

Hopes of Limiting Global Warming? China and the Paris Agreement on Climate Change

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Introduction

Climate change is closely related to the rise of the global economy since the industrial revolution. As scientific evidence shows, the increased concentration of carbon dioxide in the atmosphere is attributable to human activities since WWII, leading to global warming, rising sea levels, and more frequent occurrences of extreme weather.⁽¹⁾ Scientists warned that immediate action must be taken by the international community if we are to stop the globe from warming more than 2°C above pre-industrial levels and avoid catastrophic ecological consequences. The recent Paris Climate Summit from 30 November to 12 December 2015, officially referred to as the 21st Conference of Parties (COP 21) under the United Nations Framework Convention on Climate Change (UNFCCC), was an important part of the international efforts to tackle climate change. Over the past few decades, the international community has been working together to better understand the extent of climate change and what actions are required to mitigate it. These efforts were crystallised in the establishment of the Inter-governmental Panel on Climate Change (IPCC) in 1988 with the mandate to assess the state of climate change, and the signing of the UNFCCC in 1992, which laid the foundation for further international cooperation.⁽²⁾ The Kyoto Protocol in 1997, which required developed countries to reduce greenhouse gas emission, was an historic international agreement on climate change. Nevertheless, it did not bear much fruit without the participation of the United States. For this reason, many observers called for a new international agreement to be reached as a matter of urgency. The COP 21 in Paris was therefore highly anticipated. Prior to the conference, each participant country was invited to make pledges of carbon emission reduction according to their respective capabilities, known as "Intended Nationally Determined Contributions" (INDC). Although some NGO studies doubt the effectiveness of the INDCs to limit the world temperature increase to less than 2°C,⁽³⁾ the bottom-up approach implied by the concept of INDC is seen as more practical and promising to the climate change problem.⁽⁴⁾ As the world's largest emitter of greenhouse gases and the world's second largest economy, China has become an important force that heavily influences the failure or success of cooperation on climate change. In the following, I would like to discuss the role of China in the making of the Paris Agreement, the

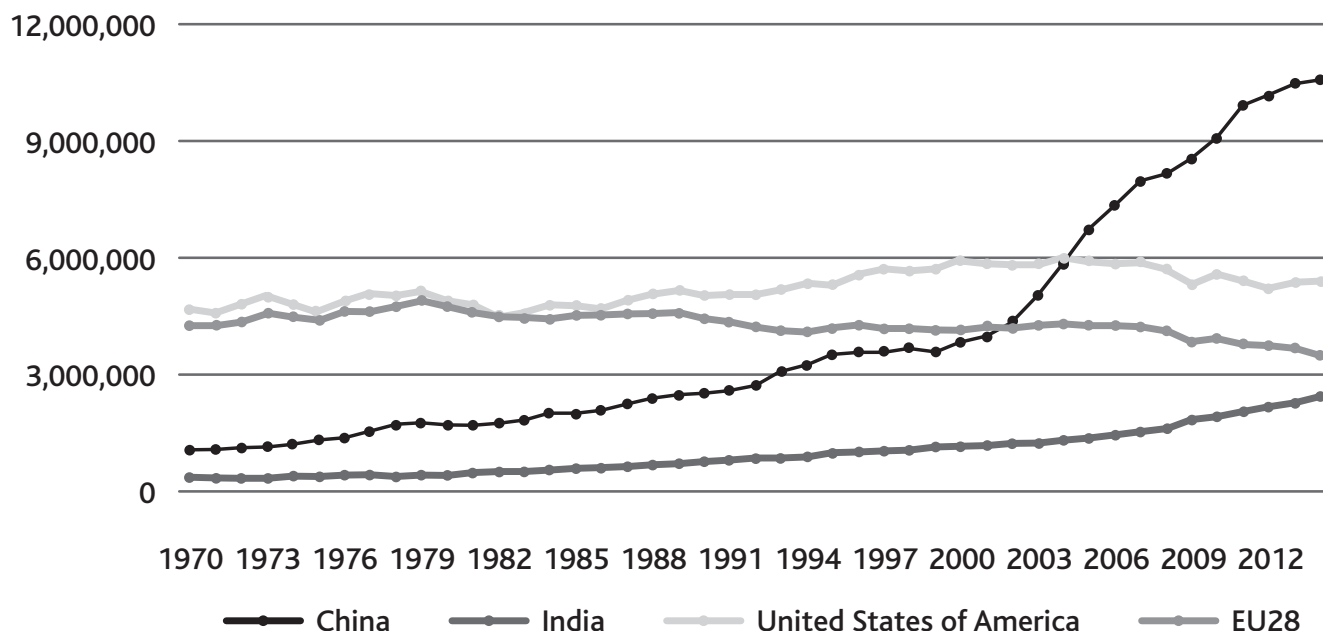
reasons for China's active role in forging international cooperation on climate change, and the challenges it faces in taking action against climate change.

China and the Paris Climate Summit

Since the start of international cooperation on climate change, China has undergone tremendous changes in many respects. Economic reform has increased China's trade with the outside world. Its accession to the World Trade Organisation (WTO) made China the "World's Factory" and helped it accumulate unprecedented wealth. In tandem with its economic achievements, the volume of carbon emission increased exponentially for China, and it has surpassed the United States as the world's largest carbon emitter since 2005 (see Graph 1).

From the perspective of China's leaders in the 1990s, environmental degradation was a necessary price to pay in order to alleviate large-scale poverty. As a corollary, China was not supposed to cut carbon emission levels, and developed countries were to contribute to the transfer of technology to developing countries so as to facilitate the control of global carbon emission.⁽⁵⁾ China's leaders were also cautious about the possibility of foreign powers attempting to interfere in China's domestic affairs in the name of environmental protection.⁽⁶⁾

1. Intergovernmental Panel on Climate Change (IPCC), *Climate Change 2013: The Physical Science Basis*, 2013, www.ipcc.ch/report/ar5/wg1/#.Um3adXDluYQ; *Climate Change 2014: Impacts, Adaptation, and Vulnerability*, 2014, www.ipcc.ch/report/ar5/wg2 (both accessed on 22 January 2016).
2. United Nations Framework Convention on Climate Change (UNFCCC), "The international Response to Climate Change," undated, http://unfccc.int/essential_background/background_publications_htmlpdf/climate_change_information_kit/items/300.php (accessed on 29 December 2015).
3. For example, see Bjørn Lomborg, "Impact of Current Climate Proposals," *Global Policy*, 9 November 2015, www.globalpolicyjournal.com/articles/climate-change-energy-and-sustainability/early-view-article-impact-current-climate-proposal (accessed on 27 December 2015).
4. Anne-Marie Slaughter, "The Paris Approach to Global Governance," *Project Syndicate*, 28 December 2015, www.project-syndicate.org/commentary/paris-agreement-model-for-global-governance-by-anne-marie-slaughter-2015-12 (accessed on 13 January 2016).
5. Richard L. Edmonds, "The Environment in the People's Republic of China 50 Years On," *The China Quarterly*, No. 159, September 1999, pp. 640-649.
6. Lester Ross, "China: Environmental Protection, Domestic Policy Trends, Patterns of Participation in Regimes and Compliance with International Norms," *The China Quarterly*, No. 156, December 1998, pp. 809-835.

Graph 1 – National Carbon Emission from 1970 to 2014 (kiloton CO₂)

Source: European Commission, Emission Database for Global Atmospheric Research (EDGAR), <http://edgar.jrc.ec.europa.eu/overview.php?v=CO2ts1990-2014&sort=des9> (accessed on 22 January 2016).

Since the 2000s, tensions have developed between China's position on its global environmental obligations and the expectations of the international community. The crux of the issue was how to assign fairly the responsibility of carbon emission reduction between developed countries and China with its fast-growing economy. Some critics from the United States argue that China's efforts have not matched its increased economic strength and corresponding responsibility for climate change.⁽⁷⁾ At the Copenhagen Conference in 2009 (COP 15), China was also accused of blocking a more substantial agreement from being reached.⁽⁸⁾

The tide changed in this round of climate talks. China was lauded by both the domestic and foreign press for its active and constructive role in bringing the Paris Climate Summit to fruition.⁽⁹⁾ At the decision-making level, leaders of both China and the United States exhibited leadership in making a deal possible in Paris. At the working level, the Chinese negotiators united with the French and the Americans to clear away some of the doubts expressed in discussion and make agreement a genuine option.⁽¹⁰⁾

China's intention to seal a meaningful deal in Paris actually became apparent in its climate diplomacy ahead of the conference. For one thing, China has engaged in a number of bilateral agreements on climate change and clean energy with Germany, the United Kingdom, France, India, and more importantly, the United States.⁽¹¹⁾ Given the previous standoffs between China and the US at COP 15, the Sino-US Joint Announcement on Climate Change in November 2014 and the Sino-US Joint Presidential Statement on Climate Change in October 2015 laid significant groundwork for the Paris talks. Their milestone cooperation was realised by a major shift in the domestic politics of the two countries in favour of carbon emission cuts.⁽¹²⁾ In relation to the Paris Climate Summit, China also submitted INDC of its own, which detailed reduction targets and reaffirmed its intention to peak carbon emissions by 2030 and to reduce carbon intensity by 60-65% from 2005 levels.⁽¹³⁾ Moreover, cooperation on climate change is taking place between city-level

governments. For example, 11 Chinese provinces and cities collaborated with 18 cities in the US to devise an action plan for carbon emission reduction before the Paris talks.⁽¹⁴⁾ Besides intergovernmental cooperation, China also joined hands with international billionaires such as Bill Gates to invest more in research on clean energy.⁽¹⁵⁾ In sum, international co-operation among various levels of the Chinese government and across various sectors has made important breakthroughs in the spirit of the Paris Conference. Qi Ye and Tong Wu from the Brookings-Tsinghua Center positively evaluated China's efforts and contended that China is ready

- Andrew Browne, "Another Kind of Climate Change: China Warms to Superpower Role," *The Wall Street Journal*, 14 December 2015, www.wsj.com/articles/another-kind-of-climate-change-china-warms-to-superpower-role-1450154527 (accessed on 29 December 2015).
- Qi Ye and Tong Wu, "China's 'Yes' to New Role in Climate Battle," *Brookings Brief*, 4 December 2015, www.brookings.edu/research/articles/2015/12/04-chinas-yes-new-role-climate-battle-qi-wu (accessed on 30 December 2015).
- Andrew Browne, "Another Kind of Climate Change: China Warms to Superpower Role," *art. cit.*; "China played a Key Role in Global Climate Pact," *Associated Press*, 13 December 2015, www.sfgate.com/world/article/China-played-key-role-in-global-climate-pact-6695812.php (accessed on 17 December 2015); Daniel Flitton, "Paris UN Climate Conference 2015: A Global Deal Made in China (and the US)," *The Sydney Morning Herald*, 13 December 2015, www.smh.com.au/environment/un-climate-conference/paris-un-climate-conference-2015-a-global-deal-made-in-china-and-the-us-20151213-glinfo3.html (accessed on 17 December 2015).
- "China Takes Leading Role in Global Climate Deal," *Xinhua*, 14 December 2015, http://news.xinhuanet.com/english/2015-12/14/c_134916400.htm (accessed on 30 December 2015).
- Qi Ye and Tong Wu, "China's 'Yes' to New Role in Climate Battle," *art. cit.*
- Coral Davenport, "Nations Approve Landmark Climate Accord in Paris," *The New York Times*, 12 December 2015, www.nytimes.com/2015/12/13/world/europe/climate-change-accord-paris.html?_r=0 (accessed on 14 January 2016).
- "China Takes Leading Role in Global Climate Deal," *art. cit.*
- "Zhongmei qihou lingdao xuanyan mingque liang guo tan jianpai xingdong jihua" (Sino-US Climate Leading Declaration Makes Clear of Carbon Reduction Action Plans of Both Countries), *21 Century Economic Journal*, 24 September 2015, <http://finance.sina.com.cn/world/20150924/021923333519.shtml> (accessed on 18 December 2015).
- Kerry A. Dolan, "Bill Gates, Mark Zuckerberg and More than 20 Other Billionaires Launch Coalition to Invest in Clean Energy," *Forbes*, 29 November 2015, www.forbes.com/sites/kerryadolan/2015/11/29/bill-gates-george-soros-more-than-20-other-billionaires-launch-coalition-to-invest-in-clean-energy (accessed on 28 December 2015).

to take up its role as a “proactive builder” in global climate governance.⁽¹⁶⁾

Despite China's activity and its cooperation with the United States ahead of the conference, divisions remained between developed countries led by the United States and developing countries represented by China and India. Xie Zhenhua 解振華, China's chief negotiator at the Paris Climate Summit, had emphasised that China's position was to secure an agreement that would provide a mechanism to tackle climate change after the Kyoto Protocol expires in 2020, to confirm the international commitment to the transition to low-carbon development, and to resolve the issue of funding and technology transfers, which concerned developing countries the most.⁽¹⁷⁾ More importantly, China wanted to uphold the principle of “Common but Differentiated Responsibility” (CBDR) that underlies the principle of fairness and national contribution according to respective capabilities.

During the Paris Climate Summit, China and India maintained that developed countries should make deeper cuts in carbon emissions before China and India made further promises on carbon emission reduction, worrying that any other arrangement would impair their right to economic growth relative to developed countries. In addition, China also demanded that developed countries honour their pledges to climate finance, and insisted that the agreement should uphold the principle of CBDR as extensively as possible.⁽¹⁸⁾

Ultimately, the Paris Climate Summit resulted in a legally binding consensus by 195 participant countries on limiting global warming to 2°C above pre-industrial levels by the end of this century, with an aim to reduce it to 1.5°C. In the parts that were agreed upon but not legally binding, participant countries also agreed to review the respective INDC every five years as a way of monitoring the effectiveness of carbon emission reduction on a global scale. In addition, the developed countries promised to discuss a roadmap to boost climate finance to US\$ 100 billion per year by 2020 in order to help developing countries mitigate and adapt to the impact of climate change.⁽¹⁹⁾ On the one hand, the Paris Agreement has been largely regarded as historic. On the other hand, some critics such as Bjørn Lomborg, the director of the Copenhagen Consensus Center, cast doubt over the credibility of participant countries in their pledges of voluntary contribution, warning that hypocrisy could result if words are not matched with real action.⁽²⁰⁾

The final outcome of the Paris Agreement seems to suggest that China has made its voice heard, and it appears to have played an indispensable role in reaching the Agreement. As Arthur Mol and Neil Carter from the University of York and the Wageningen University respectively predicted, in tandem with China's deeper integration with the international community, it is unavoidable for China to play a bigger role in environmental negotiations and to exercise greater power to direct the outcomes.⁽²¹⁾ Nevertheless, it would be speculative to say that China's role in the Agreement can be interpreted as having far-reaching implications for its ascendance on the international stage. China's constant violations of international treaties in the area of human rights protection continue to make the country a target of international criticism.⁽²²⁾ In the Paris talks, some Chinese delegates admitted that they needed to find a better way to communicate the country's position with other participants and improve China's international standing.⁽²³⁾

China's domestic problems and global climate change

From the preceding discussion, it is evident that China has made a substantial commitment to the goal of climate change mitigation over the past

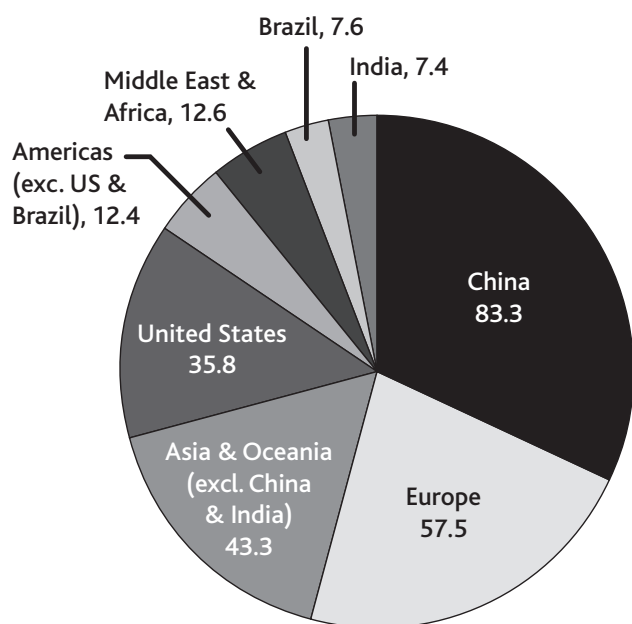
years. Given the public-good nature of climate change, China's active participation in the global climate change issue warrants deeper analysis. Apart from the international pressure for China to be a “responsible power” (*fuzeren daguo* 負責任大國), China's interests in climate change mitigation concurrently lie in its own needs to solve the domestic environmental problems caused by the three decades of rapid and high-growth-led economic development as well as the quest for sustainable economic growth with secure energy resources.

In the Mao era, the environment was not viewed as an object to be protected but rather as a resource to be exploited for economic growth and political campaigns. This resulted in large-scale environmental degradation such as serious soil erosion, more frequent flooding, shortage of arable land and water, as well as a wide range of environmental pollution. The extent of environmental degradation raised concern in the late 1970s, but economic development was still regarded as more important than environmental protection to any effective degree.⁽²⁴⁾ The Chinese public's tolerance for environmental problems has nevertheless decreased markedly, as reflected in the rise of public protests against polluting projects across the country. While the scale of these protests is usually limited, they have caused varying levels of social unrest.⁽²⁵⁾ Furthermore, from the second half of the 1990s onward, a growing body of journalistic and scholarly evidence has pointed to the alarming consequences of the fast-growth economic strategy in terms of human and environmental costs. This has led to an increasing awareness at the level of the Chinese leadership of the need to counter environmental degradation.

In the late 1990s, the central government began to take environmental issues more seriously and gradually balanced the importance of environmental protection and the need for rapid economic growth. The National Development and Reform Commission (NDRC), the supra-ministry overseeing China's comprehensive economic development, was assigned with devising plans for sustainable development starting in 1998.⁽²⁶⁾ Meanwhile,

16. Qi Ye and Tong Wu, “China's ‘Yes’ to New Role in Climate Battle,” *art. cit.*
17. Zhang Chun, “What is China's Position at Paris Climate Talks?”, *China Dialogue*, 30 November 2015, <https://www.chinadialogue.net/article/show/single/en/8356-What-is-China-s-position-at-Paris-climate-talks-> (accessed on 14 January 2016).
18. John Vidal, Suzanne Goldenberg, and Lenore Taylor, “How the Historic Paris Deal over Climate Change Was Finally Agreed,” *The Guardian*, 13 December 2015, www.theguardian.com/environment/2015/dec/13/climate-change-deal-agreed-paris (accessed on 29 December 2015).
19. United Nations Framework Convention on Climate Change (UNFCCC), “Historic Paris Agreement on Climate Change,” 12 December 2015, <http://newsroom.unfccc.int/unfccc-newsroom/finale-cop21> (accessed on 23 December 2015).
20. Bjørn Lomborg, “A Climate Agreement Powered by Hypocrisy,” *Project Syndicate*, 17 December 2015, www.project-syndicate.org/commentary/paris-climate-agreement-hypocrisy-by-bj-m-lomborg (accessed on 13 January 2016).
21. Arthur P.J. Mol and Neil T. Carter, “China's Environmental Governance in Transition,” in Neil T. Carter and Arthur P.J. Mol (eds), *Environmental Politics in China*, New York, Routledge, 2007, p. 16.
22. See, for example, the case of Pu Zhiqiang, who was convicted for “inciting ethnic hatred” and “picking quarrels” and received a three-year suspended jail term for tweeting messages on social media. Jane Perlez, “Conviction of Pu Zhiqiang Affirms China's Resolve to Muzzle Rights Lawyers,” *The New York Times*, 22 December 2015, www.nytimes.com/2015/12/23/world/asia/conviction-of-pu-zhiqiang-affirms-chinas-determination-to-muzzle-rights-lawyers.html (accessed on 14 January 2016).
23. Li Jing, “Paris Climate Talks: China Goes from Back Foot to Big Leap Forward in Negotiations,” *South China Morning Post*, 13 December 2015, www.scmp.com/news/china/diplomacy-defence/article/1890963/paris-climate-talks-china-goes-back-foot-big-leap (accessed on 18 December 2015).
24. Richard L. Edmonds, “The Environment in the People's Republic of China 50 Years On,” *art. cit.*
25. See for example, Kingsyhoon Lee and Ming-sho Ho, “The Maoming Anti-PX Protest of 2014: An Environmental Movement in Contemporary China,” *China Perspectives*, No. 2014/3, pp. 33-39.
26. Lynette H. Ong, “The Apparent ‘Paradox’ in China's Climate Policies,” *Asian Survey*, Vol. 52, No. 6, 2012, pp. 1138-1160.

Graph 2 – Global New Investment in Renewable Energy by Region in 2014 (in billion US\$)



Source: Frankfurt School UNEP Collaborating Centre for Climate and Sustainable Energy Finance, *Global Trends in Renewable Energy Investment 2015*, <http://fs-unep-centre.org> (accessed on 22 January 2016).

the State Environment Protection Administration (SEPA) was established under the direct supervision of the State Council in 1998 in order to protect the environment through the implementation of environmental policies and to enforce relevant regulations such as those controlling air pollution. To strengthen its role, SEPA later became one of the ministries of the State Council and was renamed the Ministry of Environmental Protection (MEP) in 2008. Control of air pollution and concern over climate change were also salient in national plans since the mid-2000s. For example, in the 12th Five-Year Plan (2011–2015), binding reduction targets were set for air pollutants and were incorporated into the target responsibility system (*mubiao zeren zhi* 目標責任制) to strengthen air pollution control at the local level.⁽²⁷⁾ “Climate change” also received unprecedented attention in the Plan and became one of the main foci of environmental concern.⁽²⁸⁾

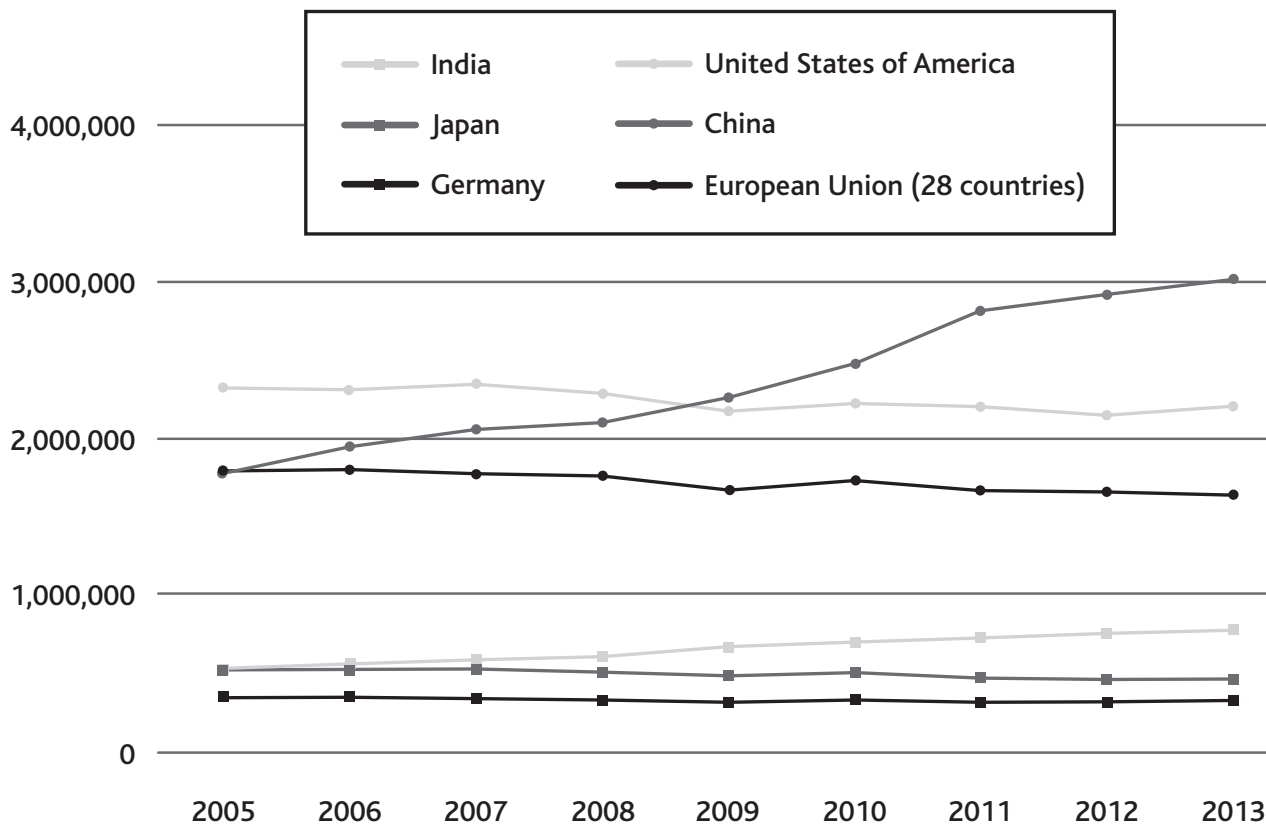
Despite strengthened measures by the central government to improve air quality in China, air pollution continues to haunt the country and areas beyond its borders. The severity of air pollution in China is partly attributed to its heavy reliance on coal for energy generation. In recent years, more than 60% of China’s coal consumption was for energy generation and contributed significantly to China’s total carbon emission.⁽²⁹⁾ The process of coal-burning releases airborne pollutants such as Particulate Matter 2.5 (PM_{2.5}) as well as carbon dioxide, worsening not only the health of the Chinese population but also the climate change problem. Around the time of the Paris Climate Summit, northern China, including Beijing, was hit hard by smog (*wumai* 霧霾) with a concentration of PM_{2.5} many times higher than the limit set by the World Health Organisation (WHO).⁽³⁰⁾ Public discontent concerning air pollution was noticeable in both state and social media.⁽³¹⁾ The smog in Beijing then became the focal issue in a panel discussion at the summit, where chief negotiator Xie responded that solving the climate change problem would have a complementary effect on smog management.⁽³²⁾ The revised Air Pollution Prevention Law (*daqì wuran*

fangzhi fa 大氣污染防治法), which among other things aims at reducing coal-related activities effective January 2015, is a case in point.⁽³³⁾ In sum, China’s policy on climate change is concurrently driven by its urgent need to control air pollutant emissions as well as maintaining social stability.

In addition to its determination to clean the air, China has made remarkable progress in the development of the renewable energy industry in the past decade. In the 12th Five-Year Plan, the renewable energy industry was identified as a “pillar industry” of strategic importance.⁽³⁴⁾ Consequently, renewable energy quickly took up 25% of total national energy generation in 2015 from virtually nothing in 2005.⁽³⁵⁾ In recent years, China has also become the world’s largest investor in renewable energy (see Graph 2) as well as the largest generator (see Graph 3).⁽³⁶⁾ Thanks to China’s heavy investment in the renewable energy sector, the cost of renewable energy has dropped significantly on a global scale,⁽³⁷⁾ creating a favourable environment for deeper carbon emission cuts through wider use of renewables. Also, wider adoption of nuclear power in China is seen as integral to reducing national carbon emission.⁽³⁸⁾ While China’s increased use of non-fossil-fuel energy sources certainly helps reduce carbon emissions, John Mathews from the Macquarie University points out that China’s heavy investment in renewables is driven more by a focus on energy security and the perceived economic benefits of renewable energy than by a concern for climate change.⁽³⁹⁾

In 2014, China had the world’s third largest coal reserves and accounted for the world’s largest coal production (46.9%). However, its huge appetite for energy still outgrew its production and turned China into a net coal importer to satisfy an additional 3.7% in its share of global coal consumption

27. Xinyan Lin and Mark Elder, *Major Developments in China’s National Air Pollution Policies in the Early 12th Five-Year Plan Period*, Institute for Global Environmental Strategies (IGES), March 2014, http://pub.iges.or.jp/modules/envirolib/upload/4954/attach/Major_Developments_in_China’s_Air_Pollution_Policies_March2014.pdf (accessed on 16 January 2016).
28. Robert Ash, Robin Porter, and Tim Summers, *China, the EU and China’s Twelfth Five-Year Programme*, Europe China Research and Advice Network (ECRAN), 2012, https://www.chatham-house.org/sites/files/chathamhouse/public/Research/Asia/0312ecran_ashportersummers.pdf (accessed on 16 January 2016).
29. Zhu Liu, *China’s Carbon Emissions Report 2015*, Harvard Kennedy School Belfer Center for Science and International Affairs, May 2015, <http://belfercenter.ksg.harvard.edu/files/carbon-emissions-report-2015-final.pdf> (accessed on 2 January 2016).
30. Agence France Presse and Keira Lu Huang, “Smog in Northeast China at Nearly 50 Times World Health Organization Safe Limits,” *South China Morning Post*, 10 November 2015, www.scmp.com/news/china/society/article/1877282/smog-northeast-china-nearly-50-times-world-health-organisation (accessed on 28 December 2015).
31. Cary Huang, “Press Freedom Needed to Win China’s Choking Air Pollution Battle,” *South China Morning Post*, 6 December 2015, <http://www.scmp.com/news/china/society/article/1887084/press-freedom-needed-win-choking-air-pollution-battle> (accessed on 28 December 2015).
32. “Wumai cheng qihou hui jiaodian” (Hazardous Smog Becomes the Focal Point of Climate Summit), *Hong Kong TVB News*, 9 December 2015, [http://news.tvb.com/world/566761b96db28c61100000000](http://news.tvb.com/world/566761b96db28c6110000000) (accessed on 14 January 2016).
33. Joshua Busby and Sarang Shldore, “Meiguo ruhe zhuli Zhongguo yingdui qihou bianhua” (How the United States Helped China Tackle Climate Change), *Paulson Institute*, July 2015, www.paulsoninstitute.org/wp-content/uploads/2015/07/PPEE_Climate-Cooperation_Chinese.pdf (accessed on 16 January 2016).
34. Lynette H. Ong, “The Apparent ‘Paradox’ in China’s Climate Policies,” *art. cit.*
35. Roger Harrabin, “China ‘Deserves More Credit’ for Renewable Energy Effort,” *BBC News*, 15 June 2015, www.bbc.com/news/business-33143176 (accessed on 29 December 2015).
36. Simon Evans, “Official Data Confirms Chinese Coal Use Fell in 2014,” *Carbon Brief*, 26 February 2015, www.carbonbrief.org/official-data-confirms-chinese-coal-use-fell-in-2014 (accessed on 3 January 2016).
37. Zhang Chun, “What is China’s Position at Paris Climate Talks?,” *art. cit.*
38. Li Jing, “Nuclear Energy ‘Essential’ to Meet China’s Climate Targets, Top Official Says,” *South China Morning Post*, 23 December 2015, www.scmp.com/news/china/policies-politics/article/1894099/nuclear-energy-essential-meet-chinas-climate-targets (accessed on 2 January 2016).
39. John Mathews, “The Renewable Energy Revolution,” *Project Syndicate*, 8 December 2015, <https://www.project-syndicate.org/commentary/china-india-transition-to-renewable-energy-by-john-a-mathews-2015-12> (accessed on 4 January 2016).

Graph 3 – Energy supply from renewables by country from 2005 to 2013 (unit: tonne of oil equivalent, TOE)

Source: OECD, "Energy," <https://data.oecd.org/energy/renewable-energy.htm> (accessed on 22 January 2016).

(50.6%).⁽⁴⁰⁾ The fact that China now relies on imports for its principal energy source sheds light on its actions to diversify sources of energy into oil, natural gas, renewable energy, and nuclear power for energy security. This urge has shifted China from its dependence on coal, further reducing the country's total carbon emissions.

Policy implementation, law enforcement, and environmental protection in China

The ambition shown by China's leaders for green development is evident, but the road is full of challenges. An important question to ask is how much China's leaders at the apex of the Chinese Communist Party are willing to make the transition from carbon-intensive to low-carbon economy, and how capable they are of overcoming obstacles in the process. While China has a number of well-intentioned environmental plans and comprehensive environmental laws in place, the real challenge remains the question of policy implementation and law enforcement.⁽⁴¹⁾ More specifically, it is important to ask how central-level officials can effectively tackle the vested interests entrenched in local governments and initiate reforms in state-owned enterprises (SOEs) related to sectors with high carbon emissions.

Since political decentralisation and economic marketization, local governments are closely allied with business interests for rapid economic growth without due diligence regarding the environmental costs.⁽⁴²⁾ While local governments are granted greater autonomy to set environmental priorities and strategies to meet local environmental needs, environmental

protection is in reality neglected by local policymakers because local governments are dependent on local industries for lucrative revenue, and local Party cadres are chiefly evaluated for career promotion based on how much GDP growth they can produce within a short time span.⁽⁴³⁾ Furthermore, in the decentralised state apparatus, local environmental protection bureaus are dependent on local government for finance, and local environmental officials are also evaluated by local leaders for career promotion. In fear of undermining the business interests crucial to the local governments, local environmental officials do not favour stringent implementation of environmental policies, nor are local judicial systems effective or their judges active in enforcing environmental laws for the same reasons.⁽⁴⁴⁾ While national campaigns against violation of environmental laws are carried out from time to time, the effectiveness of those campaigns is largely contingent upon

40. British Petroleum, *BP Statistical Review of World Energy: Coal*, June 2015, www.bp.com/content/dam/bp/pdf/energy-economics/statistical-review-2015/bp-statistical-review-of-world-energy-2015-coal-section.pdf (accessed on 14 January 2016).

41. Stefanie Beyer, "Environmental Law and Policy in the People's Republic of China," *Chinese Journal of International Law*, Vol. 5, No. 1, 2006, pp. 185-211.

42. Eric Florence and Pierre Defraigne, "Introduction," in Eric Florence and Pierre Defraigne (eds), *Towards a New Development Paradigm in Twenty-First Century China: Economy, Society and Politics*, New York, Routledge, 2013, pp. 2-3.

43. It should be noted that in recent years the central government has tried to introduce "green criteria" into the cadre assessment system in an attempt to rectify the overemphasis on GDP growth at the expense of the environment in the past. The effectiveness of the new criteria remains to be seen.

44. William P. Alford and Shen Yuan, "Limits of the Law in Addressing China's Environmental Dilemma," *Stanford Environmental Law Journal*, Vol. 16, No. 1, 1996, pp. 125-148.

the struggle between national environmental authorities and local state interests.⁽⁴⁵⁾ Similarly, national authorities also have difficulty accurately auditing the carbon emissions figures submitted by local authorities.⁽⁴⁶⁾ The conflict of interest in environmental protection between the national and local governments must be tackled more effectively if China's commitment to climate change mitigation is not to be turned into an empty slogan.

Moreover, the transition to a low-carbon economy unavoidably requires the cooperation of state-owned enterprises, which can no longer do high-polluting business as usual. In the past, SOEs in the energy sector contributed to environmental pollution by failing to meet environmental standards in executing projects.⁽⁴⁷⁾ Also, many highly polluting industries such as steel manufacturing ignored environmental regulations under the protection of local vested interests, making the MEP a "toothless tiger."⁽⁴⁸⁾ As such, restructuring SOEs in line with national environmental targets will be crucial for the success of climate change policies in China.

Concluding remarks

To conclude, China has shown its willingness to cooperate on climate change as exhibited in the Paris Agreement. China's active participation

in climate change mitigation in recent years can be attributed to its own need to solve domestic environmental problems and also to diversify its energy supply. While China's central government has a major stake in controlling air pollution and achieving energy security, both of which are conducive to climate change abatement, the delay in restructuring the political and economic interests of local governments and SOEs could impede the effectiveness of national targets for carbon emission reduction. Therefore, China's actions to undertake reforms in these two areas are inseparable from its commitment to climate change mitigation in the post-COP 21 era. The timely economic slowdown since mid-August 2015 could provide a perfect opportunity for China to do so in the near future.

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45. Tang Hao, "Shinian huigu: cong huanbao fengbao dao shehui yundong" (10-year Review: From Storms of Environmental Protection to Social Movement), *China Dialogue*, 30 January 2013, <https://www.chinadialogue.net/article/show/single/ch/5660-China-s-street-protests-won-t-change-failing-system> (accessed on 2 January 2016).
46. Lauri Myllyvirta, "How China Produced More Coal Than It Thought in 2013: And Why That Means It May Cut Emissions Faster," *Energy Desk of Greenpeace*, 5 May 2015, <http://energydesk.greenpeace.org/2015/05/05/how-china-produced-more-coal-than-it-thought-in-2013-and-why-that-means-it-may-cut-emissions-faster> (accessed on 2 January 2016).
47. "Zhongguo huanbao xin liliang dengchang de taqian muhou" (The Phenomenon and Causes of the Rise of New Force of Environmental Protection in China), *Southern Weekly*, 27 January 2005, <http://news.sina.com.cn/c/2005-01-27/17585690160.shtml> (accessed on 28 December 2015).
48. Cai Jing, *Under the Dome* (Documentary), *YouTube*, 28 February 2015, <https://www.youtube.com/watch?v=T6X2uwlQGQM> (accessed on 4 January 2016).