (hereinafter referred to as the “Guiding Opinions”) in March 2022, which takes “enhancing the supply capacity” as the top 1 objective, and calls for efforts to resolutely accomplish the set goals of recovering to 200 million tons of crude oil production and maintaining a steady and sustained rise in natural gas production by 2022; and guaranteeing adequate power supply, with an installed capacity of about 2.6 billion kW and new peak generating capacity of more than 80 million kW. This sets a clear goal for this year's energy supply work. In April 2023, NEA issued the *Several Opinions on Accelerating the Digital and Intelligent Energy Development*. With "demand-driven, digital empowerment, synergy and efficiency, integration and innovation" as the basic principles, a number of measures were put forward to accelerate the transformation and upgrading of the industry, promote the application, pilot programs and demonstration, make breakthroughs in common technologies, develop a sound support system, and enhance organizational safeguards, etc., so as to cultivate new advantages for the integrated development of digital technology and the energy industry.

In the long run, accelerating the low-carbon transition will not affect the rate of economic growth, but stimulate high-quality economic growth and accelerate the development and large-scale utilization of new technologies, such as the energy Internet and electric vehicles, and contribute to the faster development of industries such as biotechnology and information technology. Chao Qingchen, Director General of the National Climate Center, indicated that digital development is an enabler for achieving the dual carbon goals and that in the future, we shall bring together the wisdom of all sectors to further accelerate the development of digital technologies, explore intelligent solutions for sustainable development, and optimize production and consumption patterns.

(IV) Enhancing climate action and adaptation

Climate change-induced extreme heat is taking a huge toll in many parts of the world: weeks of sustained high temperatures are seriously jeopardizing human health and making outdoor activities and work unsuitable; rare summer droughts are causing water shortages in many places and drastic cutbacks in hydropower generation, affecting the water and power supply of industry, cities, energy and other sectors..... The impacts of climate change on societies are gradually coming to the forefront, and there is an urgent need to strengthen coping capacities and seek sustainable and resilient paths to development.

In June 2022, 17 departments, including MEE, NDRC and the Ministry of Science and Technology (MOST) jointly published the *National Climate Change Adaptation Strategy 2035*, which calls for efforts to strengthen urban climate risk assessment, adjust and optimize the functions of cities, guarantee the safe operation of urban infrastructure, improve the functioning of urban ecosystem services, strengthen flood prevention capacity building and water supply of cities, and upgrade the capacity of cities to cope with climate risks. The *Adaptation Strategy 2035* also stipulates that in the urban space, the focus will be on reducing climate risks with respect to populations, social and economic development, and infrastructure, building climate-resilient cities, and improving urban climate risk prevention and control capacity; in the agricultural space, the focus will be on enhancing the ability of agricultural production to adapt to climate change, thereby assuring national food security and the supply of important agricultural products; in the ecological space, the focus will be on protecting the ecological environment, enhancing biodiversity, and providing a supply of ecological products to maintain national ecological security, which sets clear targets for territorial spatial planning and the adaptation of different main functional areas.

In September 2022, MEE issued the *Guidelines for the Preparation of Provincial Action Plans for Adaptation to Climate Change*, which proposes to start the preparation of provincial action plans for climate adaptation as soon as possible, and actively expand international cooperation on climate adaptation. By 2025, the policy system and institutional mechanism for climate adaptation should be basically in place; by 2030, the technology and standards system for climate adaptation should be basically established; and by 2035, a climate-resilient society should be basically built.

In April 2023, the *Action Plan for Adaptation to Climate Change in Sichuan Province* (hereinafter referred to as the “Action Plan”) was released, which is also the

first provincial-level action plan for climate adaptation in China. The *Action Plan* specifies ten key actions, including climate change risk monitoring and assessment; ecosystem adaptation to climate change; water resources adaptation to climate change; agriculture adaptation to climate change; infrastructure adaptation to climate change; habitat adaptation to climate change; sensitive industry adaptation to climate change; health adaptation to climate change; natural disaster response and integrated management; and enhanced climate resilience in territorial spaces. In January 2023, the Department of Ecology and Environment of Zhejiang Province and seven other departments jointly issued the *Implementation Opinions on Promoting Climate Change Investment and Financing in Zhejiang Province*. It is proposed that during the 14th FYP period, centering on climate change mitigation and adaptation, we will further improve the climate investment and financing system, enhance the quality and digital level of climate investment and financing services, actively innovate and apply carbon financial products, basically form a climate investment and financing system in support of the green, low-carbon and circular development, lead the pilot work of climate investment and financing nationwide, and produce a batch of landmark results with typical exemplary significance.

(V) Steadily advancing the building of China's national ETS

Since its official launch on July 16, 2021, China's national ETS has become the world's largest carbon market in terms of covered emissions, with about 4.5 billion tons of CO₂ emissions covered annually. On December 31, 2021, the first compliance cycle was successfully concluded, with a fulfillment rate of 99.5%. As of May 24, 2023, China's national ETS has operated safely for 449 trading days, with a total of 235 million tons of China Emission Allowances (CEAs) traded, involving a total turnover of 10.786 billion yuan, and a total of 61,350 transactions cleared, involving a clearing amount of 21.571 billion yuan.

The first compliance cycle of the national ETS started from January 1, 2021 to December 31 of that year. According to the *Report*, the national ETS included a total of 2,162 key emitters in the power sector in the first compliance cycle, covering an annual CO₂ emission of about 4.5 billion tons, making it the world's largest carbon market in terms of covered emissions. In the first compliance cycle, spot trading of CEAs was carried out among key emitters in the power sector, 847 emitters experienced a quota shortfall totaling 188 million tons, and a total of 32.73 million tons of China Certified Emission Reductions (CCERs) were used for quota clearing offsets.

Overall, it seems that the trading volume in the national ETS is relatively close to the quota shortfall of key emitters. The main purpose of the trading entities is to fulfill their compliance obligations, and the trading volume can basically meet the compliance needs of key emitters. In January, 2023, MEE released the *Report on the First Compliance Cycle of the National Carbon Emission Trading Market*, which indicates that: the total trading volume of CEAs in the first compliance cycle amounted to 179 million tons, involving a total turnover of 7.661 billion yuan; the national ETS operated in a smooth and orderly manner, and the trading price rose steadily. The framework for the operation of the national ETS has been basically established, the role of the price discovery mechanism has been initially demonstrated, the awareness and capacity of enterprises to reduce emissions have been effectively improved, and the expected targets have been achieved.

In order to effectively upgrade the quality of carbon emission data in the national ETS, improve the long-term mechanism of data quality management, and strengthen the daily supervision of data quality, MEE issued the *Guidelines on Accounting Methodology and Reporting of Corporate GHG Emissions: Power Generating Facilities (Draft for Comments)* and the *Technical Guidelines for Verification of Corporate GHG Emissions: Power Generating Facilities (Draft for Comments)* in December 2022, to revise the technical specifications for accounting and reporting GHG emissions from power generation facilities. Moreover, MEE prepared technical guidelines for the verification of GHG emissions from power generation facilities, with a view to improving the standardization, effectiveness and transparency of emissions reporting and verification, enhancing the main responsibility of enterprises, optimizing the workflow, strengthening daily supervision, reinforcing chain-wide data quality management in an all-round way, and establishing a long-term mechanism for the management of carbon market data.

In June 2023, MEE revised the *Interim Measures for the Administration of GHG Voluntary Emission Reductions Trading* (hereinafter referred to as the “Interim Measures”), and compiled the *Measures for the Administration of GHG Voluntary Emission Reductions Trading (Trial) (Draft for Comment)* (hereinafter referred to as the “Measures”), and openly solicited public opinions from the whole society on the *Measures*. In addition, MEE has accelerated the preparations for the launch of the voluntary emission reductions (VERs) trading market, and strived for an early launch of the national VERs trading market in 2023.

(VI)CCICED policy recommendations

In 2022, CCICED has made a number of valuable policy recommendations on energy, environment and climate. These are detailed below:

Accelerating investment in renewable energy: The broad reform of China's electricity power market towards greater market orientation will strengthen the efficiency of market pricing mechanisms that in turn will attract additional private sector investments in green electricity generation. The current spot market should be expanded, with additional pilot projects that include inter-provincial trading. Increased renewable energy deployment should include land and offshore planning, using best-in-class environmental impact assessments, and respecting the ecological redline and spatial planning that protect ecological systems, including migratory corridors. The further scaling-up of renewable energy should include the early queuing for initial public offering (IPO), targeted loans and equity financing, and lower required reserve ratios. Regional renewable energy pilot projects should focus on correcting poor intra-provincial power consumption and out-ward grid connectivity, the inadequate development of regional power grids, and lagging price transmission mechanisms. Power grids should become more flexible and interconnected, and complemented with additional power storage to better integrate renewable energy sources.

Stabilizing the stock, strictly controlling the increment, and guiding the orderly phase-down of coal power: Efforts should be made to peak coal use by 2025, in order to achieve the peaking of carbon dioxide emissions before 2030. Short- and interim-term planning should be closely aligned with the dual control low-carbon transition, comprised of a short-term shift in coal power from base-load power generation to peak-management power generation; the elimination of outdated coal generating capacity while ensuring reasonable operating hours for high-efficiency and low-emission coal power; modernizing the remaining coal power fleet to further cut criteria air pollutants; paying special attention to cutting methane and other short-lived climate pollutants; paying close attention and leading financial risk disclosure related to coal and other fossil-fuel investments, and adjusting the investors' expectations for action related to stranded asset risks. An open and competitive auction-based mechanism to replace the guaranteed hours and price of coal-fired power generation units should be established, in conjunction with an efficient electricity-price market to provide economic returns for the flexibility of power.

Establishing a multi-objective collaborative mechanism for reducing pollution, cutting carbon emissions, expanding green development and pursuing economic growth: It is recommended to mainstream Nature Based Solutions (NbS); establish a standard Chinese system for NbS that aligns with the 2022 UNEA multilateral definition, and international standards; integrate NbS into existing policies such as the ecological redline, expand the Green Bond Endorsed Projects Catalogue and an updated green finance classification system to include eligible NbS project financing.

Developing a sound governance system for green and low-carbon transition and strengthening innovative and flexible institutional capacity building: It is advised to prioritize the development of a dedicated climate change law to set the necessary legal basis for China's climate transition, and explore to include dual carbon targets and climate adaptation into the scope of public interest litigation by procurators; develop integrated climate data systems and standards to enhance the integrity of the national ETS; and improve the quality of emissions data by building capacity, clarifying the responsibilities of the main emitters and setting penalties.

Systematically assessing risks from green and low-carbon transition and identifying key affected sectors and regions: It is proposed to undertake an ongoing, systemic risk assessment of the low-carbon green transition, paying close attention to inflationary effects of carbon pricing, stranded asset financial risks, price volatility and default risks in high-carbon sectors.

Building a diversified capital investment and financing mechanism: Transition finance should be utilized to facilitate corporate green transitions based on climate, biodiversity, pollution risk disclosure and transition timetables, and to avoid a net increase in fossil energy investments during the transition. The integration of climate, environmental and ecological finance should be encouraged through public-private partnerships and payments for ecosystem services. Moreover, a multi-party cooperation platform should be developed to track and disclose the greenwashing of ESG investments on an annual basis.

IV. Pollution Prevention and Control

(I) Further advancing air pollution prevention and control

Combating air pollution is a complex and systematic project that requires

unremitting and strenuous efforts. The CPC Central Committee and the State Council attach great importance to the air pollution prevention and control. Since the 18th CPC National Congress, China's ambient air quality has improved significantly due to the formulation and implementation of the *Action Plan for the Prevention and Control of Air Pollution* and the *Three-Year Action Plan to Fight for Blue Skies*.

In November 2022, MEE, together with NDRC, the Ministry of Industry and Information Technology (MIIT), the Ministry of Transport (MOT) and ten other departments, jointly formulated the *in-depth fight to eliminate heavily polluted weather, ozone pollution prevention and control of diesel truck pollution treatment plan*, to make concentrated efforts to further fight for blue skies in key areas, time periods, and areas, and push for the sustained improvement of national air quality. In 2022, the State Council issued the *Comprehensive Work Plan for Energy Conservation and Emission Reduction during the 14th Five-Year Plan Period*, which proposes to further push forward actions on air pollution prevention and control in key areas in autumn and winter, and step up structural adjustment and pollution control in key industries; pursue synergistic emission reduction of VOCs and NO_x, and strengthen coordinated control of fine particulate matter and ozone, with focus on key regions for air pollution prevention and control, the Pearl River Delta region and Chengdu-Chongqing region.

According to the data released by MEE, in 2022, the three binding indicators of national air quality met the schedule targets; the annual average PM_{2.5} concentration in cities above prefecture level nationwide reached 29 µg, entering the 20+ era for the first time; the number of days with good air quality accounted for 86.5%, and the number of heavily polluted days dropped to 0.9%, with all three indicators meeting the schedule targets during the 14th FYP period.

(II) Reinforcing water pollution prevention and control

Since January 2022, many new environmental regulations on domestic water use are being implemented by local governments at all levels. For example, Shandong Provincial Department of Ecology and Environment, Provincial Department of Housing and Urban-Rural Development, Provincial Department of Agriculture and Rural Affairs, and Provincial Department of Finance jointly issued the *Interim Measures for the Administration of Operation and Maintenance of Rural Domestic Sewage Treatment Facilities in Shandong Province*, which came into effect from January 1, 2022. The Interim Measures stipulates that the operation and maintenance entities shall not suspend the operation of rural sewage treatment facilities without

authorization. In the event of suspension of operation due to breakdown, it should be reported to the county (city or district) operation and maintenance authorities within 24 hours. If the operation is suspended due to overhaul and maintenance, renovation and upgrading, it should be reported to the operation and maintenance authorities and other relevant departments 10 working days in advance, stating the reasons for the suspension of operation and the emergency measures taken.

On November 25, 2021, the 31st Session of the Standing Committee of the 13th Sichuan Provincial People's Congress adopted the *Regulations on Ecological and Environmental Protection of the Jialing River Basin in Sichuan Province*, which came into force on January 1, 2022. Where the water environment is seriously polluted and an emergency that jeopardizes human health and safety occurs or is likely to occur, the local people's government at or above the county level where the accident occurs shall immediately activate the emergency response plan, and, if necessary, may order the relevant enterprises, institutions, and other production operators to take temporary emergency measures such as restricting production and suspending production. On September 9, 2021, the People's Government of Zhejiang Province approved and issued the *Discharge Standard for Water Pollutants from Centralized Rural Domestic Sewage Treatment Facilities*, which came into force from January 1, 2022. Considering the large number but small water volume of rural sewage treatment facilities with a design size of less than 5 tons/day, Zhejiang Province took the first to explore and implement standard-based management of rural sewage treatment facilities of different sizes.

In addition to the policy of domestic water pollution prevention and control, the central government has strongly supported the ecological protection and restoration of river basins in recent years. In May 2023, the CPC Central Committee and the State Council issued the *Outline of the National Water Network Construction Plan*, an important guiding document for the construction of national water networks in the current and future periods. The set goals are that by 2025, a number of national water network backbone projects will be launched; the construction of national backbone networks will move faster; provincial, municipal and county water networks will be deployed in an orderly manner; intensified efforts will be made to make up for shortcomings and weaknesses in water resource allocation, urban and rural water supply, flood control and drainage, water ecology protection, intelligent water networks, etc.; the capabilities to prevent flood and drought disasters, intensively and economically use water resources, optimize the allocation of water resources, and protect and improve

the ecology of major rivers and lakes will be further upgraded; the intelligent level of water network projects will be improved; and the national water supply capacity will be obviously enhanced. By 2035, the overall pattern of national water networks will be basically formed, the main framework and arteries of national water networks will be gradually built, provincial, municipal and county water networks will be basically perfected, and a national water supply security system compatible with the basic realization of socialist modernization will be in place. Hydropower projects will be systematically managed to ensure that they undergo science-informed, robust and participatory EIA prior to project development, safeguard hydrological integrity and ecological water demand, and reduce ecological impacts through measures such as ecological scheduling and installation of fish passage facilities.

To this end, efforts shall be made to strengthen integrated land and water management of river basin shorelines, and promote the shift of downstream industrial port shorelines into ecological and living shorelines; formulate and supervise the implementation of the “three lines and one list” for shoreline protection and utilization; incorporate green and low-carbon objectives into the laws, regulations, standards and guidelines of river basins; carry out optimal utilization and replacement of shorelines; advocate for shoreline reserve lands to provide flexibility for future development subject to spatial planning requirements; and explore the cultural and economic value of water, and promote shoreline renewal and public space building.

Shandong Province issued the *Regulations on the Protection of Nansi Lake in Shandong Province*, which came into force since January 1, 2022. It stipulates that citizens, legal persons and other organizations shall have the right to report to the people's governments at or above the county level and the relevant departments of the Nansi Lake basin any illegal act that pollutes or damages the ecological environment of the Nansi Lake. The people's governments at or above the county level and the relevant departments receiving the report shall handle according to law and give awards in accordance with the relevant provisions. Hainan Province has pushed ahead with the fight against water pollution, and the “six water co-governance” has continuously enhanced the overall coordination of water control in the province. Hainan Province has developed a sound consultation-based working mechanism for identification, early warning and resolution of water ecological and environmental problems, to facilitate early discovery, early response and early elimination of problems; issued the *Ecological and Environment Monitoring and Evaluation Plan for Water Control in Hainan*

Province, to provide accurate monitoring data support for water control; implemented the *Environmental Action Plan for Remediation of Urban Black and Smelly Water Bodies in Hainan Province*, to carry out the provincial environmental action for remediation of urban black and smelly water bodies, resulting in 40% of black and smelly water bodies eliminated in county-level cities; built and renovated 648 km of pipe networks to tackle the shortcomings of domestic sewage treatment, with the centralized urban sewage collection rate increased by 5.3%, and the coverage rate of sewage treatment facilities in organic towns increased by 14.5% on a year-on-year basis.

(III) Accomplishing preliminary results in soil pollution prevention and control

In order to deeply implement the spirit of the 20th CPC National Congress, actively implement the relevant requirements of the *Law of the People's Republic of China on Environmental Protection*, the *Law of the People's Republic of China on Prevention and Control of Solid Waste Pollution* and the *Law of the People's Republic of China on Prevention and Control of Soil Pollution*, and give full play to the role of advanced technologies in the prevention and control of solid waste and soil pollution, MEE planned to compile a *National Catalogue of Advanced Pollution Prevention and Control Technologies (in the field of Solid Waste and Soil Pollution Prevention and Control)* in 2022, to recommend technologies for the disposal and recycling of urban and rural domestic waste.

In June 2023, MEE issued a notice on public solicitation of opinions on *the Guiding Opinions on Promoting Green and Low-carbon Soil Pollution Risk Control and Remediation (Draft for Comments)*. The *Guiding Opinions* stresses that it is necessary to strengthen the whole-process quality control and supervision, comprehensively improve the level of investigation and assessment of soil pollution status, promote the integration of multidisciplinary, multi-method and multi-means investigation techniques, and accurately map the scope and degree of contamination; establish a dynamic work strategy to optimize the survey work plan in a timely manner based on field test data; and improve the accuracy and efficiency of the survey using rapid on-site screening techniques. For large and complex contaminated sites, risk assessment methods and parameters shall be scientifically selected based on pollutant migration and transformation patterns and effective exposure doses, and remediation and control targets can be reasonably determined to avoid excessive remediation.

Local governments have also carried out effective soil pollution prevention and control measures. In order to better prevent and control soil, groundwater and agricultural and rural pollution in 2023, Jiangsu Province has formulated the *Work Plan for the Prevention and Control of Soil, Groundwater and Agricultural and Rural Pollution in Jiangsu Province in 2023*. It is proposed that a sound whole-process risk prevention and control system for soil pollution and a sound management system for the prevention and control of groundwater pollution will be established; the overall quality of the province's soil and groundwater environments will remain stable; the safe utilization rate of contaminated arable land will reach more than 93%; the safe utilization of key construction land will be effectively guaranteed; the proportion of groundwater monitoring points with Class V water quality in state-controlled regional points will meet the assessment requirements, and the water quality of the risk points will remain stable in general; efforts will be deepened to improve rural living environments, so as to further improve the quality of rural ecological environment; the rural domestic sewage treatment rate will reach 47%; 90% of rural black and smelly water bodies under national regulation will be remediated; and an additional 400 rural environmental remediation tasks will be completed.

(IV) Strengthening marine pollution prevention and control

It is specified in the report to the 20th CPC National Congress that we will develop the marine economy, protect the marine ecological environment, and step-up efforts to build China into a strong maritime country. On December 27, 2022, the draft amendments to the *Marine Environmental Protection Law* was initially submitted to the 38th session of the 13th NPC Standing Committee for deliberation, with a view to further improving the quality of the marine ecological environment through amendments to the law.

In 2022, China introduced a series of policies for marine environmental protection. In January 2022, in order to implement the decisions and arrangements made by the CPC Central Committee and the State Council on further combating pollution, MEE, together with NDRC, the Ministry of Natural Resources (MNR), the Ministry of Housing and Urban-Rural Development (MOHURD), MOT, the Ministry of Agriculture and Rural Affairs (MARA), and China Coast Guard (CCG), formulated the *Action Plan for Comprehensive Remediation of Key Sea Areas*. According to the *Action Plan*, comprehensive remediation will be carried out in the three key sea areas of Bohai Sea, Yangtze River Estuary-Hangzhou Bay and adjacent waters of the Pearl River

Estuary, involving Tianjin, Shanghai and other “2 + 24” coastal cities. A head from MEE said that the *Action Plan* deploys eight special actions such as the investigation and rectification of sea outfalls. The set goals are that by 2025, the ecological environment of the three key sea areas will continue to improve; the proportion of three key sea areas with good water quality will be increased by around 2% compared to 2020. The head from MEE indicated that systematic, comprehensive and source remediation of all kinds of pollution in the land and sea would be carried out, and these actions in key sea areas would contribute to the overall improvement of the ecological and environmental quality of offshore waters across the country.

In March 2022, the work reports of provincial governments in coastal areas were released one after another, and 11 provinces (municipalities and autonomous regions), including Liaoning, Hebei, Tianjin, Shandong, Shanghai, Jiangsu, Zhejiang, Fujian, Guangdong, Guangxi, and Hainan, made arrangements for sea-related work in 2022. Building of a strong maritime province, marine ecological restoration, development of coastal economic zones, and land-sea integration became key words in a number of *Report on the Work of the Government*. On January 20, 2022, Liaoning Province released its *Report on the Work of the Government*, which specifies that we will strongly promote the high-quality development of the coastal economic belt with Dalian as the leader; support Dalian in building a strong maritime city in Northeast Asia, reinforce system-oriented opening up, and build Liaoning coastal economic belt into “Two Priority Areas and One High Ground”; deepen pollution control; implement the “bay chief system”, consolidate and deepen the Bohai Sea (Liaoning section) comprehensive remediation results, carry out marine ecological protection and restoration projects, and maintain the good water quality of offshore waters. The *Report on the Work of Government of Hebei Province* stresses that we will strengthen river basin remediation of water pollution, carry out a special campaign to improve the water quality of rivers entering the sea and offshore waters, and create beautiful rivers, lakes and bays.

In order to implement the comprehensive remediation of key sea areas, Guangdong Province has successively issued the *Plan for Marine Ecological and Environmental Protection of Guangdong Province during the 14th Five-Year Plan Period* and the *Implementation Plan for the Comprehensive Remediation of Sea Areas Adjacent to the Pearl River Estuary*, pushed forward the systematic pollution control in the river basin, effectively reduced a load of pollution into the sea, and simultaneously improved the water quality of rivers entering the sea and offshore waters. In 2022, 33

of the 36 state-controlled river sections entering the sea had good water quality, accounting for 91.7%; 32 inferior Class V state-controlled river sections entering the sea were eliminated; and the proportion of offshore waters with good water quality remained at about 90% for three consecutive years. Focusing on reducing the total amount of nitrogen entering the sea, the province paid close attention to the management and control of total nitrogen in rivers entering the sea. To implement the *Opinions of the General Office of the Ministry of Ecology and Environment on the Management and Control of Total Nitrogen and Other Pollutants in Rivers Entering the Sea in Key Sea Areas*, Guangzhou, Zhuhai, Zhongshan and Jiangmen were organized to formulate and implement the “one-policy for one river” management and control plans. The Provincial Department of Ecology and Environment has organized the development of water pollutant discharge standards for the Sha River and Qijiang River Basins, and proposed total nitrogen discharge limits.

MEE has taken a number of measures to develop marine carbon sinks. On the one hand, the *Guiding Opinions on Coordinating and Strengthening the Work of Addressing Climate Change and Protecting the Ecological Environment* was issued and implemented, which clarifies a series of priority tasks, such as actively promoting synergies between ecological protection and restoration of oceans and coastal zones and their adaptation to climate change, and fostering the integration and harmonization of monitoring systems. On the other hand, efforts to enhance marine response and adaptation to climate change were incorporated into the *National Plan for Marine Ecological and Environmental Protection during the 14th Five-Year Plan Period*, to systematically deploy relevant priority tasks. In addition, in conjunction with major remediation actions in the Bohai Sea, MEE has also urged localities to accelerate the marine ecological restoration and rehabilitation, organized the monitoring and assessment of marine carbon sinks, carried out the monitoring of carbon fluxes in coastal zones, and strengthened capacity building for relevant monitoring and assessment.

In 2023, China's provinces successively introduced various policies and plans for marine carbon sinks. In March 2023, Zhejiang Province issued the *Guiding Opinions on Enhancing the Capacity of Marine Carbon Sinks in Zhejiang Province*, which proposes five major tasks: scientific research on marine carbon sinks, marine ecological protection and restoration, integrated development of marine carbon sinks, the diversified transformation of the value of marine carbon sinks, and pilot projects of

marine carbon sinks, so as to significantly enhance the capacity of marine carbon sink ecosystems in terms of carbon sequestration and sink enhancement.

(V)CCICED policy recommendations

Policy recommendations submitted to the Chinese government from the CCICED 2022 AGM are listed below:

Reinforcing ecological conservation and restoration of river basins: It is suggested to strengthen the control of soil erosion and desertification in mountainous and hilly areas and implement the “returning space to rivers” campaign to restore river and lake basins; systematically manage hydropower projects to ensure that they undergo science-informed, robust and participatory EIA prior to project development, safeguard hydrological integrity and ecological water demand, and reduce ecological impacts through measures such as ecological scheduling and installation of fish passage facilities; promote ‘grain- for-green’ in ecologically sensitive areas and strengthen ecological restoration; pay attention to the melting of glaciers at the source of the Yangtze River and strengthen monitoring and early warning; and improve the safety and security mechanisms for vulnerable groups – especially women in disaster-prone areas such as villages, small towns, and flood storage areas.

Strengthening integrated water and land management of basin: promoting the transition of the downstream industrial port shoreline into an ecological shoreline and a shoreline for residents. Concerted efforts should be made to formulate and supervise the implementation of the "three lines and one list" for shoreline protection and utilization; integrate green and low-carbon objectives in the basin-wide law, regulations, standards and guidelines; carry out the optimal utilization and vacating and replacing of the shoreline; reserve land on the shoreline to provide flexibility for future green development in compliance with spatial plans; explore the cultural and economic values of water; and promote shoreline renewal and public space construction.

Strengthening the protection and restoration of marine ecosystems: harnessing the value of marine carbon sinks. Extensive measures should be taken to strictly enforce zoning management systems to avoid further destruction of marine habitats and coastal wetlands, and to restore degraded or damaged coastal wetlands and strictly protect critical marine habitats; invest in the creation of resilient, well-connected networks of marine protected areas covering national parks, nature reserves, and marine areas within the ecological redlines; align large marine protected areas and habitats of

major importance with carbon storage. Referring to the Intergovernmental Panel on Climate Change (IPCC) guidelines to include oceanic carbon sinks in the national greenhouse gas inventory, scientifically assess blue carbon in marine and coastal ecosystems under climate-smart integrated management for inclusion in China's updated NDC; anticipate the forthcoming global treaty on tackling plastic pollution, by taking early measures that encourage reduction, reuse, recycling and replacement, and support international cooperation; initiate pilot projects to tackle plastic pollution before the completion of the global plastics treaty.

V. Ecosystem and Biodiversity Conservation

(I) Intensifying integrated ecosystem management

According to the report to the 20th CPC National Congress, to enhance diversity, stability, and sustainability in our ecosystems, it is necessary to carry out major projects for preserving and restoring key ecosystems at a faster pace, as well as major biodiversity protection projects.

Active efforts have been made to implement major projects to conserve biodiversity nationwide. In January 2022, the *Biodiversity Conservation and Utilization Plan in Hebei Province (2021-2030)* was released to promote major biodiversity protection projects and strengthen the building and management of the nature reserve system. In May 2022, the Yunnan Provincial Party Committee and Provincial People's Government issued the *Plan for Pioneering Ecological Civilization in Yunnan Province (2021-2025)*, proposing to implement the key species and ecosystem conservation project, Asian elephant conservation project, flagship wildlife critical habitat conservation and restoration project, rescue and conservation project of extremely small populations of wild plants, etc., and integrate the concept of biodiversity protection into the whole process of promoting ecological progress. In November 2022, the *Implementation Opinions of Further Strengthening Biodiversity Conservation in Shaanxi Province* was issued, proposing to implement major biodiversity protection projects, ensure that the province's important ecosystems, biological species, and biogenetic resources are comprehensively protected, and protect the treasure house of biodiversity in Qinling Mountains. In the wetland biodiversity protection project of Minjiang River estuary in Fujian Province, the wetland biodiversity continued to improve, and the number of waterfowl and migratory birds increased significantly through returning aquaculture facilities to wetlands, eliminating *Spartina alterniflora*

Loisel, creating ecological bird islands, restoring ecosystems, and creating ecological landscapes. In February 2022, the Department of Ecology and Environment of Jiangsu Province issued the *Plan for Biodiversity Observation Capacity Building (Phase I) in Jiangsu Province*. It is proposed to construct provincial biodiversity observation stations in accordance with the characteristics of “one horizontal, two verticals and +” distribution, where 5 observation stations will be set up along the river, i.e. “one horizontal”; 5 and 4 observation stations will be set up along the Grand Canal and the coast, i.e. “two verticals”; and 6 observation stations will be set up in low hills and mountains, i.e. “+”. On this basis, a four-in-one biodiversity observation network with strong observation ability, sufficient scientific research support, good regulatory services, and a high level of publicity will be gradually formed, becoming the heart of integrating biodiversity data and information in the province, and the cornerstone for understanding the trend of regional biodiversity dynamics.

1. Ecological redline system

In order to strengthen ecological and environmental supervision of ecological redlines, strictly abide by ecological redlines, and safeguard national ecological security, MEE promulgated the *Measures for Ecological and Environmental Supervision of Ecological Redlines (Trial)* on December 27, 2022, which proposes to uphold the principles of ecological priority, holistic approach, green development, problem orientation, category-based supervision, and public participation, and establish a rigorous supervision system, so as to maintain the boundary of the natural ecological security with redlines, and to ensure that the ecological function of ecological redlines will not be degraded, the area will not be reduced, the nature will not be changed, and the quality and stability of the ecosystem will be enhanced. In the meantime, national ecological and environmental supervision of ecological redlines will be carried out, which includes: the formulation and implementation of the ecological environment related system of ecological redlines, the impact of adjusted ecological redlines on the ecological environment, the impact of anthropogenic activities within ecological redlines on the ecological environment, the status of ecological function of ecological redlines and changes, the ecological damages within ecological redlines and their treatment and rectification, the ecological environment effectiveness of ecological protection and restoration projects within ecological redlines, and other matters stipulated by laws and regulations to be supervised by ecology and environment departments. At present, the delineation of ecological redlines has been basically

completed. The area of ecological redlines in the terrestrial area accounts for about 30% or above, covering all national ecological functional zones for biodiversity protection, ecologically fragile zones and critical areas of biodiversity distribution, with 90% of key ecosystem types and 74% of wild animals and plants being protected.

Guided by the national policy, many regions have been pioneering, closely integrating the national top-level design with local ecological and environmental protection, formulating and implementing local laws and regulations and normative documents related to the management of ecological redlines, and actively carrying out supervision and management practices of ecological redlines, thus having accumulated experience for strengthening the supervision of ecological redlines and critical ecological spaces, as well as for exploring the supervision system of ecological redlines. The *Provisions on the Management of Ecological Redlines in Hainan Province*, which came into effect at the end of May 2022, clarifies that the Hainan Provincial Department of Ecology and Environment, in conjunction with the relevant departments, will coordinate the building of a supervision platform for ecological redlines, and implement dynamic supervision of ecological redlines. Jiangsu Province has effectively put the ecological redline protection into practice. For example, Jingjiang City has developed a “regional supervision platform for ecological redlines”, with real-time positioning, ecological redline boundary query, distance and area measurement, key pollution sources query, etc., which greatly improves the efficiency of ecological redline management and control. Guizhou proposed that governments at all levels play a key role in strictly observing ecological redlines, and are responsible for the implementation, protection, supervision and management of ecological redlines. Moreover, they should strengthen the daily supervision of ecological redlines, carry out special actions to enforce ecological redlines from time to time, and promptly discover and seriously investigate violations that damage the ecological environment. In May 2023, Shandong Province issued the *Measures for Ecological and Environmental Supervision of Ecological Redlines in Shandong Province (Trial)* to explore and innovate the supervision procedures, which puts forward the supervision workflow of “problem discovery-handing over for investigation and handling-supervision and rectification” and the rectification and cancellation process of “county application-municipal cancellation-provincial review”, so as to ensure the feasibility and effectiveness of supervision of ecological damage-related issues.

2. Ecological compensation policy

On April 26, 2022, after deliberation and adoption by the Commission for Deepening Overall Reform of the CPC Central Committee, MEE, in conjunction with 10 relevant departments including the Supreme People's Court (SPC), the Supreme People's Procuratorate (SPP), MOST and the Ministry of Public Security (MPS), issued the *Provisions on the Administration of Compensation for Ecological and Environmental Damages* (HFG [2022] No.31) (hereinafter referred to as the "Provisions"). The *Provisions*, taking into account new issues identified during the reform process of the compensation system for ecological and environmental damages, provide unified guidance for national efforts to compensate for ecological and environmental damages, and further deepens and refines the *Plan for Reform of the Compensation System for Ecological and Environmental Damages*, representing a concrete practice of implementing Xi Jinping's Thought on Ecological Civilization, which will play a positive role in building a sound ecological and environmental protection system.

The *Provisions* clearly defines the division of tasks among departments and the responsibilities of local party committees and governments, makes clear and detailed provisions on key aspects, such as screening of case clues, case jurisdiction, claims initiation, investigation of damages, appraisal and assessment, claims negotiation, judicial confirmation, compensation litigation, and assessment of remediation effects, and proposes to develop sound safeguard mechanisms for development of appraisal and assessment organizations, appraisal and assessment technology methods, fund management, public participation and information disclosure, strengthen supervision and appraisal, and guides comprehensive and in-depth reform.

On January 18, 2023, the Jiangsu Provincial Department of Ecology and Environment and 15 other departments issued the *Implementation Opinions on Implementing the Provisions on the Administration of Compensation for Ecological and Environmental Damages*. In order to implement the national and provincial requirements on work related to compensation for ecological and environmental damages, Nantong City, taking into account of requirements of the higher levels, timely summed up local experience in work related to compensation for ecological and environmental damages, and studied and formulated the *Implementation Plan*, which involves more participating departments, further clarifies the work responsibilities of each department, and defines the contents of investigation, assessment, consultation,

and restoration, which will facilitate the work related to compensation for ecological and environmental damages at the grassroots level.

(II) Strengthening the protection system of mountains, rivers, forests, farmlands, lakes, grasslands and deserts

The report to the 20th CPC National Congress specifies that we will advance the Beautiful China Initiative, uphold the principle that lucid waters and lush mountains are invaluable assets, and take a holistic and systematic approach to the conservation and improvement of mountains, rivers, forests, farmlands, lakes, grasslands and deserts.

On June 7, 2022, MOF released the results of the competitive selection of second-batch projects for the Integrated Protection and Restoration Program of Mountains, Rivers, Forests, Farmlands, Lakes, Grasslands and Deserts (hereinafter referred to as the “China Restoration Program”), and identified 9 second-batch projects for the China Restoration Program.

On June 29, 2022, MOF, MNR and MEE held a meeting to promote the China Restoration Program, which aims to learn and implement the spirit of General Secretary Xi Jinping's important instructions on taking a systematic approach to the restoration of mountains, rivers, forests, farmlands, lakes, grasslands and deserts, implement the important decisions made by the CPC Central Committee and the State Council on the realization of the “dual-carbon” strategic goals, further clarify the responsibility to push forward the orderly implementation of the China Restoration Program, and effectively improve the quality of ecosystems in key ecological areas and carbon sink capacity. The meeting emphasized that the China Restoration Program is a concrete practice to implement the concept of “mountains, rivers, forests, farmlands, lakes, grasslands and deserts are part of the community of life”.

During the 13th FYP period, pilot projects for ecological protection and restoration of mountains, rivers, forests, farmlands, lakes and grasslands were launched, and 25 pilot projects were selected in three batches in key ecological areas, which made useful explorations into systematic improvement paths, effectively reduced hidden ecological security risks, increased the supply of high-quality ecological products, optimized the spatial pattern of the national territory, advanced high-quality regional economic development, and improved the ecosystem quality and carbon sink capacity of key ecological areas. During the 14th FYP period, on the basis of summarizing the experience of pilot projects, the central government has further advanced the China

Restoration Program, and supported 19 provinces in systematic management, and the projects are being actively carried out in an orderly manner.

In December 2022, the United Nations announced at CBD COP15 (Part 2) in Montreal, Canada that the China Restoration Program, which puts into practice the concept of “mountains, rivers, forests, farmlands, lakes, grasslands and deserts are part of the community of life”, was selected as one of the first top 10 “World Restoration Flagships”. The China Restoration Program is a landmark program practicing the concept of “mountains, rivers, forests, farmlands, lakes, grasslands and deserts are part of the community of life”. Since the 13th FYP period, the China Restoration Program had deployed and implemented 44 projects in the important ecological barrier areas of “three zones and four belts”, and completed ecological protection and restoration of more than 3.5 million hectares, with the goal of restoring 10 million hectares of natural ecology by 2030. The selection of the China Restoration Program as one of the “World Restoration Flagships” demonstrates that China is contributing solutions and wisdom to global biodiversity conservation.

(III) Further exploring ways to realize the value of ecological products

In April 2021, the General Office of the CPC Central Committee and the General Office of the State Council issued the *Opinions on Establishing a Sound Mechanism for Realizing the Value of Ecological Products*. By 2025, the institutional framework for realizing the value of ecological products will be initially in place, a relatively scientific accounting system for the value of ecological products will be preliminarily established, the policy system for ecological protection compensation and compensation for ecological and environmental damages will be gradually perfected, the governmental appraisal and assessment mechanism for realizing the value of ecological products will be initially established, “difficulties in quantifying, mortgaging, trading and monetizing” ecological products, etc., will be effectively tackled, the benefit-oriented mechanism for protecting the ecological environment will be basically developed, and the ability to transform ecological advantages into economic advantages has been significantly enhanced. By 2035, a sound mechanism for realizing the value of ecological products will be established, a new model for building ecological civilization with Chinese characteristics will be formed, a green mode of production and life will be widely adopted, and strong support will be provided for the basic realization of building a beautiful China.

On June 7, 2022, the National Forestry and Grassland Administration (NFGA) and the National Bureau of Statistics (NBS) jointly issued a notice and decided to carry out pilot forest resource value accounting in five provinces, including Inner Mongolia Autonomous Region, Fujian Province, Henan Province, Hainan Province and Qinghai Province. The fourth phase of China's forest and grassland resource value accounting was launched to further improve the forest resource value accounting methodology, and a study on grassland resource value accounting was initiated, with the pilot work to be completed by December 31, 2022.

Accounting for the value of ecological products is the key foundation for realizing the value of ecological products. In October 2022, NDRC and NBS commissioned the People's Publishing House to publish a single-volume version of the *Specification for Accounting for the Total Value of Ecological Products*, which specifies the indicator system, specific algorithms, data sources, and statistical calibers of the total value of ecological products. It is the first normative document to put a value on lucid waters and lush mountains, and is of great significance in tackling “difficulty in measuring” ecological products and accelerating the establishment of a sound mechanism for realizing the value of ecological products.

In line with the *Opinions on Establishing a Sound Mechanism for Realizing the Value of Ecological Products*, various localities have successively made practical explorations. During the 14th FYP period, Guizhou Province took the lead in taking actions to realize the value of ecological products, and made new breakthroughs in the four areas, including difficulties in measuring, trading, monetizing and mortgaging ecological products. Shangyou County, Jiangxi Province vigorously carried out ecological environment remediation and water order rectification, with Shangyou River and Yangming Lake as the core, and by observing ecological redlines, gradually improved the water quality of the river basin, developed an industry of revitalizing the whole county with “one fish”, and fostered green ecology for sustainable development. The fish cultured are bright in color, tender in meat and luscious in taste, and the ecological value and brand awareness of “Shangyou Ecological fish” have been upgraded. Wangqing County, Jilin Province attracted investments based on agricultural products, high-quality water resources, climatic conditions and other ecological endowments, promoted agricultural restructuring and integration of the three industries by accommodating to large-scale enterprises, expanded paths for realizing the value of ecological products, and contributed to the high-quality economic development.

In November 2022, Guangdong Province issued the *Implementation Plan for Establishing a Sound Mechanism for Realizing the Value of Ecological Products in Guangdong Province*, which mainly sets out the following objectives: by 2025, the institutional framework for realizing the value of ecological products will be initially in place, a scientific and operational accounting system for the value of ecological products and a mechanism for applying the accounting results will be preliminarily established, the policy system for ecological protection compensation and compensation for ecological and environmental damages will be gradually perfected; by 2035, a sound mechanism for realizing the value of ecological products will be established in an all-round manner.

(IV) Increasing awareness of wildlife protection

China is one of the countries boasting the most diversified wildlife species, with more than 7,300 species of vertebrates. Among them, more than 470 species of terrestrial vertebrates, including *Ailuropoda melanoleuca* and *Rhinopithecus*, are endemic to China. China has always been at the forefront of wildlife conservation in the world. At present, 11,800 nature reserves of various types and at various levels have been established, accounting for 18% of the land area of the country, and more than 85% of the nationally protected wildlife populations have been effectively protected.

On December 30, 2022, the 38th session of the 13th NPC Standing Committee voted to adopt the amended *Wildlife Protection Law*, which came into effect on May 1, 2023. The newly amended *Wildlife Protection Law* strengthens the protection of wildlife habitats, making it clear that crucial wildlife habitats will be delineated into national parks, nature reserves and other nature protection areas for strict protection in accordance with the law. Terrestrial wildlife with important ecological, scientific and social values will be included in the scope of emergency rescue, the capacity of wildlife sheltering and rescue will be strengthened, and sheltering and rescue sites will be set up with appropriate professional and technical personnel, rescue tools, equipment and medicines.

(V) Deepening the building of a management system for national parks

In December 2022, NFGA, MOF, MNR, and MEE jointly issued the *Spatial Layout Program for National Parks*, which proposes that by 2035, China will basically build the world's largest national park system.

First, 49 national park candidate areas will be selected. In terms of concepts and objectives, the national park concepts of ecological protection priority, national representativeness and public welfare for all will be upheld, so as to protect the originality and integrity of natural ecosystems, safeguard national ecological security, and build a firm ecological foundation for building a beautiful China and modernization of harmony between humanity and nature. By 2025, a unified, standardized and efficient management system will be basically established; by 2035, the task of developing the spatial layout of national parks will be basically completed, and the world's largest national park system will be basically built. In terms of spatial layout, the areas with the most important natural ecosystems, the most unique natural landscapes, the best natural heritage and the richest biodiversity will be incorporated into the national park system, and 49 national park candidate areas will be selected (including 5 national parks formally set up), including 44 inland area, 2 inland-sea integrated area, and 3 sea area. The national major strategies and major ecological projects will be fully integrated, of which 13 candidate areas will be deployed in the Qinghai-Tibetan Plateau, forming a cluster of national parks in the Qinghai-Tibetan Plateau, and accounting for 70% of the total area of the national park candidate areas; 11 candidate areas will be deployed in the Yangtze River Basin, and 9 candidate areas in the Yellow River Basin.

Second, the total size of the protected area will rank first in the world. The *Spatial Layout Program for National Parks* is closely linked to the major projects for the protection and restoration of nationally important ecosystems centered on the “three zones and four belts”, and covers the most critical areas of the ecological security barrier in the national territory. A cluster of national parks will be formed in the Qinghai-Tibetan Plateau, with a total area of about 770,000 km², to systematically and holistically protect the “Third Pole of the Earth”; and a number of national park candidate areas will be set up in the Yangtze River Basin and the Yellow River Basin, greatly contributing to protection of the Yangtze River, as well as ecological protection and high-quality development of the Yellow River Basin.

Third, the first batch of national parks will be built at a high standard and from a high starting point. The building of a national park system is a major institutional innovation in the reform of the ecological civilization system. In terms of national park legislation, NFGA will further revise and refine the *National Parks Law* (draft), and guide the relevant provinces and regions to introduce local regulations on national parks,

so as to establish a legal system for national parks and a closed-loop management system covering the whole process.

(VI)CCICED policy recommendations

CCICED proposed a number of valuable policy recommendations on ecosystem and biodiversity conservation in 2022. These are summarized below:

Reinforcing ecological conservation and restoration of river basins: measure should be taken to strengthen the control of soil erosion and desertification in mountainous and hilly areas and implement the “returning space to rivers” campaign to restore the river and lake basins; systematically manage hydropower projects to ensure that they undergo science-informed, robust and participatory EIA prior to project development, safeguard hydrological integrity and ecological water demand, and reduce ecological impacts through measures such as ecological scheduling and installation of fish passage facilities; promote ‘grain for green’ in ecologically sensitive areas and strengthen ecological restoration; pay attention to the melting of glaciers at the source of the Yangtze River and strengthen monitoring and early warning; and improve the safety and security mechanisms for vulnerable groups – especially women in disaster-prone areas such as villages, small towns, and flood storage areas.

Strengthening the protection and restoration of marine ecosystems: Extensive measures should be taken to strictly enforce zoning management systems to avoid further destruction of marine habitats and coastal wetlands, and to restore degraded or damaged coastal wetlands and strictly protect critical marine habitats; invest in the creation of resilient, well-connected networks of marine protected areas covering national parks, nature reserves, and marine areas within the ecological redlines.

VI. Regional and International Engagement

(I)Leading the global biodiversity conservation process into a new phase

On 15 November 2022, during the UNFCCC COP27, the Chinese Presidency of CBD COP15 and Canada, the host country of COP15 Part 2, co-hosted the “Ministerial Event on Action for Biodiversity: the Road Leading to the Success of CBD COP15”, in Sharm el-Sheikh, Egypt. The event emphasized the importance of the *Post-2020 Global Biodiversity Framework* (GBF) in halting and reversing the loss of biodiversity and worked towards the Framework. Ministers of the Parties were invited to discuss the mission and resource mobilization of GBF, with a view to providing direction and

building consensus on the key issues of GBF, and encouraging further political will and motivation to support and contribute to the achievement of a balanced, ambitious and pragmatic Framework at COP15.

The theme of CBD COP15 was “Ecological Civilization: Building a Shared Future for All Life on Earth”, which consisted of two parts. The first part was successfully held in Kunming, China, in 2021, which reviewed GBF and set new global biodiversity targets for 2030. CBD COP15 would set a new vision, strategic plan and targets for the next 10 years and provide direction for global biodiversity conservation.

From December 7 to 19, 2022, COP15 Part 2 was held in Montreal, where the CBD secretariat is based. China, as the Presidency of CBD COP15, led the substantive and political affairs of the Conference, at which the Kunming-Montreal Global Biodiversity Framework (the “Framework”) was successfully adopted, comprising four global long-term goals and 23 specific action targets to be achieved by 2030, depicting a new blueprint for global biodiversity governance up to 2030 and beyond. At COP15, over 60 resolutions were adopted. Parties agreed on key issues such as the targets of the Framework, resource mobilization and digital sequence information on genetic resources. The “30 by 30” pledge was made, which contains a series of targets including protecting at least 30% of the planet’s lands and waters by 2030. Strong measures were put in place to secure financial resources. The agreement made it clear that developing countries must receive the support they need in terms of financial resources, technologies and capacity building. The Framework will guide global efforts on jointly halting and reversing biodiversity loss, promoting biodiversity recovery and realizing the vision of “living in harmony with nature” by 2050.

(II) Actively getting in involved in international response to climate change.

As the world's largest developing country, China has implemented a series of strategies, measures and actions to address climate change, participated in global climate governance and achieved positive results in addressing climate change.

On November 20, 2022, the UNFCCC COP27 in Sharm El Sheikh closed. On the occasion of the 30th anniversary of the UNFCCC, COP27 focused on the practical implementation of the Paris Agreement. China has made important contributions to the achievement of a relatively balanced package of multilateral outcomes, sending a positive signal of upholding multilateralism and joint efforts to address climate change. The international community has widely praised China's proposals, wisdom and solutions to address climate change, believing that China has played an important

leading role in addressing climate change by acting as a responsible major country, and looking forward to China's continued active participation in global governance to address climate change, and the building of a fair, equitable and win-win global climate governance system.

As the world's second-largest economy and the largest developing country, China has taken the initiative to shoulder its responsibilities as a major country in addressing climate change, participating in global climate governance and deeply engaging in global environmental governance. The Chinese Government has continued to push forward the full and effective implementation of the Convention and the Paris Agreement and has been pragmatically carrying out bilateral and multilateral environmental cooperation. In this regard, China has established the China-EU High-Level Dialogue on Environment and Climate, actively carried out exchanges and dialogues such as the meetings of the environment ministers of the member states of the Shanghai Cooperation Organization (SCO) and the China-ASEAN Forum on Environmental Cooperation, strengthened South-South cooperation as well as cooperation with neighboring countries, and supported projects and actions in Africa, South-East Asia and South Asia in such areas as biodiversity conservation, green economy, chemical management, and implementation of international environmental conventions, which are now yielding good results. As of June 2022, China had signed 43 climate change cooperation documents with 38 developing countries, and helped the countries concerned to improve their capacity to cope with climate change by providing weather satellites, photovoltaic power generation systems, new energy vehicles and other climate change related materials.

From March 20 to 21, 2023, the Climate Ministerial Conference, co-convened by Denmark, the Egyptian Presidency of UNFCCC COP27, and the UAE Presidency of COP28, was held in Copenhagen. China expressed its readiness to fully support the UAE in successfully hosting COP28, successfully completing the first Global Stocktake (GST) of the Paris Agreement, and promoting positive outcomes on key negotiation issues such as adaptation, finance, loss and damage, and mitigation. During the conference, China was invited to hold bilateral talks with COP28 President-designate Sultan al-Jaber, UN Assistant Secretary-General Selwin Hart, UNFCCC Executive Secretary Simon Stiell, as well as ministerial representatives from Denmark, Germany, France, UK, Canada and Australia. All parties generally highly valued China's contribution to global climate governance and expressed willingness to further

strengthen the exchange of negotiating positions and deepen policy dialogues and practical cooperation.

On July 4, 2023, Chinese Vice Premier Ding Xuexiang and Executive Vice President of the European Commission Frans Timmermans attended the 4th China-EU High-Level Dialogue on Environment and Climate in Beijing and reached a broad consensus. During the meeting, China and the EU reaffirmed their respective commitments and efforts in addressing climate change and protecting the environment, and resolved to cooperate in areas of common interest and report at the upcoming China-EU Leaders' Meeting. The two sides emphasized the need to make full use of the China-EU High-Level Dialogue on Environment and Climate, to hold regular high-level dialogue meetings, strengthen communication and coordination, and deepen cooperation in key areas.

From July 13 to 14, 2023, the 7th Ministerial Conference on Climate Action, co-organized by China, the EU and Canada and hosted by the EU, was held in Brussels, Belgium. China said that, as the impact of climate change is becoming increasingly severe and the urgency of strengthening climate action is growing, all parties should rebuild political mutual trust, return to the right track of cooperation, resolutely uphold the rules, earnestly fulfill the commitments, act by respective capabilities and strengthen international cooperation. China is ready to work with all parties to ensure the success of COP28 and the building of a fair, equitable and win-win global climate governance system in accordance with the principles of openness, transparency, broad participation, driving by parties and consensus building.

(III) Making steady progress in South-South cooperation

On January 12, 2022, FAO officially launched the third phase of the FAO-China South-South Cooperation Program. So far, the Program has supported the implementation of 17 national projects and 10 global and regional projects, playing a great role in South-South and triangular cooperation. On April 15, the China-WFP Digital Workshop on South-South Cooperation and the launching ceremony of the South-South Cooperation Knowledge Sharing Platform was successfully held in Beijing, which was designed to provide a communication platform for sharing the needs and solutions for food security, nutritional improvement, poverty alleviation, and rural transformation. China adheres to the pattern of international development cooperation, with North-South cooperation as the main channel and South-South cooperation as a complement, and encourages greater development assistance from developed countries

to developing countries, in order to build a new, fair and balanced global development partnership, and create a favorable external environment for poverty reduction.

On June 24, 2022, the High-Level Dialogue on Global Development under the theme “Building A Global Partnership for Development in the New Era, and Joining Hands to Implement the 2030 Agenda for Sustainable Development”, was held during the 14th BRICS Leaders' Meeting. The meeting was chaired by President Xi Jinping via video in Beijing, and attended by leaders of BRICS countries, as well as leaders of relevant emerging market countries and developing countries. The meeting reached a broad consensus on global development issues, implemented the Global Development Initiative in accordance with the consensus, and actively built a platform for the exchange of international development knowledge and experience, making positive contributions to common global development.

From August 27 to 28, 2022, the 6th Conference on South-South and Triangular Cooperation was held in New Delhi, India. The conference was organized around three themes: “New Development Models and Cooperation Principles”, “Global Governance and the 2030 Agenda”, and “Development Pathways and New Measurement Approaches”, aiming to explore new models of development in the wake of global COVID-19 epidemic, international conflicts and climate crisis, and encourage countries to use globalization as an effective tool for cooperation on resources, knowledge and markets so as to trigger a shift in human lifestyles towards sustainable production and consumption.

In November 2022, three major regional and international meetings, including the ASEAN Summit, G20 Summit and APEC Summit, were held back-to-back in Phnom Penh, Bali and Bangkok, making Asia, especially East Asia, a focal spot of global economic governance. On the afternoon of November 10, then Premier Li Keqiang attended the 25th China-ASEAN (10+1) Leaders' Meeting. From November 14 to 19, President Xi Jinping visited Bali and Bangkok, and attended the G20 Leaders' Summit and the APEC Leaders' Informal Meeting in person, during which he put forward China's proposals on how to build consensus, advance cooperation and contribute to a better future for mankind under the new circumstances of world development.

(IV) Building green and low-carbon “Belt and Road Initiative” in-depth

To date, China has signed more than 200 cooperation documents on the co-building of the Belt and Road with 151 countries and 32 international organizations, including ESCAP and UNDP. The construction and operation of key projects such as

the China-Laos Railway and the Hungarian-Serbian Railway are progressing steadily, and a number of “small but beautiful” projects in agriculture, medical care, poverty alleviation and other livelihood areas have been launched one after another. As most of the BRI countries are still in the early stages of economic and social development, with heavy tasks of modernization, industrialization and urbanization, the trend of high carbon intensity will be maintained for periods of time, and the total amount of carbon emissions will continue to rise. Under the context of carbon neutrality, boosting green and low-carbon energy development is of outstanding strategic value and positive practical significance for the BRI countries to cope with the climate crisis and realize the UN 2030 SDGs.

On May 10, 2023, the Belt and Road Green Development Roundtable and the General Meeting of BRI International Green Development Coalition (BRIGC) were held in Beijing. Huang Runqiu, Minister of MEE China and BRIGC co-chairman, emphasized that in recent years, China has always adhered to the concept of green development, initiated a series of green actions, launched the BRI ecological and environmental protection big data service platform, and pushed ahead with the Green Silk Road Envoys Program and the Belt and Road South-South Cooperation Initiative on Climate Change, which have achieved solid results. In particular, BRIGC, initiated by President Xi Jinping, has continuously promoted international consensus and common actions on green development, and provided important technical support for China’s green BRI policy making through dialogues and exchanges, joint research, capacity building and industrial cooperation. Currently, BRIGC has become a major platform for international cooperation on green development under the BRI, and is playing an increasingly prominent role in upgrading the environmental governance capacity of the BRI countries and in jointly realizing the 2030 Agenda. China is ready to join hands with all parties to firmly support BRIGC in playing a more important role in the new historical stage, and making greater contributions to the high-quality building of the Belt and Road, Global Development Initiative, and green development and transition in the BRI countries.

(V) Injecting new elements into international ocean governance

The ocean is a strategic area for high-quality development. The *Outline of the 14th Five-Year Plan and Long-range Objectives Through the Year 2035* proposes the we will actively develop the blue partnership, deeply participate in the formulation and implementation of mechanisms and rules for international maritime governance, and

promote the building of a just and equitable international maritime order and development of a marine community with a shared future. Against this background and under the guidance of this policy, China has taken a number of new measures to participate in global ocean governance, showing a number of new trends, which are the concrete practice and vivid manifestation of its deep participation in global ocean governance.

In order to implement the UN 2030 Agenda for Sustainable Development, the 72nd and 75th sessions of the United Nations General Assembly adopted a resolution designating the period from 2021 to 2030 as the UN Decade of Ocean Science for Sustainable Development (hereinafter referred to as the “UN Ocean Decade”), and adopted a plan for its implementation, which was formally launched on 1 January, 2021.

In August 2022, with the approval of the State Council, MNR led and coordinated with relevant ministries and commissions to set up the China Committee for the UN Ocean Decade to plan, deploy and promote the relevant work. At present, China has successfully approved 1 UN Ocean Decade Collaborative Center, and 5 major science programs, including “Seamless Ocean and Climate Forecast System” and “Negative Global Ocean Emissions”. Among them, the UN “Ocean Decade” Collaborating Center on Oceans and Climate, initiated by the First Institute of Oceanography, MNR, is the only collaborating center initiated by a Chinese institution, which will set up an international office in Qingdao to coordinate activities related to research and governance of oceans and climate change on a global scale. The successful approval of the UN “Ocean Decade” Collaborating Center and the major science programs have laid a solid foundation and created new opportunities for China's participation in international cooperation on oceans under the UN framework.

Marine plastic debris is a widely concerned marine environmental problem. The global “Beat Plastic Pollution” campaign on World Environment Day 2023 called for global solutions to combat plastic pollution. China has taken multiple measures to promote the cleanup and control of marine plastic debris. At the regional level, under the framework of mechanisms such as China-Japan-ROK Environment Ministers' Meeting, China-Japan-ROK Leaders' Meeting, ASEAN-China Leaders' Meeting, G20 Summit and APEC, China has been actively cooperating with its neighboring countries in order to enhance the regional capacity to deal with marine plastic debris through joint scientific research, scientific and technological research and development, technical assistance and academic meetings. In addition, China has cooperated deeply with

UNEP and other international organizations to create demonstration projects, share governance experience and promote practical experience. At the 5th United Nations Environment Assembly in Nairobi in 2022, heads of state and environment ministers from 175 countries approved a historic resolution aimed at putting an end to plastic pollution and reaching a legally binding international agreement by the end of 2024. In 2023, government representatives and stakeholders from around the world gathered in Paris for the second meeting of the Intergovernmental Negotiating Committee (INC-2), where China stated that plastic pollution prevention and control is a major environmental challenge shared by the international community. The Chinese government attaches great importance to the control of plastic pollution, and has continued to implement the whole-chain control, with positive results achieved.

(VI)CCICED policy recommendations

Policy recommendations from the CCICED 2022 AGM are as follows:

Strengthening international climate and biodiversity dialogues and exchanges and contributing to global environmental governance: It is advised to continuously promote bilateral and multilateral climate and biodiversity dialogues. In the COP 15 process, China should prepare for the implementation of GBF, including updating the National Biodiversity Strategy and Action Plan (NBSAP). Building on positive dialogue mechanisms such as EU–China High-Level Climate and Environment Dialogue, and the Ministerial Meeting on Climate Action, China and relevant parties should actively carry out Track 2 and Track1.5 dialogues to control CO₂ and non-CO₂ greenhouse gases. Building on the China-EU, G20, UNEP and other initiatives, continued efforts should be made to identify the next steps in green financial mechanisms, including scaling-up of NbS.

Maintaining the momentum of linking nature and climate actions and promoting synergies: It is recommended that discussions on synergistic climate change governance be strengthened at COP 15 Part 2 and that further progress be made on synergies between biodiversity and climate change at the UNFCCC COP 27 to promote the integration of global climate and biodiversity governance into the Global Development Initiative.

Deepening international cooperation to support green and low-carbon development in BRI countries and exploring new paths of green and low-carbon cooperation under the reform of the global governance system: Relying on multilateral cooperation platforms such as the BRIGC and the Green Investment

Principles (GIP) for the “Belt and Road Initiative”, further efforts should be made to strengthen dialogues and exchanges among stakeholders, promote the establishment of green project development platforms under the framework of South–South cooperation, and deeply align with the green and low-carbon development needs of BRI countries. In conjunction with the Belt and Road South-South Cooperation Initiative on Climate Change and the Green Silk Road Envoys Program, China should help enhance the local capacity of BRI countries to address climate change and achieve an inclusive and resilient recovery; strengthen the South–North–South cooperation platform for low-carbon finance.

With regard to **marine plastic pollution**, it is proposed to anticipate the forthcoming global treaty on tackling plastic pollution, by taking early measures that encourage reduction, reuse, recycling and replacement, and strengthen international cooperation; and initiate pilot projects to tackle plastic pollution before the completion of the global plastics treaty.

VII. Conclusions

CCICED Phase VII has paid more attention to major strategic issues related to China's long-term development, major issues affecting domestic and global sustainable development, and bringing into full play its role as a platform for two-way exchanges and sharing with the international community.

In Phase VII, the scope of CCICED's Chinese and international members has been expanded, including policymakers of the Chinese central government, heads of large enterprises, experts and scholars from renowned think tanks and universities, as well as representatives of multilateral financial institutions, international NGOs, major international organizations and professional institutions. It allows CCICED to hear different voices of the international community on environment and development issues, and facilitates the full exchange and sharing of experiences between China and the world on major environment and development issues.

Standing at a new historical starting point and with a more mature operational mechanism, CCICED Phase VII has given full play to its role as a high-end think tank in the field of environment and development. The systematic, strategic and forward-looking policy recommendations put forward over the past year reflect, to a certain extent, the superior capability of CCICED's Chinese and international members in Phase VII to anticipate domestic and international situations, as well as their insights into the international environment and development law.

Over the past year, the forward-looking proposals put forward by CCICED in the areas of the green and low-carbon transition, energy security, pollution control, green technology innovation and integrated ecosystem management, have been highly valued by the Chinese government, providing an important reference for future work on ecological civilization. China cannot achieve high-quality development and promote ecological progress without international cooperation. China has actively advanced South-South cooperation, responded to UN SDGs, and made new progress in issues of global concern, such as biodiversity conservation, addressing climate change, and marine ecological and environmental protection. China will continue to cooperate with the international community in a more open manner and contribute to the world's green prosperity.

Looking ahead, in terms of policy studies, CCICED, as an international high-end think tank, will keep abreast of the overall development trend of environment and development at home and abroad, attach importance to the "innovation" and "foresight"

of research results, and put forward innovative and pioneering policy recommendations on issues of great concern at home and abroad, such as climate governance, low-carbon development, energy revolution, and just transition.

Appendix: Progress on China’s Environmental and Development Policies and CCICED Policy Recommendations in 2022

Field	Time of Introduction	Policy Progress in 2022	CCICED Policy Recommendations
Environmental and Development Planning	May, 2022	President Xi Jinping stressed at the 29th collective study session of the Political Bureau of the CPC Central Committee that it is necessary to strengthen the Party's overall leadership over ecological civilization and put ecological civilization in a prominent position in the overall work, and take a holistic and systematic approach to the reform of the ecological civilization system, and the improvement of mountains, rivers, forests, farmlands, lakes, grasslands and deserts.	CCICED recommended in 2022 that China should unremittingly hold firm in its strategic determination towards Ecological Civilization, by prioritizing and stabilizing expectations for a green, low-carbon transition, and move from securing short-term economic, energy, food and other security to unleashing win-win short and long-term green economic stimulus, innovation, low-carbon growth in which science links short, interim and longer-term green development targets and timetables. In this way, China will open a new green chapter for high-quality development.
	October, 2022	General Secretary Xi Jinping stressed in the report to the 20th CPC National Congress that, “We must uphold and act on the principle that lucid waters and lush mountains are invaluable assets, and we must remember to maintain harmony between humanity and nature when planning our development”.	
	October, 2021	In October 2021, the General Office of the CPC Central Committee and the General Office of the State Council issued the <i>Opinions on Promoting Green Development in Urban and Rural Areas</i> . By 2025, the institutional mechanism and policy	CCICED recommended in 2019 that the 14th FYP should formulate an urbanization strategy based on ecological civilization. The strategy should move away from the quantity-

		<p>system for green development in urban and rural areas will be basically established; the transition to a model of green development will achieve remarkable success; carbon abatement will be implemented in a solid manner; cities will become more integrated, systematic and growth-oriented; the problem of "urban maladies" will be mitigated; the overall quality of the urban and rural ecological environment will be improved; the quality of urban and rural development and the carrying capacity of the resources and environment will be significantly upgraded; the integrated governance capacity will be dramatically improved; and green lifestyles will be generally promoted.</p>	<p>based model to a quality-based model where green urbanization becomes a key driver of China's high-quality economic development. New understanding of the relationship between urban and rural areas should be developed. CCICED recommended in 2020 and 2021 that it will be vital to advance urban green transition in line with the principles of green prosperity, low-carbon, intensive and circular development, equity and inclusiveness, as well as security and health.</p>
	June, 2022	<p>The <i>Yellow River Basin Ecological and Environmental Protection Plan</i> issued by MEE and other departments, is a special plan to implement the "1+N+X" requirements of the <i>Outline of the Yellow River Basin Ecological Protection and High-quality Development Plan</i>, which is of great importance in advancing the ecological protection and high-quality development of the Yellow River Basin.</p>	<p>CCICED recommended in 2022 integrated climate-resilient management for low-carbon and resilient river basins shall be strengthened. To be specific, it is advised to improve climate resilience in the integrated management of important river basins; implement the requirements of the <i>Yangtze River Protection Law</i> and develop a cooperative governance mechanism based on large-scale spatial planning and the co-management of pollution, ecosystem protection, low-carbon development and climate adaptation. Detailed climate vulnerability assessments should be made throughout the Yangtze River basin, from upstream to downstream areas, major</p>
	September, 2022	<p>MEE, NDRC and 15 other departments jointly issued the <i>Action Plan to Further Advance the Ecological and Environmental Protection and Restoration of the Yangtze River Basin</i>, highlighting the key points and synergistic linkages, and focusing on solving outstanding ecological and environmental problems in the Yangtze River protection, and solidly advancing the task of protecting and restoring Yangtze River.</p>	

			tributaries, key urban and rural agglomerations, river coastlines, estuarine deltas, flood storage areas, and agriculture and natural ecological zones. A early risk warning system should be implemented at the basin level for extreme climate-related weather events, with special attention to flooding, wildfires, drought and heat waves.
Governance and Rule of Law	April, 2022	The MEE General Office issued the <i>Implementation Plan for Environmental Impact Assessment and Pollutant Discharge Licensing during the 14th Five-Year Plan Period</i> , to further consolidate the core system of pollutant discharge licensing. It is stipulated that the total-element and full-cycle management of pollutant discharge licensing for stationary pollution sources shall be basically realized; the enforcement and supervision system and the self-monitoring and supervision mechanism of pollutant discharge licensing for stationary pollution sources shall be fully established; the “one permit-based” management of pollutant discharge licensing shall be fully implemented; and the supervision system for stationary pollution sources, with pollutant discharge licensing at its core, shall basically take shape.	In the 2022 SPS Report entitled “Policy Measures and Implementation Pathways for the Carbon Emission Peak and Carbon Neutrality Goals”, it is recommended to coordinate the promotion of pollution reduction and carbon reduction, and make sure that the measures for pollution reduction and carbon reduction are highly aligned. We should focus on “dual high” regions and industries with high air pollutants emission and carbon dioxide emission, and strive for collaborative governance.
	June, 2022	China's first law dedicated to protecting wetlands, the <i>Wetland Protection Law</i> , came into effect. <i>The Law of the People's Republic of China on Prevention</i>	In the 2022 SPS Report entitled “Policy Measures and Implementation Pathways for the Carbon Emission Peak and Carbon Neutrality

		<i>and Control of Noise Pollution</i> came into force.	<p>Goals”, it is suggested to accelerate work on climate legislation to provide a legal basis for carbon neutrality.</p> <p>CCICED recommended in 2022 that efforts should be made to develop a sound governance system for green and low-carbon transition and strengthen innovative and flexible institutional capacity building; prioritize the development of a dedicated climate change law to set the necessary legal basis for China’s climate transition, and explore to include dual carbon targets and climate adaptation into the scope of public interest litigation by procurators.</p>
October, 2022		The <i>Yellow River Protection Law of the People’s Republic of China</i> was formally adopted, which came into force on April 1, 2023.	
October, 2022		<p>The report of the 20th CPC National Congress clearly proposes to "work actively and prudently toward the goals of reaching peak carbon emissions and carbon neutrality". Addressing climate change is a comprehensive and holistic task, and realizing the "dual carbon" goals still faces enormous challenges under the existing legal system and action pathways. To strengthen the legal safeguards for addressing climate change, it is necessary to accelerate the climate change legislation while advancing legislation on ecological and environmental protection.</p> <p>It is proposed in the report to the 20th CPC National Congress that “fiscal, taxation, financial, investment, and pricing policies and systems of standards will be improved to support green development”, highlighting the importance of building a green financial system.</p>	
2022		Local ecology and environment departments at all levels have continued to implement the <i>Guiding Opinions on Optimizing Enforcement Methods for Ecological and Environmental Protection and Improving Enforcement</i>	

		<p><i>Effectiveness</i>, implemented a package of policies and measures to stabilize the economy, and made optimizing environmental supervision methods one of the five key measures to support the smooth operation of the economy in the field of ecological and environmental protection. For example, Jiangsu Province issued the <i>Opinions on Accelerating Off-site Supervision of the Ecological Environment</i>, with a view to constructing a “1+5+N” off-site supervision work system, and developing innovative off-site inspections, off-site enforcement and off-site management.</p>	
	2022	<p>At the local level, many local governments have issued local government regulations and normative documents related to addressing climate change. Shenzhen promulgated the <i>Regulations on Ecological and Environmental Protection of the Shenzhen Special Economic Zone</i>, adding a special chapter on “Addressing Climate Change”; Jiangsu Provincial People's Congress (including its Standing Committee) issued the <i>Decision on Advancing Carbon Peaking and Carbon Neutrality</i> (2022); and Tianjin Municipal People's Congress (including its Standing Committee) issued the <i>Regulations on Promoting Carbon Peaking and Carbon Neutrality in Tianjin</i> (2021). Almost all of the seven pilot provinces and municipalities of Beijing, Shanghai, Tianjin, Chongqing, Guangdong, Shenzhen and Hubei, as well as the regions participating in carbon emissions trading, such as Sichuan and Fujian, have issued local government regulations or normative documents related to carbon emissions trading.</p>	

	February, 2022	PBOC, together with SAMR, CBIRC and CSRC, jointly issued the <i>Development Plan for Financial Standardization during the 14th Five-Year Plan Period</i> . It is proposed to further improve the green financial standards, standardize the green bond standards, enrich the standards for green financial products and services, accelerate the formulation of environmental information disclosure standards for listed companies and bond-issuing enterprises, and establish a system of environmental, social and governance (ESG) assessment standards, etc.	<p>In the 2022 SPS Report entitled “Policy Measures and Implementation Pathways for the Carbon Emission Peak and Carbon Neutrality Goals”, it is recommended to establish a cohesive mechanism for the absolute carbon emission control system and carbon trading market system, and improve the mechanism for carbon pricing; accelerate the coordination and harmonization of the carbon market, energy consumption rights market and green power market.</p> <p>CCICED recommended in 2022 that efforts should be made to create an ongoing working dialogue between financial regulators and relevant government departments, and develop and implement ESG standards; allow consumers to purchase directly green electricity; establish a green responsibility liability account for governments, enterprises, and individuals; develop a comprehensive climate data system and standards, and increase the integrity of the national carbon market.</p>
	April, 2022	CSRC published the financial industry standard- <i>Carbon Financial Products</i> .	
	May, 2022	CBIRC issued the <i>Plan for Standardization of China's Insurance Industry during the 14th Five-Year Plan Period</i> , which calls for the establishment of index standards for green insurance statistics, green capital utilization, and green insurance assessment, so as to contribute to the building of a green financial system.	
	October, 2022	SAMR and eight other departments jointly issued the <i>Implementation Plan for Establishing a Sound Standards and Measurement System for Carbon Peaking and Carbon Neutrality</i> . As one of the supporting plans for the national carbon peaking and carbon neutrality "1+N" system, the <i>Implementation Plan</i> will provide the basis for developing measurement systems for carbon peaking and carbon neutrality	

		by relevant industries, sectors, localities and enterprises.	
	March, 2023	MEE issued the <i>Letter on Openly Soliciting Proposals on Methodologies for GHG Voluntary Emission Reduction Projects</i> (HBBH [2023] No. 95). Methodologies are the main basis for guiding the development, implementation, validation and verification of GHG voluntary emission reduction projects, and play a key normative role in the identification of baselines, demonstration of additionality, accounting of emission reductions and development of monitoring plans for emission reduction projects.	
	July, 2023	MEE prepared the <i>Measures for Administration of GHG Voluntary Emission Reduction Trading (Trial) (Draft for Comments)</i> , which stipulates the basic management requirements for GHG voluntary emission reduction trading and its related activities in term of the validation and registration of voluntary emission reduction projects, verification and registration of emission reductions, trading of emission reductions, and management of the validation and verification institutions, and clarifies the rights and responsibilities of each market player.	
	2022	At the local level, China Construction Bank (CCB) Guangdong Branch has systematically promoted green finance centering on the “four pillars”: first, defining green standards;	

		second, carrying out information disclosure; third, enriching product shelves; and fourth, improving incentive mechanisms. The PBOC Jinan Branch issued the <i>Special Action Plan for the Year of Deepening Green Finance</i> , which sets 2023 as the “Year of Deepening Green Finance”. On the basis of the full take-off of green finance work in Shandong Province in 2022, the PBOC Jinan Branch will further strengthen the foundation of green financial development, deepen the building of green financial service system, and contribute to the green, low-carbon and high-quality development in Shandong Province. In August 2022, PBOC, in conjunction with NDRC and five other departments, jointly issued the <i>Overall Program for Building a Green Financial Reform and Innovation Pilot Zone in Chongqing</i> , officially including Chongqing in the scope of the national green financial reform pilot zone.	
	December, 2022	MEE issued the <i>Notice on Printing and Distributing the Principles for Approval of Environmental Impact Assessment Documents for Construction Projects in Four Industries: Iron and Steel/Coking, Modern Coal Chemical Industry, Petrochemical Industry, and Thermal Power</i> (HP [2022] No. 31), which adds the requirement for GHG emissions related to the approval of EIAs for the four industries.	In the 2022 SPS Report entitled “Policy Measures and Implementation Pathways for the Carbon Emission Peak and Carbon Neutrality Goals”, it is recommended that system development should adhere to the principle of “building the new before discarding the old”, and the system for “dual control” of total energy consumption and intensity should be more carbon-reduction oriented. Schedules and roadmaps of “dual control” system for carbon emission are required. According to goals set
	March, 2022	The General Office of the CPC Central Committee and the General Office of the State Council issued the <i>Opinions on Advancing the High-quality Development of the Construction of</i>	

		<p><i>the Social Credit System in Furtherance of the Shaping of a New Development Pattern</i>, which improves the credit system for ecological and environmental protection.</p>	<p>for carbon peaking and carbon neutrality, absolute carbon emission objectives for each stage of the path towards carbon neutrality are needed, and a dynamic regulatory mechanism should be set up. The decomposition of carbon emission targets should take into consideration the development gaps among regions and industries, the flow of products among different regions, and the security of industrial supply chain. The “dual control” system for carbon emission should be incorporated into the provincial, municipal, and industrial action plans for carbon peaking and carbon neutrality. Carbon emission “dual control” pilot projects should be conducted as soon as possible in key areas and key industries before they are gradually promoted to the whole industry and the whole country.</p> <p>CCICED recommended in 2022 that measures should be taken to establish a green responsibility liability account for governments, enterprises, and individuals; improve the quality of emissions data by building capacity, clarifying the responsibilities of the main emitters and setting penalties.</p>
--	--	--	--

	January, 2022	<p>General Secretary Xi Jinping stressed at the 36th collective study session of the Political Bureau of the CPC Central Committee on January 24, 2022 that “we should advocate simple and moderate, green and low-carbon, civilized and healthy lifestyles, guide green and low-carbon consumption, encourage green mobility, carry out the demonstration of green and low-carbon social actions, and enhance the public awareness of conservation as well as ecological and environmental protection”.</p> <p>NDRC and other ministries issued the <i>Implementation Plan for Promoting Green Consumption</i>, which proposes that by 2025, the concept of green consumption will gain ground, extravagance and waste will be effectively curbed, the market share of green and low-carbon products will be raised sharply, marked results will be achieved in the transition to green consumption in key sectors, green ways of consumption will be generally adopted and a consumption system for green, low-carbon and circular development will take shape. By 2030, green consumption will become a conscious option of the public, green and low-carbon products will be mainstreamed in the market, a green and low-carbon development model for consumption will be substantially formed in key sectors, and green consumption systems, policies and mechanisms will be basically established.</p>	
	June, 2022	<p>MEE and six other departments jointly issued the <i>Implementation Plan for Achieving Synergies from Reducing</i></p>	

		<p><i>Pollution and Cutting Carbon Emissions</i>, which, as an important part of the "1+N" policy system for carbon peaking and carbon neutrality, explicitly advocates a simple, moderate, green, low-carbon, civilized and healthy lifestyle to reduce pollutants and carbon emissions at source; guides the public to give priority to green and low-carbon modes of mobility such as public transportation, bicycling and walking; and encourages to explore public participation mechanisms such as "carbon justice".</p>	
	2022	<p>On August 30, 2022, the State Council issued the <i>Opinions on Supporting Shandong to Further Replace Old Driving Forces with New Ones for Green, Low-Carbon, and High-Quality Development</i> (GF [2022] No. 18), which requires the in-depth implementation of the “Green and Low-Carbon Initiative for All”, and the establishment of incentive mechanisms for green consumption, such as individual carbon accounts.</p> <p>The implementation plans for carbon peaking issued by provinces propose to foster green and low-carbon lifestyles. The <i>Implementation Plan for Carbon Peaking in Shanghai</i> proposes to guide citizens to travel in a green and low-carbon manner, with the share of green mobility in central urban areas reaching 75% in 2025 and 85% in 2035; strengthen ecological civilization publicity and education, guide citizens to comprehensively and deeply practice green consumption concepts and green lifestyles, and carry out green and low-carbon actions for all. The <i>Implementation Plan for Carbon Peaking in Jiangsu</i></p>	<p>CCICED recommended in 2022 that China should integrate digitalization with sustainable development and promote green technology innovation and green digital governance, and engage the public in linking digital platforms with low-carbon, green lifestyles.</p>

		<p>Province proposes to vigorously advocate simple, moderate, green, low-carbon, civilized and healthy lifestyles, and resolutely curb extravagance, wastefulness and unreasonable consumption; actively drive green consumption, promote green and low-carbon products, implement green standards, certification and labeling, and further increase the share of green products consumed by the whole society.</p>	
<p>Energy, Environment and Climate</p>	<p>June, 2022</p>	<p>Under the guidance and support of NDRC, MIIT, and MEE, CAEPI issued the <i>Action Plan for Accelerating High-Quality Development of the Ecological and Environmental Protection Industry and Deepening Pollution Prevention and Control to Support Carbon Peaking and Carbon Neutrality (2021-2030)</i>. The <i>Action Plan</i> makes it clear that by 2030, a modern eco-environmental protection industry system will be basically established to meet the needs of environmental pollution prevention and control, ecological protection and restoration, efficient recycling and utilization of resources, and carbon peaking, with a key role to play in pursuing the transition to green economic and social development in all respects.</p>	<p>CCICED recommended in 2022 that we should remain committed to a green and low-carbon transition and ensure security and stability in key areas; establish a multi-objective collaborative mechanism for reducing pollution, cutting carbon emissions, expanding green development and pursuing economic growth. Economic recovery plans should prioritize strategic investments towards green and low-carbon development. The expanded use of carbon pricing and other market-based green measures should maximize cost-effective reductions while paying special attention to price stability and investment predictability. Standards should be planned with industry associations to scale-up and mainstream green public procurement, accelerate green technology innovation and productivity. Steps to promote green trade in low-carbon,</p>
	<p>July, 2022</p>	<p>MEE and six other departments jointly issued the <i>Implementation Plan for Achieving Synergies from Reducing Pollution and Cutting Carbon Emissions</i>, which, as an important part of the "1+N" policy system of carbon peaking and carbon neutrality, is of great significance to further optimize ecological and environmental governance, form a working</p>	

		<p>pattern of making concerted efforts to cut carbon emissions and reduce pollution, and help build a beautiful China and realize carbon peaking and carbon neutrality. The concept of “green and low-carbon, energy saving first” has long been integrated into the practice of development across China.</p>	<p>environmental products and services should increase. Further efforts are needed toward the sustainable sourcing of food and other supply chains, including traceability systems, information disclosure and incentives to promote compliance.</p>
	November, 2022	<p>The Wuhan Municipal Government issued the <i>Implementation Plan for the Top 10 Actions to Cut Carbon Emissions, Reduce Pollution, Expand Green Development, and Pursue Economic Growth in Yangtze River Economic Belt in Wuhan</i>. The <i>Implementation Plan</i> deploys work in ten areas, including promoting synergies from reducing pollution and cutting carbon emissions, establishing a sound mechanism for realizing the value of ecological products, constructing a green manufacturing system, and strengthening the leadership of green technological innovation.</p>	<p>CCICED made the following recommendations in 2022:</p> <p>Accelerating investment in renewable energy: The broad reform of China’s electricity power market towards greater market orientation will strengthen the efficiency of market pricing mechanisms that in turn will attract additional private sector investments in green electricity generation. The current spot market should be expanded, with additional pilot projects that include inter-provincial trading.</p> <p>Stabilizing the stock, strictly controlling the increment, and guiding the orderly phase-down of coal power: Efforts should be made to peak coal use by 2025, in order to achieve peaking of carbon dioxide emissions before 2030. Short- and interim-term planning should be closely aligned with the dual control</p>
	2022	<p>In terms of new energy storage, NDRC and NEA issued the <i>Guiding Opinions on Accelerating the Development of New</i></p>	

		<p><i>Energy Storage</i> (FGNYG [2021] No. 1051), the <i>Implementation Plan for the Development of New Energy Storage During the 14th Five-Year Plan Period</i> (FGNY [2022] No. 209), and the <i>Notice on Further Promoting the Participation of New Energy Storage in the Electricity Market and Dispatching Application</i> (FGBYX [2022] No. 475), to accelerate the large-scale and market-based development of new energy storage.</p>	<p>system of carbon emissions comprised of a short-term shift in coal power from base-load power generation to peak-management power generation; the elimination of outdated coal generating capacity while ensuring reasonable operating hours for high-efficiency and low-emission coal power; modernizing the remaining coal power fleet to further cut criteria air pollutants; paying special attention to cutting methane and other short-lived climate pollutants; paying close attention and leading financial risk disclosure related to coal and other fossil-fuel investments, and adjusting the investors' expectations for action related to stranded asset risks. An open and competitive auction-based mechanism to replace the guaranteed hours and price of coal-fired power generation units should be established, in conjunction with an efficient electricity-price market to provide economic returns for the flexibility of power.</p>
	<p>February, 2022</p>	<p>NDRC and three other departments jointly issued the <i>Implementation Guidelines for Energy Saving and Carbon Reduction Retrofitting and Upgrading in Key Areas of Energy-Consuming Industries (2022 Edition)</i>, which puts forward the</p>	<p>CCICED recommended in 2022 that we should align digitalization with sustainability transformations to enable and accelerate low-carbon technological innovations. More efforts</p>

		direction of energy-saving and carbon reduction retrofitting and upgrading, and the specific targets by 2025 for 17 industries such as oil refining, cement, iron and steel and non-ferrous metal smelting.	should be made to accelerate the development of digital technologies, explore intelligent solutions for sustainable development, and optimize production and consumption patterns; facilitate the scaling-up of low-carbon and zero-carbon innovative technologies; maximize the role of new market entrants as the main driver of technological innovation, by emphasizing the role of market-oriented renewable energy actors.
	November, 2022	NDRC and other departments jointly issued the <i>Circular on the Release of Advanced Levels of Energy Efficiency, Energy Saving Levels, and Access Levels of Key Energy-Using Products and Equipment (2022 Edition)</i> , which focuses on key energy-using products and equipment, and makes the relevant arrangements for saving energy and cutting carbon emissions.	
	2022	Departments of Industry and Information Technology in many places have publicly solicited opinions on the action plans for energy saving, energy consumption reduction and energy efficiency improvement in petrochemical and chemical industries. For example, in 2022, Zhejiang Province introduced the <i>General Technical Guidelines for Source Replacement of Raw and Auxiliary Materials with Low VOC Content in Zhejiang Province (Trial)</i> . In 2022, Fujian Province strictly implemented the provisions of the <i>Industrial Structure Adjustment Catalog</i> , which stipulates that we shall prohibit the construction and expansion of restricted process equipment and products, and advance the elimination and phase-out of backward production capacity as soon as possible; step up efforts to dispose of idle capacity and zombie capacity, and press ahead with mergers and restructuring of enterprises; carry out	

		special actions for energy efficiency benchmarking, release the list of energy efficiency “frontrunners”, and guide enterprises in benchmarking.	
June, 2022		17 departments, including MEE, NDRC and MOST jointly published the <i>National Climate Change Adaptation Strategy 2035</i> , which calls for efforts to strengthen urban climate risk assessment, adjust and optimize the functions of cities, guarantee the safe operation of urban infrastructure, improve the functioning of urban ecosystem services, strengthen flood prevention capacity building and water supply of cities, and upgrade the capacity of cities to cope with climate risks.	CCICED recommended in 2022 integrated climate-resilient management for low-carbon and resilient river basins shall be strengthened, and climate resilience in the integrated management of important river basins be improved.
September, 2022		MEE issued the <i>Guidelines for the Preparation of Provincial Action Plans for Adaptation to Climate Change</i> , which proposes to start the preparation of provincial action plans for climate adaptation as soon as possible, and actively expand international cooperation on climate adaptation.	
February, 2023		NDRC and NEA issued the <i>Opinions on Improving the Institutional Mechanisms and Policies and Measures for Green and Low-Carbon Energy Transition</i> , which systematically plans and globally deploys the institutional mechanisms and policies and measures for the green and low-carbon energy transition at the top level, and stresses that dynamic assessment on green energy transition shall be systematically carried out.	It is proposed to develop a sound governance system for green and low-carbon transition and strengthen innovative and flexible institutional capacity building ; improve market-driven and government-led innovation mechanisms for sustainable investment and financing, systematically assess risks from

	June, 2023	MEE revised the <i>Interim Measures for the Administration of GHG Voluntary Emission Reductions Trading</i> , and compiled the <i>Measures for the Administration of GHG Voluntary Emission Reductions Trading (Trial) (Draft for Comment)</i> , and openly solicited public opinions from the whole society on the Measures. In addition, MEE has accelerated the preparations for the launch of the voluntary emission reductions (VERs) trading market, and strived for early launch of the national VERs trading market in 2023.	green and low-carbon transition, and identify key affected sectors and regions, so as to ensure the sound operation of the national ETS; prioritize the development of a dedicated climate change law to set the necessary legal basis for China’s climate transition, and explore to include dual carbon targets and climate adaptation into the scope of public interest litigation by procurators; create an ongoing working dialogue between financial regulators and relevant government departments, and develop and implement ESG standards.
Pollution Prevention and Control	November, 2022	MEE, together with NDRC, MIIT, MOT and ten other departments, jointly formulated the <i>Action Plan for Eliminating Heavily Polluted Weather, Preventing and Controlling Ozone Pollution, and Combating Diesel Truck Pollution</i> , to make concentrated efforts to further fight for blue skies in key areas, time periods, and areas, and push for the sustained improvement of national air quality.	Reinforcing ecological conservation and restoration of river basins. It is suggested to strengthen the control of soil erosion and desertification in mountainous and hilly areas and implement the “returning space to rivers” campaign to restore river and lake basins; systematically manage hydropower projects to ensure that they undergo science-informed, robust and participatory EIA prior to project development, safeguard hydrological integrity and ecological water demand, and reduce ecological impacts through measures such as ecological scheduling and installation of fish passage facilities; promote ‘grain-for-green’ in
	November, 2021	In 2022, MEE publicly released the <i>Guiding Opinions on the Implementation of the "Three Lines and One List" Ecological and Environmental Zoning Control (Trial)</i> , which implements a system of ecological and environmental zoning control for ecological redlines, the bottom line of environmental quality, the upper limits of resource utilization,	

		<p>and the list of ecological and environmental access, and is a major move to implement Xi Jinping's Thought on Ecological Civilization in the new era, thoroughly carry out pollution prevention and control, and strengthen the ecological and environmental prevention and control at the source.</p>	<p>ecologically sensitive areas and strengthen ecological restoration; pay attention to the melting of glaciers at the source of the Yangtze River and strengthen monitoring and early warning; and improve the safety and security mechanisms for vulnerable groups – especially women in disaster-prone areas such as villages, small towns, and flood storage areas.</p>
	<p>2022</p>	<p>Provinces and cities actively boosted the development of air pollution control industry. For example, in February 2022, the Ningxia Hui Autonomous Region issued the <i>Plan for Building a Standard System for High-Quality Development in the Ningxia Hui Autonomous Region (2021-2025)</i>, which proposes to implement and improve standards for prevention and control of environmental risks, prevention and control of atmospheric pollution, prevention and control of soil pollution, prevention and control of solid waste and chemical pollution, prevention and control of agricultural non-point source pollution, ecological protection and restoration management and technology, evaluation of ecosystem service functions, and ecological security. In February 2022, the General Office of the Beijing Municipal People's Government issued a notice on printing and distributing the <i>2023 Action Plan of Beijing on Deepening Pollution Prevention and Control</i>, stating that it will deeply implement Xi Jinping's Thought on Ecological Civilization and the spirit of a series of important speeches made by General Secretary Xi Jinping to Beijing, adhere to the integrated protection and systematic improvement of mountains, rivers, forests, farmlands, lakes, grasslands and deserts, integrate</p>	<p>ecologically sensitive areas and strengthen ecological restoration; pay attention to the melting of glaciers at the source of the Yangtze River and strengthen monitoring and early warning; and improve the safety and security mechanisms for vulnerable groups – especially women in disaster-prone areas such as villages, small towns, and flood storage areas.</p> <p>Strengthening integrated water and land management of basin. Promoting the transition of the downstream industrial port shoreline into an ecological shoreline and a shoreline for residents: Concerted efforts should be made to develop and oversee the implementation of the ecological environment zero-development and restricted protected area access list based on ecological redlines that include setting regulations covering the upper limit of resource utilization and shoreline protection and utilization; integrate green and low-carbon objectives in the basin-wide law, regulations, standards, and opinions that include thresholds for the optimal utilization and vacating and replacing of the shoreline; reserve land on the shoreline to provide flexibility for future green development in compliance with</p>

		<p>industrial restructuring, pollution management, ecological protection, and addressing climate change, make concerted efforts to cut carbon emissions, reduce pollution, expand green development, and pursue economic growth, and comprehensively push forward the green, low-carbon, and circular development.</p>	<p>spatial plans; explore the cultural and economic values of water; and promote shoreline renewal and public space construction.</p>
	<p>January, 2022</p>	<p>Since January 2022, many new environmental regulations on domestic water use are being implemented by local governments at all levels. For example, Shandong Provincial Department of Ecology and Environment, Provincial Department of Housing and Urban-Rural Development, Provincial Department of Agriculture and Rural Affairs, and Provincial Department of Finance jointly issued the <i>Interim Measures for the Administration of Operation and Maintenance of Rural Domestic Sewage Treatment Facilities in Shandong Province</i>, which came into effect from January 1, 2022. On November 25, 2021, the 31st Session of the Standing Committee of the 13th Sichuan Provincial People's Congress adopted the <i>Regulations on Ecological and Environmental Protection of the Jialing River Basin in Sichuan Province</i>, which came into force on January 1, 2022. On September 9, 2021, the People's Government of Zhejiang Province approved and issued the <i>Discharge Standard for Water Pollutants from Centralized Rural Domestic Sewage Treatment Facilities</i>, which came into force from January 1, 2022.</p>	

	May, 2023	<p>The CPC Central Committee and the State Council issued the <i>Outline of the National Water Network Construction Plan</i>. The Outline proposes to accelerate the construction of national water networks, build a modernized, high-quality water infrastructure network, and address water resources, water ecology, water environment and water disasters in an integrated manner, which is a major strategic arrangement made by the CPC Central Committee with Comrade Xi Jinping at its core. It is an important guiding document for the construction of national water networks in the current and future periods</p>	
	June, 2023	<p>MEE issued a notice on public solicitation of opinions on the <i>Guiding Opinions on Promoting Green and Low-carbon Soil Pollution Risk Control and Remediation (Draft for Comments)</i>. The <i>Guiding Opinions</i> stresses that it is necessary to strengthen the whole-process quality control and supervision, comprehensively improve the level of investigation and assessment of soil pollution status, promote the integration of multidisciplinary, multi-method and multi-means investigation techniques, and accurately map the scope and degree of contamination.</p>	
	January, 2022	<p>MEE, together with NDRC, MNR, MOHURD, MOT, MARA, and CCG, formulated the <i>Action Plan for Comprehensive Remediation of Key Sea Areas</i>. According to the <i>Action Plan</i>, comprehensive remediation will be carried out in</p>	

CCICED recommended in 2022 strengthening the protection and restoration of marine ecosystems and harnessing the value of marine carbon sinks. Extensive

		the three key sea areas of Bohai Sea, Yangtze River Estuary-Hangzhou Bay and adjacent waters of the Pearl River Estuary, involving Tianjin, Shanghai and other “2 + 24” coastal cities.	measures should be taken to strictly enforce zoning management systems to avoid further destruction of marine habitats and coastal wetlands, and to restore degraded or damaged coastal wetlands and strictly protect critical marine habitats; invest in the creation of resilient, well-connected networks of marine protected areas covering national parks, nature reserves, and marine areas within the ecological redlines; align large marine protected areas and habitats of major importance with carbon storage.
	2023	China's provinces successively introduced various policies and plans for marine carbon sinks. In March 2023, Zhejiang Province issued the <i>Guiding Opinions on Enhancing the Capacity of Marine Carbon Sinks in Zhejiang Province</i> , which proposes five major tasks: scientific research on marine carbon sinks, marine ecological protection and restoration, integrated development of marine carbon sinks, diversified transformation of the value of marine carbon sinks, and pilot projects of marine carbon sinks, so as to significantly enhance the capacity of marine carbon sink ecosystems in terms of carbon sequestration and sink enhancement.	
Ecosystem and Biodiversity Conservation	October, 2022	According to the report to the 20th CPC National Congress, to enhance diversity, stability, and sustainability in our ecosystems, it is necessary to carry out major projects for preserving and restoring key ecosystems at a faster pace, as well as major biodiversity protection projects.	CCICED recommended in 2022 strengthening international climate and biodiversity dialogues and exchanges and contributing to global environmental governance. It is advised to continuously promote bilateral and multilateral climate and biodiversity dialogues. In the COP 15 process, China should prepare for the implementation of GBF, including updating the National
	November, 2022	During the UNFCCC COP27, the Chinese Presidency of CBD COP15 and Canada, the host country of COP15 Part 2, co-hosted the “Ministerial Event on Action for Biodiversity: the	

	Road Leading to the Success of CBD COP15”, in Sharm el-Sheikh, Egypt.	Biodiversity Strategy and Action Plan (NBSAP). Building on positive dialogue mechanisms such as, EU–China High Level Climate and Environment Dialogue, and the Ministerial Meeting on Climate Action, China and relevant parties should actively carry out Track 2 and Track1.5 dialogues to control CO2 and non-CO2 greenhouse gases. Building on the China-EU, G20, UNEP and other initiatives, continued efforts should be made to identify the next steps in green financial mechanisms, including scaling-up of NbS.
December, 2022	COP15 Part 2 was held in Montreal, where the CBD secretariat is based. China, as the Presidency of CBD COP15, led the substantive and political affairs of the Conference, at which the Kunming-Montreal Global Biodiversity Framework was successfully adopted, comprising four global long-term goals and 23 specific action targets to be achieved by 2030, depicting a new blueprint for global biodiversity governance up to 2030 and beyond.	
December, 2022	MEE promulgated the <i>Measures for Ecological and Environmental Supervision of Ecological Redlines (Trial)</i> , which proposes to uphold the principles of ecological priority, holistic approach, green development, problem orientation, category-based supervision, and public participation, and establish a rigorous supervision system, so as to maintain the boundary of the natural ecological security with redlines, and to ensure that the ecological function of ecological redlines will not be degraded, the area will not be reduced, the nature will not be changed, and the quality and stability of the ecosystem will be enhanced.	CCICED recommended in 2022 reinforcing ecological conservation and restoration of river basins. It is suggested to strengthen the control of soil erosion and desertification in mountainous and hilly areas and implement the “returning space to rivers” campaign to restore river and lake basins; systematically manage hydropower projects to ensure that they undergo science-informed, robust and participatory EIA prior to project development, safeguard hydrological integrity and ecological water demand, and reduce ecological impacts through measures such as ecological scheduling and installation of fish
April, 2022	MEE, in conjunction with 10 relevant departments including SPC, SPP, MOST and MPS, issued the <i>Provisions on</i>	

		<p><i>the Administration of Compensation for Ecological and Environmental Damages</i> (HFG [2022] No.31). The <i>Provisions</i>, taking into account new issues identified during the reform process of the compensation system for ecological and environmental damages, provides unified guidance for national efforts to compensate for ecological and environmental damages, and further deepens and refines the <i>Plan for Reform of the Compensation System for Ecological and Environmental Damages</i>, representing a concrete practice of implementing Xi Jinping's Thought on Ecological Civilization, which will play a positive role in building a sound ecological and environmental protection system.</p>	<p>passage facilities; promote ‘grain- for-green’ in ecologically sensitive areas and strengthen ecological restoration; pay attention to the melting of glaciers at the source of the Yangtze River and strengthen monitoring and early warning; and improve the safety and security mechanisms for vulnerable groups – especially women in disaster-prone areas such as villages, small towns, and flood storage areas.</p>
	2022	<p>Guided by the national policy, many regions have been pioneering, closely integrating the national top-level design with local ecological and environmental protection, formulating and implementing local laws and regulations and normative documents related to the implementation of the ecological redline and compensation policies. For example, the <i>Provisions on the Management of Ecological Redlines in Hainan Province</i> came into effect at the end of May 2022; In January, 2023, Jiangsu Provincial Department of Ecology and Environment and 15 other departments issued the <i>Implementation Opinions on Implementing the Provisions on the Administration of Compensation for Ecological and Environmental Damages</i>; In May 2023, Shandong Province issued the <i>Measures for Ecological and Environmental Supervision of Ecological</i></p>	<p>Strengthening the protection and restoration of marine ecosystems: Extensive measures should be taken to strictly enforce zoning management systems to avoid further destruction of marine habitats and coastal wetlands, and to restore degraded or damaged coastal wetlands and strictly protect critical marine habitats; invest in the creation of resilient, well-connected networks of marine protected areas covering national parks, nature reserves, and marine areas within the ecological redlines.</p>

		<i>Redlines in Shandong Province (Trial)</i> to explore and innovate the supervision procedures.	
	June, 2022	<p>On June 7, 2022, MOF released the results of the competitive selection of second-batch projects for the Integrated Protection and Restoration Program of Mountains, Rivers, Forests, Farmlands, Lakes, Grasslands and Deserts (hereinafter referred to as the “China Restoration Program”), and identified 9 second-batch projects for the China Restoration Program.</p> <p>On June 29, 2022, MOF, MNR and MEE held a meeting to promote the China Restoration Program, which aims to learn and implement the spirit of General Secretary Xi Jinping's important instructions on taking a systematic approach to the restoration of mountains, rivers, forests, farmlands, lakes, grasslands and deserts, implement the important decisions made by the CPC Central Committee and the State Council on the realization of the “dual-carbon” strategic goals, further clarify the responsibility to push forward the orderly implementation of the China Restoration Program, and effectively improve the quality of ecosystems in key ecological areas and carbon sink capacity.</p>	
	October, 2022	The report to the 20th CPC National Congress specifies that we will advance the Beautiful China Initiative, uphold the principle that lucid waters and lush mountains are invaluable assets, and take a holistic and systematic approach to the conservation and improvement of mountains, rivers, forests,	

		farmlands, lakes, grasslands and deserts.	
	June, 2022	NFGA and NBS jointly issued a notice and decided to carry out pilot forest resource value accounting in five provinces, including Inner Mongolia Autonomous Region, Fujian Province, Henan Province, Hainan Province and Qinghai Province. The fourth phase of China's forest and grassland resource value accounting was launched to further improve the forest resource value accounting methodology, and a study on grassland resource value accounting was initiated, with the pilot work to be completed by December 31, 2022.	
	October, 2022	NDRC and NBS commissioned the People's Publishing House to publish a single-volume version of the <i>Specification for Accounting for the Total Value of Ecological Products</i> , which specifies the indicator system, specific algorithms, data sources, and statistical calibers of the total value of ecological products. It is the first normative document to put a value on lucid waters and lush mountains, and is of great significance in tackling “difficulty in measuring” ecological products and accelerating the establishment of a sound mechanism for realizing the value of ecological products.	
	November, 2022	Guangdong Province issued the <i>Implementation Plan for Establishing a Sound Mechanism for Realizing the Value of Ecological Products in Guangdong Province</i> , which mainly sets	

		<p>out the following objectives. By 2025, the institutional framework for realizing the value of ecological products will be initially in place, a scientific and operational accounting system for the value of ecological products and a mechanism for applying the accounting results will be preliminarily established, the policy system for ecological protection compensation and compensation for ecological and environmental damages will be gradually perfected; By 2035, a sound mechanism for realizing the value of ecological products will be established in an all-round manner.</p>	
	December, 2022	<p>The 38th session of the 13th NPC Standing Committee voted to adopt the amended <i>Wildlife Protection Law</i>, which came into effect on May 1, 2023. The newly amended <i>Wildlife Protection Law</i> strengthens the protection of wildlife habitats, making it clear that crucial wildlife habitats will be delineated into national parks, nature reserves and other nature protection areas for strict protection in accordance with the law.</p>	
	December, 2022	<p>NFGA, MOF, MNR, and MEE jointly issued the <i>Spatial Layout Program for National Parks</i>, which proposes that by 2035, China will basically build the world's largest national park system.</p>	
Regional and International	November, 2022	<p>The UNFCCC COP27 in Sharm El Sheikh closed. On the 30th anniversary of the UNFCCC, COP27 focused on the practical implementation of the Paris Agreement. China has</p>	<p>In the context of the international response to climate change, CCICED recommended in 2022 deepening</p>

Engagement		made important contributions to the achievement of a relatively balanced package of multilateral outcomes, sending a positive signal of upholding multilateralism and joint efforts to address climate change.	international environmental cooperation to maintain an open, inclusive and mutually beneficial international environmental governance process: Building on positive dialogue mechanisms such as, EU–China High Level Climate and Environment Dialogue, and the Ministerial Meeting on Climate Action, China and relevant parties should actively carry out Track 2 and Track1.5 dialogues to control CO2 and non-CO2 greenhouse gases.
	March, 2023	The Climate Ministerial Conference, co-convened by Denmark, the Egyptian Presidency of UNFCCC COP27, and the UAE Presidency of COP28, was held in Copenhagen. MEE Vice Minister Zhao Yingmin led a delegation to attend the conference and delivered a speech. China expressed its readiness to fully support the UAE in successfully hosting COP28, successfully completing the first Global Stocktake(GST) of the Paris Agreement, and promoting positive outcomes on key negotiation issues such as adaptation, finance, loss and damage, and mitigation.	
	July, 2023	The 7th Ministerial Conference on Climate Action, co-organized by China, the EU and Canada and hosted by the EU, was held in Brussels, Belgium. MEE Minister Huang Runqiu, as co-chair of the conference, delivered a speech and participated in the discussion.	
	July, 2023	Chinese Vice Premier Ding Xuexiang and Executive Vice President of European Commission Frans Timmermans reached a broad consensus at the 4th China-EU High-Level Dialogue on Environment and Climate in Beijing.	

	January, 2022	FAO officially launched the third phase of the FAO-China South-South Cooperation Program. So far, the Program has supported the implementation of 17 national projects and 10 global and regional projects, playing a great role in South-South and triangular cooperation.	With regard to South-South Cooperation (SSC), CCICED recommended that we should strengthen top-level design, establish a coordination mechanism for SSC in ecological civilization, incorporate ecological civilization in China's various SSC plans and actions, and put in place a system of coordination and consultation on the formulation of strategies and policies for SSC in ecological civilization and the environmental impact assessment of major cooperative projects. In addition, efforts should be made to reinforce the safeguard system for SSC in ecological civilization, taking into account the international situation, the needs of developing countries and China's comparative advantages and capabilities, and formulate a medium- and long-term development program for SSC in ecological civilization, a cooperation plan for priority areas, and a program for key regions and countries, respectively. In the meantime, we should increase financial support and improve the effectiveness of its utilization; improve whole-process management, and establish a SSC evaluation system that incorporates comprehensive indicators of ecological and environmental benefits and social impacts; emphasize science-based project
	April, 2022	The China-WFP Digital Workshop on South-South Cooperation and the launching ceremony of the South-South Cooperation Knowledge Sharing Platform was successfully held in Beijing. The platform was jointly built by MARA and the WFP Center of Excellence for Rural Development, with the China Internet News Center participating in its operation as the website's technical partner, and it was designed to provide a communication platform for sharing the needs and solutions for food security, nutritional improvement, poverty alleviation, and rural transformation. China adheres to the pattern of international development cooperation, with North-South cooperation as the main channel and South-South cooperation as a complement, and encourages greater development assistance from developed countries to developing countries, in order to build a new, fair and balanced global development partnership, and create a favorable external environment for poverty reduction.	
	June, 2022	The High-Level Dialogue on Global Development under the theme “Building A Global Partnership for Development in the New Era, and Joining Hands to Implement the 2030 Agenda	

		<p>for Sustainable Development”, was held during the 14th BRICS Leaders' Meeting. The meeting was chaired by President Xi Jinping via video in Beijing, and attended by leaders of BRICS countries, as well as leaders of relevant emerging market countries and developing countries.</p>	<p>planning and approval, strengthen understanding of partner countries' needs and coordination with relevant stakeholders; broaden the sources of project information so that eco-friendly projects can have greater access to the China SSC Project Pool.</p>
	<p>August, 2022</p>	<p>The 6th Conference on South-South and Triangular Cooperation was held in New Delhi, India. The conference was organized around three themes: “New Development Models and Cooperation Principles”, “Global Governance and the 2030 Agenda”, and “Development Pathways and New Measurement Approaches”, aiming to explore new models of development in the wake of global COVID-19 epidemic, international conflicts and climate crisis, and encourage countries to use globalization as an effective tool for cooperation on resources, knowledge and markets so as to trigger a shift in human lifestyles towards sustainable production and consumption.</p>	

	November, 2022	<p>Three major regional and international meetings, including ASEAN Summit, G20 Summit and APEC Summit, were held back-to-back in Phnom Penh, Bali and Bangkok, making Asia, especially East Asia, a focal spot of global economic governance.</p>	
	May, 2023	<p>China has always adhered to the concept of green development, initiated a series of green actions, launched the BRI ecological and environmental protection big data service platform, and pushed ahead with the Green Silk Road Envoys Program and the Belt and Road South-South Cooperation Initiative on Climate Change, which have achieved solid results.</p>	<p>CCICED recommended in 2022 that we should deepen international cooperation to support green and low-carbon development in BRI countries and explore new paths of green and low-carbon cooperation under the reform of global governance system. Relying on multilateral cooperation platforms such as the BRIGC and the Green Investment Principles (GIP) for the Belt and Road, further efforts should be made to strengthen dialogues and exchanges among stakeholders, promote the establishment of green project development platforms under the framework of South-South cooperation, and deeply align with the green and low-carbon development needs of BRI countries. In conjunction with the Belt and Road</p>

			South-South Cooperation Initiative on Climate Change and the Green Silk Road Envoys Program, China should help enhance the local capacity of BRI countries to address climate change and achieve an inclusive and resilient recovery; strengthen the South–North–South cooperation platform for low-carbon finance.
--	--	--	---