How Much Should China Pollute?

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China is the world’s worst polluter. It suffers more from air pollution than any other nation, hosting most of the world’s polluted cities.¹ Nearly two-thirds of the country’s 360 million urban residents suffer from unhealthy levels of air pollution.² Anecdotal reports by visitors to China frequently refer to the alarming nature of the air pollution there.³ China’s water is polluted, too. About 100 billion

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¹ The precise count depends on the source that you consult. See, e.g., 152 CONG REC S8346 (daily ed. date) (statement by who) (asserting that “[s]ixteen of the world’s 20 most air-polluted cities are in China”); THOMAS L. FRIEDMAN, HOT, FLAT, AND CROWDED: WHY WE NEED A GREEN REVOLUTION – AND HOW IT CAN RENEW AMERICA 404 (release 2.0 2009) (quoting a Chinese official’s claim that “five of the ten most polluted cities worldwide are in China”); Matthew A. Cole, Robert J.R. Elliott & Jing Zhang, Growth, Foreign Direct Investment, and the Environment: Evidence from Chinese Cities, 51 J. REGIONAL SCI. 121, 121 (2011) (asserting that “[s]eventeen of the 25 most polluted cities in the world can be found in China”); Xu Yan, Green Taxation In China: A Possible Consolidated Transport Fuel Tax To Promote Clean Air?, 21 FORDHAM ENVTL. LAW REV. 295 (2010) (stating that “seven of the ten most air-polluted cities in the world are in China”); Elizabeth Economy, China vs. Earth, THE NATION, Apr. 19, 2007 (stating that “five of the world’s ten most polluted cities are in China”).

² See Yan, supra note 2 (observing that “[a]bout sixty-seven percent of the urban population, or about 360 million people, is exposed to forms of air pollution that exceed the permissible standard according to the relevant data in 2004”) (citing Asian Development Bank (ADB), Country Environmental Analysis for the People’s Republic of China 44 (2007), available at http://www.adb.org/Documents/Produced-Under-TA/39079/39079-PRC-DPTA.pdf)

³ See, e.g., Patricia Ross McCubbin, China and Climate Change: Domestic Environmental Needs, Differentiated International Responsibilities, and Rule of Law Weaknesses, 3 ENVTL. & ENERGY L. POL’Y J. 200 (2008) (observing that “[t]he images one sees while in China are staggering: a gray, toxic cloud hovers over the entire land and blocks out the sun except for a few days a year; citizens wear masks over their faces to protect themselves from the toxic vapors; and laundry becomes blackened with soot just a few hours after being hung out to dry”); Economy, supra note 1 (noting that “[a]nyone who has visited an inland Chinese city knows how terrifyingly bad the air is”); John Copeland Nagle, When the Sky Was Orange, BOOKS & CULTURE (2005).
cubic meters of China’s water supply is contaminated. China is also the leading emitter of greenhouse gases that contribute to climate change. China’s carbon dioxide emissions nearly tripled between 1990 and 2008. And China’s pollution is only expected to get worse. It is building unbelievable amounts of coal-fired electric power plants, and the number of cars in China is increasing exponentially. China “is expected to release five times more carbon dioxide over the next 25 years than the Kyoto Protocol is projected to save.”

That pollution creates three problems. First, it is a problem for China itself. The health of the Chinese people suffers from the polluted air that they breathe and the polluted water that they drink. “Air pollution causes the premature deaths of 750,000 Chinese people every year.” Just one percent of China’s urban

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6 See IEA, supra note, at 24.

7 See id. (predicting that China’s CO2 “emissions in 2030 will be almost twice current levels”).

8 As Professor Vandenbergh explains:

   China’s emissions are increasing at a rapid rate in large part because of new construction of coal-fired electric power plants. It added electric power plants with a generating capacity of 102 gigawatts in 2006, an amount equal to all of the electric power generating capacity in France, after adding an amount equal to all of Britain the year before. On average, a new coal-fired electric plant large enough to serve a city the size of Dallas opens in China every seven to ten days. Overall, China and other developing countries are projected to account for 80 percent of global energy growth between 2005 and 2020.


9 Vandenbergh, supra note 5 (citing Patrick Symmes, The China Question: Leaping Tiger, Drowning River,


residents “breathes air considered healthy by the World Health Organization.”

China’s pollution also has a profound detrimental impact on the nation’s economy. Economists suggest that China’s staggering economic growth statistics would be much more modest if the economic effects of polluter are included. The health and economic aspects of pollution, in turn, cause domestic unrest that threatens the stability of the Chinese government. There have been numerous protests against pollution from existing or proposed facilities throughout China.

China’s pollution also produces an American problem. Pollution emitted in China reaches the United States, sometimes at levels prohibited by the Clean Air Act. China is also the most common antagonist in American debates about climate change. Members of Congress routinely make two arguments about China as a basis for opposing federal climate change legislation or international climate change treaties. The first argument claims that the United States will lose jobs to China if we internalize the costs of emitting greenhouse gases but China does not. The second argument insists that it is unfair for China to be allowed to continue to emit greenhouse gases if the United States is obliged to cap its emissions.


12 See Lin, supra (noting that “[i]n September 2006 State Environmental Protection Administration (SEPA) and the State Statistics Bureau issued a Green GDP report stating that in 2004 environmental pollution cost China $64 billion, equivalent to 3.05% of GDP that year”); McCubbin, supra note, at 213 (reporting that “current environmental conditions drain away more than three percent of the nation’s annual GDP”).

13 See Vandenbergh, supra (describing the China problem).

14 See id. (describing the America problem).

15 See 152 CONG. REC. S1025 (daily ed. Nov. 16, 2006) (statement of Sen. Alexander) (observing that “China’s air pollution is also our air pollution because air pollution both deposits locally and moves around the globe”); FRIEDMAN, supra note, at 404 (writing that EPA “reports that on some days almost 25 percent of the polluting matter in the air above Los Angeles originated in China”); BRYAN TILT, THE STRUGGLE FOR SUSTAINABILITY IN RURAL CHINA: ENVIRONMENTAL VALUES AND CIVIL SOCIETY 67-68 (2010) (noting that scientists have traced pollution emitted in northeastern China to Oregon).
Moreover, many American politicians note that the environment itself will suffer if the United States reduces its emissions but China does not. Such concerns persuaded the Senate to vote 97-0 in 1997 to ratify a resolution proclaiming that “the United States should not be a signatory to any protocol” to reduce greenhouse gas emissions “unless the protocol or other agreement also mandates new specific scheduled commitments to limit or reduce greenhouse gas emissions for Developing Country Parties within the same compliance period.”\(^{16}\) Numerous Senators pointed to the forthcoming Kyoto Protocol’s treatment of China as justifying the American refusal to endorse that agreement.\(^{17}\) The United States never did ratify the Kyoto Protocol, and similar concerns about China continue to animate congressional opposition to a new international climate change agreement.\(^{18}\)

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17 See, e.g., 143 CONG. REC. 15784 (1997) (statement of Sen. Hagel) (objecting to the “current negotiating strategy of binding United States and other developed nations to legally binding reductions without requiring any new or binding commitments from 130 developing nations such as China . . . . The exclusion of these nations is a fatal flaw in this treaty.”); id. at 15795 (statement of Sen. Baucus) (asserting that “China is a growing part of the problem, it must be part of the solution”); id. at 15796 (statement of Sen. Mikulski) (concluding that “[w]e cannot part of a binding international agreement that lets countries such as China . . . off the hook”); id. at 15807 (statement of Sen. Byrd) (advising that “we must bring back from Kyoto some commitments that China and other large emitters will grow in a smart way”).

18 See 2009 Senate Hearing, supra note, at 2 (statement of Sen. Kerry) (asserting that “if America went to zero tomorrow, China has the ability to obliterate every gain we make unless it is also part of the solution”); id. at 40 (statement of Sen. Cardin) (explaining that many of constituents believe that “if the United States enacts strict standards on carbon emissions, all it’s going to do is make it easier for China to have a larger penetration into the United States market because they won’t impose the same strict standards, and then you’re putting United States manufacturers and producers at a disadvantage in international competition”); see generally BENJAMIN I. PAGE & TAO XIE, LIVING WITH THE DRAGON: HOW THE AMERICAN PUBLIC VIEWS THE RISE OF CHINA 17 (2010) (noting American concerns about losing jobs to China); id. at 29 (citing surveys indicating that two-thirds of Americans who support an international climate change treaty do so only if the United States does not have to make a greater economic sacrifice than China); Vandenbergh, supra note, at 5 (asserting that “China’s position on emissions contributes to the inability of the political process in the United States to pursue the national interest. China’s position not only undermines the value of reducing emissions to the United States, but it also provides opponents of emissions reductions with powerful rhetorical tools.”); Bill McKibben, The Great Leap: Scenes from China’s Industrial Revolution, HARPER’S MAG., Dec. 2005, at 51 (asserting that “[m]ore than any other argument, this idea of ‘fairness’ has derailed American participation in the only international agreement to do anything about” climate change). The concern about Chinese taking the jobs of American workers dates from the early 1850s, when
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The rest of the world suffers from the third problem because of the inability of China and the United States to agree on a method for reducing their greenhouse gas emissions. Even if the rest of the world were to reach such an agreement, the failure to include China and the United States would doom the project from the start. Together, China and the United States account for 41% of the world’s greenhouse gas emissions. Left unchecked, China’s emissions alone could result in many of the harms associated with climate change. That is why many observers believe that “[t]he decisions taken in Beijing, more than anywhere else, would determine whether humanity thrived or perished.”

These three problems confirm the importance of how much China pollutes. Climate change and greenhouse gases are exceptional in many ways, but they are like traditional pollution problems in other ways. This article analyzes the disagreement between the United States and China from the perspective of two polluters. Part I examines China’s right to pollute. According to China, the world’s leading polluter and leading emitter of greenhouse gases claims a right to emit as much as it wants in the future. China emphasizes the principle of “common but differentiated responsibilities.” The Chinese argue that they do have a responsibility to help avoid the harmful consequences associated with climate change, but that their responsibility is different from that imposed on the United States and the rest of the developed world. Again, there are two parts to that argument. One part emphasizes the need for China to achieve economic development that lifts its people out of poverty. The second part says that it is

the first Chinese immigrants arrived in the United States. See Stefan Halper, The Beijing Consensus: How China’s Authoritarian Model Will Dominate the Twenty-First Century 188 (2010) (noting the concerns that “Chinese workers taking American jobs pushed down wage rates because they were willing to take almost any job for less money”).

19 See IEA, supra note, at 9.

20 See Friedman, supra note, at 400 (worrying that “China’s emissions and appetites will nullify everything everyone else does to save the earth”); Vandenberghe, supra note, at 5 (fearing that “China’s projected emissions are so large that, when added to the greenhouse gases already in the atmosphere, Chinese emissions alone may be sufficient to trigger catastrophic climate change even if all other countries approach near zero emissions levels”).

21 Watts, supra note, at 4. See also Page & Xie, supra note, at 1 (opining that “[t]he future peace and prosperity of the world is likely to depend heavily on the relationship between the United States . . . and China”); Bruce Au et al., Beyond a Global Deal: A UN+ Approach to Climate Governance 26 (2011) (concluding “that China’s decisions, along with those of the United States, will largely determine the shape of global climate institutions in the post-Kyoto era”).

22 See John Copeland Nagle, Climate Exceptionalism, 40 EnvTL. L. 53 (2010).
unfair for China to have to bear the costs of reducing pollution when the United States and other developing countries became wealthy by polluting ourselves.

Moreover, there is no basis in environmental law for the right to pollute as much as someone else has already polluted. The law does not conceive of the air or the water as a resource that may be polluted until it is saturated. To the contrary, American law specifically rejects the idea that clean air or water can be polluted until the pollution actually causes harm. New polluters are usually called upon to reduce their pollution more than old polluters. China’s case thus finds little precedent in American environmental law, which further explains why it has gained such little traction in the United States.

Part II considers what China actually does to reduce its pollution. To its credit, China has done much more to reduce its greenhouse gas emissions than it is legally obligated to do. It has acted from a variety of motivations, including a desire for global leadership, genuine environmental concern, fear of domestic instability, and the opportunity for economic growth. These gains are checked, though, by China’s unwillingness to constrain its unprecedented economic growth and its inability to employ the law to actually control emissions.

Part III seeks to reconcile China’s rhetoric and China’s actions in an effort to solve the problems that China’s pollution poses for China, the United States, and the rest of the world. China should ensure that its pollution does not harm its own people or the rest of the world. China should also commit to abiding by the rule of law to actually enforce the environmental regulations that it has enacted, and the United States can help China in that regard. The United States and China should also collaborate, compete, and commit in an effort to address the problems caused by China’s pollution.

I. China’s Right to Pollute

China insists that it has an unlimited right to pollute so long as the country is transitioning from a developing to a developed country. This section critiques that argument. First I examine China’s reliance on the evolving international law idea of “common but differentiated responsibilities. China repeatedly asserts that this idea supports its claimed right to pollute, but the meaning and the status of the idea are questioned by the United States and other nations. I also question China’s continuing status as a developing country rather than a developed country. China possesses many characteristics of both developing and developed
countries, which renders the previous dualistic paradigm unhelpful in identifying the responsibilities of newly emerging economic powers such as China.

Next I show that China’s claim contradicts the premises of much domestic environmental law in the United States. American environmental law prohibits pollution that is harmful to human health. Additionally, new polluters must pollute less, not more, than existing polluters, which is the opposite of China’s position as a developing country. The picture is less clear if one views climate change as a problem of cleaning up existing pollution, where a variety of equitable factors point in opposite directions. Even then, responsibility for cleaning up existing pollution is not a license for new polluters to add to the problem. Nor does China’s suggestion that American consumers should be responsible for China’s pollution find any support in American environmental law. In sum, this section shows that China’s purported right to pollute lacks support from international environmental law and contradicts American environmental law, which is why that claim has been so unsuccessful in the United States.

A. Common But Differentiated Responsibilities

China’s position relies on the provision of the United Nations Framework Convention on Climate Change (UNFCCC) which states that its “[p]arties should protect the climate system . . . on the basis of equity and in accordance with their common but differentiated responsibilities and respective capabilities.”23 The UNFCCC was the first major international environmental treaty to refer to “common but differentiated responsibilities,” but the idea has been traced to earlier agreements such as the 1987 Montreal ozone protocol, the 1972 Stockholm Declaration, and even the 1919 Treaty of Versailles.24 Whatever its sources, there is now “near unanimous acceptance of the principle of common but differentiated responsibility for global environmental change, even if differences remain on its

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implications.” The idea continues to evolve as nations dispute both its meaning and its status under international law.

Responsibilities are “common” insofar as all nations are affected by the problem of pollution in general and climate change in particular. China and the United States disagree about what it means for responsibilities to be “differentiated.” According to China, developing countries should not be required to control their emissions while they are in the process of emerging from economic poverty. China’s reliance on “a scientific approach to development” recognizes that the tradeoffs and “balances” that must be made during the development process. China also insists that developed nations have a responsibility to help China and other developing countries develop their own economies. But China’s consistent position during international negotiations has been that the international community should not impose any binding emissions limits on it or any other developing country. China repeatedly cites the idea of “common but differentiated responsibilities” as supporting that position.

China thus emphasizes other international agreements that distinguish between the responsibilities of developed countries and developing countries. The 1992 Rio declaration – signed by China, the United States, and lots of other countries – states that “[t]he developed countries acknowledge the responsibility that they bear in the international pursuit of sustainable development in view of the pressures their societies place on the global environment and of the

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26 See Stone, supra note, at 276 (“Common” means that all nations are affected”); Mumma, supra note, at 631 (“original meaning that all nations have a duty to protect common resources”); French, supra note, at 45 (“States are beginning to accept that they are under an international obligation to protect and preserve their own ‘internal’ environment”).


28 Michael Standaert, China to Cut Carbon Intensity 40 Percent by 2020; Premier to Attend U.N. Summit, Int’l Env’t Daily (Nov. 30, 2009) (quoting a Chinese official who said that “[i]f we get the technological and financial support from developed countries, we could possibly meet this target sooner.”).

technologies and financial resources they command.”

Developed countries, says China, must accept greater responsibility for two reasons: its historic role in causing environmental degradation, and its current wealth.

A related part of China’s argument observes that greenhouse gases result in harmful climate change only once the atmosphere consists of a certain quantity of such gases. While traditional air pollutants dissipate from the diluting effect of the atmosphere, greenhouse gases accumulate there. On this understanding, climate change is only threatened because the United States and other developing countries have emitted an amount of greenhouse gases that has substantially narrowed the capacity of the atmosphere to accommodate more gases before harm occurs.

To some extent, the United States and other developing nations accept that responsibility. During the negotiations leading to the Kyoto Protocol, the United States recognized that some kind of differentiation is justified. It asserted that “the common but differentiated principle required that every nation make a commitment, and the ‘level and timing of each country’s commitments must be commensurate with its national abilities and level of development.’” Even Senator Byrd, who coauthored the Senate resolution unanimously condemning what became the Kyoto Protocol, agreed that “each country must make unique and binding contributions of a pace and kind consistent with their industrialization.” As one writer recalled, “[t]he U.S. diplomats only wanted something – virtually anything – in the Protocol’s wording that would allow the Administration to tell Congress that developing countries were ‘limiting’ their emissions in ‘meaningful’ ways.” Nothing was forthcoming, and the U.S. failed to approve the Kyoto Protocol because it disagreed with that instrument’s implicit understanding of “differentiated” responsibilities.

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31 See Stone, supra note, at 280 (writing in 1999 “many senators are agreeable to subjecting developing countries to less restrictive constraints, not ruling out even an increase in emissions over the commitment period, as long as they make some commitment on paper”).

32 Mumma, supra note, at 629 (quoting Under Secretary of State Timothy Wirth).


The American view insists that all nations have a responsibility to control their emissions, but different nations have different responsibilities. Thus, for example, developing countries could be allowed to emit more than developed countries, or they could be given more time to control their emissions, or they could be entitled to international financial or technical assistance in controlling their emissions. But the United States insists that developing countries do not have an unlimited right to pollute. This is especially true of countries, such as China and India, whose economies are growing rapidly with the attendant development of industries that have traditionally been responsible for substantial amounts of pollution. Under this view, the fact that responsibilities are “differentiated” does not exonerate developing nations from any responsibility at all.

The United States questions whether the focus on past actions or the focus on current wealth justifies China’s claim that it should not be subjected to binding pollution limits. China’s understanding would hold twenty-first century Americans responsible for the actions of nineteenth and twentieth-century Americans who had little reason to worry that their activities were endangering future generations. Nor do the historical actions of the United States easily translate into a contemporary pollution license for China. Cass Sunstein, who now heads the Office of Regulatory Affairs in the Obama Administration, has asked why should the victims of pollution be asked to pay polluters to get them to stop, and why should the world pay China to persuade it to cease imposing risks

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35 See Duncan French, Developing States and International Environmental Law: The Importance of Differentiated Responsibilities, 49 INT’L & COMP. L.Q. 35 (2000) (noting that possible grounds include recognition of the special needs of developing countries, an obligation to provide assistance in sustainable development, or an inducement to persuade hesitant countries to approve international environmental agreements); id. at 39 (could be “differential standards, permitting grace periods in implementation, requiring flexibility in approach, and the provision of international assistance”); Stone, supra at 284 (Three versions: nations should bargain for appropriate differential treatment, nations are instructed to choose a course of differential treatment, or poor nations should benefit at the expense of wealthier nations); Mumma, supra note, at 631 (“Common but differentiated responsibilities can mean that developing countries have a cap, one that they can grow into and will be adequate for their sustainable development – if they are efficient and focused on renewable sources of energy.”).

36 See Mumma, supra note, at 631 (“There is no necessary reason why common but differentiated responsibility should mean no responsibility”).

37 See Stone, supra note, at 292 (remarking that “it is not clear why a contemporary U.S. citizen should make amends for the overuse of the global commons during the stretch before her forebears had imagined”).
on the rest of the world? China should not have the right to hold the rest of the world hostage by threatening to continue to emit unlimited amounts of pollution.

Likewise, the UNFCCC contains a separate provision regarding the “respective capabilities” that is distinct from the provision related to “common but differentiated responsibilities,” which suggests that the two ideas are distinct. No other principle of customary international law differentiates on the basis of wealth. “Surely,” observes Christopher Stone, “the customary rules against piracy and abusing diplomats carve out no exception for the needy.” Many citizens of China are wealthy, and many citizens of (say) Africa, India, Germany, and France are poor. If distributional considerations are what matter, it is not at all clear that the citizens of the world should pay the citizens of China to reduce their emissions. Even if the paying nations were mostly wealthy, it remains true that millions of citizens of wealthy nations are poor, and a payment from (say) the United States, the United Kingdom, Australia, and Canada to China might well hurt millions of poor people.

The argument about “common but differentiated responsibilities” includes another practical concern. China emphasizes, and the Kyoto Protocol adopted, a bifurcated view of the world. Each country is either “developed” or “developing.” China belies that simple paradigm. Like developing countries, China is poor. Its per capita income remains in the bottom half of the world. Of the 1.9 billion people in the world who live on less than $1.25 per day, 835 million live in China. Much of China’s population lives as if it is a third-world country. This is true both in the countryside, where the rural peasants often live in the same way that their ancestors did generations ago; and in the cities, where the unprecedented migration of people from the countryside to the cities in search of better economic opportunities has overwhelmed the ability of the cities to provide for them. China

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39 Stone, supra note, at 281. Professor Stone began his article with this quote from Anatole France: “the majestic equality of the laws . . . forbid[s] rich and poor alike to sleep under the bridges, to beg in the streets, and to steal their bread.” Id. at 276. See also id. at 282 (the international law duty to prevent extraterritorial pollution is not qualified by a lack of resources); Mumma, supra note, at 632 (China’s position “makes poverty a defense justifying pollution”).

40 Sunstein, supra note, at 1682.

rely upon such evidence when it describes itself as “a low-income developing country.”

But like developed countries, China has one of the leading economies in the world. It is the world’s leading producer of steel, producing four times as much as the United States. It produces nearly three times as much coal as the United States. It produces half of the world’s cement and manufactures 28% of the world’s aluminum. It has the fourth largest gross domestic product in the world in 2007, just behind Japan. It imports more oil than every country except the United States and Japan. These and other statistics are frequently cited in the many popular books reporting on China’s ascension to an economic powerhouse.

So which is it? Is China a developing country or a developed country? The answer, of course, is both – or neither. There are in fact two Chinas: wealthy, urban, and industrialized Eastern China, and poorer, rural, and comparatively agrarian Western China. Yet the Kyoto Protocol insists that every country must be categorized as one or the other. The Protocol assigned China to the developing country list of Annex II, thus exempting it from the greenhouse gas emission

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42 The People’s Republic of China, Initial National Communication on Climate Change 1 (2004). See also Jiabao, supra note, at 9 (asserting that “China is still in the primary stage of socialism and will remain so for a long time to come”); Lisa Friedman, U.S. and China Maintain Polite Disagreement as Climate Talks Reach Final Days, ClimateWire, Dec. 8, 2010 (quoting Chinese climate change negotiator Huang Huikang as describing China as “‘poor’ and ‘not at the same level as the United States’”); Bo Wang, Exploring China’s Climate Change Policy from both International and Domestic Perspectives, 16 AM. J. CHINESE STUDIES 87, 99 (2009) (China “chooses to align with other developing countries because they share common interests in economic development and because developing countries are strategic assets in China’s foreign policy”).


45 See Pew Center on Global Climate Change, supra note 33, at 33.

46 See id. at II.


reductions imposed upon developed countries and pushing the United States toward its refusal to approve the Protocol and its eventual renunciation of it.

China’s history further complicates the near division between developing and developed countries. Historically, China was as developed as the west until the beginning of the nineteenth century. “After 1800, and especially from the middle of the century, China suffered from growing economic weakness, near implosion, debilitating division, defeat, humiliation and occupation at the hands of foreign powers, and a progressive loss of sovereignty.” 49 Then, “[f]rom around 1860 there were significant examples of Chinese industrial development that were comparable to those in Japan, notably in Shanghai. But, given China’s vast size, they were too limited and too scattered.” 50 Industrialization, along with restoring the country’s unity, was “the central task facing the PRC” when it took power in 1949. 51 China’s industrial base grew during Mao’s rule, but it really took off when Deng Xiaoping unleashed the forces of capitalism in 1980.

The unprecedented speed of China’s development since 1980 invokes another principle of international environmental law. China relies on numerous international agreements that promote “sustainable development.” But China’s development is not sustainable. It is not sustainable economically, and it is even less sustainable environmentally. China admits as much. 52 But China insists that its right to development cannot be constrained by environmental concerns. International law principles of “sustainable” development teach otherwise. The environmental consequences of China’s development would be much less severe if that development was not as rapid. So why does China need to develop so rapidly? Nothing in any international law agreement speaks to the permissible speed of development in the fact of the harmful consequences of that development. China answers that its development must continue at the same rapid pace because otherwise the country will be destabilized and its government will be threatened. 53 But the survival of a particular government is not the concern of

50 Id. at 97.
51 Id. at 98.
52 See Jiabao, supra note, at 9 (admitting that China’s “development is not yet well balanced, coordinated or sustainable”).
53 See FRIEDMAN, supra note, at 401 (quoting Nayan Chanda’s statement that China “has to grow at a minimum of 8 percent a year or it will explode . . . because it will have so much unemployment and discontent, the population will erupt”); Abebe & Masur, supra note, at 326
international norms of sustainable development. China’s position seeks to conscript international environmental law to serve the parochial interests of its governing regime.

The debate between China and the United States confirms that the correct meaning of the idea of “common but differentiated responsibilities” remains contested. The status of the idea in international law remains contested, too. Nonetheless, the United States accepts the general idea that it has greater responsibility than developing nations in combating today’s environmental challenges. What the United States denies is that developing countries have an unlimited right to pollute. Such a right would defeat even the most ambitious efforts by developing countries to reduce emissions that are associated with climate change. Regardless of who is actually right, the idea of “common but differentiated responsibilities” has failed to solve any of the three problems associated with China’s pollution. China still suffers from the harms of its pollution, the United States refuses to enter an international agreement that does not impose emissions restrictions on China, and the global community cannot effectively address the problems of climate change without the participating of China and the United States.

B. American law’s pollution rights

China’s claim that it is a developing country that has a right to pollute also contradicts the lesson of American environmental law. That law is not binding on China, but it does illustrate how an advanced legal system has resolved the

54 See Stone, supra note, at 299 (CDR “has not, despite the occasional claims by its proponents, been elevated to the status of a customary principle of international law”); French, supra note, at 38 (“whether it is a legal principle or just a political guideline is still open to debate”); Harris, supra note, at 45 (“CBDR has moved from being a ‘soft’ international legal principle . . . to a nascent but increasingly robust component of international law”).

55 French, supra note, at 50 (“the potential of the South to cause damage to the environment is immense. It is therefore apparent that differentiation cannot simply impose additional obligations on developed States ad infinitum.”).
questions that China seeks to raise again. And the American experience with environmental law also explains why the United States is unwilling to accept China’s contrary claims of an unlimited right to pollute. According to American environmental law, pollution is not permissible if harms public health, new polluters must comply with more stringent pollution regulations, the equitable factors that govern the cleanup of existing pollution do not authorize additional pollution, and pollution is attributed to producers rather than consumers.

1. **Pollution may not endanger human health**

   Numerous American environmental statutes emphasize the primacy of public health. The Clean Air Act (CAA) prohibits air pollution that would harm public health or welfare. It does so through EPA’s establishment of National Ambient Air Quality Standards (NAAQS) that prescribe the maximum level of certain pollutants that may be present in the ambient air. According to the CAA, EPA must set the NAAQS for each pollutant at a level “to protect the public health” with “an adequate margin of safety.” Primary NAAQS determine the quality of air needed to ensure public health, including the health of ‘sensitive’ populations such as children and the elderly. Secondary NAAQS set the pollution limits needed to protect public welfare, including protection against decreased visibility, ecological harms, and property damage. EPA may not consider the cost of the pollution control measures that are needed to achieve the NAAQS.

   The Clean Water Act (CWA) takes a slightly different approach. The CWA begins by prescribing the specific technology that each category of polluters must employ to reduce their discharges into the water. Additional measures are required if that technology fails to reduce the amount of pollution to the amount that each body of water can tolerate. States decide how much pollution is tolerable based on the desired use of the water. The resulting Water Quality Standards are then translated into the Total Maximum Daily Load (TMDL) of

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pollutant that may be discharged into the water, and those TMDLs yield specific regulations of each source of pollution.\(^{59}\)

The Safe Drinking Water Act (SDWA), in turn, protects the quality waters that are or may be used for drinking water supplies. EPA must establish minimum standards to protect drinking water consider based on an assessment of risks and costs. States may then add to those rules by establishing secondary standards that consider other uses of the water.\(^{60}\)

In each instance, pollution that harms public health is prohibited. There are different ways of understanding that goal and different ways of achieving it. Pollution that does not harm public health may also be prohibited because it interferes with other aspects of the public’s welfare, or such pollution may be tolerated. But public health is always judged to be more important than economic growth.

2. **New polluters are held to higher standards**

China’s position presumes that it has a right to pollute because it has not polluted as much as other countries did during previous years. The U.S. Clean Air Act takes the opposite position. New polluters are required to pollute less than existing polluters. The NAAQS adopted by the CAA provide that air quality in each part of the United States must sufficiently clean to ensure public health. The CAA further provides that new polluters may not simply move to places where air quality is already clean. Pursuant to the CAA’s prevention of significant deterioration (PSD) program, new sources located in areas that have already attained the NAAQS are held to heightened pollution control standards. Additionally, the CAA’s new source performance standards (NSPS) were intended “to reduce pollution by having more stringent control technology incorporated into new facilities that were replacing old facilities.”\(^{61}\) Conversely, the CAA grandfathered some existing polluters from having to comply with the law’s emissions standards.\(^{62}\) The rationale for the distinction between new and old polluters emphasized that “new plants could be designed from the start to take


\(^{61}\) ARNOLD W. REITZE JR., STATIONARY SOURCE AIR POLLUTION LAW 161 (2005).

pollution reduction into account,” while old plants “had often been designed with little or no thought to pollution control” and thus “would frequently require expensive retrofitting” to reduce their pollution. That rationale, in turn, would require China to adopt more stringent pollution controls in its newly built plants than those already employed in existing facilities in other countries.

3. **Equitable factors to cleanup past pollution**

Pollution may present a remedial problem as well as a preventative one. China often argues that climate change is such a remedial problem because the harms of climate change result from two centuries of greenhouse gas emissions by developed countries. Those gases remained in the atmosphere and count toward the maximum parts per million beyond which the harms of climate change materialize. China and other developing countries thus object that they are not allowed to emit enough pollutants during their phase of economic development because of the historical actions of the United States and other developed countries. China thus insists on its fair share of pollution.

CERCLA provides the best American environmental law model for allocating cleanup responsibility among polluter. Like the emitters of greenhouse gases, CERCLA “defendants can vary widely in terms of their degree of causal responsibility and the culpability of their actions.” CERCLA is also equipped to consider the effects of pollution from a variety of actors in different places over extended periods of time. Generally, CERCLA’s liability scheme deems anyone who was associated with the property during the disposal of hazardous wastes to be a “responsible party” who must help pay for the cleanup of those wastes. Liability is often joint and several.

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63 **BRUCE A. ACKERMAN & WILLIAM T. HASSLER, CLEAN COAL/DIRTY AIR: OR HOW THE CLEAN AIR ACT BECAME A MULTIBILLION-DOLLAR BAIL-OUT FOR HIGH-SULFUR COAL PRODUCERS AND WHAT SHOULD BE DONE ABOUT IT** II (1981). See also Robert N. Stavins, *Vintage-Differentiated Environmental Regulation*, 25 STAN. ENVTL. L.J. 29,30 (2006) (noting that “it is frequently more cost-effective - in the short term - to introduce new pollution-abatement technologies at the time that new plants are constructed than to retrofit older facilities with such technologies” and “it seems more fair to avoid changing the rules of the game in midstream, and hence to apply new standards only to new plants”).


65 It used to be almost always joint and several, but the Supreme Court recently held that there are more instances in which joint-and-several liability is inappropriate than the lower courts had previously thought. See Burlington Northern v. United States, 129 S. Ct. 1870 (2009).
CERCLA’s lesson for climate change comes when the statute seeks to allocate liability among multiple parties who have already been judged to be jointly and severally liable. The statute itself does not specify the proper method of allocating costs, so the courts have looked at the factors that Representative Al Gore listed during the congressional debate over CERCLA. The “Gore factors” include the amount of waste, its degree of toxicity, the degree of the party’s involvement in handling the waste, the party’s degree of care, and the degree of cooperation with government authorities to prevent environmental harm.66

Consider how these factors could be applied to allocate the costs of climate change. China emphasizes that the United States has emitted far more greenhouse gases during the past two centuries. The degree of toxicity of greenhouse gases varies widely, with the most common carbon dioxide having a lesser effect than methane and hexafluoroethane. China releases more methane than the United States because of its abundant rice paddies. The degree of the party’s involvement in the emissions can be judged in different ways. From one perspective, both the United States and China have actively participated in their respective emissions. The United States could argue that its government is less involved in current emissions than China’s more centralized government, but international law holds each country’s government responsible for what happens within its jurisdiction. The degree of care was historically modest for both the United States and China, and while the United States has a more established pollution control system now, China is actually making notable strides in its own emissions reductions efforts.67 The degree of cooperation with government authorities to prevent environmental harm is also difficult to apply in this context since we are considering both the Chinese and the American governments themselves. Perhaps the appropriate is the extent the countries have worked within the international climate change framework, which favors China because only the United States failed to ratify the Kyoto Protocol. Overall, the Gore factors suggest that the United States bears a greater responsibility than China for the presence of greenhouse gases in the atmosphere.


67 I discuss China’s efforts below in Part II.
The CERCLA allocation experience also illustrates the threshold choice between using precise formulas or imprecise lists of relevant factors when deciding who has to pay to cleanup pollution. As Dan Farber explains:

One key lesson of CERCLA is that cost apportionment involves complex determinations involving multiple social norms. In the CERCLA context, courts have never articulated a formula for how to make apportionments between responsible parties, settling instead for open-ended lists of relevant factors combined with trial court discretion. Given the much greater scale of the climate change problem, we may not be content with such ad hoc treatment. Rather, we may want to settle on some relatively mechanical formula for apportionment. The CERCLA experience suggests that no single formula is likely to appear uniquely desirable. Instead, given the complexities involved, we will have to choose among competing formulas that each have some appeal. The choice will probably involve some degree of imprecision. But, as demonstrated by CERCLA, a fairly imprecise approach to apportionment can be tolerable, so long as the relevant factors are at least taken into account.68

Yet the CERCLA example is not as helpful to China as it may hope. The purpose of CERCLA is to cleanup existing pollution, and CERCLA’s allocation scheme governs who has to pay to cleanup that pollution. That model would be appropriate if there were a way to remove greenhouse gases from the atmosphere once they had been emitted. What China argues, though, is that it has a right to emit new pollution. It wants other nations to stop polluting so it can pollute instead. That is not the problem that CERCLA addresses, and there are not any examples of CERCLA being used to force one party to cleanup a site so that another party can pollute it afterward.

4. **Pollution is attributed to producers, not consumers**

China often says that the pollution emitted within its borders should be counted toward the United States and other developing countries whose consumers purchase the products that are made in China. This is not a persuasive

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68 Farber, supra note, at 51.
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argument for many Americans. Nor does it fit with American environmental law, which in most instances holds producers responsible for the pollution that they release, rather than the consumers of the products made by those polluters.

The CAA, for example, regulates industrial factories, energy producers, car manufacturers, and other producers whose activities result in pollution. By contrast, the CAA does not regulate consumers, energy users, and drivers. Such individuals may bear the cost of pollution regulation through increased prices, but they are not the subject of the CAA’s regulations. Likewise, CERCLA’s broad categories of responsible parties who must pay to cleanup hazardous wastes includes the owners of contaminated land, those who owned the land or operated the facility when wastes were disposed there, those generated the wastes, and those who shipped the wastes to the site. CERCLA does not hold the consumers of any of those products responsible for the costs of the cleanup. In fact, one provision of CERCLA specifically exempts “consumer products in consumer use.”

Michael Vandenbergh has questioned the emphasis on regulating large sources of pollution when individuals are producing a growing proportion of pollution. The premise of Vandenbergh’s work, though, is that the CAA, the CWA, and other environmental statutes have already achieved great reductions in pollution. Individual actions thus constitute a relatively larger share of pollution than was the case before the federal government began regulating larger polluters. China is not at that stage of its legal development yet. Moreover, the concern about pollution from individuals focuses on the polluting activities of those individuals, not on their consumption habits. There may be an equitable argument for holding consumers responsible for the pollution that resulted from the products that they purchase, but so far that argument lacks significant precedent in domestic or international environmental law.

China is exporting its effects on climate change, too. It is building dams throughout the world, prompting complaints about the indiscriminate

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69 See 2009 Senate Hearing, supra note, at 5 (statement of Sen. Lugar) (objecting to “counterproductive policy demands, such as having consumers in the West pay for the carbon content of products they buy from China”).


descriptions of local ecosystems and the displacement of local populations.\textsuperscript{72} It is “the largest importer of illegally logged timber in the world.”\textsuperscript{73} Indeed, China’s “demand for natural resources” is “depleting the world’s stock of them.”\textsuperscript{74} China does not mention those activities when it suggests that resource consumers should be held responsible for pollution as well as resource polluters.

II. CHINA’S POLLUTION REDUCTION EFFORTS

China has undertaken an aggressive campaign to mitigate and adapt to climate change despite its lack of international obligations to do so. This is a surprising to many in the United States who view China as unconcerned about its growing pollution. I begin this part by outlining the steps that China is taking toward reducing its emissions. I then consider why it is taking those actions, and the obstacles to their success.\textsuperscript{75}

A. What China is doing

China’s environmental degradation is not new. China has a historical legacy of environmental abuse that worsened in the years after the Communist revolution in 1949.\textsuperscript{76} Moreover, China long relied on moral suasion instead of environmental

\textsuperscript{72} See Congressional-Executive Commission on China: Annual Report 2010, 111th Cong., 2d Sess. 31–32 (2010) [hereinafter CEC Annual Report] (advising that “[h]ydroelectric dam construction has been accomplished by a lack of attention to environmental impact assessment processes mandated by law, and by reports of the infringement upon the fundamental rights of local populations”).

\textsuperscript{73} 2009 Senate Hearing, supra note, at 14 (statement of Elizabeth Economy, C.V. Starr Senior Fellow and Director for Asia Studies, Council on Foreign Relations). See also id. at 14 (adding that China “is contributing to rampant deforestation in places as far flung as Cambodia, Mynamar, Mozambique, Russia, and Indonesia. Even as China is undertaking positive climate mitigation efforts with its own forest program within its own borders, it is contributing to the opposite in many countries abroad.”)

\textsuperscript{74} Jacques, supra note, at 187

\textsuperscript{75} See 2009 Senate Hearing, supra note, at 6 (statement of Kenneth Lieberthal, Visiting Fellow in Foreign Policy, Brookings Institution) (“Most Americans seem to believe that China is . . . ignoring its carbon emissions while pursuing all-out economic growth”).

\textsuperscript{76} See Mark D. Elvin, The Retreat of the Elephants. An Environmental History of China (2004); Economy, supra note, at 17 (observing that China experienced centuries of “the plundering of forest and mineral resources, poorly conceived river diversion and water management projects, and intensive farming that degraded the land”); id. at 27–57 (chapter entitled “a legacy of exploitation”).
laws.\textsuperscript{77} Since China began its economic development in 1980, it has enacted numerous laws designed to reduce pollution and improve environmental quality. Most of the laws are the product of the past fifteen years, when the environmental consequences of China’s economic growth became so noticeable. One recent survey counted 33 major environmental laws that China enacted 1979 and 2004.\textsuperscript{78} 

The next milestone in China’s environmental development occurred in June 2007, when the National Development and Reform Commission published “China’s National Climate Change Programme.”\textsuperscript{79} That document describes “China’s Basic National Circumstances of Climate Change” as including inferior climatic conditions and severe national disasters, vulnerable ecosystems, a coal-dominated energy mix, a huge population, and a relatively low level of economic development.\textsuperscript{80} It then states that China’s climate change efforts will be guided by the Scientific Approach of Development, the construction of a socialist harmonious society, the fundamental national policies of resource conservation and environmental protection, economic development, energy conservation, and international cooperation.\textsuperscript{81} Next it recites several governing principles, including sustainable development, common but differentiated responsibilities, and pursuing both mitigation and adaptation.\textsuperscript{82} The strategy’s mitigation measures include restructuring the economy, promoting technology advancement and improving energy efficiency; optimizing energy mix by developing low-carbon and renewable energy; launching national wide tree-planting and afforestation campaign and enhancing ecology restoration and protection; effectively controlling the growth rate of population through family planning; further improving institutions and mechanisms; attaching great importance to climate change research and capacity building; and strengthening education, training and public awareness on climate change.\textsuperscript{83}

\textsuperscript{77} See ECONOMY, supra note, at 17.


\textsuperscript{79} China’s National Climate Change Programme (June 2007).

\textsuperscript{80} See id. at 14-16.

\textsuperscript{81} See id. at 23.

\textsuperscript{82} See id. at 24-25.

\textsuperscript{83} See id. at 36-57.
China has produced annual updates on its efforts to implement its climate change strategy. It has agreed to reduce its carbon intensity by 40 to 45 percent by 2010 from 2005 levels. It instituted the Provincial Programme for Climate Change Mitigation & Adaptation in June 2008. China’s 36.7 mpg average fuel economy standard for new vehicles is more stringent than the comparable American requirement.

China has particularly sought to increase its use of renewable energy. The Renewable Energy Law of 2005 requires that 10 percent of China’s electricity be produced by renewable energy by 2020. The Medium and Long-Term Development Plan for Renewable Energy of 2007 raised that target to 10 percent by 2010 and 15 percent by 2020, and set targets of 30 GW of wind power, 300 GW of hydropower, and 1.8 GW of solar PV by 2020. The Chinese government has pursued these goals by providing extensive subsidies for the development of wind, solar, hydroelectric, and nuclear energy technologies. Yet China is more likely use a “stick” instead of a “carrot” to encourage the development of renewable energy. The government “mandate[es] both the production and consumption of renewable energy” and “uses feed-in tariffs . . . and dictates prices to electric grid operators, who are required, by law, to connect renewable energy sites to the provincial and national electricity grids.”

China has also received millions of dollars from the Clean Development Mechanism (CDM) established by the Kyoto Protocol. China accounts for one-third of the approved CDM projects, and 44% of the credits earned by those

84 See, e.g., NATIONAL DEVELOPMENT & REFORM COMMISSION, CHINA’S POLICIES AND ACTIONS FOR ADDRESSING CLIMATE CHANGE: THE PROGRESS REPORT 2009 (Nov. 2009).
85 See Standaert, supra note.
86 Bo, supra note, at 90
87 See McCubbin, supra note, at 217.
89 See Atkinson, supra note, at 67.
projects. As of April 2009, there were more than 500 registered CDM projects located in China, and another 1,500 have been approved by the Chinese government pending approval by the CDM board. They included improvements to industrial facilities, methane recovery from landfills, power production from biomass, the construction of wind farms, and especially hydroelectric plants.

Most recently, the government’s Twelfth Five-Year Plan suggests that China is preparing to address its pollution more vigorously than it has before. In a speech to the National People’s Congress on March 5, 2011, Premier Wen Jiabao boasted that “we made genuine progress in energy conservation, emissions reduction, ecological improvement, and environmental protection,” citing new greenhouse gas policies, the development of clean energy, the decommissioning of more polluting facilities, and reduced energy intensity. But, he added, China needs to do more, again specifically citing the need to “strengthen energy conservation, environmental protection and ecological development, and activity response to climate change.” Soon after his speech, Wen proclaimed in an internet chat that “[w]e must not any longer sacrifice the environment for the sake of rapid growth and reckless roll-outs, as that would result in unsustainable growth featuring industrial overcapacity and intensive resource consumption.” Zhou Shengxian, China’s environment minister, was even more blunt. “In China’s thousands of years of civilization,” he explained, “the conflict between humankind and nature has never been as serious as it is today. The depletion, deterioration and exhaustion of resources and the worsening ecological environment have

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93 Jiabao, supra note, at 4.

94 Id. at 24.

95 Andrew Jacobs, China Issues Warning on Climate and Growth, N.Y. TIMES, Feb. 28, 2011 (quoting Wen).
become bottlenecks and grave impediments to the nation’s economic and social development.”

With such warnings in mind, the Twelfth Five-Year Plan announces a variety of new environmental commitments. It sets a goal of cutting energy intensity by 16% and carbon intensity 17% from 2010 levels by 2015. It seeks to reduce the emission of traditional pollutants by 8% to 10% during the same timeframe. It also promises to set emission reductions targets for lead, mercury, chromium, cadmium, and arsenic in certain polluted zones. And the plan sets additional goals for water conservation, forest coverage, and energy conservation.

B. Why China is doing trying to reduce its pollution

China is pursuing its environmental strategy for several reasons. It wants to be an international leader among nations. It wants to protect the Chinese people from harm and to prevent them from destabilizing the government. It sees an economic opportunity in green jobs. The precise weight that should be afforded each of these reasons may be debated, but together they have inspired China to take the surprising steps toward reducing pollution outlined in the previous section.

1. Global leader

China aspires to be a leader among the world’s nations. That is quite a change from the isolation that experienced after the Communist revolution of 1949. China began to engage in international affairs when it began to develop a global market economy in the 1980s. China saw its participation in multilateral treaties as a way by which it could demonstrate its position within the world community. It joined numerous treaties, including environmental agreements, but it was not a leader in those discussions. For example, China played a minor

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96 Id. (quoting an essay written by Zhou and published on the agency’s website).


98 Atkinson, supra note, at 67 (citing three reasons for China’s support of clean energy technology: mounting pollution, climate change, and “the immense economic opportunities provided by the burgeoning global clean energy industry”).

99 See JACQUES, supra note, at 15 (“Since 1978 China has progressively sought to become a fully-fledged member of the international community and has gone to considerable lengths to reassure the West that it is a ‘responsible power,’ as it likes to describe itself”; id. at 277 (stating that “China’s belated embrace of multilateralism” is due to its growing self-confidence”).

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role in the negotiations that culminated in the Kyoto Protocol in 1997, but then China was one of the first nations to approve the protocol. China has since moved to assume a position of global leadership, not just global participation. Premier Wen Jiabao could thus report in 2011 that “China’s international prestige and influence grew significantly.” For China, then, being a world leader in efforts to combat climate change is part of its broader strategy of becoming a world leader on par with the United States or any other nation in the world.

2. Public health and social stability

Environmental pollution wreaks a horrible toll on the Chinese people. China expects that climate change will affect its agriculture and livestock industry, its forests and other natural ecosystems, its coastal zones, and other sectors. Even so, “[t]he impacts of climate change . . . are fairly remote compared to the Chinese leadership’s more immediate concerns about the tremendous levels of soot, smog and other domestic air pollution that are sickening and killing its citizens.”

The Chinese government is probably more concerned about the social instability that poor environmental conditions may cause. The desire to assure social stability is deeply ingrained in the Chinese psyche from historical

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100 See Bo, supra note, at 95 (noting that “China as the fifth nation to ratify the Kyoto Protocol”); Zang, supra note, at 218 (explaining that the State Planning Commission “was not enthusiastic about climate change negotiations in the 1980s and early 1990s” because of “its deeply embedded interests in the energy sector”).

101 See Joanna Lewis, The State of U.S.-China Relations on Climate Change: Examining the Bilateral and Multilateral Relationship, 11 CHINA ENV’T SERIES 7, 22 (2010/11) (describing how “China’s role . . . had shifted” to become a global leader in climate change negotiations); Wang, supra note, (“The role China has played in international negotiations on climate change has changed from that of a reluctant negotiator in the 1990s to an increasingly active cooperator in the 2000s”); id. at 93 (“International image concerns prevent China from withdrawing from the evolving climate change regime. . . . As a rising power, concerns with its international image are at the top of China’s international agenda. It has to cautiously avoid any steps that might arouse ‘China Threat’ issues in the world.”).

102 Jiabao, supra note, at 2.

103 See supra at 1 (describing the impacts of China’s pollution).

104 See China’s National Climate Change Programme, supra note, at 16-19 (describing the impacts of climate change on China).

105 McCubbin, supra note, at 212.
experience and motivates much of what the Chinese government does.\footnote{See CEC Annual Report, \textit{supra} note, at 9 (“The Party, with over 75 million members (roughly 5.7 percent of China’s total population), strives to maintain unchallenged rule over a country of more than 1.3 billion people. The Party stakes the legitimacy of its claim to rule China on its ability to provide both stability and prosperity to the Chinese people, and to ‘unify the country’ (\textit{tongyi guojia}).”); \textit{id.} at 167 (“The Communist Party and the central government continued to focus on ‘safeguarding social stability’ and strengthened controls over society.”); JACQUES, \textit{supra} note, at 78 (“the maintenance of social order and control has always been a primate consideration for Chinese rulers”); \textit{id.} at 82 (noting that “the Chinese attach greatest importance to unity than literally anything else”); \textit{id.} at 211 (“the Chinese have a pathological fear of division and instability”); McCubbin, \textit{supra} note, at 215 (“the Chinese leadership’s ultimate goal is to maintain the social stability or ‘harmonious development’ necessary to stay in power”); McKibben, \textit{supra} note, at 48 (asserting that “[t]he Chinese authorities . . . value stability above all else”).}

Crackdowns on democracy (e.g., in Tiannamen Square in 1989, following the award of the 2010 Nobel peace prize to a Chinese dissident, and while democracy swept through northern Africa in 2011), religion, and environmentalists are all rooted in this fundamental concern about preserving social stability. Instability in China would present a serious problem for the United States and the rest of the world, too.\footnote{See Page \& Xie, \textit{supra} note, at 119 (describing “political instability in China” as “the greatest danger of all to U.S.-China relations”).}

Pollution threatens China’s stability because Chinese citizens have become increasingly willing to protest poor environmental conditions.\footnote{See CEC Annual Report at 157 (“Chinese citizens are becoming increasingly vocal about concerns over potentially polluting enterprises prior to their construction.”); \textit{id.} at 158 (“Citizens also engaged in demonstrations protesting pollution problems after the fact, following unsuccessful attempts to utilize the petitioning (\textit{xinfang}) system and other institutionalized channels to resolve their grievances. Specific cases also highlight the possible ill-treatment of citizens, the lack of public involvement in environmental decisionmaking, and the non-transparency of the media.”); Ada Wu, \textit{Environmental Mass Incidents in Zhejiang Province}, II CHINA ENV’T SERIES 135 (2010); McCubbin, \textit{supra} note, at 214 (stating that China has seen an explosion in the number of citizen protests about environmental issues,” citing protests in Xiamen, Shanghai, and Chengdu); Lin, \textit{supra} (citing Zhifeng Tong, Dui Wuoguo Huanjing Wuren Yinfa Quntixin Shijian de Skao [Some Thoughts on Protests Arising From Environmental Pollution in China], in Zhongguo Huanjing de Weiji yu Zhuanji (2008) [Crises and Turning Points of China’s Environments (2008)] 149-156 (2008) (reporting that “[i]n 1995, there were 58,678 petitions filed with the environmental agencies nationwide; in 2006, the number increased to 616,122”).} Environmental protests have become commonplace throughout China. “With corruption endemic and little other means of political expression, illegal protest and violence
was commonplace and often more effective than using the law. With no democracy, China’s government was being held accountable by riot.”\textsuperscript{109} As one protester explained, “[w]e would rather be beaten to death than polluted to death.”\textsuperscript{110} The protests threaten China’s stability as much as the pollution that motivates them, so the government has responded both by punishing the protesters and by addressing their environmental concerns.\textsuperscript{111}

The massive migration of hundreds of millions of people from rural China to developing urban areas further threatens stability in two ways. First, the migrants often struggle to find work, and the lack of employment opportunities could threaten the stability of the regime. Additionally, the migrants add to China’s environmental problems. “As people move off the land and into the sky, they produce less and consume more. In theory, they become socialized and civilized. In practice, they spend more time shopping and eating junk food.”\textsuperscript{112} Thus Elizabeth Economy reports that “urban residents use 3½ times more energy than their rural counterparts.”\textsuperscript{113}

Additionally, the Chinese government has begun to emphasize the threat that climate change poses to its people and land as well. Kenneth Lieberthal told Congress that Chinese “leaders increasingly see climate change itself as a threat to

\textsuperscript{109} Watts, supra note, at 135. See also id. at 67 (“Historically, the government’s usual response to pollution and disaster was to cover up bad news and arrest the critics.”).

\textsuperscript{110} Wu, supra note, at 135.

\textsuperscript{111} See CEC Annual Report. supra note, at 150 (“Citizen environmental complaints continued to increase in number as citizens increasingly voiced concerns about potentially polluting projects. However, channels available to citizens to express environmental concerns and grievances were not always open, contributing to the rise of antipollution demonstrations. Chinese authorities continued to stifle selectively environmental activism and suppress citizens who were involved in or organized collective action to halt perceived environmental harms.”); Halper, supra note, at 166 (“the Politburo has come to fear environmentalists for much the same reason it fears other groups – they have the potential to become an organized social entity directing their bile against the political center. The ruling Communist Party often seems to treat environmental advocates as a bigger threat than pollution itself . . . .”); Watts, supra note, at 361 (“I met lawyers who were beaten and threatened, writers who were censored, and journalists who were frustrated that their scoops were spiked by editors either because of self-censorship or on the orders of the propaganda department

\textsuperscript{112} Watts, supra note, at 153. See also id. at 157 (“citizens tend to distance people from the environment and nurture an unsustainable lifestyle. Metropolises are giant blocks of consumption.”).

\textsuperscript{113} 2009 Senate Hearing, supra note, at 13 (statement of Elizabeth Economy, C.V. Starr Senior Fellow and Director for Asia Studies, Council on Foreign Relations).
He explained that “just a little under 50 percent of China’s GDP is produced in three coastal areas – the Pearl River Delta, the Yangtze River Delta, and along the Gulf of Bohai. Two of those areas are extraordinarily vulnerable to sea-level rise.” Chinese leaders “see climate change as a risk to the stability and development of their country,” but “this focus on stability also reduces China’s willingness to limit carbon usage in ways that might impede economic growth.”

3. Economic advantage

Last, but not least, China sees climate change as an opportunity to assert its economic supremacy in a new arena. In December 2009, the Breakthrough Institute reported that China, Japan, and South Korea “have already passed the United States in the production of virtually all clean energy technologies, and over the next five years, the governments of these nations will outinvest the United States three-to-one in these sectors.” According to the report, China manufactured 8 GW of wind turbines in 2007, and its domestic manufacturing capacity is expected to reach between 12 GW and 20 GW by 2010. Only five years ago, there was almost no Chinese presence in the wind manufacturing industry. Today, China has at least 70 wind turbine manufacturers, and the top three companies have an annual manufacturing capacity of 4 GW. China’s domestic wind manufacturers, two of which are ranked in the top ten globally, were poised to start exporting turbines in 2008. Moreover, the report advised that “[t]his public investment gap will allow these Asian nations to attract a significant share of private sector investments in clean energy technology, estimated to total in the trillions of dollars over the next decade.”

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114 2009 Senate Hearing, supra note, at 39 (statement of Lieberthal).
115 Id.
116 2009 Senate Hearing, supra note, at 5 (statement of Sen. Lugar)
117 Atkinson, supra note, at 3.
118 Atkinson, supra note, at 34. The report also concluded that “China is already a world leader in CCS technology,” id. at 36, and it listed Chinese provinces and cities with “aggressive solar subsides” and leading renewable energy technology production centers. Id. at 13.
119 Atkinson, supra note, at 3. The report explained that China’s governmental investments take on added importance because of the “large barriers to the widespread commercialization of clean energy technologies,” citing high capital costs, uncertainty and risk in investing, the absence of
This push toward green economic dominance has inspired jealously and outrage. “Earlier this year, while America spent $80 million in green stimulus measures, the largest such investment in our history, China invested $200 billion.”\textsuperscript{120} Even that $80 million was controversial, as Senator Schumer and others objected the stimulus funds were being used to pay for wind energy technology imported from China, Spain, and elsewhere.\textsuperscript{121} Then, in December 2010, the United States Trade Representative (USTR) initiated dispute settlement proceedings in the World Trade Organization regarding China’s wind energy subsidies. The USTR was responding to a petition filed by a coalition of U.S. labor unions who assert that China’s wind energy subsidies are unfair trade practices prohibited by GATT. According to the USTR, “China appears to provide subsidies that are prohibited under WTO rules because the grants awarded under the program seem to be contingent on Chinese wind power equipment manufacturers using parts and components made in China rather than foreign-made parts and components.”\textsuperscript{122} The irony, of course, is that China is doing precisely what many American environmentalists have been begging the American government to do as well.\textsuperscript{123} A group of Chinese scholars wrote an open letter condemning the unfair

necessary transmission infrastructure, intellectual property concerns, little product differentiation, and competition from established energy technologies. \textit{Id.} at 9. Or, as Thomas Friedman explained, “China’s leadership is aggressively pushing clean tech because it is the way to make GDP and Green GDP compatible.” \textit{Friedman, supra} note, at 417.

\textsuperscript{120} 2009 Senate Hearing, \textit{supra} note, at 3 (statement of Sen. Kerry).

\textsuperscript{121} See Press Release, Senator Charles Schumer, Schumer Urges Obama Administration To Block $450m In Stimulus Funds Sought By Wind Farm Project With Parts Built In China (Nov. 5, 2009), http://schumer.senate.gov/new_website/record.cfm?id=319695&.


\textsuperscript{123} See, e.g., Atkinson, \textit{supra} note, at 11 (calling on the U.S. government to “significantly increase investment in clean energy innovation by making a sustained commitment to research, development, and demonstration”). See also Wang Hui et al., “A Challenge for the U.S. to Match China’s Efforts to Address Climate Change”: An Open Letter to Todd Stern, US Special Envoy on Climate Change” at 2 [hereinafter Open Letter], available at http://www.eu-china.net/web/cms/front_content.php?idart=1471&clang=2 (“It is ironic indeed that some actors in the United States simultaneously attack China for increasing emissions and also for the measures taken to switch from carbon-intensive fossil fuels to renewable clean energy.”).
trade claim and expressing concern that the WTO case may undermine China’s efforts instead of matching and exceeding them.\footnote{See Open Letter, supra.}

C. The limits on China’s pollution control efforts

For these three reasons – a push for global leadership, fear of environmental harm and social instability, and a desire for economic gain – China has invested much of its leadership and leadership in efforts to reduce the country’s contribution to and harm from climate change. But “few within China’s elite discuss climate change with a sense of urgency; the priorities remain continued rapid economic growth and social stability.”\footnote{2009 Senate Hearing, supra note, at 50 (statement of Elizabeth Economy, C.V. Starr Senior Fellow and Director for Asia Studies, Council on Foreign Relations). See also WATTS, supra note, at 261 (“I have found the debate about global warming to be less urgent than in developed nations. . . . Many expressed a feeling of injustice because China was often blamed for being the world’s biggest emitter of greenhouse gas.”)} China’s efforts to reduce pollution and to mitigate climate change confront three significant obstacles: the unquestioned priority of rapid economic development, the overwhelming dependence on coal, and the failure to actually implement the environmental laws that it has enacted.

1. Development remains the overriding priority

Economic development is the highest priority for the Chinese government. Anything that would limit China’s development provokes suspicion. Some Chinese believe that the international pressure on China to reduce emissions is really aimed at reducing China’s economic competitiveness.\footnote{See 2009 Senate Hearing, supra note, at 41 (statement of Kenneth Lieberthal); FRIEDMAN, supra note, at 399 (reporting that “global warming is perceived by more than a few Chinese as a ‘conspiracy’ concocted by the West to slow China’s growth”); Bo, supra note, at 98 (advising that some Chinese government, IGO, NGO officials and scholars believe that the international pressure on China to agree to a binding emissions reduction “is a plot by some western countries to curtail China’s rapid development”).} Thus China has been unwilling to adopt stringent domestic pollution control measures such as a cap-and-trade system. Nor is China willing to change its consumption patterns. It insists upon a “pollute-first, clear-up later’ outlook on development.”\footnote{WATTS, supra note, at 25.}
The focus on development means that economic decisions will affect the amount of pollution more than government regulation. As one writer put it, “Pollution was yesterday’s priority. Climate change is tomorrow’s. Both are symptoms of a bigger more immediate malaise: the unsustainable consumption pioneered by advanced, wealthy democracies and now increasingly replicated by rich citizens of developing nations like China.” And the preoccupation with economic development accounts for “the possibility that it will benefit more from continued emissions than from reducing them.”

2. China remains dependent on coal

The environmental impact of China’s economic development is exacerbated by China’s continuing addiction to coal. Most Americans fail to realize that “coal mines are as much a part of China’s civilization as paddy fields.” China’s air pollution and greenhouse gas emissions are increasing so rapidly because coal fuels most of the country’s rapid economic growth. The statistics are sobering. China is the world’s leading producer of coal, with nearly triple the amount of the United States. China is also the second leading importer of coal. Sixty-nine percent of China’s primary energy and 80% of its electricity generation comes from coal.

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128 2009 Senate Hearing at 5 (statement of Sen. Lugar) (“the fundamental trends in China toward industrialization, urbanization, higher standards of living will have far more impact on the growth of emissions than government policy”).

129 Watts, supra note, at 390.

130 Sunstein, supra.

131 See Watts, supra note, at 218 (“despite its reputation as an agricultural civilization, for most of the last 2,000 years China has been by far the biggest producer of coal and iron in the world, a status lost only temporarily in the early nineteenth century when Britain industrializing”). See also Huaichuan Rui, Development, Transition and Globalization in China’s Coal Industry, 36 Development & Change 691, 692 (2005) (examining why “the state has been so ineffective in delivering policies and regulations in the coal industry”); Shannon R. Brown, Technology, Economics, and Politics in the Modernization of China’s Coal-Mining Industry, 1850-1895, 18 Explorations in Econ. Hist. 60, 80 (1981) (citing China’s prohibition on foreigners developing coal mines and the effective prohibition on private development as the reasons for China’s failure to keep pace with coal development during the nineteenth century).

132 See 2009 Senate Hearing, supra note, at 6 (statement of Kenneth Lieberthal, Visiting Fellow in Foreign Policy, Brookings Institution)

133 See IEA, supra note, at 15.

134 See id. Japan is the leading importer. Id.

135 See Lewis, supra note, at 9.
“China and India harbor around one-quarter of the world’s coal reserves, and they are deploying them rapidly to fire electric power plants.” Additionally “China is currently installing 1000 megawatts (MW) of coal power generation each week.”

The environmental consequences of China’s reliance on coal are seen in the country’s pollution and greenhouse gas emissions. The burning of coal explains why China hosts so many of the world’s most polluted cities, but coal also results in substantial pollution in rural areas. Bryan Tilt lists five factors for why coal is so ubiquitous and so harmful in China’s rural areas: (1) coal is abundant, (2) government price regulations make coal cheap, (3) rural facilities lack the capital to invest in pollution-control equipment, (4) energy efficiency is poor in rural facilities, and (5) rural facilities are less likely to be subjected to regulatory scrutiny.

Throughout China, the abundance of coal and the costliness of its alternatives conspire to make China dependent on coal for its economic development during the upcoming years.

3. The inability to actually implement environmental regulations

In 2009, Senator John Kerry remarked that “it’s time to retire, once and for all, the old outdated stereotype that China doesn’t care at all and China won’t act. They do care, and they are acting.” Kerry added that “what I heard was, in fact, very encouraging. Now, words are words.” The gap between words and actions looms large in China. As one local official explained, Communist Party leaders “speak sweet words, but continue to do bad things.”

Numerous scholars have observed that China struggles to enforce the environmental regulations that the central government adopts. China’s top environmental lawyer estimates that only ten percent of the country’s

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138 See TILT, supra note, at 69.
139 2009 Senate Hearing, supra note, at 2 (statement of Sen. Kerry). See also id. at 8 (statement of Kenneth Lieberthal, Visiting Fellow in Foreign Policy, Brookings Institution) (describing China’s climate change policies as “very impressive” and “constantly growing”).
140 Id. at 2 (statement of Sen. Kerry).
141 WATTS, supra note, at 68 (quoting a local official in China).
environmental laws are actually enforced. Elizabeth Economy testified to the U.S. Senate in 2009 that

> [t]here are few incentives within China’s political system to enforce environment-related laws and regulations. Even when Chinese factories or powerplants have pollution-control equipment, they often don’t use it, or they may use it only when the inspectors appear. There is very poor data collection, transmission, and transparency at every level of the Chinese system, and the incentive is often to hide negative information. We saw this in the runup to the Olympics, when the Beijing city government simply moved the air-pollution monitoring equipment from one part of the city to another in order to put forth better air-quality statistics that were actually there.”

And consider this explanation of China’s poor environmental enforcement offered by Daniel Abebe and Jonathan S. Masur:

> [A]s a result of its growth-driven delegation of power, the [Chinese Communist Party] CCP suffers from a surprising (for such a centralized government) erosion of state capacity: the provinces often ignore the central government’s directives, frequently without meaningful consequences. The political structure of the CCP and the institutional structure of China’s government are sometimes overlapping or redundant and, in many places, lack effective vertical or horizontal accountability. The environmental regulatory agencies are often subordinate to the very agencies they are intended to regulate. Province-level CCP officials are often evaluated (both locally and in Beijing) by their ability to produce high levels of economic growth, not their commitment to environmental protection. Although the CCP has recently tried to recentralize power and rationalize the governance structure, the center’s capacity to enforce environmental regulations on the provinces is much weaker than in a typical industrialized state. The existing structural relationship between the provinces and Beijing often results in a chronic inability on the part of

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142 2009 Senate Hearing, supra note, at 18 (statement of Elizabeth Economy, C.V. Starr Senior Fellow and Director for Asia Studies, Council on Foreign Relations) (citing the claim of Wang Canfa)

143 2009 Senate Hearing, supra note, at 13 (statement of Elizabeth Economy, C.V. Starr Senior Fellow and Director for Asia Studies, Council on Foreign Relations)
the CCP to provide public goods like environmental protection, an inability it will not be able to reverse without incurring substantial costs.144

This disconnect between the central government’s decrees and the local government’s disinterest surprises many Americans. The popular image of China’s government is that it controls everything within the country and that it can do whatever it wants.

III. SOLVING THE THREE PROBLEMS

How much should China pollute? The answer to that question must address the problems that China’s pollution presents for its own citizens and governance, for the willingness of the United States to respond to climate change more aggressively, and for the global community’s efforts to address climate change. The answer must also reconcile China’s rhetoric (which simultaneously rejects an international obligation to reduce emissions while championing efforts

144 Ababe & Masur, supra note, at 330. See also CEC Annual Report, supra note, at 154 (“Selective official enforcement and enterprise noncompliance with China’s environmental impact assessment regulations continue to blunt their effectiveness. . . . Compliance problems in less developed areas of China are exacerbated because polluting enterprises with prohibited, antiquated equipment have been known to move to poorer areas within provinces or across provinces after being shut down in more developed areas.”); 2009 Senate Hearing, supra note, at 5 (statement of Sen. Lugar) (“it remains unclear whether China will develop the capacity to effectively implement its new regulations, or even whether it can accurately measure their impact”); WATTS, supra note, at 138 (“Efforts to make polluters pay or to account for environmental costs faltered because of weak governance.”); JACQUES, supra note, at 206 (“The provinces and cities accept Beijing’s word, while often choosing to ignore it, with central government fully aware of this. Although China has a unitary structure of government, in reality its modus operandi is more that of a de facto federal system.”); id. at 173 (“on paper China already has some of the most advanced law in the world on renewable energy, clean production, environmental impact assessment and pollution control, those these still remain widely ignored in practice. The government continues to resist the idea that environmental considerations should detract from the priority of rapid economic growth, but there is, nonetheless, widespread recognition of their urgency at the highest levels of Chinese leadership.”); TILT, supra note, at 112-20 (analyzing the effort to enforce environmental regulations in Futian Township in Sichuan Province): McCubbin, supra note, at 202 (“unless remedied, the substantial weaknesses in China’s rule of law will prevent effective implementation of its climate change commitments”); id. at 232 (“Unless China makes substantial changes in the nation’s ability to enforce its environmental regulations, the success of any Chinese intentions to reduce greenhouse gases could well be in jeopardy.”).
How Much Should China Pollute?

to do so) and China’s actions (which again simultaneously includes many impressive steps toward developing renewable energy but which also includes a repeated failure to actually implement environmental regulations).

In this section, I sketch three ways to confront the problems that China’s pollution causes. First I argue that China should reduce its pollution so that it does harm its own people or those in other places. Second, I contend that China should be encouraged to achieve the rule of law in environmental policy, rather than other nations imitating China’s environmental governance structure. Third, I call on the United States to pursue more bilateral efforts to work with China on these issues, even when global agreement on a comprehensive climate change treaty remains elusive.

A. China’s pollution should not harm itself or others

The government should prevent pollution from harming human health. That is the premise of American pollution laws.\(^{145}\) It is also evident in the evolving international environmental law understanding of pollution.\(^{146}\) The concept of sustainable development also supports the claim that economic development should not result in pollution that harms public health. As discussed above, China’s commitment to sustainable development means that China should modify its economic development to avoid the massive pollution that have come to characterize the nation.\(^{147}\)

B. Achieving the rule of law in China

Coincidentally or not, in 2009 the U.S. Senate Foreign Relations committee chose the anniversary of the Tiannamen Square massacre to hold a hearing on China’s climate change policies. Senator Kerry nodded toward the significance of that date when he “urge[d] the Chinese to unleash the dynamism of the Chinese people through further political liberalization and strengthening the rule of law

\(^{145}\) See supra at text accompanying notes **-**.


\(^{147}\) See supra at text accompanying notes **-**.
and making government fully accountable to the people.”  Much has been done during the past thirty years to introduce the rule of law to China. There are still huge obstacles, though. Chinese environmental lawyers are probably as likely to be jailed for their efforts as they are to succeed in obtaining real relief for individuals harmed by pollution.

The government has been particularly unwilling to be “fully accountable to the people,” as Senator Kerry put it. It is not even clear that the people care if the government is accountable to them in the sense that is familiar to those of us in the United States. As Jacques explains, China has developed “a new kind of social compact between the Party and the people: the task of the Party is to govern, while the people are left free to get on with the business of transforming their living standards. Far from interesting themselves in politics, people have increasingly retreated into a private world of consumption.” He adds that “the idea of popular sovereignty . . . remains largely absent in China.”

Of course, popular sovereignty means that sometimes the people make decisions that don’t seem to make sense, and that worsen environmental problems rather than solve them. That phenomenon has led some American writers to envy China’s method of governance. Thomas Friedman, for example, entitled one chapter in his best-selling book “China for a Day (but Not for Two)” Friedman explained that while he generally regards China’s system of government as inferior to the American system, he finds one (and only one) aspect of China’s government appealing:

That is the ability of China’s current generation of leaders – if they want – to cut through all of their legacy industries, all the pleading special interests, all the bureaucratic obstacles, all the worries of voter backlash, and simply order top-down the sweeping changes in prices, regulations, standards, education, and infrastructure that


149 JACQUES, supra note, at 224. See also id. at 103 (describing China’s “new kind of political governance, namely the developmental state, whose legitimacy rests not on democratic elections but the ability of the state to deliver continued economic growth”).

150 Id. at 209. JACQUES further explained that “[u]nlike in the Western tradition, the role of government has no boundaries; rather like a parent, with which it is often compared, there are no limits to its authority. Paternalism is regarded as a desirable and necessary characteristic of government.” Id. at 199. Moreover, “[t]he absence of a civil society and an autonomous public realm in Communist China is not a new phenomenon: China has never had either.” Id. at 96.

151 FRIEDMAN, supra note, at 429.
reflect China’s long-term strategic national interests – changes that would normally take Western democracies years or decades to debate and implement.\(^\text{152}\)

Once the government issued those orders, Friedman adds, then “the next day we would be able to enjoy the best part of our democracy (the power of our civil society to make government rules stick and the power of our markets to take advantage of them).”\(^\text{153}\) Nor is Friedman alone in embracing China’s system, and some observers do not include his one-day caveat.\(^\text{154}\) These writers often acknowledge the harms imposed by China’s authoritarian rule, but with respect to climate change, there is a sense that the ends may in fact justify the means. Hence the characterization of “authoritarian chic.”\(^\text{155}\)

There are many arguments for representative democracy instead of authoritarian governance, and I need not rehearse them here. It should be remembered, though, that the praise of China’s approach to environmental regulation ignores what actually happens in China. As Watts explains:

> Weak governance and dire pollution go hand in hand. China’s political system is neither dictatorship nor democracy. For the environment, it contains the worst elements of both. At the top, the

\(^{152}\) Id. at 430.

\(^{153}\) Id. at 432.

\(^{154}\) See Halper, supra note, at x (asserting that “China’s market-authoritarian model provides rapid growth, stability, and the promise of a better life for its citizens,” and “China’s governing model is more appealing to the developing world and some of the middle-sized powers than America’s market-democratic model”); JACQUES, supra note, at 136 (arguing that paternalistic leadership provides “much more latitude to change direction and policies” and the ability “to take a longer-term attitude towards society and its needs”); WATTS, supra note, at 325 (“Prominent foreign commentators began to laud the virtues of authoritarianism. . . . China’s ability to get things done for the environment compared favorably against wishy-washy Western democracies that had to buy off voters with ever greater promises of consumption. . . . It is perhaps a measure of the environmental crisis facing humanity and the gains made by China that such an influential liberal was willing to consider dictatorship as, at least, a partial solution.”); Debra Kahn, “Too Much Democracy” Hamstrings U.S. Industry – Chinese, U.S. Execs, GREENWIRE, Mar. 3, 2011 (quoting Zhengrong Shi, head of a large solar energy manufacturer, as saying that “[s]ometimes I feel perhaps there is too much democracy here. There’s no decisions.”).

\(^{155}\) See Ying Ma, China’s View of Climate Change, 161 POL’Y REV. (June 1, 2010), http://www.hoover.org/publications/policy-review/article/5302.
state lacks the authority to impose pollution regulations and wildlife conservation laws, while at the bottom citizens lack the democratic tools of a free press, independent courts and elections to defend their land, air and water. The gap inbetween is filled by local governments, township enterprises, migrant workers and foreign corporations, many of which are focused on economic growth at the expense of all else. The result is neither red nor green, it is black or grey.\textsuperscript{156}

The government’s prosecution of environmental activists, and its desire to maintain control above all else, hinders any serious attempt to control the massive amounts of pollution that have produced an environmental crisis in China.\textsuperscript{157} Those actions also threaten the very stability that China craves.\textsuperscript{158}

C. The United States should pursue more bilateral agreements with China

Most nations blamed the United States and China for the failure to agree to a new international climate change treaty in Copenhagen in December 2009. In 2010, a group of Chinese individuals and organizations wrote to U.S. special envoy on climate change Todd Stern to “call upon the United States to stop drawing attention away from its own inadequate domestic efforts by trying to divert attention to China. The United States must match and exceed China’s efforts to address climate change, instead of continuing to use China as an excuse for inaction.”\textsuperscript{159} More pointedly, the writers insisted that “[i]t is time for the United

\textsuperscript{156} WATTS, supra note, at 109.

\textsuperscript{157} See CEC Annual Report, supra note, at 9-10 (“The rule of law, if implemented faithfully and fairly, should benefit not just those the Party favors. Some of China’s leaders, therefore, regard implementation of the rule of law as potentially diminishing the capacity of the Party to maintain control.” Elizabeth Economy agrees that “there is a lack of political will in Beijing to make the necessary fundamental changes to tackle the climate change challenge effectively, such as the rule of law, transparency, and official accountability.” 2009 Senate Hearing at 50 (statement of Elizabeth Economy, C.V. Starr Senior Fellow and Director for Asia Studies, Council on Foreign Relations)

\textsuperscript{158} See CEC Annual Report, supra note, at 2 (“Stability in China is in the national interest of the United States. The Chinese government’s full and firm commitment to openness, transparency, the rule of law, and the protection of human rights, including worker rights, marks a stability-preserving path forward for China. Anything less than the government’s full and firm commitment to protect and enforce these rights undermines stability in China.”).

\textsuperscript{159} Open Letter, supra.
States to stop using China as a scapegoat, and to move forward with whatever honest efforts it can come up with.”

Such efforts are hindered, though, by the widespread belief in the United States that China will not reciprocate by taking actions that are contrary to its own self-interest. Whether or not that concern is well-founded, it suggests that China and the United States can best address their common pollution and climate change problems by working together. There are three ways in which they can do so: collaborating, competing, and committing.

1. **Collaboration**

There are already countless U.S.-China partnerships related to environmental issues, and there could be even more. They should make green development economically advantageous for both nations. The United States should help China – and press China – to overcome its inability to actually implement its environmental policies. Elizabeth Economy has listed “building capacity and transparency, official accountability, and the rule of law” as the most important areas for cooperation between China and the United States. Economy adds that the United States should “help transform China’s urbanization process” by sharing its expertise in transportation, energy efficiency, and land development. The United States should also recognize that many young urban Chinese people are looking “for something more than postmodern, globalized

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160 Open Letter, supra note, at 2


162 2009 Senate Hearing, supra note, at 14 (statement of Elizabeth Economy, C.V. Starr Senior Fellow and Director for Asia Studies, Council on Foreign Relations).

163 2009 Senate Hearing, supra note, at 19 (statement of Elizabeth Economy, C.V. Starr Senior Fellow and Director for Asia Studies, Council on Foreign Relations). See also id. at 13 (citing the need “capacity-building for the enforcement of energy-efficient building codes” because “[h]alf of all new building space in the world is going up in China.”
materialism.”\textsuperscript{164} Clean energy collaboration may depend on far more than the technical specifications of energy production.

2. \textit{Competition}

President Obama emphasized competition with China regarding clean energy development in his 2011 State of the Union address.\textsuperscript{165} Thomas Friedman believes that “the greatest thing that the United States could do itself, for China, and the world is to publicly state its intention to ‘outgreen China’ – to let the Chinese know every day in every way that we are going to try to clean their clock in the next great global industry: clean power.”\textsuperscript{166} But Congress sees the problem differently. As Senator Sanders asked, “Is it fair to ask American manufacturers to compete against companies in China where there are virtually no environmental regulations and in a country which is becoming one of the most polluted countries in the world?”\textsuperscript{167} Many Americans believe that China is engaged in unfair competition with the United States, which can only be remedied by rewriting the rules in a way that the Chinese themselves will not accept. President Obama has argued that successful American competition with China also requires lots of government spending to overcome the economic obstacles to new, greener energy technologies. Again, though, Congress is unlikely to approve the amount of massive government spending that many say is necessary to empower American industries to compete with China. Proposals for increased government spending on clean energy technologies are caught up in the broader debate about the role of the government in technological innovation and the appropriate amount of government expenditures. And even as it has promoted more government spending, the Obama Administration claims that some of China’s government subsidies for its own industries are illegal under international trade rules.\textsuperscript{168} These two barriers – the governing rules and the necessary funds – must be overcome before competition between China and the United States yields the presumed

\textsuperscript{164} Watts, \textit{supra} note, 362.

\textsuperscript{165} See Remarks by the President in State of Union Address, Jan. 25, 2001 (asserting that “[t]he first step in winning the future is encouraging American innovation. . . . We’ll invest in . . . clean energy technology -- (applause) -- an investment that will strengthen our security, protect our planet, and create countless new jobs for our people); \textit{id.} (noting that “[o]ur infrastructure used to be the best, but our lead has slipped. . . . China is building faster trains and newer airports); see \textit{also} WEEKLY ADDRESS: President Obama: “We Can Out-Compete Any Other Nation.”

\textsuperscript{166} Friedman, \textit{supra} note, at 422.

\textsuperscript{167} 149 Cong. Rec. H10065 (date) (statement of Sen. Sanders).

\textsuperscript{168} See \textit{supra} at text accompany notes **.**
benefits of clean energy development. The fact that China and the United States must work together to eliminate those barriers has prompted some observers to call for “cooperative competition” between the two countries.\textsuperscript{169} Meanwhile, China is widely regarded as winning the clean energy race with the United States, and one member of Congress has even described China’s wind turbines as “economic missiles pointed at the heart of the U.S. economy.”\textsuperscript{170}

3. Commitment

Efforts to commit the United States to binding greenhouse gas reductions at the global level (via the Kyoto Protocol or a new international agreement) or at the domestic level (via new federal comprehensive climate change legislation) have failed spectacularly. Yet Senator Obama once insisted that “it is impossible for us to encourage countries such as China and India to do the right thing if we, with a much higher standard of living and having already developed ourselves so we are the energy glutton of the world, are unwilling to make these modest steps to decrease the amount of emissions that affects the atmosphere overall.”\textsuperscript{171} Thus the dilemma described earlier: the United States will not commit to reducing its pollution unless China does the same, but China will not make any binding international commitments. Perhaps the way out of that dilemma is for the United States and China to enter into bilateral agreements respecting climate change. Such agreements could go beyond the collaboration that already characterizes existing agreements. The United States and China may have greater success than the global community as a whole in identifying an agreement that is acceptable to them. That is the premise of a growing number of studies that have sought alternatives to the global process that failed to achieve an agreement in Copenhagen in 2010.\textsuperscript{172} The goal would be to find areas of agreement between the two countries where they could commit to actions that they would be unwilling to take alone.

\textsuperscript{169} See National Academy of Engineering, \textit{supra} note, at 21; Lewis, \textit{supra} note, at 17.

\textsuperscript{170} \textit{The Global Clean Energy Race: Hearing Before the House Select Committee on Energy Independence & Global Warming}, 111th Cong., 2d Sess. 1 (2010) (statement of Rep. Markay). \textit{See also id.} at 17 (statement of Ravi Viswanathan) (noting that “[t]hough the U.S. continues to be the home of the world’s best clean energy innovation, the U.S. has lost its leadership to China, Japan, and Germany in clean energy manufacturing deployment and is challenged and threatened by emerging economies such as India, South Korea, Malaysia, and the Philippines.”).

\textsuperscript{171} 151 \textit{CONG. REC.} S7005 (daily ed. date) (statement of Sen. Obama).

\textsuperscript{172} \textit{See, e.g.,} Au, \textit{supra} note, at 5-6 (emphasizing the value of “an entrepreneurial, bottom-up process” that is embraced by the United States and China).
IV. CONCLUSION

China’s pollution harms China, the United States, and the whole world. China realizes that now, but it clings to a pace of development that prevents the actions necessary to avoid toll that such pollution takes on the lives of millions of Chinese people, and even people living elsewhere as well. China must reduce its pollution so its own people do not suffer, even as China continues the economic development that has helped so many people in China. Meanwhile, many global environmental activists see the United States as the obstacle to global progress on climate change. “The reality,” proclaimed Senator Kerry, “is that a robust American partnership with China will do more than anything else to ensure a successful global response to the urgent threat of climate change.”

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