

# **Green Development: A Way to Modernization Where Man and Nature Live together in Harmony<sup>1</sup>**

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Green development is the new concept developed in the 13th Five-Year Plan period. According to the *Recommendations of the Central Committee of the Communist Party of China for Formulating the 14th Five-Year Plan for Economic and Social Development and Long-Range Objectives through the Year 2035* (hereafter the “Recommendations” for short) adopted at the Fifth Plenary Session of the 19th CPC Central Committee, we should continue to uphold this concept. It is of great significance to China, the world’s second largest economy with a population of 1.4 billion, in embarking on a new journey towards a modern socialist country. Green development represents the implementation system for realizing the long-range goal of “developing a way to modernization where man and nature live

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<sup>1</sup> The views and opinions expressed in this report are those of the authors and do not necessarily reflect those of the organizer or the government.

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together in harmony” as proposed in the *Recommendations*.

## I. Progress and experience of green development in the 13th Five-Year Plan period

Green development represents the status and pattern of development that reflect the requirements of harmony between man and nature. During the 13th Five-Year Plan period, China has been committed to green development, delivering remarkable results and gaining good momentum.

Optimization and upgrading of industrial structure and energy consumption mix. In 2019, the value-added of equipment manufacturing and high-tech industries took up 32.5 percent and 14.4 percent of that of industries above designated size, respectively, up 0.7 and 2.6 percentage points from 2015. In 2019, the value-added of the service sector reached 53.9 percent of GDP, 3.1 percentage points higher than that in 2015. In 2019, the share of natural gas, hydropower, wind power, nuclear power and other clean energy consumption in the national total was 23.4 percent, 5.6 percentage points higher than that in 2015. Energy consumption per unit of GDP dropped by 13.2 percent compared to 2015.<sup>3</sup>

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<sup>3</sup> Ning Jizhe, *Scoring Decisive Achievements in Securing a Full Victory in Building a Moderately Prosperous Society in All Respects*, the tutorial book of the *Recommendations of the Central Committee of the Communist Party of China for Formulating the 14th Five-Year Plan for Economic and Social Development and Long-Range Objectives through the Year 2035*, People's Publishing House, 2020. pp. 114, 116.

Significant improvement of environmental quality. The nine projected targets for the ecological conservation set out in the 13th Five-Year Plan were all successfully exceeded. The ratio of days with good or excellent air quality in cities at the prefectural level and above was 87 percent (target: 84.5 percent); the average concentration of PM<sub>2.5</sub> in cities at the prefectural level and above that did not meet the standard dropped by 28.8 percent compared with 2015 (target: 18 percent); the proportion of excellent and good quality surface water increased to 83.4 percent (target: 70 percent) while that of inferior Class V surface water dropped to 0.6 percent (target: 5 percent). The number of heavily polluted days declined markedly. The safety of drinking water has been guaranteed, with dark and fetid water bodies basically eliminated. Soil risks on agricultural land and urban construction land have been controlled effectively.<sup>4</sup>

Enhancement of ecosystem quality and stability. By 2019, there were 474 national nature reserves in China. From 2016 to 2019, a total of 29.57 million hectares of land were afforested, with the forest coverage reaching 22.96 percent, 1.33 percentage points higher than that of China's 8th National Forest Inventory

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<sup>4</sup> Huang Runqiu, *Thoroughly Implementing the Spirit of the Fifth Plenary Session of the 19th CPC Central Committee and Jointly Promoting High-level Environmental Protection and High-quality Economic Development*. China Environment News, February 2, 2021.

(2009-2013).<sup>5</sup> The ecological quality of counties in China has improved. In terms of area, the proportion of counties with “excellent” and “good” ecological quality rose from 42.0 percent (2016) to 44.7 percent.<sup>6</sup> From 2012 to 2018, the sandified area in China decreased by an annual average of 198,000 hectares, while the soil erosion area by 21.23 million hectares.<sup>7</sup> The desertified and sandified areas across the country have been reduced through monitoring in three consecutive five-year periods.<sup>8</sup>

Steady improvement of resources utilization. In 2018, water consumption per unit of GDP decreased by 29.8 percent compared with 2015; important indicators such as crude oil and coal-bed methane recovery rate, non-ferrous metal mining recovery rate and concentration recovery rate were significantly improved, with 953 green mines built. Twenty-five pilot projects have been implemented for protecting and restoring mountains, rivers, forests, farmlands, lakes and grasslands. Ten pilot national parks, including Sanjiangyuan, have been carried out.

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<sup>5</sup> Ning Jizhe, *Scoring Decisive Achievements in Securing a Full Victory in Building a Moderately Prosperous Society in All Respects*, the tutorial book of the *Recommendations of the Central Committee of the Communist Party of China for Formulating the 14th Five-Year Plan for Economic and Social Development and Long-Range Objectives through the Year 2035*, People’s Publishing House, 2020. pp. 116.

<sup>6</sup> China National Environmental Monitoring Centre, *Ecological and Environmental Monitoring*, February 2021.

<sup>7</sup> E Jinping, *Enhancing Quality and Stability of Ecosystem*, the tutorial book of the *Recommendations of the Central Committee of the Communist Party of China for Formulating the 14th Five-Year Plan for Economic and Social Development and Long-Range Objectives through the Year 2035*, People’s Publishing House, 2020. pp. 341.

<sup>8</sup> Lu Hao, *Improving the Overall Efficiency of Resources Utilization*. the tutorial book of the *Recommendations of the Central Committee of the Communist Party of China for Formulating the 14th Five-Year Plan for Economic and Social Development and Long-Range Objectives through the Year 2035*, People’s Publishing House, 2020. pp. 350.

220 km of coastline and 105,000 mu of coastal wetlands have been restored.<sup>9</sup>

These achievements in the 13th Five-Year Plan, together with the progress made long before that period, have provided useful experience for China to explore the path of green development in harmony with nature. Based on the basic national conditions of large population and less per capita resources, we have followed the national guidelines of green, low-carbon and circular development, maintained strategic determination, and set feasible targets and indicators. We have established mechanisms and systems to implement corresponding responsibilities, given full play to the role of government and market, encouraged innovations of green technologies, and mobilized all people to live a greener life.

## II. Green development under new circumstances

In the 14th Five-Year Plan period, green development will be faced with both favorable and challenging aspects. On the whole, it will be positive. Let's look at the more favorable aspects first.

**First, it demonstrates a firm political will to promote green development.** According to the Fifth Plenary Session of

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<sup>9</sup> Ibid.

the 19th CPC Central Committee and its Recommendations, China has reaffirmed the unswerving implementation of the concept of green development in the guidelines and main objectives of economic and social development during the 14th Five-Year Plan period. In the strategic arrangements, it was proposed that “we should promote green development, facilitate the harmony between man and nature, and follow the philosophy that lucid waters and lush mountains are invaluable assets; we should respect, protect and adapt to nature, give top priority to conservation, protection and natural restoration, and ensure the ecological security. We will further implement sustainable development strategies, improve the coordination mechanism for ecological conservation, build an ecological civilization system, promote a green transformation of economic and social development, and develop a way to modernization where man and nature live together in harmony.”

In 2020, the 17th meeting of the Central Committee for Comprehensively Deepening Reform adopted the *Guiding Opinions on Accelerating the Establishment of the Sound Economic System for Green, Low-Carbon and Circular Development*, emphasizing that it is a fundamental solution to China’s resource-related and ecological problems to establish a

sound economic system for green, low-carbon and circular development and promote a comprehensive green transformation of economic and social development. We must unswervingly implement the new development philosophy, and take a green approach to planning, design, investment, construction, production, circulation, living and consumption in all aspects. In this way, high-quality development and high-level protection can be boosted based on the efficient use of resources, strict protection of the ecological environment, and effective control of greenhouse gas emissions.

In 2021, the 18th meeting of the Central Committee for Comprehensively Deepening Reform deliberated and adopted the *Opinions on Establishing the Sound Mechanism for Realizing the Value of Ecological Products*, emphasizing that we need to deepen reform around promoting a comprehensive green transformation, further implement the reform of the ecological civilization system, improve the property rights system and laws and regulations for natural resources assets, better the resource pricing mechanism, build a sound economic system for green, low-carbon and circular development, and formulate an action plan for peaking carbon dioxide emissions by 2030.

These distinctive political declarations have sent a strong

signal to the whole society to continuously push for green development, giving guidance to all parts of the country and all industries in formulating future development plans regarding directions and methods. They have also provided a political guarantee for boosting green development as a solid foundation for China's economic growth.

**Second, the influence of green factors in global changes has been growing.** In today's world, a new round of technological revolution and industrial change are pushing for the global paradigm for economic development, while green change has been highlighted in global changes. New energy are taking up a growing share in global energy development. Major technological breakthroughs are being made in the development and utilization of solar, nuclear and other clean energy sources. Green and smart technological changes are nurturing new industrial revolutions, creating new low-carbon and eco-friendly industries and business format Non-green industrial structures and development methods are increasingly losing competitiveness or even failing to survive in the new global economic system. This situation is consistent with the direction of our green development path. China is advancing the green transformation in its economic development. To this end, China

has kept pace with the times and put forward the Green Belt and Road Initiative, announcing that it will peak carbon dioxide emissions by 2030 and achieve carbon neutrality by 2060.

**Third, China has initiated the steering and accelerating effects of green development.** Steering effect, the practice and achievements of green development in the 13th Five-Year Plan period, are guiding China to shift its economic development model into a more efficient model of natural resources (i.e., Green model). This will gradually reduce the pressure of the huge economic system on the environment, with harmony between man and nature achieved at a higher level of development. The green transformation of China's economic and social development is like the steering of a huge vessel. Although the rotation angle is not very large at the beginning and the speed is not very fast, we will be further away from the original wrong direction but closer to the new goal if we navigate along the new direction. Green development has played such a guiding role according to the 13th Five-Year Plan.

Accelerating effect, the practice and achievements of green development, has created more conditions for future green development in a circular manner. The pace of green development will accelerate and expand, with its effectiveness

multiplied in the future. As the saying goes, “slowness is better than ceasing.” Green development is being unfolded from one place to another, day by day, developing into a great landscape. During the 13th Five-Year Plan period, the concept of green development has been increasingly understood and recognized. A wide range of national policies have been issued to boost green development. Corresponding institutional mechanisms for green development have been improved, with innovative green technologies continuously developed and applied. A new generation of talents with awareness and knowledge of ecological conservation and green development have grown up, thus spurring a wider and larger scale of practices and innovations for green development. In this context, the accelerating effect of green development has been produced in a circular manner. During the 14th Five-Year Plan period, we should seize the opportunity to enhance and utilize steering and accelerating effects to accelerate the pace of green development.

Also, in the period, we will face many difficulties in boosting green development. **First, green production does not contribute much to economic growth.** From 2015 to 2019, total energy consumption rose from more than 4.3 billion tons of standard coal to over 4.8 billion tons, while total consumption of

traditional energy sources such as coal and oil continued to increase<sup>10</sup>. In 2018, China's energy consumption reached 0.52 tons of standard coal per 10,000 yuan of GDP, which was higher than the global average. In 2017, the water consumption per 10,000 yuan of industrial value-added was 45.6 cubic meters, which was twice as high as the global advanced level.<sup>11</sup> **Second, ecological improvements are not well preserved.** Currently, PM2.5 is controlled by the first-stage standard (35 mcg/m<sup>3</sup>) as the WHO's transition value, with only 62.9 percent of 337 cities above prefecture level meeting the standard.<sup>12</sup> The utilization rate of water resources in the Yellow River basin is as high as 80 percent, far exceeding the ecological warning line of 40 percent for a typical basin. The average livestock overload in key natural grasslands reached 10.2 percent in 2018.<sup>13</sup> **Third, the green development system is not well developed.** The policies for realizing the value of ecological products are not sound, while those for property rights ownership, development and protection rights and responsibilities, and supervision and management are

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<sup>10</sup> China National Environmental Monitoring Centre, *Ecological and Environmental Monitoring*, February 2021.

<sup>11</sup> Lu Hao, Improving the Overall Efficiency of Resources Utilization, the tutorial book of the *Recommendations of the Central Committee of the Communist Party of China for Formulating the 14th Five-Year Plan for Economic and Social Development and Long-Range Objectives through the Year 2035*, People's Publishing House, 2020. pp. 350, 351.

<sup>12</sup> Chinese Minister of Ecology and Environment Huang Runqiu's work report at the 2021 China National Working Conference on Ecological and Environmental Protection, the Government Information Disclosure section at the website of the Ministry of Ecology and Environment of the People's Republic of China, February 1, 2021.

<sup>13</sup> Lu Hao, Improving the Overall Efficiency of Resources Utilization, the tutorial book of the *Recommendations of the Central Committee of the Communist Party of China for Formulating the 14th Five-Year Plan for Economic and Social Development and Long-Range Objectives through the Year 2035*, People's Publishing House, 2020. pp. 351.

not put in place. There are fewer incentives for green technology innovation and product development at the front end of production and for green distribution and consumption at the back end of production<sup>14</sup>

### III. Key initiatives for green development in the Fourteenth Five-Year Plan period

#### **1. Ensuring that the philosophy of green development is implemented**

According to the Recommendations, the objective of green development is to achieve new progress in the construction of ecological civilization. The model of land development and protection has been optimized. The green transformation of production and life has been effective, the allocation of energy resources has become more rational, and the efficiency of their use has increased significantly. The total emissions of major pollutants have continued to decrease, the ecological environment has been improved continuously, and the ecological security barrier has become more solid. All these efforts have significantly improved the living environment in urban and rural areas.

This is the image goal for green development in the 14th

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<sup>14</sup> Green Development Research Group of Political Research Center, Evaluation of Policy Progress in Promoting Green Development, Special Report on China's Environmental Strategy and Policy Research, No.28, 2020.

Five-Year Plan period. Specific indicators and their values are currently being studied and will be announced in the 14th Five-Year Plan for national economic and social development that will be reviewed by China's National People's Congress. When reviewing the 13th Five-Year Plan, there are 16 quantitative indicators (projected targets) on green development, making up over 48 percent of all. When formulating the 14th Five-Year Plan, we will continue to attach great importance to goals and indicators on green development.

In order to ensure that the green development goals and indicators of the 14th Five-Year Plan are achieved, corresponding responsibility mechanisms will be established, including organization and leadership; supervision and inspection; and assessment, reward and punishment. The overall national green development indicators will be broken down by region and industry. According to such indicators, governments and industry sectors at all levels, coupled with enterprises and institutions will prepare their annual plans for meeting the indicators and implement them. The implementation of the indicators will be regularly inspected by the economic management, resources and environment departments. Also, the central government will conduct annual assessment of main

indicators.

The 14th Five-Year Plan adopted by the National People's Congress of China has the force of law, requiring projected targets for green development should be completed by officials at all levels. Such officials, if failing to meet the targets, would be held accountable and may also be reassigned to other posts. This is a goal-oriented and result-oriented institutional arrangement that provides political assurance for the implementation of green development.

## **2. Promoting greener economic growth**

According to the Recommendations, we will “promote greener economic and social development,” a specific direction for China's green economic development. To this end, the Recommendations set out the basic tasks for accelerating green and low-carbon development in the 14th Five-Year Plan period, including strengthening spatial planning and use control of land, implementing spatial control boundaries for ecological protection, farmlands and urban development, and reducing the occupation of natural space by human activities. We will provide legal and policy-based guarantees for green development, support green technological innovation, promote cleaner production, develop green finance and environmental industries,

and facilitate green transformation of key industries and areas. The clean, low-carbon and safe energy should be used efficiently. Green buildings should be developed vigorously. We should launch the campaign for green life. The intensity of carbon dioxide emissions should be reduced to support localities to take the lead in peaking carbon dioxide emissions and formulate relevant action plans by 2030. These measures focus on continuously making economic development greener.

China's vision of meeting peak carbon and carbon neutrality targets has become a new driving force for the greener economic development in the 14th Five-Year Plan period. Currently, a peak carbon action plan is being studied and formulated in accordance with the arrangements of the Fifth Plenary Session of the 19th CPC Central Committee and the Central Economic Work Conference. There is a synergistic effect between carbon emission reduction and air pollution reduction. According to relevant studies, the national air quality under the carbon neutrality scenario is expected to reach the WHO guideline value around 2060, when the cumulative contribution of carbon emission reduction policies to air quality improvement will exceed 80 percent.<sup>15</sup> The action plan for

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<sup>15</sup> Xue Wenbo, Wang Jinnan et al. Carbon Emission Reduction Will Help China Achieve the Air Quality Goal of the 2035 Beautiful China ahead of Schedule. *Chinese Reference for Environmental Decision-making*, Vol. 17, No. 4,

peak carbon covers a number of areas such as urban spatial adjustment, re-adjustment of industrial structure and energy mix, upgrading of industrial technologies, optimization of energy-saving buildings, green transportation system, energy conservation and emissions reduction. Specific initiatives include establishing a program database for national independent contribution, supporting the construction of key national independent contribution projects, accelerating the development of a national trading market for carbon emissions rights, strictly controlling high-energy-consuming and high-emission projects, improving the voluntary trading mechanism for greenhouse gas emissions rights, deepening pilot projects in low-carbon provinces and cities, promoting the construction of near-zero carbon emissions demonstration projects and carbon-neutrality demonstration zones, and launching local pilot projects for climate change on investment and financing.<sup>16</sup>

### **3. Continuously improving ecological quality**

The continuous improvement of ecological quality, one of the main objectives of green development, reflects a strong

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<sup>16</sup> Chinese Minister of Ecology and Environment Huang Runqiu's work report at the 2021 China National Working Conference on Ecological and Environmental Protection, the Government Information Disclosure section at the website of the Ministry of Ecology and Environment of the People's Republic of China, February 1, 2021.

expectation of the whole society and a realistic need for high-quality economic development. During the 14th Five-Year Plan period, the environmental protection will remain in a critical period of overlapping pressures and heavy burden. The results of improving the environmental quality are not solid. A slight slackening, just like sailing against the current, or going backwards, may lead to recurrence of low environment quality.<sup>17</sup> That is why the Recommendations propose to wage a determined battle to prevent and control pollution.

During the 14th Five-Year Plan period, we will continue keeping our skies blue, our waters clear, and our lands pollution-free. We will form the synergy to conduct regional governance and control multiple pollutants including fine particulate matter and ozone. To better the living environment in urban and rural areas, we will promote full coverage of urban sewage networks to basically eliminate dark and fetid water bodies. We will further reduce chemical fertilizers and pesticides, control soil pollution, and strengthen the control of plastic pollution. We will strengthen the collection and treatment of hazardous and medical waste. We will complete the relocation and renovation of enterprises for hazardous chemicals in key

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<sup>17</sup> Sun Jinlong, *Sustained Improvement of Environmental Quality*, the tutorial book of the *Recommendations of the Central Committee of the Communist Party of China for Formulating the 14th Five-Year Plan for Economic and Social Development and Long-Range Objectives through the Year 2035*, People's Publishing House, 2020. pp. 335.

areas. We will pay more attention to the treatment of new pollutants. The emissions permit system will be implemented across the board to promote market-based rights trading for emissions, energy use, water use and carbon emissions. We will improve the management of projected targets for environmental protection, energy conservation and emissions reduction.

We will build a system of nature reserves, with national parks as the mainstay. We will strengthen the control of alien species. We will build up the system of river and lake chiefs, enhance the ecological protection and management of rivers, lakes and wetlands, and impose a 10-year ban on fishing in the Yangtze River. We will adopt a science-based approach to controlling desertification, rocky desertification and soil erosion, launch large-scale greening programs and promote the forest chief system. We will rehabilitate grasslands, forests, rivers and lakes, strengthen the protection of blacklands, and improve the system of fallow and rotation on arable land. We will the regulatory system for nature reserves, set the red line for ecological conservation, and monitor and evaluate the effectiveness of ecosystem protection.

We will strengthen the investigation, evaluation, monitoring and registration of natural resources, establish a

mechanism for realizing the value of ecological products, improve market-oriented and diversified ecological compensation, and promote the management, rational allocation, conservation and recycling of total resources. We will implement national water conservation actions and establish a rigid system for protecting water resources. We will improve development and protection of marine and mineral resources. We will refine the pricing mechanism for resources. We will promote garbage classification, reduction and recycling. We will speed up the construction of the system for recycling waste and used materials.<sup>18</sup>

#### **4. Enhancing the coordination of environment and economy**

It is the core proposition for promoting green development to coordinate the relationship between ecological conservation and economic development in the 14th Five-Year Plan period. As the quality of the ecological environment has been enhanced during the 13th Five-Year Plan period, the relationship between man and nature in China has been alleviated to a certain extent. If the factors of future economic development are taken into account, the man-nature relationship in the 14th Five-Year Plan

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<sup>18</sup> *The Recommendations of the Central Committee of the Communist Party of China for Formulating the 14th Five-Year Plan for Economic and Social Development and Long-Range Objectives through the Year 2035.*

period will become tight because the ecological environment, a natural element, has to directly meet the **needs of human survival** (clean air and water, safe soil and food security) and also the **production needs** of economic activities (using air and water bodies to purify pollutants and land to store solid waste). While the people are looking forward to a better living environment, the economic development have more spatial demands. Both demands are very strong and have a certain competitive relationship, with less space for manoeuvre. Development is the top priority in governing and rejuvenating the country. We cannot sacrifice the ecological environment for economic development, nor can we weaken the latter to protect the former. Therefore, we must do a good job of coordinating ecological conservation with economic development, so that the environment and the economy are two sides of a coin.

We will strengthen the coordination between ecological conservation and economic development. The environmental protection department will take the initiative to cooperate with economic development entities to jointly develop and implement programs for the green economic transformation, with both considered simultaneously. This coordinated approach, combined with the simultaneous implementation of the

regulatory approach, constitutes a two-pronged strategy to advance environmental protection in the 14th Five-Year Plan period. While maintaining, consolidating and improving the regulatory approach, we will strengthen the coordinated approach. To this end, we will work together with economic development departments to make recommendations on national economic development strategies, especially regional economic arrangements and major industrial development plans from the perspective of ecology and environment and propose strategic recommendations to accelerate economic restructuring. In cooperation with economic development and science & technology sectors, we will jointly study and implement plans regarding promoting a green industrial revolution and advancing technology development for green production (especially green manufacturing) in key industries. We need to explore the use of “dual indicators” of economy and environment to evaluate the quality of regional economic development. We need to assist enterprises in formulating transformation and upgrading plans for green development, promote typical experiences in green production, help them carry out clean production audits and implement clean production plans, build national eco-industrial demonstration parks, and facilitate developing industrial parks

of circular economy.

## **5. Expediting the construction of a modern environmental governance system**

The modern environmental governance system provides the institutional guarantee for the continuous improvement of environmental quality. In the 14th Five-Year Plan period, we will speed up the construction of a modern environmental governance system, where the government will play a leading role. Enterprises will be the main part of the system and social organizations and the public will be mobilized to engage in supporting the environmental protection, so as to achieve virtuous interaction between the government as well as social regulation and enterprise self-governance. The role of market orientation, law-based governance and social action should be highlighted. The modern environmental governance system includes leadership responsibility system, enterprise responsibility system, national action system, supervision system, market system, credit system, and laws & regulations and policies system. Its goal is to form an environmental governance system featuring clear orientation, sound decision-making, powerful implementation, effective incentives,

diversified engagement and positive interaction.<sup>19</sup>

**First**, we need to make breakthroughs in the areas of regulatory capacity, investment mechanism and national action, enhance regulatory capacity in law enforcement, monitoring, information, scientific research and human resources, and establish a sound mechanism for stable financial investment and a market-based investment mechanism of “who pollutes, who pays.” **Second**, we need to strengthen and optimize the supervision system, including monitoring, evaluation, supervision, law enforcement, and accountability, make overall planning for ground and underground, and land and ocean, and form a closed-loop management system for identifying and solving problems.<sup>20</sup> **Third**, we need to enhance public participation in environmental governance and supervision. We will adopt a variety of ways to disclose information on enterprise-based emissions and strengthen the supervision and assessment of the integrity and authenticity of information disclosure. **Fourth**, we need to promote the pilot and demonstration of the commission service model for environmental management in urban areas and industrial parks;

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<sup>19</sup> The *Guiding Opinions on Building a Modern Environmental Governance System* issued by the General Office of the Central Committee of the Communist Party of China and the General Office of the State Council, 2020.

<sup>20</sup> Chinese Minister of Ecology and Environment Huang Runqiu’s work report at the 2021 China National Working Conference on Ecological and Environmental Protection, the Government Information Disclosure section at the website of the Ministry of Ecology and Environment of the People’s Republic of China, February 1, 2021.

we also need to facilitate the trading of emissions rights and the mortgage & pledge financing for trading emissions rights and unify green bond standards in China.