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The Evolution of Environmental Policy in the People's Republic of China

Richard Louis EDMONDS

Abstract: This paper outlines how the evolution of China's policy and study of the environment are reflected in the scholarly literature, paying special attention to the impact of the country's environmental developments on international relations. In particular, it examines accounts of how China has moved from an isolated national scientific and environmental control infrastructure into the centre of international environmental debates as its society has opened and the geographical scale of ecological problems has expanded. The paper also identifies the continuing inhibitors to China's ability to control environmental degradation – including lack of transparency, elite manipulation, and bureaucratic weaknesses – despite the opening of China's system to limited participation of civil society in its environmental debates.

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Keywords: China, environment, policy, climate change, pollution, risk, science

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Introduction

While there may have been “no word in the late traditional Confucian-trained administrator’s lexicon directly corresponding to the modern word ‘environment’” (Dunstan 1998: 587), the Chinese term for the environment today, *huanjing* (环境), has wide application: Like the English term “environment”, *huanjing* is used to refer to various social and ecological contexts. In China, the term is often used to demarcate social as well as geographical spheres such as the “investment environment” or the “urban environment” along with “ecological environment” and “environmental pollution” (Hoffman n.y.). The fundamental problem is that different cultural contexts produce different ideas about what constitutes “the environment” (Tilt 2010: 107, also in Wu 2010: 1212-1213). Here we shall try to limit the discussion to pollution and resource degradation and their policy implications and research agendas in the People’s Republic, while emphasising international relations.

The Development of the Study of the Environment in the People’s Republic

Since 1949, various parts of the Chinese bureaucracy have dealt with the environment. As an example, for many years pollution fell under various industrial ministries, whereas the former Ministry of Forestry had the largest amount of (but not the exclusive) responsibility for managing nature conservation. Resource degradation was often looked after by branches of the Chinese Academy of Sciences such as the Desert Research Institute, which deals with desertification. Various other branches of government that managed energy, water resources, planning and industries dealt with some aspects of environmental degradation. The trend over time has been for more aspects of the environment to be concentrated in the hands of a strengthened environmental protection bureaucracy with a simultaneous divestment of *de jure* control from the central government to local governments.

In the early years of the People’s Republic, China conducted scientific research on the environment largely for practical reasons such as improving workers’ health and improving manufacturing efficiency with an eye toward economic development and the saving of resources (for an intellectual view of the materialist support of science and the altered view of nature and the environment in the Maoist period see Murphey

1967: 313-333, and for the stress on self-reliance see: 323-324). Recycling and pollution control were undertaken as much or more for their economic benefits as they were for any feeling of well-being of the earth or for Chinese citizens' quality of life. This was not so out of sync with the thought processes in much of the world at that time (for example, see Glaser 1990: 250). The Chinese also made use of demonstration models and issued placards to enterprise units that were seen to be environmentally friendly – a policy still found in China today.

Little if any writing overseas addressed Chinese environmental problems prior to the 1970s (Wu 2009: 384), and much of the work done in China did not impact international norms greatly. Early research in the People's Republic ignored international trends due to both political considerations and the isolation of China from most of the rest of the world at that time. Much of the early environmental work attempted to ameliorate conditions in order to improve worker productivity. Chinese environmental researchers had virtually no options to visit foreign institutions and very little contact with foreigners – particularly after the Sino-Soviet split in the late 1950s. During the 1950s, the construction of the Sanmenxia (三门峡, Three Gate Gorge) Dam on the Huang (黄, Yellow) River with Soviet and Eastern European help had already demonstrated that major projects that were more appropriate in other environments might produce disastrous results if directly imported into China without taking into consideration eco-systemic differences. Sedimentation levels on quite a different order than those seen on dams in the Soviet Union rendered the Sanmenxia project nearly useless within a few years of its completion (for more on this subject see Greer 1979). Moreover, as Judith Shapiro (2001: 1-19) demonstrates, the whole of the Maoist period with its political repression, appeal to utopian extremes, dogmatic uniformity and forced relocations of large numbers of people was a highly destructive era for China's environment. In particular, the 1960s and early 1970s saw a virtual halt to scientific work throughout the country as radical politics led to a political and social meltdown. Outsiders tended to make environmental statements based on their political views of official Chinese writings of the time, often seeing China's environment through very red rose-coloured glasses.

During the early years of the post-1978 opening and reform period, increased contact and information from outside led to gradual change in the study of, and policies towards, the environment in China. The 1972 Conference on the Human Environment held in Stockholm was a crucial

point in the development of China's environmental policy and its interchange with the international community (Edmonds 1994: 230). The People's Republic had just gained the China seat in the United Nations. This new relationship with the international community led to China's participation in Stockholm. From this point on, organisation of China's environmental bureaucracy began to change. Research during the 1980s, however, remained dominated by scientists who worked in government-run research academies based upon Soviet models with their work driven by government research projects. Foreign contacts in this early opening-up period came mostly from Western Europe, North America and Japan. Many of these foreign scientists had little knowledge of China or the Chinese language. However, some China studies experts who possessed limited scientific knowledge engaged in social studies subjects related to environmental research. This situation produced a research pattern where Chinese researchers provided data while foreign specialists provided Western frameworks and theories and wrote reports and papers in foreign languages for publication outside of China.

At the same time, Chinese researchers and teachers with an interest in social studies began to emerge from the shadows of the Cultural Revolution, a time when it had been dangerous to work on topics with political implications. In the case of academic geography, for example, this led some human geographers, who had relabelled themselves physical geographers during the Cultural Revolution, to return to work on human geography.

In 1991, prior to the United Nations Conference on Environment and Development held in Rio de Janeiro, China hosted a conference of developing countries. Through this forum, China tried to establish itself as the leader of a bloc that could put pressure on the developed countries to obtain concessions on pollution reduction commitments. The 1992 Rio conference itself was to have special significance for Chinese policy as the forum's focus on the marriage of environment and development made it easier for China to support its initiatives (Heggelund and Backer 2007: 421). In China's 9th Five-Year Plan (1996–2000), the phrase "sustainable development" appears for the first time (Government of the People's Republic of China 1997; Lo and Leung 1998: 502). By this time, China had become engaged in the international environmental protection process even if pollution and degradation were far from under control on the ground and China's environmental protection network continued to remain relatively weak.

The majority of environmental writings on China that appeared in academic literature in the early 1990s continued to be scientific in nature and often dealt with land degradation with less emphasis on pollution. Topics such as desertification and deforestation possibly were seen as less politically sensitive than pollution. Nature conservation was often cast in terms of the efficient use of natural resources. This overall emphasis also could have been due to China's greater concern at that time with the economic aspects of food security and resources than with pollution.

In the early 1990s, researchers interested in social issues were affiliated more often with China's university system than with the Chinese government academies. In part this was a result of a perception that social research did not require the large grants that were given to scientists in the government research academies. Still, as Wu Fengshi (2009: 386) notes, when socio-political studies began to take off in China, the environment was seen as a topic where relatively sensitive social issues could be undertaken. Thus, over the 1980s and 1990s, the way environmental problems and studies were addressed gradually changed as the Dengist, market-oriented, open policy took hold and the scene was set for a surge in social studies relating to the environment (Wu 2009: 384). Much of the research from these years that appeared overseas continued to be produced through collaborative efforts between Chinese and foreign researchers.

As previously mentioned, nature conservation was one of the easiest areas in which to develop international cooperation in environmental research during the Dengist years. Wildlife research cooperation seems to have grown out of the "panda diplomacy" of the later Maoist years when China started giving pandas, golden monkeys and other rare endemic animals to foreign countries to stock their zoos as "gifts of friendship". In the early 1980s, Friends of Nature (Friends of Nature 2011) and a few other conservation organisations entered China, whereas pollution control collaboration grew more slowly, presumably because pollution damage remained too politically sensitive.

Despite political setbacks, most notably the Tiananmen Incident of 1989, but also retrenchment in Chinese political rights from time to time, the opportunities to study China's environment have increased greatly over the last two decades. China's participation in the United Nations Conference on Environment and Development in Rio de Janeiro in 1992 helped the country regain acceptance after its post-Tiananmen interna-

tional malaise (Harrington 2005: 110-112). Foreign manufacturing in China also came to play a role in this development: Phillip Stalley (2010) concludes that foreign firms in China have helped in the improvement of pollution control in China rather than merely participating in an “environmental race to the bottom”. Having felt some pressure to meet production standards from the beginning of the open era, China began to adopt Western environmental production standards in the 1990s. For example, China adopted its first five ISO 14000 standards in 1997. Green economic policies were first pushed around this time and are now undergoing a second push for “green insurance” (Aizawa and Yang 2010), “green securities”, and favourable pricing of “green energy”. Others, such as Chen (2009: 26-32), present a contrarian view, noting the negative impact in levels of pollution after China’s December 2001 entry into the World Trade Organisation.

In the early twenty-first century, the study of the growth of environmental movements and civil society in China has accelerated (Ho and Edmonds 2008a). China’s participation in the World Summit on Sustainable Development in Johannesburg in 2002 seemed to lead to a greater focus on safe drinking water in China (Heggelund and Backer 2007: 422). It was the first “Earth Summit” to which the Chinese government invited domestic governmentally organised non-governmental organisations (GONGOs) and Chinese NGOs to attend as part of its delegation.

There is now enough independent data gathered in China to begin to assess an increasing number of projects’ prospects in quantitative and qualitative terms, albeit still often in a rather limited way (see Tullos 2009). However, assessing China’s environmental record on the national level remains difficult. One failed attempt was China’s plan to implement a “Green Gross Domestic Product” measure of environmental loss caused by economic development. Soon after the release of 2004 figures in 2006, the State Environmental Protection Administration (SEPA, now Ministry of Environmental Protection, MEP) had to admit that the figures were very conservative in contrast to World Bank estimates since many costs of ecological damage were omitted. In addition, there were data flaws, difficulties determining what costs should be included, worry about provinces with weak Green GDPs demanding more resources, and local concern about central government scrutiny. Ultimately, the government dropped the idea of calculating Green GDP figures (Kirykovicz 2010), although Hu (2011) notes that the World Bank had first

turned its attention towards Green GDP as a more relevant measure of wealth than GDP during the mid-1990s.

Fieldwork undertaken by foreigners since the turn of the century has increased, although Chinese organisations often continue to try to maintain control of data. The tendency remains for collaborative projects or for foreigners to establish strong connections with Chinese in positions of authority in order to obtain access to data. While there were difficulties in the negotiations between China and the West at Copenhagen, and to a lesser extent at Cancun, and while the continuing global financial crisis could limit resources, environmental cooperation does not seem to have slowed.

Today, big projects in China impact international scientific processes in ways not seen prior to the late 1990s. In particular, the ability to produce large-scale projects has brought China to the fore in determining a part of the world scientific agenda, and this trend is growing rapidly. A review of State Intellectual Property Office data from 1986 to 2006 by Kenneth Huang (2010) demonstrates that in 2001, private sector patents in 12 major science and technology categories surpassed all other sectors including public research institutes, universities, state-owned institutes, state-owned enterprises, and even the growing number of individuals holding patents. Considerable developments in wind and solar power are being undertaken by private sector initiatives, for example. While many of China's new patents have nothing to do with environmental technology, this does suggest a trend toward more science and technology research coming from the private/ semi-private sector, an increase in Chinese innovation, and a geographical spreading out of innovations away from the big cities in the East, and it also implies a rapid maturation of Chinese scientific capabilities in the early twenty-first century.

At the same time, the availability of a wider range of official data and publications has led to suspicion among observers about the quality and ethics of environmental science in China. Plagiarism and falsified data are known to be commonplace in China, and this has led to suspicion about data found in published papers both by Chinese and about China. Among the factors cited for this state of affairs are a continuing lack of transparency and ineffective watchdog capabilities within China's political culture (Geall 2010a). This adds to worries expressed about China's official data and suggests that Chinese research could be pres-

sured internationally to eliminate any unethical practices in future scientific endeavours (Zeng and Resnik 2010).

How Does Environmental Policy Arise in China?

The Chinese government has often initiated policy change as a reaction to a specific environmental problem. For example, when drought occurred in 1997 followed by flooding in 1998 along the Chang (扬子, Yangzi) River, the government launched forest protection and land conservation programmes upstream in western China (Yeh 2005: 11). A more recent case of a change in policy enforcement as a reaction to an environmental disaster occurred in northeastern China during November 2005 when a PetroChina plant on the Sunggari River (松花江, Songhua River) exploded and released 100 tonnes of benzene. The Jilin provincial government tried to hush up this incident much to the concern of people in both neighbouring, downstream Heilongjiang province and the nearby Russian Far East (Oxford Analytica 2010). The Chinese government then attempted to make it clear that future incidents should not be covered up in such a fashion. Again in the summer of 2011, a new Bohai Gulf (渤海湾, Bohai wan) oil spill initially was hushed up, demonstrating a continuing lack of transparency on the part of a government agency, a state-owned enterprise and a foreign corporation (Ma 2011). Although persistence by the Chinese press to get to the truth was encouraging and the Chinese government demanded that such information be made public in the future, the fact that again information was not immediately forthcoming demonstrates that China still has a way to go in terms of transparency.

Pete Suttmeier has pointed out that such situations demonstrate that China has not learned how to manage environmental risk (Suttmeier 2008). For Suttmeier there are two more modernisations beyond the original “Four Modernisations” called for during the late 1970s in industry, agriculture, national defence, and science and technology. He refers to the often-cited fifth modernisation, democratic political change (something expected to occur concomitantly with wealth creation according to the “Washington Consensus”), with the sixth modernisation being the development of institutions to manage technological and environmental risk.

Suttmeier notes it is difficult for a country of China’s scale to easily develop mechanisms to manage environmental risks. There is also the

problem of the changing pace of intensity in the industrialisation process. It took Britain a far longer time to go through industrialisation and accumulation of wealth during the eighteenth and nineteenth centuries than it did for the United States in the late nineteenth and early twentieth centuries. In turn, the United States' industrialisation process took longer than Japan's industrialisation in the twentieth century. Once a more rapid industrialisation process begins, the catch-up game seems to speed up presumably because ever more intense industrial technology is transferred or copied more rapidly by the expanding nation. Will such a transforming society always put the right risk and governance mechanisms in place to avoid serious environmental damage and produce a stable society at a high level of development without heavy costs to the people and to the state? Can future rising states evolve quickly enough to manage these changes without ever-greater disruption?

The Chinese aviation industry is identified by Suttmeier as a case where safety was improved despite use of substandard planes, poorly trained staff and weak management. He rightly points out that the Chinese airline industry is less complex than an environmental regulatory system, which has to deal with a plethora of industries. Is it also not likely that the pace of improvement proceeds more quickly when the system directly affects a base of local and foreign elites than it does in the case of protection of national environmental safety where the elites are able pass most costs on to the poor? In other words, a good air network is necessary to keep the elites moving and shaking. However, while pollution directly affects mine workers, the urban poor, and agricultural peasants, the elites are not equally affected. Thus these risks can be put off or slowly implemented by the elite for the sake of short-term profit.

Suttmeier feels government regulation alone will not be enough to control the risks associated with environmental degradation. In the end, management of risk comes down to transparency and accountability – something recommended for China a long time ago (Edmonds, 1994: 250-258). Despite problems of elite manipulation found in democracies where some civic-minded leaders may be trying to achieve good environmental risk management, Suttmeier sees risk management as even more difficult to achieve under the current political system in China.

One way to avoid blockage within the Chinese system is to promote a new project as having both an ecological and a developmental benefit. Local officials can push a policy by understating potential environmental problems and/ or noting a need for economic development when ad-

vantageous. In a case where a project with an environmentally positive component would be profitable for a select group, local officials can overemphasise that potential environmental need in order to secure approval. Such techniques have often been attributed to what has been called the fragmented authoritarian nature of Chinese politics (Lampton 1987; Lieberthal and Oksenberg 1988). In this sense, a local government or even the national government can paint an issue with a broad and perhaps deceptive brush to obtain economic and political power (Yeh 2005: 13-14). Data can be manipulated to support such an objective.

The dominant way that local Chinese officials advance their careers is by fulfilling quotas imposed by higher-level authorities. More often than not this has meant fulfilling economic growth quotas, which often came at the cost of allowing enterprises to ignore environmental and health regulations. In order to fulfil quotas, some officials found creative ways to get around environmental regulations such as by forcing enterprises to temporarily halt production rather than fully address the excessive production of pollutants or use of energy beyond their allotted levels. Once environmental targets were reached, or when the demands from above relaxed, things often returned to “business as usual”. Increasingly, however, environmental quotas are playing a larger part in career advancement (see Feng and Yuan 2011), and this has led to improvements in environmental regulation in some places, particularly wealthier parts of the country.

Meanwhile, those outside of government can use various techniques to force projects through as well as to block them. Andrew Mertha’s book *China’s Water Warriors* looks at three water conservancy projects and attempts to show how opposition can stop a project as well as how proponents can move one forward (Mertha 2008). Mertha essentially argues that China’s fragmented authoritarianism is becoming even more fragmented (Liu 2009: 141). Basically, for Mertha, the side that can put together a more compelling story is able to get its way in stopping or starting a project and to some degree this favours a more open discussion of environmental proposals than was the case in the past. This suggests that environmental issues can be used as points of focus for those arguing for change in general governance structures, presumably because the issue of the environment can be employed as an oblique attack on China’s wider governing structures.

In any event, as time goes by, more varied types of groups within China are able to participate in the environmental policy decision-making

process. The increased debate can have negative as well as positive environmental implications as worse options could be given more weight in certain circumstances. Still, NGOs, non-official media, and others outside the formal power structures of government continue to have a difficult time getting their voices heard in these debates. Sometimes they are denied access to information, which makes it more difficult for them to effectively argue their case. It is even possible that they assume the potential for environmental damage is greater than it actually is. In the end, the ability of non-governmental groups to influence the outcome of a government-proposed project is inversely related to how much the government organisation in charge and its selected experts are coordinated and in agreement about that particular project (Ford 2009: 143).

Still, if advocates suggest anything in a project that might be seen as a threat to major political stability, repression can be severe. At times in recent years, we have seen civil society being forced to retreat from certain issues where the state has felt threatened, including those of an environmental nature (Brettell 2009: 129, footnote 11). Harassment of civil society has been orchestrated through various methods, including firing/laying off workers, arresting people, giving out fines, conducting arbitrary tax audits, restricting or denying international travel privileges, restricting or denying access to geographic areas and materials, censoring news stories, and physically beating people. Avoidance of such harassment by NGOs that try to work within firm parameters set by the state has been termed “embeddedness” (Ho and Edmonds 2008b). For example, Benjamin van Rooij (2010: 76-77) has pointed out that embeddedness has made NGOs relatively reluctant to actively advocate in court for pollution victims. He found that NGOs were willing to take on only a small number of cases involving citizen protests against pollution. When fighting such cases, the NGOs steered clear of any involvement with foreigners but still suffered harassment and threats.

That said, in the last couple of years large mass environmental protests have been able to hinder certain projects. The Dalian paraxylene (PX) case in the summer of 2011 demonstrated that officials now may back down in the face of large protests (Tang 2011). Whether such projects merely will simply be delayed or moved to a less resistant location (instead of being completely halted) remains to be seen, but environmental resistance is changing the way some officials govern in parts of China.

Whether a local or national decision, attempts to rectify environmental policy after a particular disaster often have been ineffective. As

previously mentioned, in 2005 there was a serious pollution spill on the Songhua River that was mismanaged (Green 2009). Despite claims that the system had improved, the month of July 2010 saw a spate of similar pollution incidents on the Songhua in Jilin and on the Ting River (汀江, Tangjiang) in Fujian, as well as a coastal spill and fire off the coast of Dalian, Liaoning. While these disasters were better managed in terms of the media, they still demonstrated lack of proper management of the pollution regulatory system. In each case, local officials were not fully implementing existing policy (Oxford Analytica 2010; Tang 2011).

Yok-shiu F. Lee, Carlos Wing-hung Lo, and Anna Ka-yin Lee (2010: 40-42) found several explanations over the last 30 years for a lack of effective environmental enforcement in the literature. One line of explanation they found attributes weak enforcement to the inability of agencies to undertake effective actions because of the lack of strong institutional support within the bureaucratic structure. Another line of reasoning attributes ineffective enforcement to the absence or weakness of conflict resolution mechanisms for policy and legal processes, making local implementation extremely difficult. Finally, they see considerable difficulty in getting policy to respond to the changing structure of an environmental problem in China. In other words, responses are often outdated. They found that this final reason applied to the problems with air pollution control measures in Guangzhou, where efforts remained focused on SO₂ omissions despite the growth of CO, NO₂ and NO_x emissions from automobiles.

Many researchers note the dubious nature of Chinese statistics, which continue to be manipulated to make officials or their favoured policies look good. One sees reports in the newspapers of progress being made in pollution control in China at the same time as one reads about environmental blunders. Serious problems remain in evaluating Chinese data. There are questions of the quality of measurements, comparability of measurements, whether what is measured is the best indicator of harmful pollutants or degradation, and the withholding of negative data. Some also note that such statistics do not hold up to scientific scrutiny in areas as disparate as rangeland management and air pollution control. Emily Yeh (2010) makes this case for resource degradation while Richard B. Harris (2010) points out that on the Qinghai-Tibetan Plateau, new policy still is being formulated which misses in terms of providing socio-economic outlets to displaced pastoralists and often relies on large “pest” eradication campaigns that can do as much or more harm than good.

One also should note that even when statistics are collected well, the data sometimes have little impact on mitigation and enforcement policies.

In addition to using partial and not necessarily the most serious indicators of urban air pollution, Steven Q. Andrews (2008/ 2009) has shown how officials intentionally modify data to make their cities look cleaner and better than they actually are in order to enhance their chances for promotion. Andrews found that air pollution data often become abnormally bunched at figures just within the so-called “blue sky” standard in cities such as Beijing, Chongqing, Chengdu and Zhengzhou.

China and Climate Change Policy

The geographical scale of environmental problems is getting larger as time goes by. Thus any environmental problem in one country can affect the environment and health of another. This makes environmental issues an increasingly important factor in international relations. This includes China’s massive South–North Water Transfer Project, which initially appeared to be largely a domestic matter but is now seen as an international one as China gears up to develop the Western route that would reduce flows in the Brahmaputra and other basins that drain into South Asia (Freeman 2011).

Perhaps nothing reflects how much and how little China has changed in the area of international relations as the climate change debate. On the one hand, China has moved, as has the world, from a state of ignorance and/ or denial about the possibility of global climate change to a situation where the Chinese leadership recognises its importance.

It is not surprising that the People’s Republic is afraid to fully confront this problem head on, as there will be domestic “losers” and the government wants stability at all costs. There are many uncertainties about how climate change will affect China and this impairs the policy-making process (for one view see Piao et al. 2010). Increasingly, as the twenty-first century unfolds, it appears that China has undertaken more dynamic domestic climate change initiatives than countries like the US or Australia. In the 11th Five-Year Plan (2006–2010) China had set an ambitious 20 per cent energy reduction target, in 2007 it set up a “National Climate Change Programme”, and in 2009 it announced a 40 to 45 per cent reduction in carbon intensity by 2020 (Fu, Li, and Sun 2009). The

12th Five-Year Plan (2011–2015) has set targets to decrease energy intensity by 16 per cent, carbon intensity by 17 per cent, and industrial water intensity by 30 per cent (Finamore 2011). At the same time, China has been reluctant to view climate change as a security concern in the same fashion as North American and European states do, although the link between climate change and national security has its advocates within China (Zhang 2010). While it remains to be seen just how efficiently and comprehensively such initiatives are implemented (and we note that reduction of carbon intensity allows room for significant growth in overall carbon emissions), such encouraging signs were not matched by an equally significant shift in China's international negotiating position at Copenhagen in 2010.

One view expressed at the 1992 Rio de Janeiro Conference on Environment and Development was that industrialised countries had initiated global climate change through a long history of carbon emissions, and it was their duty to clean up their act while allowing countries to do their share of polluting during their industrialisation phases. Such a position enabled China to focus on development rather than on its environmental consequences and also made it a leader of the developing world at the time. Over the last two decades, China has gradually developed a tacit recognition that it needs to address environmental impacts and that pollution entails all sorts of costs, but at the same time, there is also a fear of what emissions control would do to the Chinese economy. Experiments with new types of environmental impact assessments are being developed, but the system needs to be perfected in its method and implementation (Wu et al. 2011). Not surprisingly, members of the Chinese leadership who want to forcefully tackle issues such as climate change have met with considerable resistance.

Meanwhile, the external view of China has gradually changed: The PRC used to be considered an underdeveloped country, but now it is recognised as being well on its way to becoming a developed country. China was the largest emitter of CO₂ in 2006 (Netherlands Environmental Assessment Agency 2006) and considered to be the world's largest energy user in 2010. While China disputes the 2010 figure and points out that it is far from the largest consumer of energy on a per capita basis (Biello 2010), and further, that its per capita income is still not very high in international comparisons, the view that China is now or shortly will be the country with the largest energy consumption has changed the nation's "developing country" image in both the developed and develop-

ing worlds (Harris, Paul 2010). This affected China's ability to solidify support for its position at Copenhagen from the developed countries – and from many developing countries as well. Nonetheless, at the October 2010 Tianjin meeting in preparation for the Cancun Summit, China was able to muster some support amongst developing countries for the idea that the US was using China as a scapegoat to avoid meeting its own climate change responsibilities (Shi 2010). Indeed by the end of the meeting it looked like the US–China squabble could have derailed the Cancun talks (Geall 2010b), but at least Cancun showed that multilateralism was not dead with China's offer to submit to a binding UN resolution on carbon emissions although new carbon reductions under the Kyoto Protocol were put off until after 2012.

Still, the continuing blame game has led some on the left of Western politics to consider China a source for answers to the world's environmental dilemma rather than looking at the country as a threat. As in other areas of international relations, some see Confucianism as a possible desirable alternative to Western market controls as an answer to the world's environmental problems (Kassiola 2010). Such studies attempt to suggest new philosophical avenues for Western thought and possible revision of environmental thought in China although these ideas have as much chance of appealing to nationalists in China as they do to people with deep green tendencies. To date, these views do not seem to be taking hold within either the Chinese or the international mainstream.

Today, China's case differs from that of most developed economies in three ways: The first is one-party rule by an autocratic political party that fears for its own survival. The second factor has to do with the scale of China's ongoing rapid transition from a developing economy to a developed economy. In reality, China's economy as a totality remains in between developed and underdeveloped – or perhaps better put, much of the East has a developed or rapidly developing economy, while in much of the West, an underdeveloped economy still prevails. China tries to maintain the view that suits the negotiating situation it is in. When negotiating emissions reductions, international environmental degradation, financial incentives or trade, the government tries to project a developing economy image. For example, during a visit to Europe in October 2010, Chinese Premier Wen Jiabao stated that

although China's total GDP and external trade are among the largest in the world, the basic reality about China – a populous country with

a weak economic foundation and uneven development – has not changed (*Xinhua* 2010).

It is noteworthy that close to one-quarter of China's CO₂ emissions come from the manufacture of export products (Wang and Watson 2009), and it is debatable who is responsible for the creation of those carbon emissions – China or the importing country. In any event, climate change diplomacy is now a key component of Chinese foreign policy, and for He Lichao (2010: 8), this change in diplomacy is the result of the transformation of China's strategic goal to become a major world power.

China Overseas

In the last decade, China's overseas aid and investment in resource extraction for import has resulted in a literature that is incomparable to the studies on Chinese overseas aid during the Maoist era. Recent writings from outside of China on this topic seem to be mostly critical of the environmental aspects of Chinese-led overseas projects (White et al. 2006), (Zweig and Bi 2005). Damage and potential damage to landscapes and livelihoods in search of resources or in building large dams and other facilities are often cited (Bossard 2010; McDonald, Bossard, and Brewer 2009). Such projects are frequently considered a form of exportation of pollution. Chinese foreign investment has created fears within NAFTA, the EU, ASEAN and Russia, for example, which are similar to those seen in countries and blocks during the expansive growth of Japan in the 1980s that came to be referred to as "Japan bashing". The worries about China, however, are considered by many to be greater than those about Japan in the 1980s due to the geographic and demographic scale of China as well as the country's continuing autocratic political system, which has shown little sign of change.

Some authors rightly point out that current Chinese behaviour overseas is not very different from that of Western colonial powers and Japan in the recent past. Some have stressed that China remains a relatively small player, if a growing one (Downs 2007), that its approach is becoming more responsible (Shankleman 2009), and that there is often an aid element attached to China's overseas projects (Lum 2009).

Conclusion: Shifting Sands?

This brief review suggests several conclusions about the People's Republic of China's environmental politics. There has been change in China's environmental policies during the three decades of reform and opening. Increasingly, officials at the top of the bureaucracy have come to take environmental problems more seriously. At lower levels of government, much has depended upon the attitude of the lower-level officials themselves and the local resources they have available to address environmental degradation. In general, the richer East has been in a much better position to tackle degradation and to implement prevention measures. While the attitude toward tackling problems openly has to some degree spread from less politically sensitive issues to more sensitive issues – including a certain number of formal procedures for citizen complaint, data that are increasing in quantity and to some degree in quality, legal structures that have become more codified, and the overall process having become more inclusive of various elements in society – rapid progress remains hampered by China's political system and by an uneven spread of resources, both socially and geographically.

Many Chinese researchers and activists recognise the problems with their system but when they attempt to assert themselves, they find it difficult to succeed at making a direct impact. This is why “embedding” their organisations and then hoping that their efforts can reduce the pace of environmental degradation seems to be the way that most environmentalists attempt to move forward. At the same time, a minority take a more radical stance against prevailing norms and often pay a price. Foreign researchers can get their messages out but also risk losing their ability to work further in China if they touch upon too sensitive a topic.

In conclusion, it is not unusual to read of China's ability to rapidly expand solar energy and wind energy while the country is simultaneously building carbon generating power plants or using suboptimal technologies to build nuclear power plants. It is not a surprise that data can be made to show China's environment is improving when conditions actually might be getting worse. Finally, as in every country on earth, politicians in China are also confronted with decisions about how to balance environmental damage and economic growth in a way that allows them to maintain their power. To date in China, this has entailed the government slowly opening bits of space for environmentalists while maintaining as much control over environmental organisations as it can in its attempt to avoid what it perceives will be *luàn* (亂, chaos).

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