

The incentives for China's climate actions

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Although China is not subject to the emission targets set by the Kyoto Protocol, it has ramped up significant effort in climate mitigation on its own. The Greenhouse Gas Emission Control Plan in the twelfth Five-Year Plan sets carbon intensity targets for provinces, taking into account different stages of economic development and industrial structure. Although China's climate policy-making is centralized, the successful implementation needs the compliance of provincial governments. However, climate policy is challenged by economic growth and social stability, the Chinese government's top priority. In the context of climate governance, China's success depends on the willingness of the political center.

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China has been at the focus of scrutiny in the international climate negotiations since it took over the United States to become the world's largest greenhouse gas (GHG) emitter in 2007 (see Figure 1). In 2011, its GHG emissions accounted for 29% of the global emissions.¹ China's per capita emission used to be much lower than the level of developed countries. However, it has caught up quickly to the European level in recent years. Therefore, without meaningful participation of China, any climate treaty will be hardly successful at the global scale.

Although China is not subject to the emission targets set by the Kyoto Protocol because of "common but differentiated responsibility," an exemption for developing countries granted by the United Nations Framework Convention on Climate Change (UNFCCC), it has ramped up significant effort in climate mitigation on its own. The national climate actions can be divided into three stages²: (1) 1989–1995: the Chinese government started to learn about the climate change problem, (2) 1995–2007: China had become an active participant in international climate negotiations, and (3) from 2007 on, China has engaged extensively in domestic and international climate actions. As a developing country, China has no emission cap in the Kyoto Protocol. However, the new climate treaty that is expected to form in 2015 will not distinguish the Annex I/non-Annex I or industrialized/developing countries. It implies that China is likely to commit to some types of GHG emission limit.

Under the Copenhagen Accord, China has pledged to reduce its carbon intensity, measured as CO₂ emissions per unit of GDP, by 2020 by 40–45% from 2005 levels. In addition, its use of non-fossil fuels will be increased to about 15% of its total energy consumption. To achieve this target, the Greenhouse Gas Emission Control Plan in the

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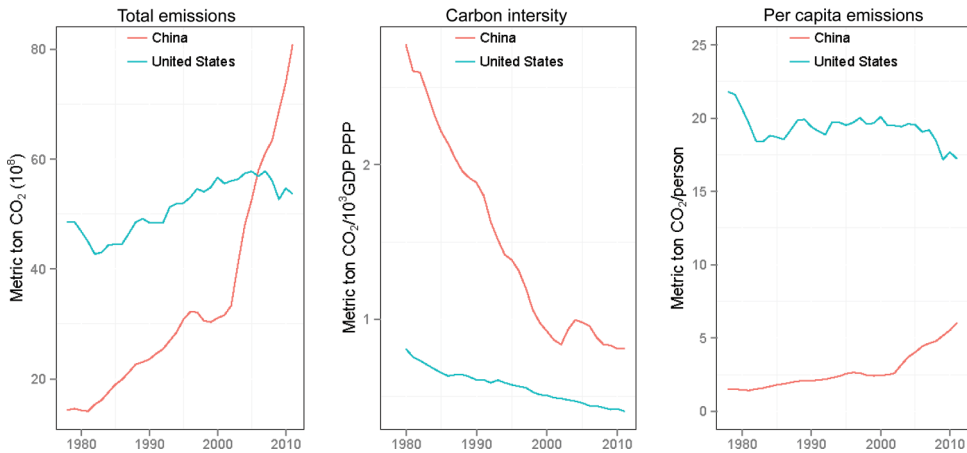


Figure 1. CO₂ emissions from fossil fuel consumption in China and the United States (1978–2011). Emission data are provided by the Carbon Dioxide Information Analysis Center at the Oak Ridge National Laboratory. GDP (PPP in 2005 US dollar) and population data are obtained from the World Bank.

twelfth Five-Year Plan sets carbon intensity targets for provinces, taking into account different stages of economic development and industrial structure (see Figure 2). The Plan intends to reduce carbon intensity by 17% by 2015 compared with the 2010 level. Note that China has also set the target to reduce energy intensity by 16% during the same period. My own analysis shows that the fulfillment of one target will automatically lead to the achievement of the other target. Therefore, it is redundant to specify two targets simultaneously.

Most national climate initiatives are related to energy demand and supply, including (1) using industrial policy to slow down the rapid growth of energy-intensive industries, by retiring dirty industries and providing favorable policy treatment to new industries; (2) promoting energy efficiency in manufacturing, construction, transportation, public institutions, and consumer products; and (3) development and deployment of low-carbon energy such as wind, solar, biomass, hydro, geothermal, coal-bed methane, and cleaner coal technologies. Because energy security is a top priority, China will engage in these activities no matter if there is a GHG emission target.

China's climate governance is centered at the national level. The National Leading Group on Climate Change, Energy Conservation and Emission Reduction was established in 2007. The Leading Group is a super-ministerial mechanism used to handle complexity issues that involve multiple ministries. The group is chaired by the Premier and includes multiple Vice Premiers and most members in the State Council. It is the top consultation and coordination body for climate change. The daily operation of its two offices is managed by the National Development and Reform Commission (NDRC). The Leading Group aims to achieve a better ministerial coordination on climate-related policy-making, since climate change has an extensive impact on the society.

NDRC has obtained the authority to regulate GHG emissions instead of the Ministry of Environmental Protection. NDRC's climate authority ranges from domestic policy-making to international negotiations. The latter was traditionally led by the Ministry of Foreign Affairs. NDRC is authorized to regulate GHG emissions because of its influence

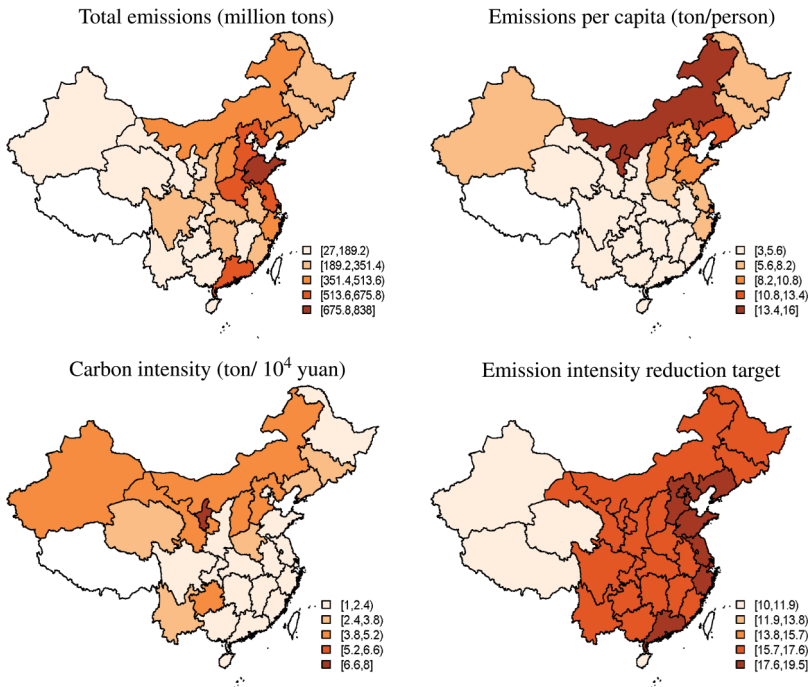


Figure 2. Chinese provincial CO₂ emissions from fossil fuel use in 2010 and the emission intensity target in the twelfth Five-Year Plan: total emissions (up left), emissions per capita (up right), carbon intensity (down left), and target to reduce emission intensity (down right). Emissions are calculated from the China Energy Statistical Yearbook. GDP is measured in constant 2005 yuan. No data for Tibet.

on China's macro economy and industrial planning.³ The assignment of climate policy-making is appropriate because climate strategy needs to be coordinated with economic development and energy use, both of which are under the authority of NDRC. However, the Department of Climate Change is the youngest department in NDRC, so it may have limited influence on its economic planning.

Although China's climate policy-making is centralized, the successful implementation needs the compliance of provincial governments. In addition, the central government has incentive to conduct regional experiments in order to reduce the risk of failure. This is the rationale for the current low-carbon pilot programs. If the pilot climate policy is successful in some test provinces, it is likely to scale-up to the national level. In the climate policy experiment, the central government is closely monitoring the impact of the policy on emission reduction as well as its impact on other indicators such as economic growth and social development.

Since 2010, NDRC has started the pilot program of low-carbon regions and cities. The first group of pilot regions includes five provinces and eight cities.⁴ The total number of pilot regions increased to 42 in 2012. Beijing, Shanghai, and Guangdong started pilot emission trading in the same year. The pilot provinces and cities are voluntary. Their selection is based on a comprehensive, while subjective, consideration of exemplarity, representivity, and regional capacity. It thus includes provinces and cities with diverse emissions, economic growth, and industrial structure. The pilot regions are required to

establish low-carbon leading groups and mechanisms for coordinated decision-making. These regions are also expected to implement a series of climate policy actions.⁵ Nevertheless, it is up to the pilot regions to determine the details of compliance.

The central government does not set mandatory emission caps or limitations in the pilot program. Instead, it provides incentive for local governments to participate. The selected regions can bargain better support in terms of favorable technology, fiscal, and financial treatment from the central government. Some local government officials may not be genuinely interested in climate change. They are more or less attracted by the title of “Model Low-Carbon Province/City” and the benefits associated with these image projects. There are no official standards for low-carbon development, no enforcement, and no evaluation. Local governments might just re-label the existing initiatives as the low-carbon development, which has raised the concern of “greenwashing.” If this is true, pilot regions can enjoy the low-carbon title with little effort.

The success of the pilot program hinges on whether the central government treats climate change as a priority. However, the Chinese government’s top priority is economic growth and social stability. It is unlikely that climate change can enter that list. The priority of climate change is lower than local and regional environmental pollution that causes imminent damage and social unrest. Furthermore, climate mitigation is not necessarily compatible with GDP growth. Provincial officials have no incentive to sacrifice growth to reduce GHG emissions unless the climate action has significant local co-benefits. Those cost-efficient mitigation projects without co-benefits will not be implemented. Local government officials have no incentive to engage in climate actions unless GHG emission standards enter the cadre performance appraisal system. It is claimed that carbon intensity is used to evaluate the progress of regional economic and social development. However, there is no evidence that the carbon performance measure is used in the promotion of local officials.

Finally, I would like to stress the importance of China’s fundamental institution in climate policy-making, since it defines the role of its government at each level. China has a combination of political centralization and regional economic decentralization. The Chinese Communist Party controls appointment, promotion, and dismissal of sub-national government officials. Using the personnel power, the political center can incentive subordinates to implement the national priorities. In the context of climate governance, its success hinges on the willingness of the political center. Local governments will comply with climate policy if the center incorporates GHG emission target into the cadre management system. However, they have no incentive to overshoot climate goals. If GHG emission standards are irrelevant to officials’ career advancement and climate policy is not aligned with GDP growth, the compliance of climate policy might be compromised.

Notes

1. European Commission, Joint Research Centre (JRC)/PBL Netherlands Environmental Assessment Agency. Emission Database for Global Atmospheric Research (EDGAR), release version 4.2. <http://edgar.jrc.ec.europa.eu>, 2011
2. *Interview of Zou Ji*, China Dialogue. 2013. <http://www.chinadialogue.net/article/show/single/en/5711-What-the-world-is-getting-wrong-about-China-and-climate-change>
3. The mandate of NDRC includes but is not limited to formulate national economic development strategy, monitor social and economic development progress, restructure the economic system, and approve major projects.
4. Five provinces include Guangdong, Liaoning, Hubei, Shaanxi, and Yunnan. Eight cities include Tianjin, Chongqing, Shenzhen, Xiamen, Hangzhou, Nanchang, Guiyang and Baoding.

5. The pilot regions are expected to incorporate low-carbon development strategies into local Five-Year plans, promulgate policies to support low-carbon and green development, establish new low-carbon industries, establish GHG emission inventory system, and promote low-carbon life style.

Notes on contributor

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