PART I

Introduction and Analytical Framework

1 Introduction

China and India, two of the world's fastest-growing economies and most populous countries, with their ever-increasing demand for energy and their huge greenhouse gas (GHG) emissions, have already emerged as crucial players in the international system in general, and in the issue areas of energy security and climate change in particular. In other words, both China and India matter.[1] More specifically, they are the world's largest and third-largest energy consumers respectively, consuming coal extensively. They are the world's largest and third-largest net importers of oil respectively, and are projected to lead global oil demand growth over the next 20 years.[2] They are also the world's largest and third-largest emitters of GHGs on an annual basis respectively. As a result, it is almost inevitable that China's and India's efforts to address the intertwined challenges of energy insecurity[3] and climate change[4] will have significant implications for

[1] In the late 1990s, it was argued that China was a middle power so it was relatively unimportant, or China did not matter. See Gerald Segal, "Does China Matter?," *Foreign Affairs* 75, no. 5 (September/October 1999), 24–36. However, such a view has been seriously challenged by other scholars since the beginning of the 21st century. See Robert G. Sutter, "Why Does China Matter?," *The Washington Quarterly* 27, no. 1 (Winter 2003–4), 75–89; Barry Buzan and Rosemary Foot (eds), *Does China Matter? A Reassessment* (London: Routledge, 2004). As to the argument that India matters, see Mohammed Ayoob, "India Matters," *The Washington Quarterly* 23, no. 1 (2000), 27–39; Maya Chadda, *Why India Matters* (Boulder, CO: Lynne Rienner Publishers, 2014).

[2] International Energy Agency (IEA), *World Energy Outlook 2013* (Paris: OECD/IEA, 2013), 62.

[3] Energy insecurity may be defined as "the loss of economic welfare that may occur as a result of a change in the price or availability of energy." See D. R. Bohi and M. A. Toman, *The Economics of Energy Security* (Norwell, MA: Kluwer Academic Publishers, 1996), 1.

[4] "Climate change" is defined by the United Nations Framework Convention on Climate Change (UNFCCC) as "a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over

global energy and climate governance, given the fact that without substantial efforts on the part of China and India to enhance their energy security and limit their increased GHG emissions, any measures undertaken by other countries to address these two challenges would turn out to be much less effective. In other words, China's and India's efforts to address energy insecurity and climate change have already had and will continue to have significant ramifications for global energy and climate governance, which becomes an important factor in determining the effectiveness and evolution of global governance on the two issue-areas.[5] Other factors, such as sustainable development and human development, contribute to the equation, so that not only the economic and political, but also moral and ethical issues will invariably be brought to the fore. Simply put, both countries have a major role to play in global governance on energy security and climate change.

This introductory chapter starts with China's and India's puzzling energy and climate policy behavior and a brief statement of the main argument and propositions. It then reviews studies of the existing research on China's and India's energy security and climate policies, the literature on global energy and climate governance, as well as on China's and India's roles in global energy and climate governance. This is followed by a theoretical debate on levels of analysis in international relations, case selection, and contributions of the study, as well as a synopsis of each chapter in the book.

comparable time periods." See United Nations, *United Nations Framework Convention on Climate Change* (1992), 7, available at http://unfccc.int/files/essential_background/background_publications_htmlpdf/application/pdf/conveng.pdf, accessed February 19, 2018. "Energy insecurity" and "climate change" appear as two key words in the book title: Felix Dodds, Andrew Higham, and Richard Sherman (eds), *Climate Change and Energy Insecurity: The Challenge for Peace, Security and Development* (London: Earthscan, 2009).

[5] According to Robert O. Keohane, "Issue-areas are best defined as sets of issues that are in fact dealt with in common negotiations and by the same, or closely coordinated, bureaucracies, as opposed to issues that are dealt with separately and in uncoordinated fashion. Since issue-areas depend on actors' perceptions and behavior rather than on inherent qualities of the subject-matters, their boundaries change gradually over time." See Robert O. Keohane, *After Hegemony: Cooperation and Discord in the World Political Economy* (Princeton, NJ: Princeton University Press, 2005), 61.

Puzzling Energy and Climate Policy Behavior

China's and India's policy behavior to address their energy insecurity and climate change in the first decade and a half of the twenty-first century has been puzzling. In terms of their energy policies, especially their energy diplomacy, both countries have, on the one hand, employed a variety of policy measures – political, economic, military, and diplomatic – to foster close relationships with all energy-rich countries across the world, including those labeled as "pariah states," such as Iran, Sudan, and Myanmar. On the other hand, China and India have also undertaken policy measures that obviously run counter to their efforts to strengthen their energy ties with those energy-rich countries. For instance, both China and India voted against Iran at the International Atomic Energy Agency (IAEA), and China voted against Iran at the UN Security Council on the Iranian nuclear issue. Moreover, China and India even cut their oil imports from Iran against the backdrop of their increased dependence on imported oil (see more in Chapter 4). When it comes to China's and India's climate diplomacy, both countries had at one time consistently rejected taking any actions to mitigate their increased GHGs, especially CO_2 emissions, in international climate change negotiations (ICCN), which was the main force that led to the fiasco of the Copenhagen climate conference in late 2009. In stark contrast, at the Paris climate conference in late 2015, China and India agreed, along with other countries, developed and developing, not only to undertake voluntary actions to mitigate their CO_2 emissions, but also to subject their actions to legally binding, transparent procedures, which eventually led to the successful adoption of the Paris Agreement (see more in Chapter 5). Why have China and India conducted such puzzling energy and climate diplomacy? More broadly, what forces have driven China's and India's energy and climate policies in general, and their energy and climate diplomacy in particular?

Argument in Brief and Propositions

The main argument of the book is that China's and India's energy and climate policy behavior has been both proactive and reactive. On the one hand, China and India have adopted proactive energy and climate policy measures, at both national and international levels. On the other

hand, both countries have had to modify or adjust their proactive policy measures in response to external pressures applied on them by state and non-state actors. China's and India's proactive and reactive energy and climate policy behaviors have been shaped by two-level pressures: at the domestic/unit level, both countries have tried to maximize their economic wealth by sustaining their fast economic growth; at the international/systemic level, both countries have tried to enhance their status as great powers in the international system, which is characterized not only by asymmetrical interdependence, but also by global governance in general and global energy and climate governance in particular.

Based on this argument, I put forward four propositions:[6]

Proposition 1: The energy policies of China and India are designed to help these countries to achieve sustained, fast economic development at the domestic level.

Proposition 2: The energy policies that China and India have pursued globally are constrained by the patterns of asymmetrical interdependence and international norms in which the two countries are enmeshed. In other words, their energy diplomacy is increasingly constrained by forces emanating from the systemic level.

Proposition 3: China's and India's negotiating stances in international climate change negotiations are increasingly shaped by asymmetrical interdependence, climate protection norms, and social opprobrium at the systemic level.

Proposition 4: Addressing climate change is not China's or India's domestic policy priority. They have only adopted domestic climate change policies when faced with increased international pressures.

Literature Review

Since the early 2000s, issues related to China's and India's energy security and climate change in general, and their relationship with global energy and climate governance in particular, have already generated considerable scholarly attention. This section explores this

[6] I owe the idea of developing propositions to Professor Robert O. Keohane, who made some very insightful and useful comments on the second version of my book prospectus. My four propositions draw directly on the two propositions recommended by Professor Keohane.

growing literature on energy security and climate change, in addition to the literature on global governance on these two issue-areas, and the literature on the role of both countries in global energy and climate governance.

China's and India's Energy Security and Climate Change

As far as the energy security issue is concerned for both countries, there is a hot debate among scholars and experts. Much of this debate centers on the nature and impact of their national oil companies' (NOCs) "going-out" strategy, to acquire overseas equity oil and natural gas on the international energy market, as well as the impact of this on regional and international security. Some argue that seeking overseas energy has transformed both countries' foreign policy,[7] and the nature of such strategy is neo-mercantilism, aimed at locking up energy resources around the world.[8] Therefore, it has intensified competition for scarce energy resources with other energy-consuming countries, especially with the United States,[9] which might worsen

[7] Charles E. Ziegler, "The Energy Factor in China's Foreign Policy," *Journal of Chinese Political Science* 11, no. 1 (March 2006), 1–23; Amy Myers Jaffe and Steven W. Lewis, "Beijing's Oil Diplomacy," *Survival* 44, no. 1 (Spring 2002), 115–134; I. P. Khosla (ed.), *Energy and Diplomacy* (New Delhi: Konark Publishers PVT Ltd, 2005); Sascha Müller-Kraenner, "China's and India's Emerging Energy Foreign Policy," Discussion Paper, Bonn: Deutsches Institut für Entwicklungspolitik 15/2008, available at www.die-gdi.de/uploads/media/DP_15.2008.pdf, accessed February 19, 2018; Erica S. Downs, *China* (Washington, D.C.: Brookings Foreign Policy Studies Energy Security Series, 2006), available at www.brookings.edu/~/media/research/files/reports/2006/12/china/12china.pdf, accessed February 19, 2018; Tanvi Madan, *India* (Washington, D.C.: Brookings Foreign Policy Studies Energy Security Series, 2006), available at www.brookings.edu/~/media/research/files/reports/2006/11/india/2006india.pdf, accessed February 19, 2018.

[8] Flynt Leverett, "Resource Mercantilism and the Militarization of Resource Management: Rising Asia and the Future of American Primacy in the Persian Gulf," in Daniel Moran and James A. Russell (eds), *Energy Security and Global Politics: The Militarization of Resource Management* (New York: Routledge, 2009), 211–242; Kenneth Lieberthal and Mikkal Herberg, "China's Search for Energy Security: Implications for U.S. Policy," *NBR Analysis* 17, no. 1 (2006), 5–9.

[9] 吴磊 [Wu Lei], 《能源安全与中美关系》 [*Energy Security and Sino-US Relations*] (北京：中国社会科学出版社 [Beijing: China Social Sciences Press], 2009); 伍福佐 [Wu Fuzuo], "能源安全：中印面临的共同难题 [Energy Security: A Shared Problem Facing both China and India]," 《南亚研究季刊》 [*South Asian Studies Quarterly*] 2 (2006), 47–53; 张力 [Zhang Li], "印度的能源外交及

geopolitical competition and even lead to conflicts at the regional level, such as in the Middle East – the world's largest reservoir of proven oil and gas reserves – and in Asia,[10] as well as at the international level.[11] In addition, some argue that both countries' resource-motivated trade and investment relations with some so-called "rogue states," or "pariah states," such as Iran, Myanmar, Sudan, and other African countries, have largely compromised the efforts of the international community – especially the Western countries – to prevent nuclear proliferation, promote good governance, and protect human rights.[12] Although the International Energy Agency (IEA) does not make a similar normative judgment in its *World Energy Outlook 2007: China and India Insights*, an outlook with an exclusive focus on China's and India's energy sectors and energy-related CO_2 emissions, it still implies

其地缘政治考量 [India's 'Energy Diplomacy' and its Perspectives on Geopolitics],"《南亚研究季刊》 [*South Asian Studies Quarterly*] 3 (2004), 34–40; 张力 [Zhang Li], "能源外交：印度的地缘战略认知与实践 [India's Energy Diplomacy: Geo-Strategic Perceptions and Practice],"《世界经济与政治》 [*World Economics and Politics*] 1 (2005), 51–56; Philip Andrews-Speed, Xuanli Liao, and Roland Dannreuther, *The Strategic Implications of China's Energy Needs* (London: International Institute for Strategic Studies, 2002).

[10] Flynt Leverett and Jeffrey Bader, "Managing China–U.S. Energy Competition in the Middle East," *The Washington Quarterly* 29, no. 1 (Winter 2005–6), 187–201; Robert A. Manning, *The Asian Energy Factor: Myths and Dilemmas of Energy, Security and the Pacific Future* (New York, NY: Palgrave, 2000); Stein Tønnesson and Åshild Kolås, *Energy Security in Asia: China, India, Oil and Peace* (Oslo: International Peace Research Institute, 2006); Michael Wesley, *Energy Security in Asia* (London: Routledge, 2007); Charles L. Glaser, "How Oil Influences U.S. National Security," *International Security* 38, no. 2 (Fall 2013), 112–146.

[11] Michael Klare, *Resource Wars: The New Landscape of Global Conflict* (New York: Henry Holt and Company, 2002).

[12] George J. Gilboy and Eric Heginbotham, *Chinese and Indian Strategic Behavior: Growing Power and Alarm* (New York: Cambridge University Press, 2012), 231–250; Harry G. Broadman, *Africa's Silk Road: China and India's New Economic Frontier* (Washington, D.C.: The World Bank, 2007); Monica Enfield, "Africa in the Context of Oil Supply Geopolitics," in Andreas Wenger, Robert W. Orting, and Jeronim Perovic (eds), *Energy and the Transformation of International Relations: Toward a New Producer–Consumer Framework* (Oxford and New York: Oxford University Press, 2009); David Zweig and Bi Jianhai, "China's Global Hunt for Energy: The Foreign Policy of a Resource Hungry State," *Foreign Affairs* 84, no. 5 (September/October 2005), 25–38; Ian Taylor, "China's Oil Diplomacy in Africa," *International Affairs* 82, no. 5 (October 2006), 937–956.

that both countries would pose some serious challenges for the international community in terms of energy security and climate change.[13]

Others, in stark contrast, challenge the aforementioned discourse in three ways: first, pointing out the fact that both countries' NOCs have traded the majority of their acquired equity oil and gas on the international energy market rather than shipping it back to their domestic markets, and therefore, both countries' going-out strategy has increased world energy supplies;[14] second, arguing that the strategy of both countries has provided the opportunity for more cooperation between countries because of their increased interdependence;[15] and third, providing empirical evidence that China and India have already cooperated with each other in their efforts to seek overseas energy supplies.[16]

When it comes to China's and India's climate change issue, the existing literature includes research studies that use a variety of perspectives. Some scholars explore the factors behind both countries' climate policies. For instance, Yu argues that the United Nations Framework Convention on Climate Change (UNFCCC) has played an important role in shaping China's climate policy.[17] In contrast, Moore contends that it is the Chinese Communist Party's core interests that have determined its climate policy.[18] Gan explores China's climate diplomacy

[13] IEA, *World Energy Outlook 2007: China and India Insights* (Paris: OECD/IEA, 2007).
[14] Downs, *China*; Madan, *India*.
[15] Zha Daojiong, "China's Energy Security: Domestic and International Issues," *Survival* 48, no. 1 (Spring 2006), 179–190; 伍福佐 [Wu Fuzuo], 《亚洲能源消费国间的能源竞争与合作：一种博弈的分析》 [*Energy Competition and Cooperation Among Asian Energy Consuming Countries: A Game Theory Analysis*] (Shanghai: Shanghai People's Publishing House, 2010).
[16] Hong Zhao, *China and India: The Quest for Energy Resources in the Twenty-First Century* (London: Routledge, 2012); Ma Jiali, "The Energy Cooperation between China and India in the Post-Crisis Era," *Contemporary International Relations* 20, no. 2 (2010), 96–102; 张立 [Zhang Li], "浅论中印能源合作 [Brief Comments on Sino-Indian Energy Cooperation]," 《国际问题研究》 [*International Studies*] 1 (2008), 26–29; 龚伟 [Gong Wei], "印度能源外交与中印合作 [India's Energy Diplomacy and Sino-Indian Cooperation]," 《南亚研究季刊》 [*South Asian Studies Quarterly*] 1 (2011), 29–34.
[17] Yu Hongyuan, *Global Warming and China's Environmental Diplomacy* (New York: Nova Science Publishers, Inc., 2008).
[18] Scott Moore, "Strategic Imperative? Reading China's Climate Policy in Terms of Core Interests," *Global Change, Peace, and Security* 22, no. 4 (June 2011), 147–157.

through the perspective of its capacity building,[19] and Zhang investigates climate change and China's national security.[20] In addition, Zhang also compares China's climate change-related cooperation with both Japan and the United States.[21] Bo examines China's climate diplomacy through its willingness and capacity to cooperate in global climate governance.[22] Ma explores how China has internalized the international climate institutions.[23] Both Rajamani and Vihma point out that India's climate policy has been shaped by its priorities, such as economic development and poverty eradication, as well as by international pressure.[24] Rajamani explores China's and India's climate policy in ICCN using a moral perspective, by arguing that both countries' negotiating stance is legitimate according to the existing climate change regime, but it is not sagacious because climate change will negatively impact their own poorest people and other poorer nations in the developing world.[25] Siddiqi argues that there is more cooperation than competition between China and India in areas of both energy and

[19] 甘均先 [Gan Junxian], 《中国气候外交能力建设研究》 [*A Study of China's Climate Diplomacy and its Capacity Building*] (Beijing: China Social Sciences Press, 2013).

[20] 张海滨 [Zhang Haibin], 《气候变化和中国国家安全》 [*Climate Change and China's National Security*] (Beijing: Current Affairs Press, 2010).

[21] 张海滨 [Zhang Haibin], "应对气候变化：中日合作与中美合作比较研究 [Addressing Climate Change: A Comparative Study of Sino-Japan and Sino-US Cooperation]," 《世界经济与政治》 [*World Economics and Politics*] 1 (2009), 38–48.

[22] 薄燕 [Bo Yan], "合作意愿与合作能力 – 一种分析中国参与气候变化全球治理的新框架 [Cooperative Will and Cooperative Capacity – A New Framework for Analyzing China's Participation in Global Climate Governance]," 《世界经济与政治》 [*World Economics and Politics*] 1 (2013), 135–155.

[23] 马建英 [Ma Jianying], "国际气候制度在中国的内化 [The Internalization of International Climate Institutions in China]," 《世界经济与政治》 [*World Economics and Politics*] 6 (2011), 91–121.

[24] Lavanya Rajamani, "India and Climate Change: What India Wants, Needs, and Needs to Do," *India Review* 8, no. 3 (August 2009), 340–374; Antto Vihma, "India and the Global Climate Governance: Between Principles and Pragmatism," *The Journal of Environment Development* 20, no. 10 (January 2011), 1–26.

[25] Lavanya Rajamani, "China and India on Climate Change and Development: A Stance that Is Legitimate but not Sagacious?," in Steven Bernstein, Jutta Brunnee, David G. Duff, and Andrew J. Green (eds), *A Globally Integrated Climate Policy for Canada* (Toronto: University of Toronto Press, 2007), 104–127.