

# **China's Submission on the Global Stocktake**

## **I. Proposal Mandate**

According to the Article 14 of the Paris Agreement, The Conference of the Parties to the Paris Agreement (hereinafter referred to as the CMA) shall periodically take stock of the implementation of this Agreement to assess the collective progress towards achieving the purpose of this Agreement and its long-term goals (referred to as the "global stocktake"). It shall do so in a comprehensive and facilitative manner, considering mitigation, adaptation and the means of implementation and support, and in the light of equity and the best available science. The outcome of the global stocktake shall inform Parties in updating and enhancing, in a nationally determined manner, their actions and support in accordance with the relevant provisions of this Agreement, as well as in enhancing international cooperation for climate action. Paragraph 19 of 19/CMA.1 requests the Chairs of the Subsidiary Body for Scientific and Technological Advice and the Subsidiary Body for Implementation to issue a call for the inputs referred to in paragraphs 36 and 37 of the same decision. China welcomes the opportunity to share its understanding and provide the following information and comments.

## **II. The priorities of global stocktake**

The global stocktake is an important mechanism to promote the implementation of the Paris Agreement. By stocktaking the collective progress in the implementation of the Paris Agreement, including mitigation, adaptation, means of implementation and support, in a comprehensive and facilitative manner, the GST helps identify obstacles, gaps, needs and opportunities, and exchange experiences, lessons and best practices. It would inform Parties to take actions, enhance support, and strengthen international cooperation, in line with the principles of equity, common but differentiated responsibilities, in a nationally determined manner. GST should aim at strengthening implementation and focus on progress on the ground in delivery of commitments, rather than doing empty equations or slogans. The progress should also be solution-oriented, so as to facilitate achieving just transition for all Parties, especially developing countries, under the framework of sustainable development, strengthening the adaptive capacities and levels, enhancing the provision of means of implementation and support from developed countries to developing countries, promoting international cooperation and abandoning unilateral barriers.

## **III. Relevant information**

### **1. Mitigation**

The aim of stocktaking the collective progress of implementation of the Paris Agreement is to clarify where we are, laying out the basis for achieving the goals of the

Paris Agreement. This global stocktake is being carried out in 2021-2023. Objectively, the progress in delivery of Pre2020 commitments and its lessons learned are the core useful information to understand where we are.

The latest reports of IPCC AR6 stressed the unequivocally human-induced greenhouse gas (GHG) concentrations increase since around 1750. Global surface temperature was 1.09°C higher in 2011–2020 than 1850–1900, and the best estimate total human-caused global surface temperature increase is 1.07°C. More than half (58%) of historical cumulative net CO<sub>2</sub> emissions from 1850 to 2019 were occurred between 1850 and 1989. IPCC AR6 also shows that the North America accounted for 23% of historical cumulative net anthropogenic CO<sub>2</sub> emissions from 1850 to 2019 and Europe accounted for 16%, which are the highest among all regions. In 2018, for example, the North America's production-based emissions were 16t CO<sub>2</sub>-FFI per person, and its consumption-based emissions were 17t CO<sub>2</sub>-FFI per person, both much higher than the rest of the world, with the consumption-based emissions per capita 20 times higher than those of the Africa.

Both climate science and the UNFCCC and its Paris Agreement clearly state that developed countries should take the lead in combating climate change and reducing anthropogenic emissions significantly. The IPCC AR4 published in 2007 suggested that in order to limit global temperature rise to well below 2°C, Annex I Parties need to reduce their emissions by 25% to 40% in 2020 compared to 1990. In 2009, Annex I Parties made quantified economy-wide emission reduction targets for 2020. If these pledges are converted to 1990 as the base year, the 2020 emission reductions promised by Annex I Parties as a whole are only 12.6% from 1990, far below the scientific requirements of the IPCC. According to the latest GHG inventory submitted by developed countries in April 2022, by 2020, more than half of the developed country parties (the EU as a whole) are still far from achieving their 2020 emission reduction targets; some countries have only fulfilled half of their commitments; some other countries even achieved a significant increase in their emissions. The Emissions Gap Report 2021 released by the United Nations Environment Programme (UNEP) shows that some developed countries are assessed to require stronger policies to achieve their NDCs with currently implemented policies, therefore additional and urgent efforts are needed to meet their new NDC targets.

## **2. Adaptation**

For a long time, the progress of global adaptation has been seriously lagging behind, the global goal on adaptation is still unclear, developed countries have not provided adequate and effective support, developing countries have been adversely affected by the increasingly severe climate change, and the pandemic has further exacerbated the vulnerability of developing countries. The IPCC AR6 WGII noted that despite the increasing and initial progress in adaptation planning and implementation at the regional scale, there is still a huge gap between the current level of adaptation and the

level needed to address adverse impacts and reduce climate risks. Developing countries have repeatedly reported the following adaptation challenges and needs in their National Communications (NCs), Nationally Determined Contributions (NDCs), National Adaptation Plans (NAPs), Adaptation Communications etc., including insufficient supply of clean drinking water, agriculture plant diseases and insect pests, biological invasion, forest fires, deforestation, forest diseases and pests, incomplete meteorological observation facilities, floods, drought, coastal erosion, seawater intrusion caused by sea level rise, malaria and other insect-borne diseases, the waste of food caused by improper storage, which reflects the fact that developed countries have not yet provided necessary, timely and adequate support. Twenty developing countries have prepared NAPs with the support of the Global Environment Facility (GEF), but GEF has not yet established a mechanism to support developing countries in implementing NAPs. The scaled-up, systemic, sustainable and long-term adaptation support provided by developed countries to developing countries needs to be delivered and enhanced urgently at global level. The current level of support is far from meeting the needs of developing countries to adapt to climate change.

In terms of adaptation finance, UNEP states that the annual cost of adaptation in developing countries could range from US\$140 billion to US\$300 billion by 2030, and is expected to reach as high as US\$500 billion by 2050 (UNEP, 2021). Compared with the support provided for mitigation, the support provided by developed countries to developing countries for adaptation actions is seriously insufficient, presenting increasing imbalance. Prior to 2020, in terms of the adaptation finance by developed countries, there are systematic deficiencies, including disproportionately lack of financial resources, lack of transparency, lack of substantial support on technology transfer and capacity building etc., and the developed countries failed to fulfill their promised responsibilities and obligations.

### **3. Implementation means and support areas**

**Finance.** According to UNFCCC and its Paris Agreement, developed countries shall provide finance, technology, capacity building and other means of implementation and support for developing countries for mitigation and adaptation. Although developed countries have mobilized some public and private funds from multilateral, bilateral and regional channels, there are systematic deficiencies:

**Firstly,** developed countries failed to deliver their commitment to annually mobilize USD100 billion to developing countries by 2020, with a lack of systematic assessments of the progress and gaps. It leads to a lack of a clear global view of overall progress in climate finance and a lack of effective information towards further finance arrangements. According to the Fourth Biennial Assessment and Overview of Climate Finance Flows issued by Standing Committee on Finance (SCF), the public financial support reported by developed country Parties in Annex II to the UNFCCC in their BRs (as of October 2020) is \$45.4 billion in 2017 and \$51.8 billion in 2018. 74% of spending

is climate-specific, mainly through bilateral, regional and multilateral channels to finance developing countries.

**Secondly**, there is a huge gap between the implementation of climate finance obligations and commitments by developed countries and the needs of developing countries. UNEP points out that to keeping the temperature rise below 2°C by the end of the 21st century, the needs of developing countries on climate finance will be US\$250 billion to US\$500 billion per year by 2050 (UNEP, 2016). According to the summary of financial needs in developing countries' proposals in the First report on the determination of the needs of developing country Parties related to implementing the UNFCCC and its Paris Agreement issued by the SCF, based on data from NDCs from 153 developing country Parties, a total of 78 involve climate financial needs and the aggregate demand by 2030 is \$5.8 to \$5.9 trillion; based on the NCs submitted by 149 Parties, the needs ranged from US\$8.8 to US\$8.9 trillion; based on the Biennial Update Reports (BURs) of 62 Parties, the cumulative demand was US\$11.5 trillion. However, after the adoption of Paris Agreement, the willingness of developed countries to contribute and to respond to the needs of developing countries continued to decline. They failed to set ambitious pre-2025 finance targets, and were reluctant to propose their own clear arrangements for post -2025 targets. It not only weakened the basis of political mutual trust in the multilateral process of climate governance, and has further delayed the progress of developing countries in taking actions on climate change, significantly impaired the global efforts and effectiveness of addressing climate change.

**Thirdly**, the definition of climate finance is unclear, and there exist double-counting and labeling problems. Developing countries and many research institutions and international organizations pointed out that most of the climate finance resources provided by developed countries come from official development assistance (ODA), and most developed countries have not indicated that whether these supports are related to existing support to developing countries in other fields of environment and sustainable development, e.g. biodiversity conservation, elimination of ozone-depleting substances, combating desertification etc. And the double accounting problem failed to reflect whether the Annex II Parties to the UNFCCC has undertaken the requirement of "providing new and additional financial support".

**Fourthly**, public funds, especially grants, provided by developed countries are seriously insufficient. At present, most of the climate finance support provided by developed countries is not in the form of grants, and it requires a cumbersome and complicated application procedures. According to the BRs submitted by developed countries, the proportion of grants in some developed countries is less than 10%.

**Technology development and transfer.** The current transfer of climate-friendly technologies are far from sufficient in supporting the long-term vision of technology development and transfer in Article 10.1 of the Paris Agreement: Firstly, the transfer of climate-friendly technologies is mainly through market-based approaches with the

private sector as the main body, while the willingness, public support of developed countries' government to transfer technology are insufficient. Secondly, developing countries have identified targeted technology needs through TNAs and formed many technology action plans (TAPs), but they cannot be effectively implemented due to lack of follow-up funds and technical support. Thirdly, although the Technical Mechanism of the UNFCCC has established a relevant knowledge and information platform, a network of technical providers and institutions and a technical assistance system, effective linkage with the Financial Mechanism has not been established, and the Technology Mechanism especially the Climate Technology Center and Network (CTCN) facing continued challenges in securing sufficient, stable and sustainable funding guarantees, making it difficult to effectively support the actual needs of developing countries for climate-friendly technology transfer under the Paris Agreement.

**Capacity building.** Support of capacity-building under the UNFCCC has been lacking in systematization and continuity, mainly at individual (focusing on knowledge, skills and training), organizations/institutions (focusing on organizational performance and institutional collaboration) and systems (creating an enabling environment through regulatory and economic policies) levels. Despite decades of capacity-building efforts under many developmental and environmental mechanisms, including UNFCCC, developing countries have made uneven progress in capacity-building mechanisms. The Paris Committee on Capacity Building also pointed out that despite some progress in capacity building related to climate action at the national level, there are still institutional, technical and financial capacity gaps and needs in developing countries to implement NDC mitigation and adaptation. The scope and scale of these gaps and needs vary significantly across countries.

#### **IV. China's suggestions on GST**

##### **1. Principles**

The increasingly frequent extreme climate events around the world once again urge people to seriously examine the effectiveness of the global response to climate change, reminding us that empty slogans and target figures did not lead to achievement of our goals. To achieve the goals of the Paris Agreement and effectively address climate change, we must focus on implementation and delivery of commitments and actions. China believes that the global stocktake should faithfully follow the mandate, in accordance with the goals and principles of UNFCCC and the Paris Agreement, and conduct a comprehensive, balanced and facilitative stocktake of the overall global progress, so as to promote the global delivery of commitments, implementation of actions, and enhanced cooperation.

**Firstly**, the global stocktake should anchor in the goals of the Paris Agreement, follow the principles of equity, common but differentiated responsibilities and respective

capabilities, in the light of different national circumstances, and based on historic, objective, scientific, systematic and multilateral-obligations perspectives to ensure that developing countries have the right to just transition in the context of sustainable development.

**Secondly**, the global stocktake should take stock of the progresses across all pillars in a comprehensive and balanced manner. The current progresses of global stocktake on adaptation and implementation means and support are far behind that on mitigation. The situation of emphasizing mitigation, neglecting adaptation, and avoiding support should be reversed as soon as possible. In particular, it is necessary to systematically analyze the status quo and reasons for the serious lack of information on adaptation and means of implementation and support by developed countries, including on finance, technology, and capacity building, and to provide clear guidance.

**Thirdly**, the global stocktake should focus on collective progress in a facilitative and non-intrusive manner. The stocktake should base on global collective progress, and provide critical information for the global implementation of the Paris Agreement, the delivery of climate commitments, and enhancing international cooperation for all Parties, in a nationally determined manner. The global stocktake should not go beyond the principles of the UNFCCC and its Paris Agreement, nor introduce country-specific, prescriptive or intrusive requests and outcomes.

**Fourthly**, the global stocktake should enhance international cooperation and oppose unilateral measures. Promoting international cooperation is an important mandated aim of the global stocktake. Effective response to climate change requires the an open and healthy global economy. The global stocktake should promote international cooperation and oppose unilateral measures and green barriers in the name of addressing climate change.

**Fifthly**, the global stocktake should be open, transparent, consensus-based and Party-driven, to ensure full and effective participation of all Parties in the process and Party-driven outcomes, and welcome the extensive participation of non-Party stakeholders.

## **2. Specific suggestions**

**(1) Dedicated topics and chapters on the progresses and gaps of pre2020 ambitions and implementation should be presented in** the roundtables, the reports of different phases, as well as the final outcome. The pre2020 implementation and ambition is the core information in assessing the progress of the implementation of the Paris Agreement and understanding where we are. It is a key reference and basis for mutual trust to answer how to achieve the goals of the Paris Agreement. It is of practical significance and meaningful value for the comprehensive, effective and sustained implementation of the UNFCCC and its Paris Agreement, and for Parties to communicate and implement their NDC and long-term low-emission development

strategies in an proactive and responsible manner. The technical assessment should analyze the historic accumulative effect of global GHG emission, historic accumulative emission per capita, national greenhouse gas emission inventory, the summary report and submissions of the roundtable on pre-2020 implementation and ambition, the second periodic review under the Convention and other relevant inputs. In the reports and outputs of the different phases of the global stocktake, a dedicated chapter should lay out the historic emission responsibilities of the developed countries, the progress, experience, gaps and suggestions to close the gaps of Pre2020 ambition and implementation, with the gaps and lessons as a key component in the final outcome of GST.

**(2)** The global stocktake should analyze the challenges and costs of just transition in developing countries, put forward economically and technically feasible options, collect good practices and cases from Parties on mitigation, adaptation, means of implementation and support, and produce a compilation of climate action good practices as an important outcome of the global stocktake. The global stocktake should provide effective information on how to conciliate climate actions and transition and development, assess the challenges and costs faced by developing countries to achieve just transition, and provide economic and technical options for developing countries to carry out climate action in the context of sustainable development. At the same time, it should urge developed countries to implement their obligations to take the lead in emission reductions, by achieving net-zero emissions significantly ahead of the global timeframe, and provide developing countries with support in finance, technology and capacity-building that matches their actions and ambition.

**(3)** Systematically assess the progress of global adaptation efforts and of adaptation finance, analyze the reasons for the serious lack of information in adaptation, accelerate the clear recognition of global goal on adaptation with quantified targets, clearly assess the needs for adaptation finance as well as the progress and gaps towards doubling adaptation finance, and provide clear guidance. The status quo of lack of clear global goal on adaptation, emphasizing plans while neglecting implementation, lack of information as well as critical inadequacy of adaptation support greatly hampered the progress of global adaptation actions and hindered global sustainable development. Although existing information on adaptation is mostly fragmented and small-scale, and are generic plans addressing short-term risks, the global stocktake should systematically assess and analyze the existing information on global adaptation actions and support through integrated manner. In view of the obstacles such as the long implementation periods of adaptation actions and the difficulty in collecting quantitative information, it is urgent to quantify the global adaptation goals, clarify the implementation direction of adaptation actions, accelerate to put forth the methodology and relevant indicators of quantifying adaptation information for tracking progress on achieving global goal on adaptation, improve the development and demonstration of analysis tools on adaptation effectiveness. It provides assistance in obtaining useful

adaptation information, accurately identifying regional adaptation development needs and gaps, and developing an adaptation progress information platform in line with the long-term global stocktake mechanism, especially effectively helping developing countries to enhance their capabilities in this regard.

(4) Systematically assess the progress of provision of finance, technology, capacity building and other means of implementation and support by developed countries. It should include the delivery of developed countries' commitment to annually mobilize USD100 billion for developing countries by 2020, the delivery of existing long term climate finance goal through to 2025, and assessment of financial needs of developing countries etc. GST should put forward plans and roadmaps to close finance gaps, analyze the situation and reasons for the serious lack of transparency on climate finance, the tardiness in provision of means of implementation and support, and provide clear guidance. The global stocktake should also carry out a detailed stocktaking of the financial mechanisms under the UNFCCC, such as the proportion and comparison of mitigation and adaptation finance received, as well as strategic plans and the funding gaps to implement the strategies in GEF, GCF and the Adaptation Fund. And GST should take stock of the current status of financial mechanisms outside the UNFCCC, such as Climate Investment Funds, clarify the relationship between the financial mechanism system and the flow of public funds from developed countries, as well as the role of financial mechanisms and their proportion in public funds.

## **V. China's Good Practices in Addressing Climate Change**

China attaches great importance to climate change work, regards climate change as an important starting point for promoting the construction of ecological civilization and achieving high-quality development and actively implementation of the national climate change strategy. Adaptation of a series of policy measures such as adjusting the industrial structure, optimizing the energy structure, saving energy and improving energy efficiency, establishing market mechanisms, and increasing forest carbon sinks, and has achieved outstanding results.

The next five years will be a critical period for the beginning of the comprehensive construction of a socialist modern country. China's ecological civilization construction has also entered a critical period, which will take carbon reduction as the key strategic direction, promote the synergy of pollution reduction and carbon reduction, promote the comprehensive and green transformation of economic and social development, and realize the improvement of ecological environment quality from quantitative change to qualitative change. the Report to the 20th National Congress of the Communist Party of China has pointed out the direction to further efforts in addressing climate change. China will actively and steadily promote carbon peaking and carbon neutrality. Achieving carbon peaking and carbon neutrality is a broad and profound economic and social systemic change. Based on China's own energy and resource endowments, we insist construction before destruction, and implement carbon peaking actions in a



planned and step-by-step manner. Improve dual-controls over energy intensity and gross energy consumption, focus on controlling fossil energy consumption, and gradually shift to controlling both carbon intensity and total carbon emissions. Promote the clean, low-carbon and efficient use of energy, and promote the clean and low-carbon transformation of industry, construction, transportation and other industries. Further promote the energy revolution, increase the efficiency of coal utilization, plan hydro power development and environment protection as a whole, and actively develop nuclear power in a safe and orderly manner. Improve the statistical measuring and counting system for carbon emissions, and improve the carbon emission trading market trading system. Improve the carbon sink capacity of ecosystems. Actively participate in global governance to address climate change.

In the next step, we will continue to actively implement the national climate strategy, and focus on the implementation of the relevant arrangements of the Report to the 20th National Congress of the Communist Party of China. We will stick to the overall planning of industrial restructuring, pollution control, ecological protection, and climate change, coordinate to promote carbon reduction, pollution reduction, green expansion, and growth; and coordinate to promote carbon reduction, pollution reduction, greening expansion and growth, adhere to the system concept. Through the application of systematic thinking, we will strike a balance between development and emissions reduction, between overall and local imperatives, between short-term and longer-term considerations, and between the government and the market in a proper manner, and promote new progress in addressing climate change.

### **1. 2020 mitigation target ahead of schedule**

On the eve of the Copenhagen Climate Change Conference, China made a solemn commitment to the world: to reduce carbon intensity per unit of GDP by 40-45% by 2020, compared to 2005 levels; to increase the non-fossil share of energy consumption to around percent by 2020. In the past ten years, China has firmly implemented the national strategy to actively address climate change, and unswervingly pushed forward the work to address climate change. By the end of 2020, China's carbon intensity had decreased by about 48.4% compared with 2005, and non-fossil energy accounted for 15.9% of primary energy consumption, significantly exceeding the 2020 targets. Not only has China exceeded its climate commitments to the international community ahead of schedule, in September 2020 China announced to would scale up its NDCs, strive to peak CO<sub>2</sub> emissions before 2030, and achieve carbon neutrality before 2060. In October 2021, China officially submitted “China’s Achievements, New Goals and New Measures for Nationally Determined Contributions” to the secretary of UNFCCC and including “strive to peak carbon dioxide emissions by 2030, and strive to achieve carbon dioxide emissions by 2060. China’s updated NDC goals are as follows: aims to have CO<sub>2</sub> emissions peak before 2030 and achieve carbon neutrality before 2060. By 2030, CO<sub>2</sub> emissions per unit of GDP will have dropped by more than 65% compared

with the 2005 level, the share of non-fossil energy consumption will reach around 25%, the forest coverage rate will have reached about 25%, and the total installed capacity of wind power and solar power reaching over 1200 gigawatts..

## **2. Establishment of the“1+N”policy package for Carbon Peaking and Carbon Neutrality**

(1) In order to strengthen the centralized, unified leadership over the efforts to peak carbon dioxide emissions and achieve carbon neutrality, the Leading Group on Carbon Peaking and Carbon Neutrality was established. All provinces (autonomous regions and municipalities) have established leading groups on carbon peaking and carbon neutralization as well to strengthen the overall coordination of local carbon peaking and carbon neutrality, and establish a working mechanism that is linked central and local authorities and coordinated in an orderly manner. (2) Make green and low-carbon development an important part of national economic and social development planning. Integrate emission control targets into China's 14th Five-Year Plan and the Long-Range Objectives Through the Year 2035, and require all provinces (autonomous regions and municipalities) to take green and low-carbon development as an important part of their 14th Five-Year Plan, and clarify specific goals and tasks. (3) The establishment of the “1+N” policy package for Carbon Peaking and Carbon Neutrality provides a sufficient guarantee for achieving the carbon peaking and carbon neutrality. “1” is the theoretical guidance and top-level design constituted by two documents “Working Guidance for Carbon Dioxide Peaking and Carbon Neutrality in Full and Faithful Implementation of the New Development Philosophy” and “Action Plan for Carbon Dioxide Peaking Before 2030” released in 2021, which clearly define the timetable, roadmap, and blueprint for achieving China’s dual carbon goals. “N” is a series of implementation plans for key fields, such as energy, production, construction, transportation, agriculture, pollution reduction and carbon reduction, as well as key industries, such as coal, oil and natural gas, steel, non-ferrous metals, petrochemicals, and building materials, along with technological, financial, statistical and human capital safeguard measures.

## **3. Development of Renewable Energy**

China has continuously increased energy conservation and emission reduction efforts, accelerated the adjustment of its energy structure, and built a clean, safe, efficient and low-carbon energy system. Establish a new strategy for energy security, promote energy consumption revolution, supply revolution, technological revolution, and institutional revolution, strengthen international cooperation in an all-round way, give priority to the development of non-fossil energy, promote the green development of hydropower, comprehensively coordinate the development of wind power and solar power. China develop nuclear power in an orderly manner under the premise of ensuring safety and maintain a steady pace of construction, developed biomass energy, geothermal energy and ocean energy according to local conditions, and comprehensively improved the utilization rate of renewable energy. Deepening the reform of the energy system and

promoting the efficient allocation of energy resources. China's renewable energy has achieved leapfrog development, and the total installed capacity of hydropower, wind power, photovoltaic power generation and biomass power generation has ranked first in the world for 17 consecutive years, 12 years, 7 years and 4 years respectively. By the end of 2021, China's installed renewable energy power generation capacity, wind power generation capacity, and photovoltaic power generation installed capacity accounted for more than 1/3 of the global installed capacity, accounting for 33%, 40%, and 36%, respectively, and hydropower generation capacity accounted for 29% of the world's total installed capacity.

#### **4. Compile and implement the national climate change adaptation strategy**

China has always adhered the same significance to both mitigation and adaptation, and promoted and implemented major strategies for adaptation to climate change. In June 2022, China released the National Climate Change Adaptation Strategy 2035, which proposed the guiding ideology, primary objectives and basic principles for China's adaptation to climate change in the new era, providing important guidance and basis for adaptation to climate change. Based on the exposure and vulnerability of each sector and region to the adverse effects and risks of climate change, natural ecosystems and economic and social systems are divided into two dimensions, and clarifies water resources, terrestrial ecosystem, marine and coastal zone, agriculture and food security, health and public sanitation, infrastructure and major engineering projects, city and human habitats environment, sensitive secondary and tertiary industries and other key areas. It builds a multi-level regional structures adaptive to climate change, combines adaptation to climate change with territorial space planning. And proposes adaptation actions to cover eight major regions across the country, as well as the Beijing-Tianjin-Hebei region, Yangtze River Economic Belt, Guangdong-Hong Kong-Macao Greater Bay Area, the strategic region for the integration of Yangtze River Delta, Yellow River Basin and other major strategic regions, to further improvement of safeguard measures.

#### **5. Build a natural ecosystem integrating mountains, rivers, forests, fields, lakes, grass and sand to improve the ability to adapt to climate change**

President Xi Jinping stressed the promotion of green development and the harmonious coexistence of human and nature. China always believes that nature is the basic condition for human survival and development. We should respect nature, conform to nature, protect nature, and plan development considering harmonious coexistence between human and nature. Coordinate and promote the integrated protection and systematic management of mountains, rivers, forests, farmlands, lakes, grasslands and sandylands, optimizing national ecological security barriers, and deploy and implement integrated protection and restoration projects for mountains, rivers, forests, farmlands, lakes, grasslands and sandylands. Coordinate terrestrial and marine adaptation to climate change and implement nature-based solutions. Focus on major aspects such as

water resources, terrestrial and marine coastal ecosystems, and comprehensively improve the ability of natural ecosystems to adapt to climate change.

## **6. Promoting the construction of a national carbon emission trading market**

The carbon emission trading scheme is an important policy tool to promote the realization of China's carbon peaking and carbon neutrality. It has the functions of promoting energy structure adjustment, energy saving and energy efficiency improvement, ecological protection compensation etc. and also supports local governments and enterprises in promoting emission reduction through market mechanisms, providing the effective pathways for properly deal with the relationship between economic development and emission reduction. China's national carbon emission trading market (hereinafter referred to as the national carbon market) officially launched online trading on July 16, 2021. By 2022 on October 27, the first compliance cycle of the national carbon market has run for 310 trading days, with a cumulative trading volume of carbon emission allowances of 196 million tons and a turnover of 8.601 billion RMB. The market is operating in a healthy and orderly manner, and the transaction price rises steadily. The carbon emissions trading pilots are running smoothly. The carbon emissions trading pilots in 7 provinces (cities) including Beijing, Tianjin, Shanghai, Chongqing, Guangdong, Hubei and Shenzhen, cover nearly 3,000 key emission units in more than 20 industries including electricity, steel, and cement. By October 21, 2022, the cumulative trading volume of carbon emissions trading pilots was 551 million tons, with a turnover of 14.432 billion RMB. The incentive and restraint role of the national carbon market has achieved initial results, the awareness and ability of enterprises to reduce emissions has been effectively improved, and the role of promoting enterprises to reduce greenhouse gas emissions and accelerate green and low-carbon transformation has initially appeared.