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CHINA AS AN
ENVIRONMENTALLY
RESPONSIBLE
GLOBAL CITIZEN

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ABSTRACT

China's remarkable economic growth and development has placed it among leading nations, where it is therefore open to demands about what it should do in order to meet global norms of responsible international behaviour. There are many points of view internationally and within China on what such behaviour might entail. Chinese leaders consistently point out that, while the country intends to meet its major international obligations, it should not be expected to achieve the same level of performance as richer countries, since it still has important development needs both in its cities and, especially, in its rural areas. China also wishes to take development pathways that differ from the trajectories that produced unsustainable outcomes elsewhere. The rising significance of the environment and development, including climate change, is leading to new pressures in the country's relationships with the global community. This paper examines China's response, ways in which Canada could become more effective in its sustainable development relationships with China, and the mutual benefits of doing so. China is probably in a transformative stage of deciding how it will deal with the environment and development both domestically and internationally; it is turning the problems into new economic growth and trade opportunities and placing emphasis on improved science and technology solutions. Self-interest on the part of China will prevail, with new patterns of international investment within countries such as Canada and also in the developing world. But China can be expected to play an increasing role individually and through partnerships to address global environmental problems. Canada must be proactive to avoid being sidelined in this process by other powerful nations seeking relationships with China in new fields such as green growth and the low-carbon economy.

RÉSUMÉ

Le développement et l'extraordinaire croissance économique de la Chine l'ont propulsée aux premiers rangs des nations tout en soulevant des questions sur les mesures qu'elle doit prendre pour satisfaire aux normes mondiales de comportement responsable des États. Mais aussi bien en Chine que sur la scène internationale, les avis divergent sur ce que doit englober un tel comportement. Les dirigeants chinois rappellent constamment que leur pays compte bel et bien s'acquitter de ses grandes obligations internationales, mais qu'on ne peut s'attendre à ce qu'il le fasse à même échelle que les nations plus riches vu l'ampleur des besoins à combler dans ses zones urbaines et plus encore dans ses régions rurales. La Chine envisage en outre des voies de développement différentes des modèles non viables appliqués ailleurs dans le monde. Enfin, l'importance grandissante de l'environnement et du développement, et notamment des changements climatiques, ajoute aux pressions qui caractérisent les relations entre la Chine et la communauté internationale. Cette étude examine la réponse de la Chine face à ces enjeux, les moyens qui permettraient au Canada de tisser avec elle des liens plus étroits en matière de développement durable ainsi que les avantages réciproques que peuvent en tirer les deux pays. Il fait peu de doute que la Chine traverse une vaste période de transformation et qu'elle cherche à définir son approche nationale et internationale des questions d'environnement et de développement, mais aussi à convertir ses problèmes en possibilités de croissance et d'échanges commerciaux et à élaborer de meilleures solutions scientifiques et technologiques. Or elle privilégiera toujours ses intérêts en tentant d'établir de nouveaux schémas d'investissement international, aussi bien avec des pays comme le Canada que les pays en développement. Mais on peut aussi prévoir qu'elle jouera un rôle accru dans le règlement des problèmes environnementaux mondiaux, à la fois individuellement et par l'entremise de partenariats. Le Canada doit donc adopter une approche proactive pour éviter d'être supplanté par d'autres puissants États désireux de renforcer leurs liens avec la Chine autour de nouveaux enjeux comme la croissance verte et l'économie à bas carbone.

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The opinions expressed in this paper are those of the author and do not necessarily reflect the views of the Canadian International Council, its Senate or its Board of Directors.

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INTRODUCTION

Over the past three decades since “opening up” under Deng Xiaoping, China has become the world’s sleeping giant of a nation. Remarkably, many aspects of its growth have been accomplished without much of the clamor and bluster often associated with ascendancy to the world stage. China generally has shunned an overt leadership role in global relations, even when it seems to other nations that it should be playing a major, even dominant role on some matters. China has made it abundantly clear that it wishes to contribute toward global peace and prosperity, and to global sustainable development. At the same time, its leaders continually point out that China is still very much a developing nation, even though it is now the world’s largest exporting nation, expects to soon pass Japan as the world’s second-largest economy, and is still managing to maintain the highest economic growth rate of any large nation. They point out that China cannot be expected to take on too many international obligations, or to meet all expectations of others concerning any number of important global issues, ranging from human rights to limiting the growth of greenhouse gas (GHG) emissions.

People outside China are becoming more demanding about what China should or should not do in order to meet global norms of responsible international behaviour. Some focus on matters of defence and security, worrying about China’s growing defence expenditures and its expanding reach into space and on the high seas. Others focus on China’s rapid rise to become the world’s workshop, a trend that has created trade imbalances and concern that it is a pollution haven, a place where workplace and food safety are ignored, and a country where intellectual property rights are not fully respected.¹ China has gone through a steep learning curve over the past decade on AIDS, SARS, and other public health matters – amounting to a trust-building effort with its own people and with the international community. There is a strong international lobby pressuring China to adopt more democratic and participatory approaches in governance of its own people, and to take a larger role in international cooperation and development globally.

Chinese leaders point out that they have undertaken serious international obligations, often outperforming other nations. An example is China’s commitment to meeting the United Nations Millennium Development Goals; it has taken some 300 million Chinese out of poverty since 1990.² Another is China’s successful effort under the Montreal Protocol to reduce chlorofluorocarbon (CFC) emissions in order to protect the ozone layer in the atmosphere.³ A third example in recent years has been China’s expansion of development assistance and investment in Africa and other parts of the world.⁴ China insists that it intends to meet obligations under the international agreements that it signs, and it does sign a substantial number.⁵

Today’s international cooperation frameworks are certainly much more complex than those of even a decade ago. China’s gradual ascendancy within the United Nations, its membership in the World Trade Organization, its participation in the G20 and with the G8, its association with the other BRIC (Brazil, Russia, India, and China) nations, and its bilateral relationships (especially with the United States, a pairing known as the G2) all signal its growing influence and level of responsibility in world affairs. But at the same time these relationships point to a fundamental dilemma. China’s development ambitions are high and its domestic governance is adaptive enough to have supported a very rapid rate of change. Yet in the

¹ Elizabeth Economy has documented many aspects of the environmental downside of China’s rapid growth in *The River Runs Black* and in “The Great Leap Backward?”

² *China’s Progress*; Sachs, *Common Wealth*.

³ Zhao and Ortolano, “Chinese Government’s Role.”

⁴ Wilde and Mepham, *New Sinosphere*; Broadman, *Africa’s Silk Road*; Branigan and Borger, “China Looks to British Experience.”

⁵ China, State Council, *White Paper*.

international arena, its decision-making is slow and often not consistent across a range of factors. Therefore, to some considerable extent, the domestic benefits to China from international cooperation could be constrained by these inefficient mechanisms. Another way of looking at it is that China could take advantage of these inefficiencies to avoid or delay international obligations while playing its card as a developing nation.

This short introduction has laid out many of the key arguments heard about China – inside and outside the country. The country’s senior leaders have made it very clear that they wish to play a larger and more constructive role in securing future global well-being. But their route to this better place would not exactly follow the path of past Western industrialization, capitalist systems, or Western democratic systems. When it comes to international matters, it is rarely clear how much China wishes to shape the future of other nations, whether via globalization, international development, or international accords. China is, however, adamant that it does not want to engage in a rearmaments race or set off a new cold war.

China is seen by some outside the country as neglecting or ignoring important international norms and minimizing its global stewardship responsibilities. Others see China as on a global rise, taking on new obligations, often in an innovative fashion, and behaving in a more responsible way than some other major countries have over the past decade.⁶ Yet understanding what has sometimes been described by China’s leaders as “China’s peaceful rise” still entails guessing as to what the future will hold. It is therefore useful to anchor general observations with information about specific directions and actions taken by China. In this regard, environment and development concerns, generally now described as sustainable development, make an interesting and globally significant case study, which will form the main topic of this paper.

CHINA’S PARTICIPATION IN GLOBAL ENVIRONMENT AND DEVELOPMENT ACCORDS

Influence of the Earth Summits

Sustainable development emerged as a global concern in the aftermath of the 1992 Earth Summit in Rio, where political leaders, including China’s, signed the United Nations Framework Convention on Climate Change (UNFCCC) and various other global conventions (those on biodiversity and desertification were particularly relevant to China) and reached agreement on Agenda 21, a sector-by-sector set of guidelines on sustainable development strategy. The Earth Summit built upon decades of experience with global environmental agreements⁷ that China and others had ratified; on the 1972 Stockholm Conference on the Human Environment, which China attended; and on the work of the United Nations Environment Programme.⁸

China benefited more than most other nations from participation at the Rio Summit. It came three years after the Tiananmen Square incident, when China was trying to bolster its international standing again, but also at a time when economic growth was beginning to accelerate dramatically through international trade and foreign direct investment. By 1994, China had produced its own Agenda 21, judged to be the most outstanding of any such national guidance document.

⁶ Bergsten et al., *China’s Rise*.

⁷ The Convention on International Trade in Endangered Species of Wild Flora and Fauna (CITES), the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal, the United Nations Convention on the Law of the Sea, and others.

⁸ China was a founding member of the Governing Council of UNEP in 1973.

In 1992 China, with assistance from the Canadian International Development Agency, put in place a senior-level international advisory body called the China Council for International Cooperation on Environment and Development (CCICED), now chaired by the executive vice-premier of China and reporting directly to the State Council on environment and development issues. The intent was to provide the national government at the highest levels with an independent source of knowledge and advice drawing on the best possible international and Chinese sources. This council has met with the premier of China annually ever since and has established dozens of task forces over the years on a wide range of topics including pollution, conservation and sustainable resource use, urbanization and transportation, agriculture and the environment, energy and the environment, the environment and trade, health and the environment, environmental governance in China, business and the environment, and market-based instruments for environmental protection. This council is unique in that over the years it has been used by senior Chinese officials not only for advice but also for informal dialogue on China's interests in international environmental cooperation. It now receives financial support not only from China and Canada but also from at least 10 other countries and several international non-governmental organizations, foundations, and UN agencies.

Since the early 1990s China's pollution problems have increased dramatically and changed from national to regional and global concerns, largely as a consequence of China's export-driven economic growth, its huge construction boom, and its reliance on coal. China is now the world's largest GHG emitter. The effects of pollution have been described by Premier Wen Jiabao as "a grim situation." Added to these concerns are low rural incomes and poor living conditions, reforestation and biodiversity conservation needs, urgent water and energy problems, agricultural pollution on a massive scale, the emerging environmental health, waste disposal, and urban environmental design issues associated with the planet's largest ever rural-to-urban migration. Each of these sustainable development matters has important international connotations.

By the turn of the new century China already had moved into the big leagues of global polluters, and its neighbours, especially Japan, raised concerns about acid rain and other long-range transport of air pollutants. The Stockholm Convention on Persistent Organic Pollutants (POPs), intended to address the problem of transboundary movement of pesticide-type pollutants, was signed by China at the time of its negotiation in 2001.⁹

In 2002, when the second Earth Summit took place, in Johannesburg, world attention moved beyond these pollution matters to address social and ecological concerns, including the links between the environment and poverty, and the alarming rate of biodiversity loss in the world. China highlighted its efforts under the UN Millennium Development Goals, and also committed itself to the lofty global goal of achieving by 2010 "a significant reduction of the current rate of biodiversity loss at the global, regional and national level as a contribution to poverty alleviation and to the benefit of all life on Earth."¹⁰ China believes that it is well on the way to achieving this objective, even though there are many obstacles, especially to protection of genetic resources such as rice varieties, and threats such as invasive species.¹¹ China now has designated more than 15 percent of the country's area as nature reserves.

⁹ The Stockholm Convention is particularly relevant to Canada since these contaminants are transported from Asia and elsewhere into the Arctic, where they concentrate through marine and terrestrial food chains, creating health risks for residents dependent on "country food" and also for marine mammals and other creatures feeding at the top of food chains.

¹⁰ This biodiversity objective was set at the sixth Conference of the Parties to the Framework Convention on Biological Diversity in 2001 and affirmed in the agreements reached at the Johannesburg Earth Summit.

¹¹ China, Ministry of Environmental Protection, *China's Fourth National Report*.

China's ecological stewardship is the subject of considerable international interest since it is a "megadiversity" country.¹² The major global conservation organizations, including the International Union for Conservation of Nature, the World Wide Fund for Nature, and Conservation International, are very active in China, with considerable cooperation from national and local authorities. Since the 2002 Earth Summit, China has received substantial bilateral and multilateral donor support for nature conservation, especially from the Global Environment Facility, and bilaterally from the European Union and Norway among others. The rationale for such support is to help China protect biodiversity and maintain ecological services that assist in preserving national, regional and global environmental conditions.

Climate Change

China has very rapidly increased its GHG emissions since its entry into the World Trade Organization, becoming the leading global emitter over the last few years. China makes the following points to the world community in post-Kyoto Protocol climate change negotiations under the UN Framework Convention on Climate Change (UNFCCC):¹³

- It will be seriously affected by climate change and therefore is interested in both mitigation and adaptation.
- The major burden for action should lie with the historic polluters – the rich nations of the Organisation for Economic Co-operation and Development (OECD), which China proposes should achieve GHG reductions of 40 percent by 2020.
- China and other low per capita emitters need to develop before they can accept binding targets for reductions, and indeed their emissions will rise in the coming decades.
- Access to money and technology from industrial countries is required if China and other developing countries are to be active participants.
- Over the long term (2020-50) China expects to make substantial contributions to solving this global issue, including stabilizing and eventually reducing its own emissions, with a peak perhaps sometime during the decade 2030-2040.

Postponing the peak of Chinese GHG emissions until 2030 or later is unsettling for various observers outside of China; some analysts suggest that the peak could come sooner with concerted effort. Within China there is still a debate about whether carbon dioxide should actually be considered a pollutant, a matter settled now in the United States. While China is prepared to set domestic intensity targets as a voluntary measure, it insists that it will not establish binding internationally monitored targets.¹⁴ Furthermore, China does not wish to be subject to full international verification of its efforts, although during the Copenhagen meeting it agreed to some level of external verification.

China is seen by some as a laggard or even as a disruptive force in the efforts to achieve a new global accord on climate change,¹⁵ a view that is hotly disputed by the Government of China.¹⁶ Another way of

¹² There are 12 to 17 "megadiversity" countries, together holding 60 to 70 percent of the world's living species.

¹³ These negotiations started with the Bali Action Plan in December 2007, which China strongly supported, and were targeted at reaching agreement in Copenhagen in December 2009 on post-2012 climate change action at meetings of the UNFCCC parties and a parallel meeting of those countries which ratified the Kyoto Protocol. However, the Copenhagen meeting was inconclusive in its outcome.

¹⁴ Premier Wen announced on November 26, 2009, that China would lower carbon intensity by 40 to 45 percent from 2005 levels by 2020. This intensity target, based on carbon dioxide output per unit of GDP, would still mean a rise in total greenhouse gas levels given continued high levels of economic growth.

¹⁵ Vidal, "Ed Miliband: China Tried to Hijack Copenhagen Climate Deal."

¹⁶ "Endeavors to Build Global Hope," *People's Daily Online*.

looking at it is that unless China and the United States can reach a constructive accord on this subject, the global effort will be doomed or at least seriously constrained.¹⁷ Some of the richer countries, including Canada, took the line at various times in the preparations for the Copenhagen climate change conference that as long as China and India do not agree to binding targets, why should they?

Climate change is now the cutting edge of environment, economy, and development relationships. It is a mainstream political and economic topic, where China's attitudes and actions are examined from a geopolitical perspective. China is indeed displaying considerable bluster and sending somewhat confusing signals at the international bargaining table. Yet it is quietly preparing itself for major changes in its energy and environment relationships at home and through international cooperation, trade, and investment. This point is now starting to be recognized by the world's media and commentators.¹⁸

In reality, China has taken these actions to date:

- China has developed a Climate Change Action Plan backed up by changes in various laws and regulations and by studies on likely climate change impacts the country will face.
- China has established a leading group on energy, the environment, and climate that is chaired by the premier.
- China (along with India) has been by far the largest user of the Kyoto Protocol's Clean Development Mechanism.
- China has signed major accords with the European Union, with many individual countries such as the United Kingdom, and with private sector firms for technology cooperation on energy efficiency, advanced technologies for coal combustion, and other climate change actions.
- China is moving toward world leadership on some renewable energies, particularly wind and solar power applications.
- China's energy intensity (energy per unit of GDP) has declined substantially over the past years, and in the 11th Five Year Plan (2006-10) it is targeted for a 20 percent reduction. Even though this goal is very difficult to achieve, China believes that it will be successful.
- Chinese cities and enterprises are being encouraged to engage in energy conservation, with dramatic results in some sectors such as steel.
- China and the United States have placed energy and climate change among a small number of key topics for intense discussion and agreement through their Strategic and Economic Dialogue.¹⁹
- China is seriously exploring the implications of a shift toward a low-carbon economy development pathway.²⁰

China's public positioning on climate change shifted almost weekly during the summer of 2009 partly as a result of bilateral discussions between China and the United States, but mainly as a result of internal meetings within China. The United States and China have agreed to cooperate on new technology development

¹⁷ During President Obama's visit to China in mid-November 2009, accord was reached on a number of matters including significant long-term cooperation on energy and environment. See United States, The White House, "U.S.-China Joint Statement." This agreement focuses attention on mutual interests in achieving a low-carbon economy in both countries and in advanced environmental technologies.

¹⁸ Osnos, "Green Giant."

¹⁹ On July 28, 2009, China and the United States signed a cooperation agreement on energy, climate change, and environment, pledging a joint commitment for seeking agreement at the Copenhagen climate change conference and on technological cooperation.

²⁰ Low-carbon economy (LCE) is a concept promoted particularly in Europe but more recently in the United States. It refers to a reduction in carbon content required per unit of economic activity, either by energy conservation or by shifts in the mode of energy production. At the UN meeting on climate change in September 2009 and elsewhere, President Hu Jintao indicated that China intends to move toward a low-carbon approach.

for carbon sequestration, on smart electrical grid development, and, in general, on finding solutions that will lead toward a low-carbon economy. China has announced at the United Nations that low-carbon approaches should be incorporated into development plans, with carbon intensity targets (similar to the approach currently being followed for energy efficiency).²¹ It is still an open question that may take several years to work out on whether China will yield to international pressure to establish binding targets on GHG emissions, with full international scrutiny beyond its own published data.

China can draw upon some past successful experience as it becomes engaged with this new threat to the global atmosphere. The Montreal Protocol on Substances That Deplete the Ozone Layer, ratified by China in 1991, is widely regarded as one of the most successful multilateral environmental agreements. Under its provisions China and other developing nations could continue to produce CFCs (gases such as freon) even as rich nations were phasing out their use during the 1990s. A multilateral fund was established to assist the developing countries in this process. For a decade or more, a thriving global black market existed for trade in CFCs, operating at a level close to that of the world drug trade. Chinese CFC sources and illegal trade were difficult to eradicate, becoming a major challenge for the government as recently as 2005.²² However, this activity has now been greatly reduced, and China is viewed as a major contributor to the success of the Montreal Protocol.

This example of Chinese experience and others described later suggest that China is well aware of the potential benefits of active participation in multilateral environment agreements. These benefits can include direct cash flows, capacity development, and technology cooperation. Less tangible but of considerable importance to China are good standing within the international community and improved understanding of how to engage with other nations. What also has become clear is the pattern in which China actively avoids taking on an overt international leadership role. Overall, there is reason to believe that when China does sign an international accord, it intends to fulfill its obligations. The very tricky question is whether China should continue to be regarded solely as a developing nation at the international table, and therefore well protected behind the shield of “common but differentiated responsibility.”²³

CHINA'S ENVIRONMENT AND TRADE RELATIONSHIPS

By entering the World Trade Organization (WTO), China redefined its economic relationship with the rest of the world. However, becoming the world's workshop has come with a heavy environmental cost. Arguably, this is a cost not only to China but to other countries as well, since there is justifiable concern that by producing goods without adequate environmental safeguards, countries undercut the environmental protection initiatives of other nations. To what extent the responsibilities lie with countries like China, India, or Vietnam, and to what extent the responsibilities should be with the consuming nations and consumers themselves is intensely debated. But it is clear that trading arrangements and illegal trade play a major role in environmental outcomes – in the forests of Indonesia and Latin America, in the world's oceans, and in the polluted rivers of China.

²¹ Speech by President Hu Jintao at the UN General Assembly on September 22, 2009.

²² Perrement, “Corruption Stalls Government Attempts.”

²³ This principle was incorporated into the Rio Declaration on Environment and Development at the 1992 Earth Summit. It recognizes the historical differences of developed and developing countries as sources of global environmental problems, and also differences in capacity to contribute to their solution. The principle was incorporated into the Framework Convention on Climate Change and has been a part of UN climate change accords reached ever since that time.

China began its environmental preparations for entry into the WTO as far back as 1995, when it started studies through the CCICED with both the State Environmental Protection Administration and the Ministry of Trade (now called the Ministry of Commerce). Once China entered the WTO, studies on trade's environmental impacts within China were undertaken.²⁴ Estimates are that at least 20 to 30 percent of the pollution load in China comes from goods produced for export.

In recent years there have been several market supply-chain analyses concerning the environment and sustainable development implications of China's activities,²⁵ and more are needed. The topics deserving of study are wide-ranging, including forest products; seafood; commodities such as cotton, soybeans, and various minerals such as copper and steel; electronic wastes; and recyclable materials such as paper. As China develops new export sectors such as chemicals and automobiles, very demanding standards will need to be met, perhaps including more attention to embedded carbon, pollution during production, and, in the case of autos, stringent emission control technology, at least for markets in Europe and North America.

The fear of China and other developing countries is that environment and climate change will be used to restrict trade. While there are some safeguards under the WTO intended to prevent such actions, powerful countries do try, including the United States and European Union nations. Thus it is in China's interest to develop various "green" and safe approaches, whether via voluntary certification programs such as those of the Forest Stewardship Council, organic agriculture labels, strict adherence to the Food and Agriculture Organization's Codex Alimentarius, or via regional and global trade negotiations. In the wake of a series of scandals involving lead in painted toys, melamine contamination, and other problems such as antibiotic residues in aquacultured fish, China has tightened its health and safety regulatory framework, but consumer confidence will need to be rebuilt, likely both domestically and abroad.

China also hopes to develop substantial export product lines from its rapidly expanding environmental and sustainable development sector. Here China has distinctive advantages: the ability to rapidly re-engineer and improve upon environmental technologies, substantial domestic markets that complement international demand, low production costs, and the possibility of substantial government incentives.

China's rapid growth in production of solar panels is an example. Using imported technology and imported pure silica blocks, China has increased yield efficiency and is now upgrading the technological efficiency of its panels. The product had been heavily underwritten by subsidized purchases in Germany, which is switching toward greater use of renewables and found it cheaper to import solar panels from China. However, in the aftermath of the 2008 financial crisis, this market has dried up. China therefore has recently instituted on a trial basis very substantial subsidies for domestic use of solar panels. Another example is the removal of export credits by China for products with high embedded-carbon content. This rollback occurred in the past few years but has been threatened by the desperate effort to maintain exports following the global financial meltdown. This type of adaptive response is a hallmark of Chinese decision-making, which creates confusion on the part of external observers seeking signals of definitive shifts in behavior.

Some environment and trade issues are covered by the Convention on International Trade in Endangered Species of Wild Flora and Fauna (CITES) and under the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal. These are important trade agreements for China. CITES officials are concerned about China's importation of items ranging from ivory to animal parts and

²⁴ China Council for International Cooperation on Environment and Development, Task Force on WTO and Environment, *Environmental Impact Assessment*.

²⁵ Potts and Runnalls, *Sustainable Development and China*.

plants for medicinal purposes. And China has struggled with a noxious and illegal trade in imported electronic wastes that it has banned, but that still continues, abetted by the non-adherence of some countries such as the United States to the Basel Convention. In this instance, China has actively sought the cooperation of other countries to eliminate this trade, carried out by smuggling container shipments of electronic wastes into ports in eastern China.

Finally, China has brought about a remarkable transformation of the world's recycling industry, especially for paper, various metals, and plastics. These materials enter into China's "circular economy" via shipping containers that might otherwise return to China empty from Europe and North America in particular. This trade is not without its problems, especially in relation to the control of pollution and waste disposal during reprocessing, and because of price instability with the downturn of commodity prices over the past year. But the recycling effort has not simply been a redirection of materials. It has helped various industries abroad (e.g., iron and paper) to reach globally high levels of recycling. And it has saved on the environmental costs of using virgin raw materials.

There is more to this story of China's trade and environment relationship, because it also involves foreign direct investment within China and the activities of Chinese enterprises operating abroad, plus Chinese efforts to invest in businesses in other countries. There is wariness about the overseas investment interests of China in countries like the United States and Canada, in part because of worries about whether environmental considerations will be respected. The Ministry of Commerce (known as MOFCOM) and the Ministry of Environmental Protection are said to be developing regulations that will hold Chinese firms abroad responsible for obeying both the host country's and China's environmental laws and regulations.²⁶ The capacity of China to enforce such regulations may be a limiting factor on their success but this is an important step forward.

China also has created a set of regulations covering environmental aspects of foreign direct investment within China. Many of the multinationals operating within China have environmental codes and watchdogs concerning their global operations, and these enterprises can be important positive examples for domestic firms. This is true, for example, in the chemicals sector. But it is important for government to develop an appropriate regulatory framework, rather than expect that businesses will be motivated of their own accord. An example is that some foreign auto-makers operating in China did not introduce available emissions control technologies until standards were strengthened.²⁷ On the other hand, Walmart has engaged in an extensive dialogue with China about introducing environmental considerations into its store operations there, and about introducing environmental considerations into its market supply chains for products exported from China.

There are many more topics that could be covered on Chinese trade and environment relationships; for example, reducing GHG emissions from China's huge shipping fleet and eliminating unsustainable practices in the fisheries trade. Also of concern is the potential for China to place more emphasis on trade relationships within Asia, and with countries in Africa and elsewhere that have lower expectations concerning the environment than Western developed countries. Trade and the environment is a subject where "greenwash" is frequently encountered, and where certification or other voluntary processes can be hijacked or phony. The WTO has moved slowly and relatively ineffectively on the environment, even though sustainable development is supposed to be a priority for it. Regional trade agreements that China is negotiating with the Association of Southeast Asian Nations and others are not heavily weighted toward environmental performance.

²⁶ Li, "Green Rules."

²⁷ Gallagher, *China Shifts Gears*. Also, Beijing adopted stringent Euro 4 standards for auto emissions in January 2008.

Despite these shortcomings in the international framework for the environment and trade, there are good reasons why China will wish to continue strengthening its own performance. First, it is a victim of bad practices, whether it is from invasive species introduced into China, pollution from illegally imported wastes, or the contamination that remains in China from goods produced for export. Second, China has experienced the prejudice against Chinese firms that seek to invest in companies abroad but are rebuffed, in part due to concerns over environmental protection. Third, China worries about barriers to entry of its products into markets abroad as a consequence of production methods or market supply chains. And, fourth, China sees economic opportunity in “going green.” Thus being a “globally responsible citizen” on trade and the environment can be justified on purely pragmatic, self-interested grounds.

CHINA’S INTERNATIONAL DEVELOPMENT EFFORTS AND THE ENVIRONMENT

China has been active in development assistance since the 1950s, with much of the early effort very ideologically driven.²⁸ Today, the motives of China’s development efforts in Africa, Asia, and elsewhere are often considered to be driven by the need for reliable sources of oil, minerals, forest products, and other commodities; by support for Chinese views at the United Nations; and by the cultivation of future markets for Chinese goods and services. These certainly may be collateral benefits for China, but there could also be substantial development benefits for poorer countries, which may learn from China’s successes and from transfer of appropriate technology. Some of these benefits to other countries will be directly related to environmental improvements: for example, clean water, waste treatment, improved agricultural practices, and watershed management. China is already the world’s largest producer and user of solar-powered rooftop water heaters. Transfer of this technology and, in the future, of other renewable energy technologies developed in China will be part of China’s relationship with developing nations.

China is meeting one of the demands of developing nations: the opening of trade opportunities. African trade with China has gone from US\$10 billion in 2000 to US\$106 billion in 2008.²⁹ The trade balance is in favour of Africa, reflecting the commodities such as oil and minerals. The key factor is ensuring that this trade wealth reaches people, rather than being skimmed off at higher levels within countries. This should be a concern to China. Mechanisms are needed to link China’s trade and aid in practical ways.

China is working with various countries and international agencies with development expertise to increase the quality of its assistance. But China clearly is also interested in establishing its own approach – posing a challenge to existing international development cooperation. Emphasis is being placed on the role of Chinese business, which includes purchase of mining companies, turnkey engineering projects, investment in fishing fleets, and relationship building, for example via the China Africa Business Council. How much attention is given to environmental impacts of the various activities is uncertain. The China Export-Import Bank and the China Development Bank are organizations that should take an interest. They are developing relationships with the World Bank, and there are other mechanisms by which China can incorporate environmental safeguards into its international development and expanding trade relationships with developing countries.

²⁸ Chin and Frolic, *Emerging Donors*.

²⁹ United Kingdom, Department for International Development, “Why China Is Important.”

In China's international cooperation with developing countries, the environment and development may best be described as a work in progress, with many rough edges, of which only a few have been mentioned here. This topic should be one of major concern to the OECD countries in the coming years. At the moment the Department for International Development, the British development assistance agency, appears to be the most proactive among bilateral donors. It has entered into working relationships with China on some Sino-African international development.

COOPERATION IN SCIENCE AND TECHNOLOGY INNOVATION

Solving today's environmental problems and meeting tomorrow's sustainable development needs require not only expanded application of available technologies, but also a commitment to science and technology (S&T) innovation. Some problems such as carbon sequestration, advanced coal combustion, nuclear fusion, and monitoring environmental changes in the oceans cannot be resolved by any single nation in isolation. China is better placed than any other developing nation, and indeed better than some G8 nations, to initiate work on environment and development S&T. China aspires to be among the top five nations engaged in science and is investing accordingly. Much of this investment is directed to meeting sustainable development objectives over the coming decade.³⁰

China has many S&T environment and sustainable development international cooperation efforts under way via the Ministry of Science and Technology and leading universities and academies. China has maintained diverse linkages with international bodies such as the United Nations Environment Programme, the International Council for Science, and UNESCO (e.g., its Intergovernmental Oceanographic Commission). China is a partner in ITER, the international consortium attempting to develop fusion energy. The significance of China's participation in many of the advanced efforts is that cooperatively developed S&T can make such technology, including highly efficient power plants and advanced pollution prevention, available in time to be deployed in China's massive upcoming investments in infrastructure. China complains that is forced to pay a very high price to get access to the newest technologies if they are developed abroad. It wants to avoid lock-in to older generations of technology that are less efficient or fail to deal adequately with the complex problems of today.

The intellectual property that China is beginning to accumulate in its own right will provide an interesting situation for the future. Will China be prepared to share the fruits of its substantial S&T investment with other nations, especially poorer nations? And will the locus of some environmental research and development eventually shift to China, for example on reforestation, desertification mitigation, clean coal technologies, and some elements of biotechnology for sustainable development such as cellulosic ethanol?

THE ENVIRONMENT AND SECURITY

The expanding definition of security to include environmental and human development concerns is a relatively new approach to global cooperation. This raises intriguing possibilities for China's relationship with other countries, especially the Western democracies.

³⁰ China's Mid-term S&T Plan is the basis for efforts to build a science-based economy; Cao, Suttmeier, and Simon, "China's 15-Year Science and Technology Plan."

The Chinese Communist Party's leaders have made the case over the past three years that what is needed is the development of an "ecological civilization" within China and elsewhere in the world.³¹ Presumably such a transformation would reduce the ecological footprint of our species, which is believed to already exceed the earth's carrying capacity to sustain life.³² It would be a means to reduce threats to ecosystems while safeguarding food supplies, fresh water, and other necessities and gradually reducing the risk from climate change, pandemics, and other threats to human security. Such a vision is far removed from what is actually happening in the world today, where multiple and convergent crises are the order of the day.

Environment and development scenarios about the future prepared by various think tanks³³ have tended to focus on responses to insecurity such as a "fortress world," in which those nations that can afford it will build barriers and defence mechanisms, with others left in a disadvantaged situation. At the other extreme is a "sustainability world," where there is a much greater collaborative effort and participation by people and communities in the shaping of their future. The question is where to place the two powers likely to dominate international relations in the coming decades – the United States and China – and where to place others such as the European Union nations and other major countries such as India, Russia, South Africa, and Brazil.

Democratic governance, human rights, and public participation intersect with these scenarios, of course. Environment and development turn out to be valuable entry points to the dialogue, both nationally and globally. Environmental progress depends on people's participation in decision-making, as nations such as Japan and Korea have discovered. And political change can be brought about through the rise of environmentalism, exemplified by the Green Party in Germany and the role played by environmental organizations during the disintegration of the former Soviet Union.

Globally, the debates over who is indeed a good and responsible global citizen are being led not so much by governments as by the many citizen watchdog groups and by a wide array of lobby forces. Thus perception plays a large role in defining whether a country is meeting its responsibilities. China is very aware of this, and in recent years has expanded its efforts to tell the world about what it is doing for environment and development. It has not explicitly tied these matters to those of human rights, although it places much emphasis on increasing public participation in environmental assessments. By Western standards, this appears to be mainly rhetoric. But within China it is clear that environmentally based protests occur frequently over pollution, ecological degradation, industrial siting, mining activities, and land grabs by some corrupt officials at local levels.

LOOKING AHEAD

China has moved into an important transformative phase on environment and development. It has started down a domestic pathway toward environmental improvement that would be difficult to stop even if the government wished to do so. It appears to be heading along a similar path internationally, even if the signals often appear inconsistent during international negotiations such as those currently under way on climate

³¹ Statement by President Hu Jintao at 17th Communist Party of China Congress, October 2007.

³² World Wide Fund for Nature, *Living Planet Report 2008*; and China Council for International Cooperation on Environment and Development and World Wide Fund for Nature, *Report on Ecological Footprint in China*.

³³ Raskin et al., *Great Transition*. See also Stockholm Environment Institute and United Nations Development Programme China, *Making Green Development a Choice*.

change. As the various examples of action above have revealed, China certainly is engaged with the international community on issues of the environment and development. This is being done through multilateral and bilateral agreements for environmental cooperation, but also via efforts linked to poverty reduction and to economic growth and trade. The question is how much more effort is needed, and whose criteria will determine whether China is really pulling its weight sufficiently at the global level.

China will have to build a relationship between the environment and the economy that is robust for its domestic circumstances, including its goals of poverty reduction, urbanization, and continued economic growth. The current global interest in "green growth"³⁴ is therefore likely to dominate within China as well. This will balance today's challenges with tomorrow's opportunities, an approach that is appealing to China's traditional way of addressing crises. It is also a positive means for China to continue strengthening its engagement with other countries on matters related to globalization and global environmental security.

Self-interest, not altruism, is the key factor in determining the extent of China's action on global cooperation for the environment and sustainable development. But it is important to recognize that China's perspective is long-term and strategic, thus opening more options for action. Also important is China's ability to be adaptive when faced with changing circumstances. This has been demonstrated by the more open and proactive way in which China has recently addressed international public health crises after problems with how it addressed SARS in 2003. This new approach bears similarities to what is starting to happen in China's efforts to meet global responsibilities on the environment and development.

The ongoing pressure for China to act responsibly in its global environmental relations will come from many sources, but clearly one of the most important will be the views of the Chinese people. The rising public interest within China on environmental issues is not confined to domestic concerns. And the capacity within universities and other institutions to understand China's international concerns and positioning has become much more sophisticated in recent times.

Other countries can shape China's global contributions in a number of ways. First, the richer nations can demonstrate through their own actions a very high standard that will force China to move upward more quickly. This has been the case with China's adoption of the very advanced Euro 4 standards for auto emissions. Second, trade barriers or other sanctions might be applied, for example on products with high amounts of embedded carbon in their makeup. This will be fiercely resisted by China. And, third, key developing nations can band together to provide their own demands and standards of environmental behaviour. To some extent this is already being done via the G20. There is speculation about the direction climate change negotiations might take if India and China form a strong alliance,³⁵ or if China links strategically with other major developing countries.³⁶ In fact there was evidence of such alliances at the Copenhagen climate change meeting. On the other hand, China could become a powerful bridge between the developing nations and OECD countries on environmental matters.

³⁴ Organisation for Economic Co-operation and Development, "Declaration on Green Growth."

³⁵ China and India signed a memorandum of agreement on climate change in October 2009, under which the two countries "would build partnership on climate change and strengthen cooperation in alleviation, adaptation and empowerment projects concerning climate change. The two countries would also set up a Joint Working Group, which would hold annual meetings alternately in China and India, to exchange views on major issues on global climate talks, domestic policies and measures, and implementing related cooperative projects, according to the MoA". See "China-India MoA on Climate Change," *China View*.

³⁶ Senior officials from Brazil, China, India, Brazil, South Africa, and Sudan (current G77 chair) met in Beijing at the end of November 2009 to discuss joint strategy for the Copenhagen conference.

Finally, what happens at the international bargaining table is only the start of real action. International accords, whether with China, the United States, or other nations, have to be translated into implementable plans at home. Here most countries have great difficulties, including China. Implementation of climate change agreements is a particular concern, because energy demand will continue to rise and any shift toward a low-carbon economy will be challenging, especially with China's reliance on coal and given its need to stimulate domestic consumption.

The dance between China and the world community on environmental concerns has moved from the pace of a waltz to a much faster beat as global problems worsen. But the slow speed of the international response to problems of monumental difficulty will probably work against China's longer-term prosperity and well-being. China can address this in several ways: by leading through best-practice actions and policies at home and abroad; by taking a highly proactive and positive role in reform of international organizations in order to make them operate more effectively; and by investing cooperatively in the development, adoption, and dissemination of innovations for sustainable development – especially for poorer nations.

IMPLICATIONS FOR CANADA

Stewardship Expectations

Together, Canada and China constitute about 13 percent of the world's total land area. They share a common need to understand how they can sustainably manage at internationally acceptable standards their vast lands and waters, plus their other natural resources and their overall ecosystems. This challenge has to be undertaken at a scale and complexity far beyond the scope of the comparable challenges facing countries such as Germany, Japan, and other populous but smaller nations. As well, China and Canada face huge challenges of dealing with climate change across their territories, including the problems of coastal sea-level rise, diminishing glaciers, melting permafrost (China ranks behind only Russia and Canada in total area of permafrost), and areas affected by changing rainfall patterns.

There is good reason for China to learn from some of Canada's experiences in environmental management, but also for both countries to cooperate on international mechanisms that will be advantageous for large countries in dealing with forest and agricultural land management, freshwater and marine issues, mineral development, and biodiversity management. The two countries can work together on how ecological services such as carbon sequestration in soils can lead to carbon credits and advantageous eco-compensation arrangements. Over time the learning would likely become very much a two-way affair in which Chinese experience in managing ecosystems under very intensive use would become of interest to Canada, as would some of China's environmental technologies for land and water management.

Intercontinental Pollution Control

Canada is the recipient of pollutants that cross the Pacific Ocean in the atmosphere and via ocean currents. The people and ecosystems in the Canadian Arctic receive POPs and mercury, among other noxious chemicals. There are concerns about toxics in marine mammals and other ocean life along Canada's west coast, and about mercury levels in freshwater bodies throughout North America. China is not the only source but it is believed to be a major one for such contaminants. These are delicate issues where the receiving countries are highly vulnerable, and the trails leading back to sources are unclear because of limited scientific understanding. Ideally some of the uncertainties could be resolved through greater scientific cooperation. This

is a problem area where Canada-US cooperation with China might be productive, as well as cooperation carried out via the Arctic Council, where China is now an observer.

Sustainable Urban Development

By 2025 China is expected to have about 220 cities with a population greater than 1 million each, including eight with populations greater than 10 million each. Although Canada has only a small number of large cities, our urban experience is of considerable relevance to China. Canadian cities' reputation for quality of life, environmental management, and governance relationships make them of interest. The massive urbanization of China already under way and slated to continue for several decades offers many business opportunities, as companies such as Bombardier have already discovered. Chinese urban environmental management focuses on cost-effective infrastructure for solid waste management, drinking water, and sewage; on green development, such as energy-efficient buildings and transportation and livable neighbourhoods; on land reclamation and brownfield redevelopment; and on pollution prevention. There is a strong interest in addressing urban sprawl since agricultural land is so scarce. There are many difficulties in developing adequate funding relationships among the various levels of government and in regional urbanization arrangements.

Similar urban development problems have been tackled with varying degrees of success in many parts of Canada. Many Canadian communities have developed sustainable action plans that have been followed up with major investments. Planning and governance experience, and private sector design, construction, and technology development experience are relevant to China. This is the time for Canada's experience to be transferred, via a variety of mechanisms including the private sector, and via direct city-to-city exchanges. Indeed, China's needs are urgent and massive, since design and construction today lock Chinese development into patterns for generations to come.

INVESTMENT, TRADE, AND THE ENVIRONMENT

Both China and Canada depend upon foreign direct investment and international trade for their wealth creation. China is Canada's second-largest trading partner, and Canada is China's 12th-largest.³⁷ Environmental matters have not yet played a very significant role in bilateral trade and investment. But times are changing.

An example is the attitude of Canadians toward Chinese investment in Canadian businesses, especially in the resources sector. China has been rebuffed in several efforts to invest in Canadian mining companies, and frustrated on others such as the oil sands. Initially, concern was expressed by Canadians over the possibility that China's investments might lead to reduced environmental and safety efforts on activities carried out in Canada. Chinese firms encountered these problems elsewhere, although their efforts in some Latin American, Asian and African countries have led to substantial investments, often with allegations that indeed environmental and social issues were not adequately addressed.

Now, in the aftermath of the global financial crisis, Chinese businesses, with the full backing of their government, are making deals throughout the world, including recent investments in Canada. They are taking advantage of low prices to buy or invest in companies, with the expectation of greater security in access

³⁷ Zhu Taoying, "China's Policy on Environmental Protection and the Industrial Cooperation between China and Canada in the Environmental Protection," welcoming remarks at the Third Annual Canada China Environmental Forum, Toronto, June 8, 2009.

to needed resources, and even taking over agricultural lands and lands for biofuel production in some countries. The Government of China has signalled that it intends to make companies responsible for following both Chinese laws and relevant environmental laws in the countries abroad where they operate. In the future more Chinese manufacturing and other enterprises will operate abroad, and Canada will need to be prepared to address the environmental aspects of such activities as well as the operations of Canadian firms that are at least partially owned by Chinese interests and are operating in third countries.

Another way the two countries can benefit is by increasing the investment by Canadian enterprises in China's sustainable development and transferring Canadian environmental experience through this mechanism. China's laws governing foreign direct investment now include environmental safeguards, with some expectation that there will be demonstration value for similar Chinese firms. Some Canadian firms, Sino-Forest Corp. being an example, have built their business around sustainable development approaches. This firm has become the largest forest plantation operation in China, making a good profit by comparison with most Canadian forestry companies.³⁸

The recent agreement of China to include Canada on its list of "Approved Destination Status" countries for Chinese visitors is expected to create a major infusion of visitors, including tourists who presumably will be influenced by the parks and other outstanding examples of the Canadian environment. They will return home with enhanced awareness of the value of nature conservation and protection.

Canada has conducted prolonged negotiations concerning a Canada-China foreign investment promotion and protection agreement. One of the preparatory elements was an initial environmental assessment completed in 2008. It concluded that the level of investment by Chinese businesses in Canada was still very modest and posed no major environmental threat.³⁹

Greater cooperation between China and Canada would be advantageous on environmental issues related to international trade agreements, including embedded carbon and many other market supply-chain concerns; import and export of wildlife products; invasive species and disease organisms; trade involving genetically modified species, including fish and forest products; and trade issues related to recycling, including electronic wastes and possibly other types of banned products that are smuggled into China for recycling. These matters are covered under a range of international agreements including those of the WTO and environmental agreements such as CITES and the Basel Convention. But trade and environmental relationships are still not fully worked out. Trade barriers are set up on environmental grounds even when they are unwarranted. Supply chains are a major problem when illegal trade is involved or when countries are willing to buy or sell commodities and finished products not produced in an environmentally acceptable way. Canada has a big stake in these matters, especially as they affect our forestry, agriculture, fisheries and aquaculture, mining, and oil and gas industries.

Climate Change

Canada and China both face the difficult situation of having rapidly growing GHG emissions. China's emissions can influence the global outcome of climate change, while Canada's represent a relatively small overall contribution. But both countries face strong international scrutiny: Canada because it failed miserably on a goal it agreed to under the Kyoto Protocol and China since its emissions, already the highest in the

³⁸ Galt, "Sino-Forest's China Advantage."

³⁹ Canada, Department of Foreign Affairs and International Trade, "Initial Environmental Assessment."

world, are unlikely to peak before about 2030 at the earliest, under current projections. For both countries, a large portion of their emissions is exported as embedded carbon to countries that hold no responsibility for these emissions on their carbon scorecards. Clearly both countries have a substantial stake in the post-2012 agreement that is to replace the Kyoto Protocol, and in other efforts to address climate change.

Canada was not a leader in the two years of meetings leading up to the December 2009 Copenhagen climate change conference. China's positioning is governed by its own strongly held views, which emphasize substantial reduction progress by rich countries and assurance that its own development will not be affected; by its concern to build a mutually acceptable approach with the United States; and by a desire to turn this large problem into new opportunities through a green growth strategy. Certainly at the bargaining table Canada has not had any strong influence on moving China toward targets, or toward accepting any particular position. But that does not mean Canada and China should go their separate ways on this issue, or that either can afford to ignore the other in what will be a long-term struggle.

First, both countries will likely be bound by the limited outcomes of the Copenhagen meeting and by the later negotiations still needed to produce a workable framework covering action for 2013 to 2020 and beyond. Over that time there will be a remarkable change in carbon trading relationships globally and in the pricing of carbon. These changes will affect our biggest exports, including hydrocarbon products, forest and agriculture products, and the types and sources of automobiles we import and produce. For example, if China is successful in producing robust electric autos, as it is trying to do, will Canada become the testing ground for the North American market, and an attractive place to assemble Chinese-designed cars by 2020? How will our trade in auto parts to car companies around the world, including China, be affected? Canada and China should both be able to take advantage of any agreement that gives greater recognition to carbon sequestration through improved agricultural and forestry practices. But such a regime will require better monitoring and careful carbon bookkeeping. On the other hand, melting of permafrost may well become a major new source of GHG emissions, and here both Canada and China are vulnerable. They may wish to work with other countries such as Russia that have a similar problem.

The second reason for building stronger cooperation with China on energy, the environment, and climate change is the growing set of linkages across the Pacific on these issues. Chinese investment in Canadian energy sources, including coal and the oil sands, will expand, with a variety of environmental implications. These include the need to ensure safe transport via Pacific Coast ports, including those in Prince Rupert, Kitimat, and Tsawwassen. The problem of atmospheric pollutants, especially those from coal burning, travelling from China to the eastern Pacific and the Arctic will need to be solved. And there will be growing international pressures to produce in a more environmentally-friendly way "dirty" energy sources, including coal and oil sand products, slated for export from Canada.

The third reason is the great need for technological cooperation. This point is stressed by China and other major developing countries. Chinese researchers have identified more than 60 energy and environment technologies that they need but do not have full access to. Canada does have direct experience with various types of low-carbon energy and environment solutions and is prepared to invest more money in their development. Examples include cellulosic biofuels, hydrogen as a fuel source, advanced models for coal burning, sequestration of carbon dioxide from oil sands into oil and gas wells, advanced wind-power use, and advanced building technology. There will be interest within China not only in gaining access to these and other technologies, but also in drawing upon the many secondary and ancillary technologies required – for example, energy storage systems for wind and solar power, and improved electrical grid systems. Some of the technologies of the next 20 to 30 years will emerge from China through joint ventures and research consortiums. Canada should be working with China and other countries to take full advantage of what will be a remarkably large R&D investment in sustainable energy. It is promising that China and Canada

have taken steps in this direction in the accords made at the time of Prime Minister Harper's visit in December 2009.

Yet so far Canada and China have failed to produce a strategic relationship on energy and climate change issues. At least half a dozen European Union nations believe they have such a relationship, generally focused on a low-carbon economy, on the basis of nuclear reactors (France), economy-wide approaches (UK and Sweden), transformation to renewable energy sources (Germany and Denmark), or advanced remediation technologies (Norway). The new economic dialogue established at the highest levels between the United States and China is strongly focused on technology cooperation for green growth. Canada needs to appraise carefully what its best advantages may be for environment and sustainable development technology with China, and move quickly in order not to lose competitive advantage. Success in China will translate into global green market advantages later.

The United States, China, and Canada

In the near future China's most significant relationship building on environmental matters will be with the United States. The need for stronger ties has been apparent for a number of years, but with the proactive efforts of the Obama administration to improve overall US-China relationships, prospects are better than at any time in the past decade. These two superpowers will put the planet's environment at risk if they fail to stem their substantial GHG growth, and they will put the world's economic recovery at further risk unless they can provide leadership on financial and trade reform. Beyond these aspects, of course, are a variety of security issues. What is important to recognize is that the global environment for the first time is being treated as one of the top matters in the China-US relationship.

Canada, Europe, and Japan are not being shown the same degree of attention by China as it is giving the United States on the environment. This is not for lack of trying in the case of many European Union countries, especially the United Kingdom, Germany, France, and several Nordic nations. Many accords are in place on energy and environment cooperation, and during visits to China their leaders have emphasized environment and climate change action. Canada has sent mixed signals. For at least a decade, starting in the mid-1990s, it made the environment a key priority of its development assistance with China; it initiated programs such as the CCICED, started cooperation with the Central Party School and several provincial party schools to introduce the environment and sustainable development into their curriculums, and undertook a joint project for cleaner production. Canadian environmental technology companies participated in various trade missions to China.

More recently Canada has sent very ambivalent signals to China concerning environmental interests. It has given a lower overall profile to the subject in its development assistance and in other relationships involving government-to-government contact. The message on climate change at one point was severe – and was sometimes formed as a question. Why should Canada sign on to targets for addressing GHG reductions as long as China and other countries such as India will not? While the situation may be changing as Canada and China rebuild their general relationship, it is not very clear yet where environmental matters will fit. This should be a concern for both countries, as significant opportunities are likely to be lost and the costs to both may be significant without a clear and actionable relationship on environment and development. There are economic and competitiveness implications, of course, but also strategic concerns.

Our proximity and the depth of our relationship with the United States give Canada a certain level of advantage compared with European nations as we develop environmental relationships with both China and the United States. We have built a solid suite of arrangements with the United States on many

environmental topics, and we often cooperate during international negotiations as well. We take the environment into account in our substantial economic cooperation on commodity and industrial trade, for example in cross-border softwood lumber and agricultural product flow, and in standards for auto emissions. This experience and particularly the likely efforts over the next few years to build a North American continental approach to GHG emissions trading and on other energy and environment matters should protect some of our economic interests with China.

Yet Canada needs to be proactive with both China and the United States to ensure that it is not a victim of US success in building a strong environmental working relationship with China. We stand at some risk of being left in the dust as China-US cooperation leads to new technology development favouring US environmental industry, or international environment or trade accords that might harm Canada's interests. For example, Canada could be sideswiped on the use of an ice-free Northwest Passage for shipping, or by bilateral arrangements between China and the United States on product environmental health and safety standards.

SOME RECOMMENDATIONS FOR CANADA

We must assume that serious efforts will be made sooner rather than later to strengthen ties with China on environmental matters, including climate change. These have to be addressed in the context of an overall improvement in Canada-China relationships. And the relationships must be long-term, ideally fostering not only desirable actions between the two governments but also bilateral linkages between provinces, enterprises, communities, research organizations, universities, and civil society bodies. Putting it bluntly, each country needs the other as we move into a future where sustainable development becomes an overarching and attainable goal for society at local, national, and global levels. But success will depend upon the breadth and depth of the linkages.

A number of steps could be taken to improve Canada's relationship on the environment and development with China – for the betterment of the two countries, and in order to help both become more responsible environmental contributors globally.

Retain and Strengthen Existing, Successful Environmental Initiatives

Over the past several years it has become more difficult to maintain environmental initiatives through the China Program of the Canadian International Development Agency (CIDA), which has been reduced in both overall scale and scope. While it is certainly true that China is now more capable of funding development activities, it is still difficult for international cooperation activities to be fully funded through domestic Chinese sources. Indeed, if there are strong mutual cooperation interests at stake, it is wise to ensure that funding comes from outside as well as within China. In some instances such as the CIDA support for CCICED, this need has been recognized, so that an environmental policy activity started by Canada is now financially supported by more than 10 other countries, plus several other sources, and by China itself.

Canadian governmental organizations, civil society groups, universities, sister city programs, and research organizations have emphasized environment and development in many instances – too many, in fact, to describe here. These include a long-standing cooperation agreement between Environment Canada and China on cleaner production and other topics; the work of Statistics Canada with its Chinese counterpart to introduce internationally acceptable resource and environmental accounting; research support from the

International Development Research Centre on a number of agricultural and natural resource topics and on science and technology; International Institute for Sustainable Development initiatives on trade and environment with MOFCOM and other parts of the Chinese government; environmental planning efforts in Chinese cities via the Vancouver-based International Centre for Sustainable Cities; and the Harmony Foundation.

External funding for initiatives with China tends to be fragmented, and not always fully in line with the needs. Some other countries flow their resources through environmental agencies, but that does not seem to work well for Environment Canada, already hard pressed to meet its core priorities. CIDA now has limitations that seem to make it difficult to secure a full range of long-term commitments for environmental activities, including both those that have a primary purpose of addressing global environmental concerns and those specifically related to China. And so it goes across government.

Canadian private sector investment linkages on the environment within China have been backstopped by a range of mechanisms and organizations including Export Development Canada, the Canada-China Business Council, the Asia-Pacific Foundation, and the Globe Conferences on Environment held every two years in Vancouver. In addition, Canada organizes trade missions, and of course many individual companies, provincial trade bodies, and others have their own initiatives. The problem is that, with the exception of the Globe Conferences, there is no single body with the environment as its main focus. Furthermore, the signals sent by Canada on bilateral trade with China have not been very strong in general, and certainly not powerful, especially in relation to the emerging green growth approach of other nations such as the United States.

With a central strategy to address the joint interests of Canada and China on the environment and development, it would be much more possible to strengthen the links among Canadians working on these topics and to build more robust ways to deal with the types of problems discussed in this paper. It is interesting to see how even the signals that the United States is moving toward such a strategy are working in that country to bring a more coherent approach there, and certainly this is true for Great Britain, Sweden, and other countries. In Canada there have been recent efforts outside of government to link interested groups, for example, the Canada-China Environmental Forum.⁴⁰

Strengthen Cooperation in Environmental Science and Technology

Canada has a strong S&T base that is mature and productive, including many achievements and ventures that are relevant to complex environmental issues. Canada also has backstopped its S&T with bodies such as the Canada Foundation for Innovation, the IDRC, and Sustainable Development Technology Canada (SDTC). China is investing much more money in S&T than Canada could ever hope to do, much of it for environmental technology. For now, much of this funding will go toward capacity development, but ultimately China wishes to be among the top five nations in S&T. Getting there depends on international cooperation. China has a strong interest in having Canada as a significant partner. Why should Canada wish to do so? Certainly in relation to the environment, such a partnership would permit Canada to access one of the world's largest markets for environmental technology. It would help the Canadian science and technology sector become a more important player in speeding the implementation of new technologies that will help to save the global environment.

⁴⁰ The Third Annual Canada-China Environmental Forum was held on June 8, 2009, in Toronto. <http://www.canadachinagreen.com/splash.asp>.

In 2007 Canada and China signed a bilateral treaty called the Canada-China Science and Technology Cooperation Agreement, focusing on four sectors: energy, environment, health and life sciences/biotechnology, agricultural foods and bioproducts. Under this agreement, funds can be accessed from a few sources, including those administered by ISTP Canada,⁴¹ which supports technology cooperation between Canada and several countries in addition to China. This could be a stable and sizable source of international cooperation funding, although perhaps only a limited portion will be allocated for environmental technology.

An important need is to link this funding to Canadian environmental private sector initiatives in China, perhaps with the assistance of organizations such as SDTC, or by other means. The bigger challenge is how to grow the still relatively modest funding available under the agreement into the bigger pots of money, on the order of tens of millions of dollars or more, that will be needed to address specific problems related to climate change. Here is where there may be substantive opportunities to link Canadian, international, and Chinese sources of funds. Hopefully a strong vision will emerge that could justify such efforts.

Use Political Opportunities Well

There are numerous political forums where Canada could facilitate China's growing interest and abilities to make a larger contribution to solving global problems. Some of the best, of course, are those where Canada is the host, particularly the G8/G20 gathering in 2010. The G8 meetings have focused considerable attention on issues of the environment and development in recent years, including climate change and African development. The G8 must soon take the step of expanding to include China among its members. Could this be brokered with the assistance of Canada, as some commentators have suggested? And could part of the deal be that China would take on greater international cooperation roles on both international development and on environmental matters? Whether China would agree is a question that might well hinge on the concessions necessary.

Certainly there are other opportunities and needs in the restructuring of institutions where China could take on a more important role. It is already cooperating with the OECD on some environmental matters; for example, it subjected its environmental policies and practices to international benchmarking in an OECD review in 2007.⁴² Both Canada's and China's activities in the G20 have been constructive, helping this body to become a significant voice in climate change matters.

Whether Canada can or should support Chinese positions on the environment and development in international political gatherings will continue to depend upon a variety of factors: our own domestic interests, the views of the United States, and sometimes the positions of European nations or others. What has been lacking in recent years is consistency on how to deal with a rising China. We can assume that with the Copenhagen climate change conference behind us, the air has been somewhat cleared among all the leading nations, even though the immediate results were not what was hoped for – a clear path ahead for this vital topic. We have a better sense of which statements were only political rhetoric, and which are likely to open avenues for real action. What remains is the challenge of building a stronger, more cooperative global relationship for addressing climate change. If this challenge can be addressed more constructively in the coming few years, it will also transfer into positive action on other global environmental problems. We can hope to see the start of a new era emphasizing the environment, the global economy, and the well-being of people throughout the world. Canada should not lose sight of the opportunities ahead, and should work very closely with like-minded countries. China should be considered one of those countries.

⁴¹ ISTP Canada, "Partnership Development Activities in China."

⁴² Organisation for Economic Co-operation and Development, *OECD Environmental Performance Reviews: China*.

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THE CIC CANADA-CHINA RELATIONS PROJECT

Bilateral relations between the governments of Canada and the People's Republic of China are a matter of strategic interest to Canada. Recent changes in the frequency of high-level visits, the effective style and content of bilateral communications and perspectives held about each country by various sectors of each other's society all suggest that the Canada-China relationship has changed significantly in recent years. Yet China remains vitally important to Canada for a variety of reasons and in a variety of sectors. Political and diplomatic cooperation on issues of direct bilateral concern and also on issues of global import remains critically important. Commercial and trade ties linking Canada with the world's third largest and fastest growing economy are of obvious importance. Cultural and civil society ties, including immigration patterns and the ancillary effects they generate, are also important. In these and other matters, the Canada-China relationship will likely grow in importance in the years to come. While the diversity of links between Canada and China militates in favour of giving due attention to a multiplicity of commercial, academic and civil society links, bilateral cooperation at the federal/central government level remains important.

In keeping with CIC objectives to advance research and dialogue on international affairs issues of importance and interest to Canadians, the CIC Canada-China Relations Project has focused on supporting research and analysis toward building a policy framework for Canada's relationship with China. The project's activities have been developed along three thematic areas that reflect issues of common concern: a) Chinese domestic institutional and normative contexts for engagement; b) Economic relations; c) Collaboration on global issues such as environment, health and security.

- a) Domestic Context for Engagement: The Canada-China relationship can be most effective when it is grounded on complementarity of interests, which in turn requires mutual understanding of domestic normative and institutional conditions in both countries. Canadian initiatives with China, ranging from WTO compliance and business regulation to human rights, can be effective only if they are designed and implemented in light of China's domestic conditions, ranging from popular norms to governmental structures and policy priorities. Similarly, China's success in nurturing productive relationships with Canada will require appreciation of Canadian domestic conditions. The papers for this thematic area were commissioned and directed by Professor Jeremy Paltiel of Carleton University.
- b) Economic Relations: Economic relations between Canada and China are critically important. Economic relations include bilateral trade and investment relations, and also extend to local effects of economic conditions and behaviour. In the trade area, Canada's strengths match up extremely well with China's needs. In trade and investment relations, efforts to promote normative and institutional accommodation in China for Canadian business objectives are consistent with Chinese development policies and also serve important Canadian interests in the areas of good governance. As well, national economic behavior by the two countries in response to changing economic conditions at the global, regional and local level have important effects on the Canada-China relationship. The papers for this thematic area were commissioned and directed by Yuen Pau Woo, President of the Asia Pacific Foundation of Canada.
- c) Collaboration on Global Issues: The importance of China's responsible participation in systems for addressing global policy concerns in areas such as environment, health and security cannot be overstated. Yet China's participation in the global community can be distorted by its responses to apprehension and competition from other global actors, particularly the United States, the European Union and Japan. Canada has a significant role to play in supporting China's responsible participation, not only through direct bilateral programming but also through our capacity to deploy good offices, legitimation and other soft power resources both bilaterally and globally. The papers for this thematic area were commissioned and directed by Professor Brian Job of the University of British Columbia.

The papers here presented in connection with the CIC Canada-China Relations Project offer informed, non-partisan recommendations for a variety of stakeholders in Canada, including the government and private and public sector institutions and individuals, with a view toward furthering the development of healthy long-term relations between Canada and China. While historical and current conditions may result in disagreement as to how best to manage the Canada-China relationship, China's importance to the world requires our attention. We hope that the papers presented here can further the process of understanding and effective engagement that will strengthen the foundation for productive relations for the long-term interests of both countries.

Dr. Pitman B. Potter

Chair

CIC China Working Group

The Canadian International Council (CIC) is a non-partisan, nationwide council established to strengthen Canada's role in international affairs. With local branches nationwide, the CIC seeks to advance research, discussion and debate on international issues by supporting a Canadian foreign policy network that crosses academic disciplines, policy areas and economic sectors.

The CIC features a privately funded fellowship program and a network of issue-specific Working Groups. The goal of the CIC Working Groups is to identify major issues and challenges in their respective areas of study and to suggest and outline the best possible solutions to Canada's strategic foreign policy position on those issues. The CIC aims to generate rigorous foreign policy research and advice.

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