

China's climate change law: History, current situation, and key issues

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Abstract

The international obligations assumed by China and the special circumstances pertaining to the various stages of the country's development have determined the evolution of China's climate change law. Owing to the lack of basic or comprehensive legislation and the failure to establish a complete legislative system, China's climate change law and the institutions responsible for its construction are still in their early stages of development. Although many ministerial and departmental regulations have been implemented, there is still an urgent need for basic or comprehensive legislation to be introduced. At the institutional level, China still has much work to do in terms of the development of key systems, including the carbon emissions trading system. Going forward, it is critical for China to develop a special 'climate change response law' to improve the carbon emissions trading system, among other relevant systems.

1 Introduction

The Paris Agreement came into effect on November 4, 2016, setting in motion the implementation of the international community's 'bottom-up' responsibility-sharing framework, as introduced under the Durban-Paris process. In terms of the arrangements under the Paris Agreement, each party is required to determine its 'Intended Nationally Determined Contributions' (INDC) according to its own capabilities and national circumstances. China submitted its INDC to the Conference of the Parties on June 30, 2015, setting out its action targets for 2020 and 2030. China's INDC stated that: carbon dioxide emissions would peak in around 2030; carbon dioxide emissions (per unit of GDP) had dropped by 60-65%, compared with 2005 levels; non-fossil fuel energy accounted for approximately 20% of primary energy consumption; and forest stock volume had increased by 4.5 billion cubic metres compared with 2005 calculations.¹

To realise the objectives underpinning its INDC and to ensure the implementation of relevant policies and measures, China urgently needs to establish a complete set of legal and institutional systems to address climate change. On the one hand, this can trigger actions in line with the plans outlined in legislation and with the rule of law,

1 For China's INDC see <<https://bit.ly/3JLuLmY>> accessed 28 March 2022.

thus making various obligations explicit. On the other hand, it can also be helpful in mobilising domestic support and defining expectations, thus advocating stronger protection against climate change.

2 Review of the development of China's climate change law

The development of China's climate change law is the result of the international obligations assumed by China and the special circumstances surrounding the various stages of China's development. Although the United Nations Framework Convention on Climate Change (UNFCCC) (hereinafter referred to as 'the Convention') has been in force for more than 20 years, the law and institutional structures supporting China's climate change policies are still in their early stages of development.

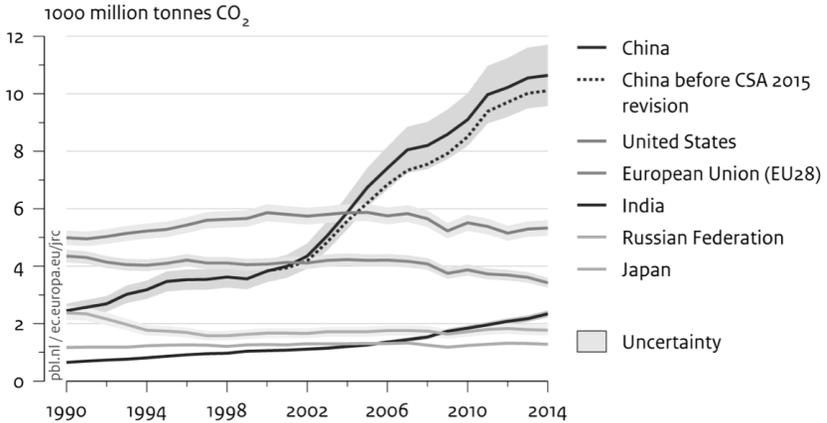
2.1 Prior to 2007

China signed the Convention as early as June 11, 1992 and ratified it on May 7, 1993.² However, China did not immediately start to construct laws and systems for the purpose of implementing the Convention. There were two main reasons for this. Firstly, from an external or international perspective, China had no substantive international obligations. In accordance with the Convention and the subsequent Kyoto Protocol, China, as a developing country party, did not assume quantifiable emissions reduction obligations. China only undertook to implement formal measures such as the formulation of national programmes and the strengthening of scientific research cooperation and capacity building, among others. Secondly, from an internal or domestic perspective, China's carbon emission flux was at a low and relatively stable level before 2002; hence, objectively, it was not necessary to start carbon emissions control (see Figure 1 below).

2 See <<https://unfccc.int/node/180417>> accessed 18 March 2022.

Figure 1: CO₂ emissions from fossil-fuel use and cement production in the top five emitting countries and the EU³

CO₂ emissions from fossil-fuel use and cement production in the top 5 emitting countries and the EU



Therefore, China did not establish any systematic law or construct related systems prior to 2007. This was only done in accordance with the obligations of the Convention and the objectives to control domestic air pollution and other preliminary measures, as provided for under the Convention. Among these preliminary measures were the ‘Interim Measures for the Administration on External Cooperation of the Joint Implementation of Activities Projects in the Pilot Phase during China’s Implementing the United Nations Framework Convention on Climate Change’ (which has since expired), a regulation issued by the National Science and Technology Commission, the Ministry of Foreign Affairs, the State Planning Commission and China Meteorological Administration in 1997. These interim measures were typically designed to regulate cooperation pertaining to ‘the Joint Implementation of Activities Projects in the Pilot Phase’ between developed countries and China, which ensured the additional reduction in emissions, funding and other factors, with the approval of the two governments involved. Other preliminary measures included a series of policies and laws on renewable energy which have been introduced in China since 1990. For example, in 1995, the former National Science and Technology Commission, the State Planning Commission and the Economic and Trade Commission jointly formu-

3 PBL Netherlands Environmental Assessment Agency, ‘Trends in global CO₂ emissions’ <<https://www.pbl.nl/en/publications/trends-in-global-co2-emissions-2015-report>> accessed 3 March 2022.

lated China's 'New Energy and Renewable Energy Development Program (1996-2010)' and the 'New Energy and Renewable Energy Priority Development Projects'. After a lengthy period of preparation, the Standing Committee of the National People's Congress adopted the Renewable Energy Law on February 28, 2005.

2.2 2007 to 2011

As can be seen from Figure 1, after 2002 China's economy began to develop rapidly and carbon emissions increased dramatically. This resulted in China facing increasing pressure in international negotiations. Developed country parties urgently requested a change in the pattern of unilateral commitments by developed country parties, which ultimately led to the United States withdrawing from the Kyoto Protocol. In this regard, the Conference of the Parties adopted the Bali Action Plan in 2007, which – based on the Ad Hoc Working Group on Further Commitments for Annex I Parties under the Kyoto Protocol (AWGKP) – set up the Ad Hoc Working Group on Long-term Cooperative Action under the Convention (AWG-LCA), responsible for negotiating the specific obligations of all states to implement the Convention. In addition, the Bali Action Plan required developing country parties to adopt 'Nationally Appropriate Mitigation Actions (NAMAs)', which broke down the original responsibility-sharing model (developed countries would carry all responsibilities and developing countries would carry fewer responsibilities), laying the foundation for all parties to assume obligations.

In the above circumstances, China set out to start some preparatory work on the legal and institutional aspects. Organisationally, in June 2007 the State Council set up a national leading group responsible for responding to climate change, specifically energy saving and emissions reduction. Likewise, the State Forestry Administration, Ministry of Agriculture and State Oceanic Administration subsequently established leading groups on climate change. From a legal perspective, on August 27, 2009, the Standing Committee of the National People's Congress adopted the 'Resolution of the Standing Committee of the National People's Congress on Actively Responding to Climate Change', which proposed strengthening the legalities surrounding climate change protection, implementing relevant laws and enacting laws according to what was occurring at that time. In terms of administrative regulations, the State Council issued 'China's National Climate Change Program' in June 2007 (which has since expired), setting out specific targets, basic principles, key areas, policies and measures relating to China's response to climate change until 2010. In terms of ministerial or departmental rules, the relevant departments of the State Council had thus begun to act.

The Ministry of Agriculture carried out projects using international financial assistance; the Ministry of Science and Technology, the National Development and Re-

form Commission and the Ministry of Foreign Affairs issued 'China's Scientific and Technological Action on Climate Change'; the China Association for Science and Technology and China Meteorological Administration issued the 'Circular on Further Strengthening the Scientific Propaganda Work of Meteorological Disaster Prevention and Mitigation and Climate Change' in 2007; the State Oceanic Administration issued 'Opinions of the State Oceanic Administration on the Respond Work Related to Marine Climate Change'; and the National Development and Reform Commission formulated the 'Interim Measures for the Management of Foreign Cooperation in the Field of Climate Change' in 2010.

Overall, China's focus at that stage was on macro-organisation and plans and preparations for specific areas, such as finance, technology and adaptation, without addressing substantive issues pertaining to carbon emissions control.

2.3 From 2011 until now

The Durban Conference in 2011 ended the 'two-track' negotiation mechanism and established the Ad Hoc Working Group on the Durban Platform for Enhanced Action to develop an agreement applicable to all the parties. Moreover, the Durban Conference called on developed countries to establish 'Nationally Appropriate Mitigation Commitments or Actions by Developed Country Parties' and developing countries to establish 'Nationally Appropriate Mitigation Actions by Developing Country Parties'. Following several subsequent meetings, the Paris Agreement finally established a mechanism through which all parties were required to determine their own obligations in accordance with their INDC.

Under this mechanism, China, like other contracting parties, was to determine its obligations to tackle climate change and formulate legal and institutional systems to assist this process. Since 2011, therefore, China has accelerated its formulation of legal and institutional structures and systems. In terms of administrative regulations, the State Council, in 2011 and 2016 respectively, issued the 'Work Plan for Controlling Greenhouse Gas Emissions for the Twelfth Five-Year Plan period' and the 'Work Plan for Controlling Greenhouse Gas Emissions for the Thirteenth Five-Year Plan period'.

From a ministerial and departmental perspective, the relevant departments under the State Council have also begun to formulate relevant regulations. These include: a target responsibility assessment; carbon emissions control; carbon emissions trading; and measuring and providing data and statistics on greenhouse gas emissions. The regulations of greatest significance include: the 'Interim Measures for the Administration on Certification of Low-carbon Products' issued by the National Development and Reform Commission on February 18, 2013; the 'Notice of the National Development and Reform Commission on Organizing the Reporting of Greenhouse

Gas Emissions of Key Enterprises and Institutions’ issued by the National Development and Reform Commission in 2014; and the ‘Interim Measures for the Management of Carbon Emissions Trading’ promulgated by the National Development and Reform Commission in 2014.

In addition to the abovementioned work, which is already under way, the National Development and Reform Commission has been actively promoting the drafting of basic legislation at the national level and has commissioned certain units to engage in preliminary research aimed at developing a Climate Change Act or Low-carbon Development Promotion Law. To this end, the National Development and Reform Commission announced a publication in 2012 titled ‘China’s Policies and Actions for Addressing Climate Change’.⁴

3 The current situation with China’s climate change law

At present, China has a fairly clear and established management system framework. However, in the legal system, although many departmental rules have been introduced, basic or comprehensive legislation is still lacking. At the institutional level, although China has introduced many mechanisms and systems, there has still been insufficient progress made on key systems, such as the carbon emissions trading system.

3.1 Management system

In terms of its management system, China combines deliberation and coordination agencies, centralised management and division of labour with individual responsibility.

Firstly, China established deliberation and coordination agencies in the State Council and its departments to coordinate the actions of all parties. A deliberation and coordination agency is an interdepartmental coordinating body set up to perform a specific or temporary task. This agency is mainly responsible for macro-strategic decision-making and the coordination of various departments and additional functions.

As early as February 1990, the Chinese government set up the National Climate Change Coordination Group under the then State Council Environmental Protection Committee. In 1998, the State Council set up a National Climate Change Coordina-

4 The State Council the People’s Republic of China, ‘China’s policies and actions for addressing climate change’ (22 November 2011) <<https://bit.ly/3CEJhKM>> accessed 18 January 2022.

tion Committee. In June 2007, the State Council decided to establish the National Leading Group on Climate Change and Energy Conservation and Emission Reduction (hereinafter referred to as the 'leading group'). In 2010, the National Development and Reform Commission led the establishment of the Coordinating Liaison Office of the National Leading Group on Climate Change. In August 2011, China set up a Working Group on Climate Change Adaptation Mechanism under the Coordinating Liaison Office of the National Leading Group on Climate Change.

Secondly, China established the Development and Reform Commission of China which is specifically responsible for the centralised management of climate change and for addressing matters related to climate change. According to the regulations of the National Development and Reform Commission: The Main Responsibilities, Internal Institutions and Staffing Requirements (hereinafter referred to as 'the three programmes' of the National Development and Reform Commission),⁵ the Commission is responsible for 'organizing and developing major strategies [and] planning and [developing] policies on climate change'. These responsibilities are executed through the relevant departments which take the lead in organising international negotiations on climate change and implementing the United Nations Framework Convention on Climate Change. The Department of Climate Change and the National Development and Reform Commission specifically assume the responsibilities and undertake the tasks mentioned above. The Department of Climate Change has five divisions: the General Office, the Strategic Research and Planning Service, the Internal Policy and Compliance Branch, the International Policy and Negotiation Service, and the External Cooperation Service.

According to the 'Notice of the Office of the State Council on Printing and Distributing the division of work of the key departments of the greenhouse gas emission control scheme for the Twelfth Five-Year Plan period',⁶ besides the National Development and Reform Commission, which is responsible for coordinating the work on controlling greenhouse gas emissions, the key departments include: the Ministry of Foreign Affairs, the Ministry of Science and Technology, the Ministry of Environmental Protection, the Bureau of Meteorology, the Ministry of Finance, the Ministry of Commerce, the Ministry of Construction, the Ministry of Transport, the Ministry of Water Resources, the Ministry of Agriculture, the State Forestry Administration, the Bureau of Oceanic Administration, the Civil Aviation Administration, the Ministry of Education, the Department of Health, the Chinese Academy of Sciences (CAS), the National Bureau of Statistics (NBS), the Ministry of Land and Resources, and other relevant departments. All these departments shall undertake the work related to climate change in the relevant fields in line with the stipulated assignment of responsibilities.

5 Issued by the Office of the State Council, Number 102 of 2008.

6 Issued by the Office of the State Council, Number 41 of 2011.

3.2 Legal system on climate change

China's current legal system on climate change comprises three levels, namely laws, administrative regulations and departmental rules. Moreover, in accordance with the status and content of adjustment, China's current legal system on climate change mainly includes basic (or comprehensive) legislation, laws, regulations and rules concerning the mitigation of and adaptation to climate change.

3.2.1 Basic (or comprehensive) legislation

At present, since the Climate Change Response Law is yet to be introduced, the most important legislation in China is the 'Resolution on Actively Responding to Climate Change', which shall be seen as a 'quasi-law' specifically for climate change within the national legislature. The resolution addresses the following six aspects:

- Climate change is both a major opportunity and a challenge when it comes to China's economic and social development.
- Responding to climate change requires the full implementation of the 'Scientific Outlook on Development'.
- Practical measures must be taken to actively respond to climate change.
- The construction of the rule of law relating to climate change must be strengthened.
- Efforts must be made to improve the awareness and practical capability of the whole of society to address climate change.
- More active international cooperation is needed in the field of climate change.

The resolution puts forward China's basic proposition on climate change and identifies basic principles, measures and means to address climate change. The resolution not only shows the international community what China's basic attitude is towards climate change, but it also provides a simplified basis for China to establish and improve its own legal system on climate change.⁷ Specifically, it has five parts, namely: basic concepts, climate change planning, greenhouse gas emissions and quantitative control measures, capacity building, and nurturing and supporting measures.

7 Li Yanfang, 'On the construction of legal system of China addressing climate change' (2010) 20(6) *Journal of China University of Political Science and Law* 81.

3.2.2 Laws, regulations and rules to mitigate climate change

In a legal context, the most important documents are the Energy Conservation Law and the Renewable Energy Law. Neither is directly related to mitigation; rather, each one indirectly seeks to realise the global goal of mitigation. The Energy Conservation Law has established the following systems: the energy-saving target responsibility system; the energy-saving evaluation and assessment system; power demand-side management; contract energy management; energy-saving voluntary agreements; the standard of limited unit energy consumption; the energy efficiency labelling management system; and others. According to the sequential calculation, over a 15-year period (between 1991 and 2005), through economic restructuring and improved energy efficiency, China saved approximately 800 million tons of standard coal. This is equivalent to about 1.8 billion tons of carbon dioxide emissions, if calculated using 1994 data – 2,277 tons of carbon dioxide emissions per ton of standard coal.⁸

The Renewable Energy Law promotes the development of renewable energy through the following systems: the medium- and long-term target system of renewable energy development and utilisation; the renewable energy planning system; the Feed-In Tariff (FIT) system; the system of guaranteed compulsory acquisition; and the Renewable Energy Development Fund, to name a few. The implementation of the law reduces national energy dependence on fossil fuel energy production, which leads to high carbon emissions. In addition to the two abovementioned legislative documents, the Circular Economy Promotion Law, the Cleaner Production Promotion Law and the Population and Family Planning Law objectively seek to mobilise climate change mitigation measures.

In terms of administrative regulations, the most important regulation is the 'Work Plan for Controlling Greenhouse Gas Emissions for the Thirteenth Five-Year Plan period' which sets out key areas and plans for 2015-2020, including: the launch of a low-carbon leading energy revolution, the establishment of a low-carbon industrial system, the promotion of low-carbon urbanisation development, an acceleration in regional low-carbon development, the construction and operation of the national carbon emissions trading market, the enhancement of low-carbon scientific and technological innovation, the strengthening of basic capacity building, and the strengthening and implementation of established plans.

In terms of departmental rules, the most important rule is the 'Interim Measures for the Management of Carbon Emissions Trading', issued in 2014. This rule systematically regulates competent authorities, parties' transactions, the initial allocation of emissions quotas, emissions trading quotas, verification and quota settlements, and transaction management, to name a few.

8 National Program on Climate Change.

3.2.3 Laws, regulations and rules to adapt to climate change

Within existing Chinese legislation, no laws have been specifically established for the purpose of adapting to climate change in relation to agriculture, natural ecosystems, water resources or coastal zones. However, there are some laws that can assist in the adaptation to climate change outcomes. Specifically, the relevant legislative documents in agriculture include the Agricultural Law, Grassland Law, Fisheries Law and Land Administration Law. The relevant legislative documents in the field of forests include the Forest Law, Soil and Water Conservation Law, and Law on Desert Prevention and Transformation. Relevant legislation in water resources include the Water Law, the Law on the Prevention and Control of Water Pollution and the Flood Control Act. The relevant legislation relating to coastal zones and coastal areas include the Marine Environmental Protection Law as well as the Law on the Administration of the Use of Sea Areas.

On the whole, however, China still lacks legislation on the field of adaptation, similar to the Law on Disaster Prevention and Mitigation.

3.3 Institutional system of climate change

China has started to carry out preparatory work on basic laws, regulations, rules and policy documents to assist in establishing, regulating and monitoring institutional systems to address climate change.

3.3.1 Carbon emissions trading system

In 2011, the National Development and Reform Commission formulated the ‘Notice of the General Office of the National Development and Reform Commission on the Implementation of the Carbon Emissions Trading Pilot Program’,⁹ establishing Beijing, Shanghai, Tianjin, Chongqing, Hubei and Shenzhen as pilot provinces and municipalities for local carbon emissions trading. The state gave these provinces and municipalities greater autonomy in establishing a carbon trading market to encourage active exploration of local emissions trading schemes. In 2014, the National Development and Reform Commission, on the basis of the experience of these pilot provinces and municipalities, introduced the ‘Interim Measures for the Management of Carbon Emissions Trading’, the key features of which were:

- Competent authority: The National Development and Reform Commission is the carbon trading department for the various provinces, autonomous re-

9 NDRC Climate – Number 2601 of 2011.

gions and municipalities. Operating under the State Council, it is responsible for carbon emissions trading and the construction of carbon emissions trading markets as well as the management, supervision and guidance of the carbon emissions trading market and its related activities in their respective administrative regions.¹⁰

- Coverage: The coverage of carbon emissions trading shall be determined by the provincial carbon trading authorities. Specifically, the provincial carbon trading authorities shall determine the standard according to the key units of emissions released by the carbon trading department under the State Council. On this basis, the provincial carbon trading authorities shall create a list of key units of emissions in the administrative region in accordance with the standard and then report to the carbon trading department under the State Council. After confirming these units, the carbon trading department under the State Council shall release the list to the public.¹¹
- Determination of total amount: According to the requirements of the national goal of controlling greenhouse gas emissions, the carbon trading department under the State Council shall determine the total emissions quotas of the country and the provinces, autonomous regions and municipalities directly under the central government. This shall be determined by giving comprehensive consideration to factors such as greenhouse gas emissions, economic growth, the industrial structure and the energy structure, and the inclusion of key units of emissions.¹²
- Allocation method: The allocation of emissions quotas shall be predominantly free in the initial distribution, followed by the timely introduction of paid distributions and a gradual increase in the proportion of paid distributions.¹³
- Requirements of transaction: The initial trading products of the carbon emissions trading market are the emissions quotas and the voluntary emissions reductions certified by the state, with additional trading products added at the right time.¹⁴ The key units of emissions, the institutions and individuals that meet the trading rules can participate in carbon emissions trading.¹⁵ The transaction shall in principle be traded at the transaction institutions determined by the carbon trading department under the State Council.

10 'Interim Measures for the Administration of Carbon Emission Permit Trading', Article 5.

11 Ibid Article 7.

12 Ibid Article 8.

13 Ibid Article 9.

14 Ibid Article 18.

15 Ibid Article 19.

cil.¹⁶ In the interests of public welfare, the transaction parties can voluntarily cancel their emissions quotas and emissions reductions certified by the state.¹⁷ The carbon trading authority, under the State Council, shall be responsible for establishing the regulations in the carbon emissions trading market and maintaining the stability of the market.¹⁸

3.3.2 The statistics, reporting and accounting system of greenhouse gas emissions

In 2001, China issued the ‘Circular of the State Council on Issuing the Work Plan for Controlling Greenhouse Gas Emissions for the Thirteenth Five-Year Plan period’ which referred to the establishment of a statistical accounting system for greenhouse gas emissions. This brought the basic statistical indicators of greenhouse gases into the government statistical index system and required key units of emissions to improve the ledger records of greenhouse gas emissions and energy consumption. Building a statistics and accounting system of greenhouse gas emissions at the national, local and enterprise levels strengthened the process of capacity building and established a team for full-time work and basic statistics, which is responsible for the accounting of greenhouse gas emissions. Implementing the statistics and accounting system allowed key enterprises to directly submit energy and greenhouse gas emissions data.

On May 20, 2013, the National Development and Reform Commission and the National Bureau of Statistics issued the ‘Circular of the National Development and Reform Commission and the National Bureau of Statistics on Issuing the Opinions of Strengthening the Work of Climate Change Statistics’, which regulated the guiding ideology and the basic principles of China’s climate change action while also improving China’s statistical index system of climate change. The statistical index system of climate change comprises five categories, 19 sub-categories and 36 indicators. The five categories are: climate change and impacts; adaptation to climate change; control of greenhouse gas emissions; capital investment in addressing climate change; and management related to climate change. In addition, the relevant functions are divided up as follows: the National Bureau of Statistics is responsible for data collection and evaluation of the climate change statistical index; the National Bureau of Statistics and the National Development and Reform Commission is responsible for the basic statistics of greenhouse gas emissions; and the National Development and Reform Commission and the National Bureau of Statistics are responsible for greenhouse gas emissions accounting.

16 Ibid Article 21.

17 Ibid Article 22.

18 Ibid Article 23.

When it comes to enterprises' specific measurement, reporting and verification (MRV) of greenhouse gas emissions, the 'Notice of the National Development and Reform Commission on Organizing the Reporting of Greenhouse Gas Emissions of Key Enterprises and Institutions', issued by the National Development and Reform Commission in 2014, stipulated the principles, the competent authorities, and the contents and procedural safeguards of corporate greenhouse gas reporting. The reporting subjects are legal enterprises and institutions or units with independent accounting systems (deemed to be legal persons), whose greenhouse gas emissions reached the equivalent of 13,000 tons of carbon dioxide in 2010 or whose comprehensive energy consumption reached 5,000 tons of standard coal in 2010. Those in charge of verification are the competent provincial departments of climate change, which ultimately submit the summary to the National Development and Reform Commission.

3.3.3 The certification system for low-carbon products

On February 18, 2013, the National Development and Reform Commission promulgated the 'Interim Measures for the Administration on Certification of Low-carbon Products', which officially launched the certification system for low-carbon products. It stipulates the establishment of a unified certification system for low-carbon products, comprising three aspects: implementing a unified directory of low-carbon product certification;¹⁹ the rules for low-carbon product certification, which shall be formulated and promulgated by the Department of Certification and Accreditation Administration under the State Council; and the implementation of unified certificates and certification marks for low-carbon product certification.

To effectively carry out the work of low-carbon product certification, unified identifications of low-carbon products must be used. The format and content of the certificates of low-carbon product certification and the style and type of the certification marks shall be uniformly formulated and issued by the Department of Certification and Accreditation Administration under the State Council.

19 Products listed in the directory are certificated voluntarily whereas those not included in the directory are temporarily excluded from the unified low-carbon product certification process. Unified standards, technical specification certification and certification rules are also implemented.

4 Key issues related to China's climate change action

A study of the history and current situation relating to China's climate change action (discussed above) indicates that although the management of China's climate change action has been relatively sound, the laws and systems underpinning China's climate change action are still in their early stages of development, and many issues still need to be resolved. These issues include the formulation of basic or comprehensive legislation; the improvement of the carbon emissions trading system; and the improvement of other related systems.

4.1 The formulation of basic or comprehensive legislation

From an international perspective, a large number of countries have developed special climate-related legislation. For example, Japan enacted the Law on Promoting Global Warming Countermeasures in 1998, the United Kingdom adopted the Climate Change Act in 2008, the Republic of Korea adopted the Green Growth Basic Law in 2009 and modified it into the Framework Act on Low Carbon Green Growth in 2013, and the United States adopted the American Clean Energy and Security Act in 2009. Therefore, China must develop basic or comprehensive legislation for the purpose of taking comprehensive action at the national level in the future.

In this regard, the National Development and Reform Commission assigned, to the Institute of Law of the Chinese Academy of Social Sciences, the task of drafting a compendium on China's Policies and Actions for Addressing Climate Change which was published in 2012.²⁰ The draft provides comprehensive coverage of the two main areas of mitigation and adaptation, and defines the basic principles and systems of climate change as well as specific areas for addressing. In accordance with the provisions of the draft, the purpose of the legislation is to 'control and reduce greenhouse gas emissions, to scientifically respond to global and regional climate change and to promote the sustainable development of China's economy and society'.

The basic principles of the legislation include:

- the principle of sustainable and coordinated development;
- the principle of scientific response;
- the principle of equal emphasis on mitigation and adaptation;
- the principle of combining voluntary emissions reduction and compulsory emissions reduction;
- the principle of policy coordination; and
- the principle of social participation.

20 The State Council the People's Republic of China (n 2).

The main aspects covered by the legislation include:

- the duties, rights and obligations of climate change action;
- measures mitigating climate change;
- measures facilitating adaptation to climate change;
- safeguards dealing with climate change;
- the supervision and management of climate change;
- publicity, education and social participation relating to climate change; and
- international cooperation in and legal responsibility for climate change.

Although the provisions of the legislation are more comprehensive, the draft legislation has not yet been submitted for consideration. As a result, China still does not have basic or comprehensive climate change legislation.

Regarding the 'completeness' of the legal system, China now has relevant legislation on mitigation and adaptation, but urgently needs specific basic or comprehensive climate change legislation to determine the management system and basic principles as well as the country's main system of responding to climate change. Doing this will not only provide the legal basis to the departments – which will take related actions or formulate relevant regulations or policies in future – and legal protection for China to take comprehensive actions, but it can also deliver a clear signal to the international community regarding China's commitment to fulfilling its international obligations.

4.2 The improvement of the carbon trading system

Carbon emissions trading and carbon tax are the two most important means used by the international community to mitigate climate change. However, owing to their overlapping functions, countries usually choose one as their core system for mitigating climate change. China finally chose carbon emissions trading as its core system. However, China has not given up the idea of introducing a carbon tax system. In line with the vision of the National Development and Reform Commission, China will employ both carbon emissions trading and carbon tax simultaneously. Carbon emissions trading will be applied to enterprises in a specific range, while other enterprises beyond that specific range will be required to adhere to a carbon tax system.

In October 2016, the National Development and Reform Commission was due to start allocating carbon emissions quotas in the national carbon market, with the quota allocations being complete by the first or second quarter of 2017. Before 2020, the threshold for the carbon market would be reduced to bring the carbon market into line with the enterprise expansion process and a carbon tax would be levied on enter-

prises outside the carbon market system following the initial stage of operation of the national carbon market.²¹

The implementation of a carbon tax system is much simpler than that of a carbon emissions trading system. Carbon emissions trading can only be effective in a more sophisticated market, with more stable prices and stringent supervision.

Although China has begun to implement a carbon emissions trading system and has conducted numerous pilots, there are still many problems to be addressed, especially the establishment of carbon emissions trading in the national market and the monitoring and accounting of carbon-emission enterprises.

4.3 The improvement of other relevant systems

Carbon emissions trading alone cannot cover all areas of climate change, nor solve all its problems. Therefore, in addition to improving the carbon emissions trading system in the future, it is necessary to improve other related systems, of which the most important ones are the governmental environment, resources and energy responsibility system and the economic incentive system.

Over the past decade, China has benefited from effective competition among local governments and has achieved a high rate of economic development. However, too much government attention has been given to the performance of the economy, which has resulted in China facing serious governmental failures in the environmental, resources and energy fields. Local governments tend to invest in energy-intensive, high-emission industries, leading to the blending of greenhouse gas emissions and air pollution with Chinese characteristics, leading to the serious environmental, resource and energy-related issues currently experienced in China.

Therefore, to effectively address climate change in the future, China not only needs to build systems at the enterprise level, with clear corporate responsibilities in relation to climate change, but it also needs to give greater emphasis to the responsibilities of government to cope with climate change. By introducing greenhouse gas emissions control and by upgrading and transforming industrial structures, local government performance can be assessed, thus improving the government's environment, resources and energy responsibility system.

In addition, from developed countries' perspectives (in contrast to stricter control measures), economic instruments such as credit, investments, tax incentives, financial subsidies and government procurement can be used to more effectively promote enterprise transformation, reduce the burden on enterprises and contribute to the

21 'The uniform carbon market is coming and the carbon tax may levied after 2020', Renmin Net <<http://gd.people.com.cn/n2/2016/0810/c123932-28809932.html>> accessed 16 December 2016.

transformation of economic development. In this regard, China has begun to take relevant policy actions. For instance, in terms of financial subsidies, in 2013 China allocated 2.56 billion RMB of central budget funds to support 438 energy-saving technological transformation and industrialisation projects, achieving an energy saving of 5.6 million tons of standard coal. In addition, China allocated 372 million RMB of central budget funds to support 445 capacity-building projects in energy-conservation supervision institutions and allocated 1.844 billion RMB of central financial energy-saving incentive funds to support 272 financial incentives projects involving energy-saving technological transformation, achieving an energy saving of 6.42 million tons of standard coal. Approximately 280 million RMB of central financial incentive funds were allocated to support 443 contract energy-management projects, achieving an energy saving of about 1.16 million tons of standard coal.²²

Although relevant policy actions have already been taken, China has not yet introduced clear provisions on the relevant economic incentive system into legislation. In the future, it will be necessary to stipulate in basic or comprehensive legislation and authorise the relevant departments to introduce corresponding regulations or policies and measures, to ensure adequate public and private investment.

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22 The Central People's Government of the People's Republic of China, 'China's policies and actions to address climate change (2011) White Paper' <http://www.govcn/jrzg/2011-11/22/content_2000047.htm> accessed 23 December 2016.

