At the Crossroads: China’s Domestic and International Climate Change Policy

I. Introduction

Are Chinese climate politics and policy-making coming of age? That is the central question addressed in this thematic issue of Carbon & Climate Law Review (CCLR). While much more research is required, we assert here that China, and in fact the world at large, are at a crossroads: the phase of early, fairly restricted climate action is behind us, and China (as well as other countries) face the choice of continuing snail-paced action, or gradually accelerating efforts based on a more mature and cooperative internal and external policy environment.

It is clear that China’s economic rise has transformed it into a “climate superpower”, capable of making or breaking a global climate deal, and that it is only rivaled in this position by the U.S. and arguably the EU. However, from a western point of view, it has long hesitated to fully live up to its current international status. Instead, it has focused on domestic policy-making efforts in areas such as renewable energy development, energy efficiency, car standards, air pollution, and experiments with carbon trading. Compared to European and American efforts, and taking into account its current level of industrial development, Chinese climate politics are indeed becoming increasingly mature. Despite this positive evolution, many challenges remain and levels of greenhouse gas (GHG) emissions continue to rise domestically, while the (legal) nature of its future international engagement also needs further clarification.

This special issue seeks to inform the ongoing debate by providing insights and analysis from the political, legal and economic disciplines. Contributions focus on the domestic and international dimensions of Chinese climate policy-making, including its relations with other major players such as the US, the EU and India, and specific Chinese climate and energy policies including carbon trading, air pollution (PM 2.5) regulation, as well as shale gas, nuclear and renewable energy development efforts.

II. China’s International Climate Policy: The Increasing Relevance of Bilateral Relations

There are many clues that China is gradually turning the tanker on GHG emissions. It is also true that it will take time. China’s currently most prominent target, to peak CO₂ emissions, will take another 15 years (2030 or earlier) to fully materialize. However, China’s action to invest in non-fossil fuel energy sources is sincere and may be a game changer in the mid-term. Moreover, EU and U.S. pledges are also on the lower end of ambition, and in that sense China is now on an equal international footing. This is quite remarkable for a country with a 2014 GDP per capita of $7 593.9 (compare this to a developed country such as Belgium at $47 516.5 or a developing country such as Indonesia at $3 491.9 per capita).¹

¹ In current USD. World Bank, “GDP Per Capita (Current USD)”, available on the Internet at <data.worldbank.org/indicator/NY.GDP.PCAP.CD> (last accessed on 27 October 2015).
From a global perspective, it is of course China’s size that turns it into a pivotal superpower when it comes to GHG emissions. As mentioned in the preface of this special issue by Li Junfeng, Director General of the National Center of Climate Change Strategy Research at the NDRC, China’s choices “will significantly shape the international climate regime”. What we see in the run-up to the 2015 Paris climate summit is that a bottom-up regime is being established, with countries announcing their own targets or intended nationally determined contributions (INDCs). This type of self-differentiation can work best when there is sufficient trust among Parties and when reliable monitoring, reporting and verification (MRV) structures are put in place.

While the technical details are being discussed under the umbrella of the UNFCCC, it is important to note that in such a bottom-up system, bilateral relations are essential, precisely to build the type of implicit and explicit understanding and mutual trust that are required. The importance of the U.S.-China joint announcement in November 2014 is the most telling example in this regard so far.2

But China’s multiple bilateral relations with other countries are also significant, including its practical collaboration with the EU on a variety of issues (including low-carbon cities and emissions trading), and its rapidly evolving relationship with India3 and the G-77.

There are of course many other relevant aspects to China’s international climate policy, but we want to highlight the relevance of these “multiple bilateralisms”, and the necessity to conduct further research on the diplomatic efforts going on within them.

III. Domestic Climate Policy: Towards Low-carbon Development

Recognizing that climate change is one of the greatest threats facing humanity and that China is one of the most vulnerable countries to climate change impacts, the government is taking quite proactive policies on climate change mitigation and adaptation, while providing the largest investment in clean energy development worldwide.

Under the joint announcement with the U.S. and the INDC submitted to the UNFCCC, China pledges to peak its CO₂ emissions around 2030, while increasing the share of non-fossil fuel energy to 20% of primary energy consumption. An additional 800 to 1000 gigawatt of power generation would be built based solely on non-fossil fuel energy, which requires an investment of $1.7 trillion. In fact, overall investments needed for achieving China’s 2030 INDC target would go up to $6.6 trillion, equivalent to the size of today’s German and French economies combined, according to Mr. Xie Zhenhua, the special envoy on climate change who leads the effort on climate change in the Chinese government.4

Since Copenhagen, China has been leading the world in renewable energy investment. Today, 30% of all investment in renewable energy is from China. By 2014, China had built up a capacity of 114 GW of wind power generation within a decade, starting nearly from scratch. In 2014 alone, China added 23 GW of wind generation capacity, half of the world’s new installed capacity that year, and twice as much as the EU. In addition, solar power generation is now experiencing a faster growth than wind. By the end of 2014, China’s so-

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lar PV generation had grown to a new high of 28.5 GW, a little more than 15% of the world total. But the growth in 2014 is equivalent to the whole of Europe and about a third of the world total. Nuclear energy may also play a critical role in GHG emission reductions in China. Currently, China is adding a total of 37.23 GW to its existing 22.14 GW generation capacity, accounting for nearly 40% of the world total under construction.\(^5\)

However, China needs 10 times the current non-fossil fuel energy generation capacity in order to achieve its target of 20% non-fossil fuel generation by 2030. By 2020, China’s non-fossil fuel supply will reach 700 million tonnes of coal equivalent (tce), equivalent to Japan’s total energy consumption. All of this represents a significant challenge and a clear deviation from business-as-usual.

Under the Copenhagen Accord, China pledged to decrease its carbon intensity by 45-50% from the 2005 level by 2020, and further pledged a reduction of 60-65% by 2030. By the end of 2014, its carbon intensity had decreased 33.8% from the 2005 level, well on track to achieve the Copenhagen target. The annual improvement is 3.76%, the highest among all major economies in the world (but of course starting from a coal-intensive base).\(^6\)

China has focused on command-and-control measures as its primary policy instrument so far. These measures make use of administrative capacity to implement climate policies. The advantage of such policy instruments is their effectiveness as shown in various performance indicators. However, command and control approaches have resulted in a high cost of policy implementation. From 2005 to 2013, the government forced many enterprises to shut down production facilities, including 150 million tons of iron, 120 million tons of steel, 870 million tons of cement, and 94.8 GW of coal-fired power facilities. The financial, economic and social costs have to be absorbed by businesses and the domestic economy. To improve the efficiency of policy implementation, China has been trying to resort to market mechanisms to reduce GHG emissions. Since 2010, 7 provinces/cities have been selected for a pilot carbon market programme, with technical assistance from the EU, the World Bank and other organizations. President Xi Jinping announced that a nationwide carbon market would be built in 2017 in his joint presidential statement with President Obama. This would become the largest carbon market ever built in the world, at least twice as large as the EU ETS in terms of emissions covered.\(^7\)

It seems likely that China, within a decade, will exceed the United States in the overall size of the economy. But the real challenge is to build the largest green, low-carbon economy in the world. While the leaders of the G7 countries announced their target to decarbonize the economy by 2100, China sets a strategy of economic and social development through a revolution of energy production and consumption, which will also tackle China’s prominent local air pollution problems.\(^8\) China hopes to transform its current energy and resource intensive production system to a cleaner, greener system, and to achieve prosperity through low-carbon technology and consumption. Indeed, the 2030 peaking of carbon emissions is projected to be achieved at per capita carbon emissions equivalent to that of the average per capita emissions of OECD countries, with a per capita income half of the developed countries when they achieve(d) their own peak of carbon emissions.

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\(^7\) See also Maosheng Duan, “From Carbon Emissions Trading Pilots to National System: The Road Map for China?”, \(9\) Carbon & Climate Law Review (2015), in this issue.

\(^8\) See also Lydia McMullen Laird, Xiaofan Zhao, Mengjie Gong and Samuel J. McMullen, “Air Pollution Governance as a Driver of Recent Climate Policies in China”, \(9\) Carbon & Climate Law Review (2015), in this issue.
IV. Conclusion

The articles in this special issue address a variety of political, legal and economic aspects of China’s current domestic and international climate politics. The focus lies more specifically on five topics that have been identified by the contributors to this special issue as the most important ones. The key challenge that is present in each of these five topics is not only why, but also how China implements its policies and how it manages its relationships with international partners.

The five topics, studied in-depth in the articles presented in this special issue, consist of:

- Multiple bilateralism between China, the US and the EU (e.g. the US-China joint announcement);
- The shifting relations between China and India and their positions on climate change;
- The construction of a national carbon market in China;
- The synergies between China’s air pollution and climate policies;
- China’s shale gas, nuclear and renewable energy (wind and solar PV) development efforts.

Collectively, the articles in this issue suggest that the most important domestic trend to follow is the shift towards low carbon energy, and the (overlapping?) policies that are being put in place to support that transformation (notably coal caps, non-fossil fuel targets and the carbon market). Internationally, meanwhile, the relevance of bilateral relationships has come to the fore, although the multilateral setting under the UNFCCC also remains of utmost importance, as shown in the run-up to the Paris summit in December 2015.

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