

Regional legislation to address climate change in China: necessity and feasibility

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Abstract

Purpose – Legislation plays an essential role in addressing climate change in China. However, many barriers to formulating national legislation to address climate change have so far prevented its enactment. The bottom-up approach adopted in the international climate regime sets a good example. Accordingly, the purpose of this paper is to discuss the regional legislation to address climate change in China through exploring the following two questions: whether it is necessary to enact climate change legislation at regional level first and whether it is feasible to develop such regional legislation in the absence of national climate change law.

Design/methodology/approach – This paper analyses the necessity and feasibility of regional legislation to address climate change. Section 2 introduces the current legislative framework on climate change in China. Section 3 investigates whether it is better to push the legislative agenda at regional, rather than national level. Section 4 analyses the feasibility of establishing regional legislative systems. Section 5 explores the key issues in formulating and promoting regional legislation.

Findings – This paper concludes that it is necessary and feasible to pilot regional legislation before enacting national legislation. Under these circumstances, local governments can take the initiative to begin formulating regional legislation.

Originality/value – Addressing climate change needs immediate action and effective measures. It is, thus, necessary to reconsider the approach that China should adopt when developing legislation on climate change. This paper contributes to broadening current knowledge of regional climate change legislation in China.

Keywords China, Climate change, Paris Agreement, National policy, Regional legislation

Paper type Research paper



1. Introduction

Climate change is the most urgent and profoundly complex environment-related problem for the international community in this century. To promote international cooperation and ensure the effective implementation of climate change agreements, the system of Intended Nationally Determined Contributions (INDCs), applying a “bottom-up” approach, was confirmed by the landmark Paris Agreement of 2016. The INDCs are essentially the backbone of the new climate agreement. Distinguished from the previous top-down strategy, which relied on national governments to mandate emissions reductions, the essence of the bottom-up approach is helping countries with different economic development and national circumstances to identify appropriate actions aligned with their long-term development goals. The action plan thereby provided overcomes the dilemma of international legislation on climate change.

As the world's second largest economy and the biggest GHGs emitter, China is under great pressure to reduce emissions. China has submitted its INDCs and pledged to cut its carbon emissions per unit of GDP by 60-65 per cent of the 2005 level by 2030[1]. These INDCs commitments must be translated into immediate domestic reduction actions. National legislation is often cited as being critical to a credible and effective international response to climate change (Townshend, 2014). In its 2016 global legislation study, the Grantham Research Institute on Climate Change and the Environment identified the existence of 854 climate change laws and policies globally, rising from only 54 laws and policies in 1997 (Grantham Research Institute on Climate Change and the Environment, 2016). The legislation also plays an essential role in China, as it may establish the necessary enforcement and accountability mechanisms to ensure effective implementation of climate change mitigation and adaptation activities, giving them binding force, stability and predictability. The importance of legislation in addressing climate change, China must consider which approach it should adopt to realize its commitments through legislative measures. As a result, China chooses a top-down strategy of formulating national law first. The Chinese Government began drafting the Climate Change Law in early 2009, and is constantly seeking to accelerate the legislative process for enacting this comprehensive national law (National Development and Reform Commission, 2016; National Development and Reform Commission, 2017). Despite recent progress on domestic climate change legislation in some important areas, such as the Emission Trading System (ETS), the Climate Change Law has not yet been enacted: a consequence of its slow legislative process.

Addressing climate change needs immediate action and effective measures. It is, thus, necessary to reconsider the approach that China should adopt when developing legislation on climate change. The bottom-up approach adopted in the international climate regime sets a good example. Facing the dilemma of formulating national legislation, another option for China is to enact climate change legislation at the regional level first. Accordingly, this article focuses on the regional legislation to address climate change in China.

There is extensive literature discussing the legislation on climate change both in China and abroad. Most overseas studies on the topic of China's legislation are written in English by Chinese scholars, and they provide an introduction to and overviews of China's climate laws (Shen, 2014; Zhou, 2017). Some scholars focus on legal strategies for climate change (McDonald and Styles, 2014) and national legislation (Lacobuta *et al.*, 2018; Fankhauser *et al.*, 2016). Moreover, there are numerous pieces on the multi-level governance for climate change and regional policies or actions. For example, Peel *et al.* (2012) have written on climate change law in an era of multi-level governance; Wolking *et al.* (2012) have written on the implementation of Europe's climate targets at the regional level; Lin (2012) have discussed climate governance in China. Despite the importance of legislation being generally

accepted and regional governance being discussed, to the best of the authors' knowledge, no prior work has specially studied the differences between national and regional legislation or discussed, which should be enacted first to address climate change in the context of China.

In addition, legislation to address climate change is the main topic in Chinese academia, and many papers on this topic have been published in Chinese. On the one hand, most research still focuses on analyzing the dilemma of and various barriers to devising national legislation from different perspectives (Li *et al.*, 2016; Peng, 2012), considering the basic principles (Zhang, 2010) and construction of China's legislative system (Zhao, 2015). On the other hand, only a few scholars have begun to consider the importance and current situation of regional legislation (Lai *et al.*, 2013), and to explore the factors influencing regional climate governance (Ma, 2014).

Therefore, this article contributes to broadening current knowledge of regional climate change legislation in China. The purpose of this article is to discuss regional legislation to address climate change in China through exploring the following two questions:

- Q1. whether it is necessary to enact climate change legislation at regional level first.
- Q2. whether it is feasible to develop such regional legislation in the absence of national climate change law.

To answer the research questions, this article analyzes the necessity and feasibility of regional legislation to address climate change. The rest of the paper is divided into the following five sections. Section 2 introduces the current legislative framework on climate change in China, investigating the implications of legislating on climate change at the national or regional level and the differences between these two approaches. Section 3 investigates whether it is better to push the legislative agenda at regional, rather than national, the level at this phase. Section 4 analyzes the feasibility of establishing regional legislative systems, examining whether it is legitimate and possible for promoting regional legislation before enacting national climate change law. Section 5 explores the key issues in formulating and promoting regional legislation. Finally, Section 6 provides concluding remarks.

2. Legislative framework on addressing climate change in China

2.1 Introduction to the legislative system in China

According to the Legislation Law[2], there are five legal levels with different binding force in the Chinese legislative system (Figure 1). The National People's Congress (NPC) and its standing committee exercise the legislative power of the State. The Constitution and basic laws, governing criminal offences, civil affairs, the State organs and other matters, have the highest binding force and are enacted and amended by the NPC. The NPC Standing Committee enacts and amends laws other than those to be enacted by the NPC, termed other laws. The administrative regulations are at the third level. The State Council shall, in accordance with the Constitution and laws, formulate administrative regulations. Operating directly under the central government, provincial and municipal people's congresses or their standing committees may formulate local regulations according to the specific conditions and actual needs of their respective administrative areas, provided such regulations do not contradict the Constitution, the laws and the administrative regulations. Moreover, the people's governments of the provinces and municipalities (directly under the central government) and the cities with subordinate districts may, in accordance with laws, administrative and local regulations, formulate rules for specific administrative matters pertaining to their respective administrative areas. These rules have the lowest binding

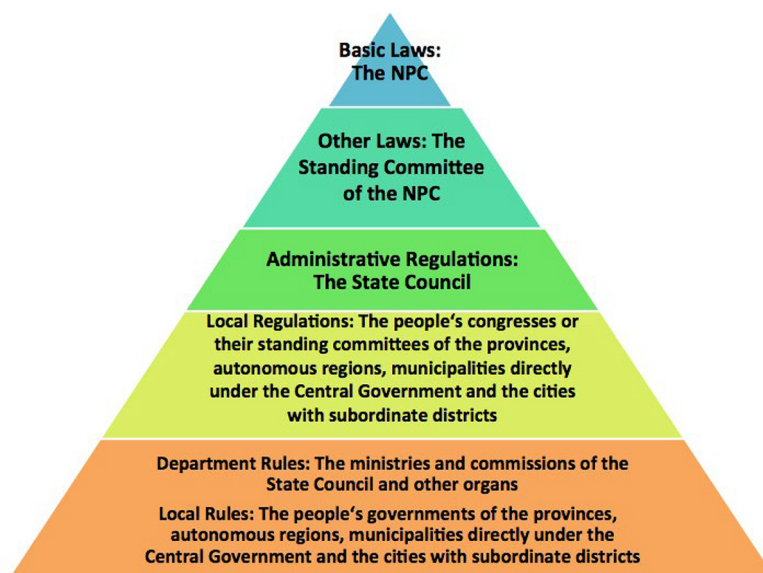


Figure 1.
The Chinese
legislative system

force and other local governments below provincial level do not have legislative power in China (Jiang, 2014).

2.2 National and regional legislation on climate change: implications and the major differences between them

The Constitution, basic laws, other laws, administrative regulations and department rules are called national legislation, all of which have binding force nationwide. Local regulations and rules are called regional legislation, and they only have binding force in their administrative area.

Hence, there are at least four differences between national and regional legislation on climate change. First, they differ in form and the legislature responsible for enacting them. As climate change is not within the scope of basic laws, the national legislation on climate change will take the form of other law, according to the State Council's 2016 legislative plan, and should be enacted by the NPC Standing Committee. By contrast, regional legislation on climate change includes local regulations and local rules, which are, respectively, enacted by the provincial and municipal people's congresses or their standing committees and local governments. Second, with different legislatures and legal levels, the formulation of national climate change law involves a strict and time-consuming legislative procedure; for example, the preparation phase usually exceeds five years. By contrast, the legislative procedure of regional legislation is relatively straightforward. Third, given the different scopes of their binding force, national climate change law must be formulated according to national circumstances, whereas regional legislation can be devised according to regional conditions. Fourth, the nature of their binding force also differs. Compared to national law, regional legislation on climate change has lower binding force; thus, the types and scope of the corresponding liabilities imposable on regulated entities are limited.

3. The necessity of promoting legislation on climate change through a bottom-up approach

3.1 Legal principle of the proposed national legislation on climate change remains uncertain
Legal principles are the foundation on which legislation is formulated, and so should be clarified at the beginning of the legislative process. However, the legal principle underlying the proposed climate change law remains uncertain.

Climate change law is an important branch of China's environmental protection legal system, the essence of which is to objectively address the relationship between climate change and economic social development. In light of many factors, such as climate change being a global issue of public interest, uncertainties in the science of climate change and the great powers' different climate change strategies, it is still debated whether the legal principle of national legislation on climate change follows the protection priority principle in the Environmental Protection Law ([Environmental Protection Law of the People's Republic of China, 1989](#)). This law has been formulated to protect and improve people's environment and the ecological environment. Guided by this legal principle, unlike under most of China's laws, environmental protection would be prioritized in the case of conflict with economic development.

The proposed legal principle of both national and regional legislation on climate change challenges China's traditional environmental protection laws. China remains in the middle stage of its industrialization, demanding high energy levels to support its economic development; thus, its economic growth in the current development phase is related to its carbon emissions. National legislation addressing climate change should consider both economic development and environmental protection targets, with the objective of providing legal support for China to realize a green economy and low-carbon transition. In this sense, national legislation should be different from traditional environmental laws in China, carbon emission reduction laws in some developed countries and laws on adapting to climate change in some developing countries. Instead, it should be more comprehensive, focusing on the low-carbon economy and social transition ([Yu and Tian, 2016](#)). Devising this kind of law is unprecedented in legislative practices in China and abroad, posing a great challenge for the central legislature.

While innovative thinking is needed in the law-making process, the legislative experience is also critical. After the legal principle is ascertained and the law enacted, subsequent revision involves an extremely complex amendment process, even if the law does not function effectively in practice. Comparatively speaking, the greater flexibility of regional legislation is preferable; thus, climate change approaches should be first tested through local regulations and rules in different regions of China.

3.2 National legislation cannot be enacted quickly due to many barriers

Although China has embedded emission reduction targets in its national Five-Year Plans[3], it still has no specific national law on climate change. The official enactment of such legislation remains a protracted process. In 2009, the NPC passed a comprehensive climate change resolution that paved the way for comprehensive national climate change legislation. Subsequently, the proposed Law on Addressing Climate Change, drafted by the China Social Science Academy, was published for discussion in 2012. Despite the first draft of the climate change law being completed in 2014, the legislative process reached a stalemate.

Several reasons for concern are delaying this legislation. First, climate change is complex and despite clear scientific consensus, there remains political contestation on whether climate change is actually occurring and is caused by human activities. Hence, some Chinese officials have insufficient confidence and incentives to push for legislation on climate

change. Second, China lacks adequate cutting-edge clean technology. Thus, carbon emission reduction may, to some degree, impact on economic development. In these circumstances, the higher the level of ambition and the more economic sectors to be covered by the legislation, the longer the drafting and approval process will take and the greater the likelihood of encountering opposition (Townshend, 2014). Third, the legislation needs to address the development of huge disparities between different regions. It is very difficult to devise a comprehensive law to meet the demands of every Chinese region. Fourth, the reasons for and impacts of climate change are diverse; thus, there are many governmental departments with different functions involved in climate change issues. What roles are best played by each level of government and each department as China addresses climate change and how these roles should be reflected in one piece of legislation, are very sensitive issues. Extensive time must be spent coordinating and communicating about the different interests. Fifth, climate change is a relatively new problem for China and the wider world. China still lacks sufficient experience in making climate laws.

In these circumstances, the national legislation on climate change cannot be quickly formulated and enacted. Indeed, the Climate Change Law was only included in the “Research Projects” of the Annual Legislative Program of the State Council 2016 (National Development and Reform Commission, 2017); this indicates that enacting such legislation remains a distant objective. The current dilemmas in legislating to address climate change at the national level, it is necessary to start from regional legislation. With relatively simple legislative processes, regional legislation can be formulated and implemented much more quickly. Moreover, the range of issues that regional legislation must address is considerably less complicated. Therefore, China may opt to pursue its climate change legislative agenda at the regional level before formulating the national law.

3.3 Climate change's present impacts on and potential threats to different Chinese regions are varied

China is vulnerable to suffering varied impacts of climate change. It was reported that the extreme heat wave in southern parts of China in 2014 was the severest since 1951, characterized by its long duration, covering large areas and combining high strength and great extremity (Wang and Zheng, 2014). Due to China's vast territory and varied geography, different regions may suffer from different impacts of climate change and climate disasters; thus, their demands for and interests in addressing climate change vary. Coastal provinces and cities in China are likely to suffer from sea level rises and marine climate disasters, such as typhoons; inland arid areas are likely to face the problems of water shortages and reduced grain harvests caused by global warming; northern parts of China will have more frequent extreme cold and hot climates; and southwestern provinces are vulnerable to ecological damage and, thus, need to tackle many adverse disasters resulting from climate change, such as mountain snow and ice melting, flooding and mudslides (King *et al.*, 2016).

The varied impacts of climate change on China pose challenges to formulating a unified national law. Climate change law is supposed to contain both mitigation and adaptation provisions. Mitigation refers to reducing GHG sources, while adaptation means adjusting to a changing climate. Thus, legislation on mitigation focuses on anthropogenic intervention to tackle the sources of climate change, while legislation on adaptation aims to address its impact. Due to the varied impacts in different regions, it is impossible to formulate appropriate provisions in a national climate change law to fit every adaptation requirement. In this situation, legislatures tend to devise rather abstract and general provisions to guide adaption activities. The common practice is for regional legislation to then be enacted in

accordance with the national law to provide more detailed rules for concrete adaptation activities in each region. Regional legislation plays an essential role in adapting to the impacts of climate change because it can be formulated according to regional circumstances and impacts. Accordingly, regional legislation is a better option than national legislation in this regard, and it is necessary to use regional legislation to address the varied impacts of climate change before enacting national climate change law.

3.4 Regional legislation can better assist in realizing China's intended nationally determined contributions in the current situation

Having submitted its INDCs and ratified the Paris Agreement in 2016, China is now confronted with difficult tasks and challenges to effectively realize its commitments and successfully fulfil its international responsibilities in addressing climate change. In these circumstances, regional legislation can better assist in realizing China's INDCs.

The absence of national legislation on climate change means China has not clarified the legal nature of its INDCs. To achieve these commitments, the targets must be decomposed into small targets and distributed from the central government to local governments at different levels. Thus, measures to tackle climate change are predominantly actioned by local governments. Climate change-related work is only promoted by administrative orders issued from the central government to local governments; a series of program and policies are formulated to address climate change issues, and performance is supervised through administrative assessment by the head of each regional administrative area. Consequently, local governments still lack strong incentives and restraint mechanisms to develop their performance in tackling climate change. Given this situation, regional legislation can promote the active involvement of local governments in addressing climate change issues. It can also provide legal support for the relevant tasks to be stably and persistently carried out. Therefore, regional legislation plays a significant part in ensuring that China's INDCs are translated into regional NDCs. Regional legislation should be pushed now to assist with realizing China's commitments.

Although, in the case of China, a national policy is always formulated before regional policy and legislation, the regional legislation has the potential to be culminated into a national policy, thus supporting INDCs. The most notable example is the establishment of a carbon market in China, which starts from regional pilot trading systems and regional legislation. Because of the experience and lessons obtained from pushing the pilot trading systems through regional legislation, a national emission trading system was successfully launched in 2017. In light of the absence of national emission trading legislation, a national policy was formulated to guide and regulate the national carbon market. The national policy also embodies the relevant provisions of the regional legislation on the ETS. The ETS is regarded as an effective measure to mitigate climate change. Nowadays, the ETS has become one of the most important and indispensable measures to realize China's INDCs.

3.5 Regional legislation on climate change can provide coordinated support for regional efforts on air pollution prevention and control

The problem of smog and haze caused by air pollution in China, especially in Beijing and North China, has become an issue of national concern for many years and a focus of environmental governance. Air pollution, caused by atmospheric pollutants, is quite different from climate change, which is caused by GHGs. Moreover, climate change is a global issue, whereas air pollution may be a regional issue with the potential to become trans-boundary. However, the origins of air pollution and climate change are both rooted in the overuse of fossil fuels and deficiencies in emission control measures.

To combat air pollution, China revised the [The Law of the People's Republic of China on the Prevention and Control of Atmospheric Pollution \(1987\)](#), highlighting joint prevention and control of regional atmospheric pollution, cooperative control of atmospheric pollutants and GHGs, total volume control targets for the discharge of key atmospheric pollutants, an atmospheric environmental quality and atmospheric pollution source monitoring system and an emergency response mechanism. The legislation on air pollution is aimed at the management of pollution after it occurs and improving emission control measures. Although to a certain degree, it plays a positive role in preventing air pollution, it cannot completely eliminate the phenomenon of smog and haze.

If the provinces and cities suffering serious air pollution could accelerate regional legislation to reduce fossil fuel consumption, this would significantly help to reduce atmospheric pollutants. The establishment of an emissions trading system, renewable energy promotion system and energy efficiency improvement system in legislation on climate change will restructure the shares of energy supply, thus, stimulating the emission sources of energy management departments, industries and transportation to reduce energy consumption and gradually transit to clean energy, thereby also reducing emissions of atmospheric pollutants. In the absence of national law, regional legislation should be promoted to provide coordinated support for air pollution prevention and control.

4. Feasibility of establishing regional legislation system on climate change in China

4.1 Provinces and municipalities have certain legislative power in formulating regional legislation on climate change

Although China differs from federal countries in which states have extensive legislative and autonomous power, provinces and municipalities in China may have certain legislative power under restricted conditions. The legislative power of local people's congresses or governments is based on the following two approaches: top-down and bottom-up. Under the top-down approach, with the precondition that laws and regulations have already been formulated, local people's congresses or governments may enact detailed implementation rules according to regional circumstances and superordinate laws. Through the bottom-up approach, local people's congresses or governments may enact legislation on specific issues in their respective administrative areas or test regional legislation in the absence of national superordinate legislation, which may provide experience and lessons relevant to future national legislation.

It is feasible and legitimate to start from regional legislation on climate change. Unlike in some unitary states, there is no specific law on formulating regional legislation in China. For example, Japan formulates the Local Autonomy Law, providing specific regulations on regional legislative power through its autonomy and decentralization system ([Local Autonomy Law of Japan, 1947](#)). Instead, in China, the regulations on regional legislative power are only found in the relevant provisions of the *Legislation Law*. According to the Legislation Law, regional legislation addressing climate change issues can be in the forms of local regulations and rules and must obey the principle of not contradicting superordinate laws. In addition, provinces and cities in which special economic zones are located and the national autonomous areas may have certain powers to adapt certain provisions of the laws and administrative regulations based on local regions' characteristics.

Under Article 73 of the Legislation Law, there are three types of regional legislation. First, there are matters requiring the formulation of specific provisions, in light of each administrative area's actual conditions, to implement the provisions of laws or administrative regulations. Second, there are matters of local character that require the

formulation of local regulations. Third, except for the basic national issues stipulated in Article 8, the local people's congresses or governments may formulate local regulations on all other affairs for which the State has not yet formulated any laws or administrative regulations. In doing so, they will consider specific local conditions and actual needs. This last type could be interpreted as according to local people's congresses or governments certain legislative power to first formulate regional legislation on climate change issues in the absence of specific national legislation thereon. Moreover, regional legislation addressing climate change may be in the form of local regulations, which are formulated by local people's congresses and local rules, which are formulated by local governments.

Surveying the history of legislative practices in China, there are evidently many precedents for regional legislation being formulated first, and subsequently being used to advance the cause of and provide experiences to shape the national legislation, especially in the period of major economic transition. In the early 1990s, China was undergoing its profound "reform and opening up". Enactment of a national-level company law was discussed for many years and delayed many times from preparation through enactment because there were millions of state-owned companies needing to be restructured; thus, the national legislation needed to coordinate various conflicting interests. However, some coastal development areas desperately needed solid legal support for introducing foreign investment and market economy transition. Facing this situation, Shenzhen and Zhuhai, which are located in special economic zones, took the lead in formulating local regulations and rules on joint stock companies and limited companies by taking advantage of the NPC's decision to authorize legislation. Thus, advanced legislative experience was accumulated, and, finally, was used to advance the enactment of the Company Law in 1993 ([Company Law of the People's Republic of China, 1993](#)). China is currently in the critical phase of vigorously constructing an ecological civilization and realizing an economic and social low-carbon transition. Against this background, it is more feasible practically to first promote regional legislation addressing climate change through a bottom-up approach.

4.2 Some local people's congresses and governments' legislative practices provide examples for other regional legislation

China is operating several regional ETSs, and also commenced a national ETS, albeit only in the electric power industry, at the end of 2017. The comprehensive work of legislating on climate change started from legislative practices over regional ETSs. Seven provinces and municipalities (Beijing, Chongqing, Guangdong, Hubei, Shanghai, Shenzhen and Tianjin) took the lead in formulating local regulations (Shenzhen and Beijing) and local rules to provide legal bases and support for their respective pilot ETSs. The pilot provinces and cities were selected because they are located in different regions of China and can represent regional characteristics. Thus, their regional legislative practices reflect typical challenges in their administrative areas and can provide experience for national legislation in the future.

After a testing period exceeding four years, several lessons can be gleaned from the regional ETSs. First, local politicians tend to welcome regional legislation on climate change. Most of them regard formulating regional legislation as an opportunity to elevate their individual political status and promote their region's economic development. Many provinces and municipalities competed to host a pilot ETS in their respective regions. After the seven provinces and municipalities were designated, each of their governments immediately began preparing its regional ETS and endeavoring to devise its own regional legislation. Shenzhen was the first to issue its local ETS regulations. Evidently, each local government strived to be the first to establish a carbon market and formulate its ETS rules.

Second, despite many barriers, regional legislation was successfully enacted in each ETSs pilot before the launch of each regional carbon market. The ETS is a relatively new concept in China, which lacks the relevant superordinate laws and sufficient legal bases in this field. In this situation, local governments based their ETSs on the principle of “easy to get started”, and have constructed legal systems to ensure the smooth operation of their regional ETSs in a pragmatic, practicable and acceptable manner. Consequently, the regional legislation on ETSs plays a critical role in establishing pilot carbon markets and providing experience for formulating national ETS legislation.

Third, the experience of legislating on ETSs at regional level demonstrates the feasibility of securing public support for regional climate change legislation. Public participation is an essential component of China’s law-making processes: legislation can only be enacted with the approval and support of the public and, especially, emission reductions stakeholders. In fact, stakeholders were invited to attend consultation conferences on regional ETS legislation. Initially, most were resistant to the proposed legislation because they knew little about ETSs and feared too many restrictions would be imposed. However, this situation changed by informing them about ETSs and how they operate. In particular, stakeholders show more interest when their rights and obligations are clearly addressed in the legislation. In this regard, feasibility can be realized when the stakeholders’ rights and interests are clearly defined and guaranteed through legal provisions.

In conclusion, although the regional legislation on ETSs focuses specifically on a particular climate change field, it also inspires pushing legislation to address climate change more comprehensively. The experience of the regional ETS pilots demonstrates the feasibility of first formulating regional legislation.

Besides the regional legislation on ETSs, the two provinces of Qinghai and Shanxi have passed provincial climate change laws. The measures for addressing climate change in Qinghai ([Measures for Addressing Climate Change in Qinghai Province \[trans of: 青海省应对气候变化办法\]](#), 2010) and Shanxi ([Measures for Addressing Climate Change in Shanxi Province \[trans of: 山西省应对气候变化办法\]](#), 2011) are formulated as local rules of the local governments. On the one hand, the progress of regional comprehensive legislation on climate change is relatively slow. There are only two pieces of regional legislation on climate change in China. On the other hand, the other provinces in China, especially coastal provinces and cities, large industrial provinces and areas with developed manufacturing industry, need to reach the emission reduction targets allocated by central government, and meanwhile, are likely to suffer from the various impacts of climate change. Thus, these regions have practical needs to take immediate actions to both mitigate and adapt to climate change, demonstrating the time is opportune to enact legislation. In fact, some other provinces, including Sichuan and Jiangsu, have prepared for the enactment of regional legislation and are in the law-making process.

Although these provinces cannot represent all the other provinces and cities in China, their legislative practices demonstrate the feasibility of first formulating regional legislation based on regional characteristics. They provide examples for other provinces, and their relevant experiences can be borrowed to promote the law-making process of other provinces and, ultimately, improve national legislation.

4.3 The climate change policies formulated by local governments have created favorable conditions for regional legislation

The process of addressing climate change in China has been characterized by legislation lagging behind policies for a long time. Since 2007, the national government and its various departments have issued a series of documented political plans, such as China’s National

Climate Change Program and China's National Climate Change Plan (2014-2020), which provide guidance, strategy and plans for regional efforts on climate change, and the corresponding work was allocated to local governments at different levels. When accepting the task of addressing climate change delegated from the central government, local governments also formulate their respective programs to address climate change on the basis of their regional characteristics and various key aspects of climate change that especially need to be addressed in their administrative areas. Pursuant to the policies and targets they have devised and established, local governments must formulate concrete action plans and implementing measures.

Despite lacking binding force, the relevant policies can ensure that local governments' work on climate change is conducted with flexibility, exactly meeting the specific needs in the preliminary phase of addressing climate change in China, as the establishment of national targets lack clear direction and low carbon developments are subject to rapid changes. Hence, legislation can legalize the concrete measures of addressing climate change, ensuring that the relevant work is conducted with stability and predictability. Moreover, it may reduce the phenomenon of unfairness and interference in human activities caused by policies. The existing political measures adopted by local governments have become increasingly sophisticated in addressing climate change. The concrete work strategies have been confirmed, and also highlight the key areas in different regions. Thus, it is necessary to confirm that these work plans can be carried out in the long-term and be given more binding effect through legislative measures. In fact, the legislation in Qinghai and Shanxi was formulated against the background of their respective provinces addressing the climate change program under China's 11th Five-Year Plan. Therefore, these policies on climate change provide practical bases for the development of regional legislation.

5. Key issues in formulating regional legislation addressing climate change in China

Regional legislation plays a tentative role in promoting legislation on climate change in China. Against the background of ecological civilization construction, local people's congresses and governments should consider the following three aspects when formulating regional legislation through a bottom-up approach, namely, selection of legislative mode, construction of legislation system and coordination of different interests.

5.1 Ways of developing regional legislation to address climate change

5.1.1 Regional legislatures should consider flexibility and stability when formulating legislation and gradually enhance its binding force. Based on differences in binding force, regional legislation on climate change is divided into local regulations and local rules with different levels of legal stability and legislative flexibility. In the preliminary phase of regional legislation, local governments are inclined to formulate legislation in the form of local rules. Despite their relatively lower binding force, the law-making process of local rules is streamlined compared to regulations, and they can, thus, be issued in a short time. Furthermore, local governments are familiar with the relevant policies and strategies on climate change and their implementation. Hence, if the local governments act as local legislatures, they may provide meaningful advice for regional legislation. Even once legislation is in force, local governments can promptly revise and improve the local rules according to practices and new demands of the work of addressing climate change, thus demonstrating flexibility and promptness.

The ultimate objective of legislating on climate change at the regional level is to ensure the stability, predictability and authoritativeness of the law through the issue of local

regulations by people's congresses. Because the work of addressing climate change concerns many basic issues, such as the establishment of organizational structures, mitigation, adaptation, finance, technology, etc., local people's congresses have certain legislative power to enact comprehensive and systematic regulations for the management and disposal of critical issues in addressing climate change in their administrative areas. In addition, the law-making process of local regulations led by the local people's congresses must undergo complicated phases of legislative plans, proposals, discussion, voting, publication, etc., ensuring the fairness of the legislative procedure and reducing the interference in legislative activities by governmental departments. Local regulations play a significant role in pushing the development of legislation on climate change in China. After local regulations are issued, they could not only establish legal bases for the prospective national law addressing climate change but also as superordinate laws, provide legal support and guidance for local rules and implementing rules.

5.1.2 Legislative power of local people's congresses and local governments should be enhanced. The scope of the legislative power of local people's congresses and local governments should be expanded to cover more affairs. Legislation on climate change may concern extensive fields, including energy, finance, banking, etc. Article 8 of the Legislation Law stipulates that some of these affairs should only be governed by national law and that regional legislation should not have the power to govern these affairs. However, regional legislation on climate change must involve certain affairs surrounding climate change activities, such as imposing a carbon tax, establishing the necessary funding mechanism, etc., which require that the national NPC should give local people's congresses more legislative power, to ensure that the regional legislation on climate change covers comprehensive affairs.

Whether the legislative power of local people's congresses and local governments should be expanded is a hotly debated topic. In 2014, the Third Plenary Session of the 18th Central Committee of the CPC actually proposed to "gradually increase the number of comparatively larger cities having regional legislative power." Moreover, the 2015 revisions to the Legislation Law demonstrate a tendency to delegate more legislative power to local legislatures. The most notable revision was to allow all cities with subordinate districts to make local regulations. Such regulations may address issues of urban and rural construction and management, environmental protection and historical and cultural protection. In addition to the original 80 regional legislatures, 237 cities with subordinate districts are conferred with regional legislative power by the revised *Legislation Law*. This expanded legislative power should be harnessed to further develop regional climate change legislation.

It is also necessary to give regional legislatures more power to adapt certain provisions of the laws and administrative regulations given that there are many specific laws and regulations on the affairs concerning climate change. Although the national law addressing climate change has not yet been issued, there are many specific laws or administrative regulations on matters concerning energy utilization, industrial production, land management, soil contamination, forestry, electric power, meteorology, etc., that are closely related to climate change. Regional legislation must not contradict these laws and administrative regulations. Some laws and regulations have been formulated for many decades: for example, the Electric Power Law was issued in 1995. Some provisions under these laws cannot completely meet the current demands of addressing climate change, leading to circumstances in which regional legislation may contradict some provisions in national laws. Facing this situation, regional legislative power should be expanded with the precondition of not contradicting the basic principles of the national laws and

administrative regulations; thus, allowing regional legislation to adapt concrete provisions based on the characteristics and demands of local action on climate change issues.

5.2 Framework structure and system design of regional legislation addressing climate change

5.2.1 Local governments should establish a legal system on climate change based on comprehensive legislation supplemented by specific laws on certain issues and detailed implementing rules. The framework structure and system design are fundamental to regional legislation addressing climate change. Regional legislation should start from formulating comprehensive local regulations addressing climate change because they provide the higher binding force. The contents of local regulations should cover legislative objectives, application scope, basic principles, supervision and management systems and other basic affairs; and mitigation, adaptation and various supporting mechanisms should also be covered. Considering that a region's comprehensive legislation plays a leading role in addressing climate change in its administrative area, it should primarily target the common problems in addressing climate change and present comprehensiveness, certainty and normalization. Subsequently, to supplement the comprehensive legislation, the priority of the legislative work should be shifted to promote specific local regulations on climate change-related issues and to revise and improve the existing local rules. The regional legislation on ETSs, low carbon production standards, renewable energy and meteorological disaster prevention can be issued as local rules and formulated by the relevant local governmental departments, which respectively belong to the areas of mitigation, adaptation and supporting mechanisms under the regional comprehensive legislation.

5.2.2 Regional legislation should be formulated according to regional circumstances and realize the combination of recognizing common problems and emphasizing mitigation and adaptation. On the one hand, the generally accepted basic system of addressing climate change needs to be confirmed in the regional comprehensive legislation. For example, the climate change strategy and planning system should be introduced into regional legislation, which ensures that the climate change programs formulated by local governments can be implemented with political continuity and stability. Moreover, under environmental democracy, all those affected by the outcomes of environmental issues must be involved in addressing them, rather than only governments and industrial sectors (Hazen, 1997). As recognized and first elaborated by Rio Principle 10, public participation is a reinforcing right of environmental democracy. Accordingly, the legal confirmation of the public participation system ensures that environmental democracy is seriously reflected in regional legislation.

On the other hand, the mitigation system and adaptation system should be applied differently in regional legislation due to the differences in GHG emissions and climate change impacts in different regions. The manufacturing provinces, located in the middle-eastern part of China, face a great challenge in reducing emissions. Thus, the carbon emission budget system, energy efficiency labeling system and other systems reflecting the need to mitigate climate change in these regions are likely to be given more favorable consideration in regional legislation. By contrast, as most western provinces are vulnerable to ecological damage, their local legislatures are likely to attach great importance to climate change adaptation. Thus, a climate change risk assessment system and climate feasibility approval should be introduced into regional legislation. The risks caused by climate change must be comprehensively assessed, to provide clear direction for adaptation activities; for example, environmental impact assessments, including the potential climatic impact of the proposed projects, must be submitted and approved before starting actual projects. Even against the background of establishing a national ETS in China, ETSs must be introduced

into the regional legislation of every region. Eastern provinces may also pay attention to a carbon inventory and certification system that is related to mitigation, aiming to realize the effective control of various emission sources. By contrast, western provinces may highlight the forest carbon sink system, which is expected to provide ecological compensation and generate incomes for protecting forests in the carbon market.

5.3 The coordination of different interests involved in addressing climate change in regional legislation

5.3.1 Factors reducing the positive impact of first formulating regional legislation and dealing with the problems of carbon leakage and regional protectionism. There are two problems that could potentially be caused by the first formulation of regional legislation. First, provisions addressing the problem of carbon leakage should be introduced into regional legislation. In their regional legislation, some relatively developed provinces and cities will adopt stricter carbon emission standards, causing the enterprises in their administrative areas to relocate operations to the provinces and cities with fewer regulations on emissions. In these circumstances, the carbon emissions reduced in one area are offset by the increased emissions of the enterprises moving to another area. Second, the stricter emission reduction measures adopted in the regional legislation of relatively developed provinces and cities could possibly trigger restrictions on the products and services with high emissions in other provinces and cities. This requires the establishment of a necessary consultation mechanism in regional legislation to avoid inter-province conflicts of interests caused by regional protectionism.

5.3.2 The provinces and cities with common interests should cooperate in making legislation addressing climate change. Taking joint legislative actions with neighboring provinces and cities with common interests in addressing climate change is the secondary development phase of first formulating regional legislation. For example, the districts that include neighboring provinces and cities with similar characteristics and interests concerning climate change – such as Beijing, Tianjin and Hebei Provinces and cities surrounding the Yangtze River Delta and the provinces and cities surrounding the Pearl River Delta – may address climate change through trans-province cooperative legislation, realizing the synchrony in legislative mode and contents to address climate change. Such joint legislation could reduce the cost of conflict caused by differences in the regional legislation of provinces and cities with similar characteristics, and also assists in promoting coordinative legislation to address climate change and both prevent and control air pollution. Thus, the corresponding joint legislation mechanism should be introduced into regional legislation to advance cooperation in jointly addressing climate change through legislation.

6. Concluding remarks

Addressing climate change presents a great opportunity and challenge for China in the twenty-first century. Legislation plays a significant role in addressing climate change. However, the law-making process of national legislation faces a multifaceted dilemma. Under these circumstances, local governments can take the initiative to first formulate regional legislation. It is necessary and feasible to pilot regional legislation before the enactment of national legislation. During this period, the local legislatures should also pay special attention to the selection of legislative mode, construction of the legislative content system, coordination of regional interests and other key issues. It is predictable that, in the critical phase of constructing ecological civilization in China, the first formulation of regional legislation is bound to play an indispensable role in promoting the construction and development of China's legal system on climate change.

Notes

1. For more details about the targets, see China's INDCs (Department of Climate Change, 2015).
2. Legislation Law of the People's Republic of China 2000, past amended in 2015.
3. Though lacking any legal status, the Five-Year Plans function as the most important and authoritative component of China's national economic planning by setting objectives and directions for long-term national economic development.

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