ENVIRONMENT IN CHINA: PROBLEMS AND CHALLENGES

Dissertation Submitted to the Jawaharlal Nehru University in partial fulfillment of the requirements for the award of the degree of

MASTER OF PHILOSOPHY

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CERTIFICATE

This is to certify that the dissertation entitled "Environment in China: Problems and Challenges" submitted by Ms. Swetasri Ghosh Ray, in partial fulfillment of the requirements for the award of the degree of Master of Philosophy, is her own work and has not been previously submitted for any other degree of this or any other university.

We, therefore, recommend that this dissertation be placed before examiners for evaluation.

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To Ma & Baba

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Preface

The recognition of international community that environmental problems transcend boundaries has resulted in the development of various international environmental agreements and has also led to the ratifying by various states. The ad hoc, disparate and reactive policy responses by individual states or local communities will be wholly inadequate to address the growing environmental problems faced by the international community. Environmental threats have increased exponentially with technological advances.

A recent trend in many countries in Asia and the Pacific has been the strengthening of governance structures for environmental protection. A large number of environmental institutions have been established in the public sector, including environment ministries and independent environment agencies have been created to assist the ministries

The factors, which determine environmental awareness, are multifaceted. Although there are cultural components involved in development of awareness of ecological degradation, there also exists a relationship between environmental values and economic growth. This is even more elaborately illustrated in case of China. The fact that water supply, sewerage, and air pollution are major concerns in China today, while solid waste and noise pollution remain secondary, suggests some truth to this universal economic argument.

Some critics have argued that since increased trade and foreign direct investment stimulate higher growth in developing countries, this in turn leads to higher industrial pollution and environmental degradation. However, recent evidence suggests a more subtle and complex relationship between economic development and environmental protection. For example, average air quality in China has stabilised or improved since the mid- 1980s in monitored cities, especially large ones — the same period during which China experienced both rapid economic growth and increased openness to trade and investment.

In my dissertation, I would make an attempt to examine and analyse the positive relationship between economic development and environmental protection in China. In the first chapter after looking into the evolution of environmental protection norms at the global level and developing countries role in it, I would then move on, in the consecutive chapters to locate China as a developing country and its compliance with the emerging international environmental regimes.

The North South Divide and Emergence of Environmental Concerns at the International Level

Generally speaking, the environmental problems facing developed countries are caused by their excessive discharge of hazardous substances, which affect not only themselves but also the world around. In developing states the pre-dominant cause of the environmental problems is underdevelopment. The objective facts show that developed countries should bear major responsibility for global environmental degradation: misguided environmental development and over consumption on the part of the developed countries are the main causes of the greenhouse effect, the excessive release of the chloro-fluorocarbons (CFCs), causing the ozone depletion, and excessive diffusion of sulphur-di-oxide, causing acid rain.¹

Although developed countries and Developing are both responsible for global environmental degradation, there are profound differences in the way each has contributed to the degradation. Underdevelopment and low technological levels prevent the Developing from doing anything substantial to address environmental

¹ Philippe Sands (eds.), Greening International Law, London, Earthsacn Publications Limited, 1993, p.12.

problems. This has historical reasons like prolonged colonial plunder, control, exploitation, and oppression to which they have been subjected. As a result, their natural resources and environment have were seriously affected and wasted. At present, because of the combined effects of a weak economic base, irrational economic structures, a low level of science and technology, over-population and no-sign of improvement, as well as heavy domestic and foreign indebtedness, these countries are unable to sustain the financial and technological burdens necessary to substantially improve the environment. Furthermore the international environment continues to deteriorate, the developing states will be less and less able to clear up their environment. This is further complicated by the indifference of the developed countries toward the developmental problems of developing countries.

Over exploitation of natural resources, loss of biological diversity, ozone depletion, climate change, acid rain, deforestation and desertification, air and marine pollution, toxic and other wastes and a population explosion are some of the interrelated threats facing the planet. At the UN Conference on Environment and Development, held in Rio De Janiero in June 1992, poverty and international debt were added to the accepted list of the root causes of global environmental degradation.²

It can be asserted that nowadays no country can effectively protect its environment and solve its various environmental problems on its own.

Global problems require global efforts both for the evolving means of legislation as well as to pay the cost of environmental damage, including the ever-increasing cost of new technologies developed to remedy the damages caused by such pollution. Given this situation, the participation of the developing countries in the international implementation legislation environmental protection, and international environmental laws need to be considered. The adoption of the Declaration on Human Environment in 1972,3 the enactment of U.N. Convention on the Law of Sea in 1982⁴, the adoption of Resolution 1803 (XVII) by the UN General Assembly, and the enactment and adoption of the UN Declarations on the Right to Development in 1984⁵, could not have transpired without the great support and efforts of the developing countries.

The present economic situation of developing nations is in part result of low level of development, their backward industry, and outdated agricultural methods. It is understandable why their economies have vestiges of colonialism. The developing nations, with their approximately70% of world population, subsist on only 30% of the GNP. Their per capita income is only one-twelfth of that of the other countries and the discrepancy is still rising. In addition, although these countries contain and produce the main portion of the world's

² ibid, p.xv.

³ International Convention on Civil Liability for Oil Pollution Damage, 29 November, 1969, UN Jurid, Y. B. 174, 9 I.L.M. 45, 973 U. N. T.S. 3, 1969.

⁴ Treaty on the Prohibition of Emplacement of Nuclear Weapons and Other Weapons of Mass Destruction on the Sea Bed and other Floor, and the Subsoil Thereof, 11 February 1971, 23 U.S.T 70, T.I.A.S. No. 7337, 2 Ruster 498 (1971).

⁵ PRC-US Agreement on Scientific and Technological Cooperation T.I.A.S. No. 10921, 12 January 1984. The Agreement covers environmental protection.

most important non-ferrous metals and many other minerals, they mainly utilise a small portion of their wealth for themselves, most of these materials satisfying the needs of the developed countries for energy and raw materials.⁶

It would not be right to argue that the main difficulties in the legislation and implementation of international environmental law should be attributed to weak economic bases and low productive levels of Developing states. Even if it were true, developed countries cannot shift the entire responsibility and blame to the Developing countries. On the contrary, the developed countries must give more support and cooperation to the Developing countries in light of their limited economic and social capacity as well as their inadequate scientific and technological levels. Nevertheless, the Developing countries should rely on their own resources to overcome the problem of environmental degradation.

Hence, it can be concluded from the above that Developing states are not only the owners of tremendous natural and environmental resources, but they are also they the victims of environmental pollution.

6 www.unu.edu

Evolution of Environmental Regimes: Landmark Resolutions

International environmental agreements addressing external effects both on global commons and within other countries' frontiers have increased in numbers and entered into force since the UN Conference on Human Environment (UNCHE) and UN Conference on Environment and Development (UNCED). These trends have emerged primarily because of the heightened salience of environment issues and a greater salience on momentum-building processes involving conventions and scientifically based accretions to the conventions rather than an uncompromising insistence on binding international treaties.

The Stockholm Declaration

Initially it was recommended to the UNCHE Preparatory Committee that the Stockholm Conference should adopt a Declaration laying down 'rights and obligations of citizens and governments with regard to the preservation and improvement of the human environment'. However, it became clear during the drafting process that many governments were hostile to this ideas as to the scope and legal status of proposed declaration. Though some of them were willing to contemplate a declaration embodying general principles elaborating the rights and duties of states with respect to the environment they were not prepared to go as far as to accept the elaboration of a legally binding instrument.

⁷ Philippe Sands (eds.), <u>Greening International Law</u>, London, Earthscan Pulications Limited, 1993, p. 2.

The Stockholm Conference eventually opted for non-binding declaration of principles, reflecting the commitments of a political, and moral rather than legal nature; a document 'embodying the aspirations of the world's people for a better environment', rather than imposing specific obligations on governments in order to fulfill those aspirations. Nevertheless, the Stockholm Declaration adopted by the UNCHE in June 1972 is generally regarded as the foundation of the modern international environmental law. Despite, its ambiguities, the declaration eventually acquired not only moral and political value, but some of the principles laid down in it are now considered as the basis of the subsequent development of international environmental law in the form of numerous bilateral and multilateral conventions.

World Charter for Nature

As the Stockholm Declaration felt short of the expectations of the environmentalists and legal scholars, other attempts followed. The second attempt to draw up a world environment charter was spearheaded by the World Conservation Union (IUCN), which convinced Zaire to put up the matter on the agenda of the UNGA. At the session of a Special Charter of UN Environment Programme (UNEP) Governing Council held in Nairobi in May 1982 to mark the tenth anniversary of the Stockholm Conference, President Mobutu of

Zaire announced his "initiative" was nearing the adoption by the UNGA.

The World Charter for Nature, which was adopted by the UNGA a few months after the special session of UNEP, constitutes another effort to formulate general principles of conduct for States and individuals. But its scope is limited to conservation and use of living natural resources, and it does not purport to have any greater legal effect than the Stockholm Declaration.

The Brundtland Report

A few years later, the World Commission on Environment and Development (WCED) added its voice to that of earlier advocates of a universal legal instrument and proposed 'to consolidate and extend relevant legal principles in a new charter to guide State behaviour in the transition to 'sustainable development'.

The WCED recommended the UNGA to elaborate an universal declaration and ultimately, a global convention on environmental protection and sustainable development. To this end WCED mandated a group of eminent experts from North and South on environmental law to draft a set of legal principles. Unfortunately, these principles, though carefully and skillfully drafted by the experts,

⁸ As quoted in UNEP's periodical (1982) *Uniterra*, No. 2, p.13.

⁹ Philippe Sand (eds.), <u>Greening International Law</u>, London, Earthscan Pulications Limited, 1993, p. 3.

were never considered by the UNGA, nor by the Preparatory Committee of UNCED, let alone by the Rio Conference itself.¹⁰

The Rio Declaration

The Rio Declaration on Environment and Development is one 'product' of the UNCED designed precisely to embody rules and principles of general and universal nature to govern the future conduct and cooperation of States.

The Rio Declaration emerged from the last Preparatory Committee meeting in New York under the heading 'principles related to general rights and obligations' and was adopted unchanged by the Rio Conference. It is a far cry from the general ambition of the proponents of the 'Earth Charter', who hoped that UNCED would adopt a declaratory instrument whose moral and political authority would be equivalent to the Universal Declaration of Human Rights.¹¹

The Rio Paradox

One notable feature of the Rio Declaration is its handling of what, to many people, was the crucial challenge of the conference that of fully and indissolubly integrating environment and development because, 'environment and development has to be one'. The Rio Declaration's response to this challenge and to the dominant

¹⁰ ibid.

¹¹ ibid, p.4.

environment motif was instead to redefine the relationship between environment and development, as development may sometimes take precedence over environment. The most paradoxical feature of the Rio Declaration is, however, that in answer to the call for "new globalism" it reaffirms 'sovereignty', while highlighting 'different contributions to global environmental degradation' as the basis for international cooperation in sustainable development. To explain how the Rio Declaration came to incorporate features, which seem to challenge the environment's appeal for a new globalism, it is necessary to look at the negotiation process and to examine the function of the 'development' motif at the conference.

Negotiating the Rio Declaration

Poverty can be very easily linked with the causes of environmental degradation. As Brundtland pointed out in the report prepared for the World Commission on Environment and Development — Our Common Future — that "poverty is both a major cause and effect of global environmental problems". The poor will often destroy their immediate environment in order to survive. For example, they will cut down forests for fuel or carry out subsistence farming as in many African countries. In addition, the inequality between rich and poor countries exacerbates environmental damage in the developing nations. The Developing owes the industrialised nations \$ 1 trillion. As commodity prices fall, the pressure to increase exports meet up

12 ibid, p.21

¹³ Ileana Porras, "The Rio Declaration", in Philippe Sands n.1, p.22.

Excessive dependence on cash crops for export and, inability to purchase new, cleaner technologies contributes directly to environmental degradation.

As far as the developing countries are concerned, the issues are not global warming, ozone depletion, etc. The priorities are for basic subsistence. There are many in the developing countries who consider the environmental agenda of the North as a pernicious form of colonialism. It is criticised for setting aside the interests of the two-thirds of humanity. They strongly feel that the industrialised world should pay the developing world to protect its environment – in cash, expertise and technology.¹⁵

While the battle was over ideologies, priorities and visions, the negotiations also served as the testing ground for developing countries to explore the potency of what they perceived as a new bargaining chip. That is, the desire of the industrialised countries to ensure that the developing countries adopt a sustainable model of development, due to their own conviction that their survival is conditional on it. Developing countries perceived that what developed countries feared most that they should 'blindly' follow the historical development example of the wealthy industrialised States and thereby impose unsustainable pressures on environment. ¹⁶

14 Edna Ross, The North- South Divide on Environmental Concerns as cited in www. jinx.edu

¹⁵ ihid

¹⁶ Observations during the Fourth Session of the Preparatory Committee of UNCED, held in New York the Spring of 1992, and during the Earth Summit at Rio De Janiero, June 1992.

Despite the steadfast resistance of the many industrialised countries to being pressured into adopting a common developed country position, negotiations of the Rio Declarations took on an essentially bipolar North-South character, with a newly revitalised Group of 77 and China (G 77) presenting the developing country position.

Most developing countries have agreed to participate in an international environmental conference only because the theme of development was to be linked to that of environment. Their primary goal was to ensure their urgent development needs were not impeded by a focus on international environmental concerns. These countries felt threatened with the environment motif. The experience with the international lenders, such as World Bank, had already raised fears that new environmental conditionalities will be imposed upon development projects.¹⁷

In the end, despite all the differences of the initial stage, some kind of a consensus was reached on the text of Rio Declaration. The text of the Rio Declaration reveals the uneasy compromise. Although all interests are represented in it, the Rio Declaration may to some extent may judged as a victory from the developing countries perspective, insofar as there is evidence of a shift away from the practice of the developed country dominance over the process of dictating international norms and priorities.

The Case of China:

The Chinese government is of the opinion that the issues of environment protection have become a tool, which is utilised by some countries to interfere in other countries internal affairs. Though politicization of the environmental problems complicates the issue, they have already become an important part of the international political struggle.

The official stand taken by the Chinese government is that the developing countries have common historical experiences; in certain conditions they are in an identical stage of economic development and have common political interests, which must be protected. Therefore developing countries must coordinate their stand on environmental issues, unite as one, and jointly meet the challenge of international environmental needs.¹⁸

The case of China in the context of environmental debate clearly highlights the heightening of the north south divide. Environment as a key development issue was recognised mainly because of the fear of international isolation. 19 During the era of opening up under Deng Xiaoping, economic growth was the priority. Relative neglect of the environment, a common feature of developing countries, applies to China also. Equally, it was faced with the contradiction between the economic growth and environmental protection.

¹⁷ Philippe Sand (eds.), Greening International Law, London, Earthscan Pulications Limited, 1993, p. 23.

¹⁸ Qu Geping, China's Policy Options, as cited in www.chineseculture.about

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Despite nearly two decades of rapid industrialization and a measure of political reform, China ranks well below the advanced industrialized countries of the world in a per capita basis with respect to economic development. It is also an assertive defender of national sovereignty, both its own and as a principle, against external interference. Thus, in the case of China where low-income levels and restrictions on political participation limit the present day potential for domestic environmentalist pressures and external interference is handled and dealt with warily by the State the question that arises is why China has become a more active participant in the international regimes; whether the quality of China's participation varies according to substantive area, the threat of sanction and other variables; and whether constructive engagement can shape China's participation in the global efforts regarding environmental issues. An examination and analysis of these aspects, is the chief objective of the proposed dissertation.

Two researchers of the Environment and Development Research Institutes at the Chinese Academy of Social Sciences, Zheng Yisheng and Qian Yishong, in their book called the <u>Grave Concerns – Problems of Sustainable development for China (Shendu Youhuan Dangdai Zhongguo de Kechixu Fazahan Wenti)</u> point out that China has reasonable environmental laws and policies but has been unable to implement them because of poor coordination among ministries

¹⁹ Lester Ross, Environmental Protection and International Norms, <u>China Quarterly</u>, December 1998, p.831.

and local governments and the center. The authors conclude that the waste arising from a collective property system in which no one exercises property rights over natural resources, widespread corruption and the failure to respect laws and individual economic rights are the principal obstacles to sustainable development in China. The dissertation would seek to examine and analyse the emergence of different views on these matters and the nature of the non-official debates that have begun in China in recent times.

The main emphasis of the environmental policies in China is to bring environmental protection in the line with national economic, social and environmental benefits. Much of the impetus for expanding the scope, stringency and comprehensiveness of the environmental regulations comes from the State. Moreover, China has begun to take stringent action to address various pollution problems in specific areas, particularly water pollution in key water bodies, sulphur dioxide and acid rain, under the so called "Three Rivers", "Three Lakes" and "Two regions" control policies.²⁰

However, international environmental diplomacy has become more salient in China as environmental issues have gained importance in international relations. Spending on environmental protection is also increasing at a relatively fast pace, further signifying the government recognition of the importance of environmental protection.

²⁰ Lester Ross, op. cit.

A recent compendium edited by State Environment Protection Agency (SEPA)'s Policy and Law section listed 29 multilateral environmental agreements to which China has become a party. Moreover China's adherence to international obligations became more pronounced in recent years as international environmental diplomacy has accelerated and as China's own capacity to participate has increased.²¹

When the Communist regime took over in 1949. China had a number of environmental problems typical of a populous semi-industrialised. low technology nation. The existing environmental problems, it has been suggested, even exacerbated with China's adoption of the Stalinist model of economic development.²² China, under Mao, was faced with the entire range of problems associated with the early stages of industrialization and while, Maoist policies allowed for much needed socio-economic recovery in the early 60's they also led to degradation of the environment. The proposed dissertation would look into this apparent contradiction between arowth and environmental exploitation and degradation.

Reforms under Deng Xiaoping attempted to shift attention to various problems, which had arisen during the Cultural Revolution. The reforms initiated were primarily aimed at achieving the official goal of quadrupling the per capita GDP for one fifth of humanity within a single generation. The environmental concerns only began to emerge

²¹ Lester Ross, Environmental Protection and International Norms, China Quarterly, December, 1998, p.831.

outside world and international financial and economic institutions and organisations deepened in the late eighties.

In the following chapters of my thesis I would attempt to examine how far China has been able to accommodate the policy shift with regard to environment; what has been the shape of domestic environmental policies after it opened up in 1978; how far did it negotiate and/ or compromise with the international agreements.

²² Mark Elvin, Environmental Legacy in China, China Quarterly, December, 1998, p.756.

Chapter 2

China's Political Economy in Maoist Period¹

Introduction

The history of Chinese environment has been entwined with the anthropogenic forces. The Chinese landscape was one of the most transformed in the pre-modern world as the result of its reshaping for the cereal cultivation, re-engineering for hydraulic works for drainage, irrigation and flood defense, and deforestation for the purpose of clearance, and the harvesting of wood for fuel and construction.

When the Communist regime took over in 1949, China had a number of environmental problems typical of a populous semi-industrialised, low technology nation. As mentioned earlier, the existing environmental problems, it has been suggested, even exacerbated with China's adoption of the Stalinist model of economic development.² China, under Mao, was faced with the

¹ This Chapter is based on the study of following works:

Carl Riskin, China's Political Economy: The Quest for Development Since 1949, Oxford University Press, 1987; Mark Selden, The PRC: A Documentary History of Revolutionary Change, Monthly Review Press, New York, London, 1997;

Mark Selden, China in Revolution: The Yenan Way Revisited, M. E. Sharpe, London, 1997;

Mark Blecher, China Against the Tides: Restructuring through Revolution, Radicalism and Reform, Pinter, London, Washington, 1997;

Maurice Miesner, Mao's China: A history of People's Republic, The Free Press, Macmillan Publications Co. Inc., 1977; Stuart R. Schram, Authority Participation and Cultural Change in China, Cambridge University Press, 1973.

² Mark Elvin, Environmental Legacy of China, China Quarterly, December 1998, p. 756.

entire range of problems associated with the early stages of industrialization and while, Maoist policies allowed for much needed socio-economic recovery in the early 60's they also led to degradation of the environment.

In February 1950, after months of hard bargaining, China and the Soviet Union signed the Treaty of Friendship, Alliance, and Mutual Assistance, valid until 1980. The pact also was intended to counter Japan or any power's joining Japan for the purpose of aggression. For the first time in decades, a Chinese government was met with peace, instead of massive military opposition, within its territory. The new leadership was highly disciplined and, having a decade of wartime administrative experience to draw on was able to embark on a program of national integration and reform.

In the first year of Communist administration, moderate social and economic policies were implemented with skill and effectiveness. The leadership realized that the overwhelming and multitudinous task of economic reconstruction and achievement of political and social stability required the goodwill and cooperation of all classes of people. Results were impressive by any standard, and popular support was widespread.

After China entered the Korean War, the initial moderation in Chinese domestic policies gave way to a massive campaign against the "enemies of the state," actual and potential. These enemies consisted of "war criminals, traitors, bureaucratic capitalists, and counterrevolutionaries." The campaign was combined with party-sponsored trials attended by huge numbers of

people. The major targets in this drive were foreigners and Christian missionaries who were branded as United States agents at these mass trials. The 1951-52 drive against political enemies was accompanied by land reform, which had actually begun under the Agrarian Reform Law of June 28, 1950. The redistribution of land was accelerated, and a class struggle landlords and wealthy peasants was launched.

The Transition to Socialism, 1953-57

The period of officially designated "transition to socialism" corresponded with China's First Five-Year Plan (1953-57). The period was characterized by efforts to achieve industrialization, collectivization of agriculture, and political centralization.³

The First Five-Year Plan stressed the development of heavy industry on the Soviet model. Soviet economic and technical assistance was expected to play a significant part in the implementation of the plan, and technical agreements were signed with the Soviets in 1953 and 1954. For the purpose of economic planning, the first modern census was taken in 1953; the population of mainland China was shown to be 583 million, a figure far greater than had been anticipated.

³ ibid.

Among China's most pressing needs in the early 1950s were food for its burgeoning population, domestic capital for investment, and purchase of Soviet-supplied technology, capital equipment, and military hardware. To satisfy these needs, the government began to collectivize agriculture. Despite internal disagreement as to the speed of collectivization, primary level collectivization was 90 percent completed by the end of 1956. In addition, the government nationalized banking, industry, and trade. Private enterprise in mainland China was virtually abolished.

The Great Leap Forward 1958

In 1958, the CCP launched the Great Leap Forward campaign under the new "General Line for Socialist Construction." The Great Leap Forward was aimed at accomplishing the economic and technical development of the country at a vastly faster pace and with greater results. The shift to the left that the new "General Line" represented was brought on by a combination of domestic and external factors.

Although the party leaders appeared generally satisfied with the accomplishments of the First Five-Year Plan, they believed that more could be achieved in the Second Five-Year Plan (1958-62) if the people could be ideologically aroused and if domestic resources could be utilized more efficiently for the simultaneous development of industry and agriculture. These assumptions led the party to an intensified mobilization of the peasantry and mass organizations, stepped-up ideological guidance and indoctrination of

technical experts, and efforts to build a more responsive political system. The last of these undertakings was to be accomplished through a new *xiafang* (or down to the countryside) movement, under which cadres inside and outside the party would be sent to factories, communes, mines, and public works projects for manual labor and firsthand familiarization with grass-roots conditions. Mao's decision to embark on the Great Leap Forward was based in part on his uncertainty about the Soviet policy of economic, financial, and technical assistance to China. That policy, in Mao's view, not only fell far short of his expectations and needs but also made him wary of the political and economic dependence in which China might find itself.

The Great Leap Forward centered on a new socioeconomic and political system created in the countryside and in a few urban areas--the people's communes. By the fall of 1958, some 750,000 advanced agricultural producers' cooperatives, now designated as production brigades, had been amalgamated into about 23,500 communes, each averaging 5,000 households, or 22,000 people. The individual commune was placed in control of all the means of production and was to operate as the sole accounting unit; it was subdivided into production brigades (generally coterminous with traditional villages) and production teams. Each commune was planned as a self-supporting community for agriculture, small-scale local industry (for example, the famous backyard pig-iron furnaces), schooling, marketing, administration, and local security (maintained by militia organizations). Organized along paramilitary and laborsaving lines, the commune had communal kitchens, mess halls, and nurseries. In a way, the people's

communes constituted a fundamental attack on the institution of the family. especially in a few model areas where radical experiments in communal living--large dormitories in place of the traditional nuclear family housing-occurred. (These were quickly dropped.) The system also was based on the assumption that it would release additional manpower for such major projects as irrigation works and hydroelectric dams, which were seen as integral parts of the plan for the simultaneous development of industry and agriculture. The Great Leap Forward was an economic failure. In early 1959, amid signs of rising popular restiveness, the CCP admitted that the favorable production report for 1958 had been exaggerated. Among the Great Leap Forward's economic consequences were a shortage of food (in which natural disasters also played a part); shortages of raw materials for industry; overproduction of poor-quality goods; deterioration of industrial plants through mismanagement; and exhaustion and demoralization of the peasantry and of the intellectuals, not to mention the party and government cadres at all levels. Throughout 1959 efforts to modify the administration of the communes got under way; these were intended partly to restore some material incentives to the production brigades and teams, partly to decentralize control, and partly to house families that had been reunited as household units.

Readjustment and Recovery, 1961-65

In 1961 the political tide at home began to swing to the right, as evidenced by the ascendancy of a more moderate leadership. In an effort to stabilize the economic front, for example, the party--still under Mao's titular leadership but under the dominant influence of Liu Shaoqi, Deng Xiaoping, Chen Yun, Peng Zhen, Bo Yibo, and others--initiated a series of corrective measures. Among these measures was the reorganization of the commune system, with the result that production brigades and teams had more say in their own administrative and economic planning. To gain more effective control from the center, the CCP reestablished its six regional bureaus and initiated steps aimed at tightening party discipline and encouraging the leading party cadres to develop populist-style leadership at all levels. The efforts were prompted by the party's realization that the arrogance of party and government functionaries had engendered only public apathy. On the industrial front, much emphasis was now placed on realistic and efficient planning; ideological fervor and mass movements were no longer the controlling themes of industrial management. Production authority was restored to factory managers. Another notable emphasis after 1961 was the party's greater interest in strengthening the defense and internal security establishment. By early 1965 the country was well on its way to recovery under the direction of the party apparatus, or, to be more specific, the Central Committee's Secretariat headed by Secretary General Deng Xiaoping.

The Cultural Revolution Decade, 1966-76

In the early 1960s, Mao was on the political sidelines and in semiseclusion. By 1962, however, he began an offensive to rejuvenate the party, having grown increasingly uneasy about what he believed were the creeping "capitalist" and

antisocialist tendencies in the country. Mao continued to believe that the material incentives that had been restored to the peasants and others were corrupting the masses and were counterrevolutionary.

To arrest the so-called capitalist trend, Mao launched the Socialist Education Movement (1962-65), in which the primary emphasis was on restoring ideological purity, reinfusing revolutionary fervor into the party and government bureaucracies, and intensifying class struggle.

In connection with the Socialist Education Movement, a thorough reform of the school system, which had been planned earlier to coincide with the Great Leap Forward, went into effect. The reform was intended as a work-study program—a new *xiafang* movement—in which schooling was slated to accommodate the work schedule of communes and factories.

End of the Era of Mao Zedong, 1972-76

Among the most prominent of those rehabilitated was Deng Xiaoping, who was reinstated as a vice premier in April 1973, ostensibly under the aegis of Premier Zhou Enlai but certainly with the concurrence of Mao Zedong. Together, Zhou Enlai and Deng Xiaoping came to exert strong influence. Their moderate line favoring modernization of all sectors of the economy was formally confirmed at the Tenth National Party Congress in August 1973, at

which time Deng Xiaoping was made a member of the party's Central Committee (but not yet of the Political Bureau).

The radical camp fought back by building an armed urban militia, but its mass base of support was limited to Shanghai and parts of northeastern Chinahardly sufficient to arrest what it denounced as "revisionist" and "capitalist" tendencies. In January 1975 Zhou Enlai, speaking before the Fourth National People's Congress, outlined a program of what has come to be known as the Four Modernizations for the four sectors of agriculture, industry, national defense, and science and technology. This program would be reaffirmed at the Eleventh National Party Congress, which convened in August 1977. Also in January 1975, Deng Xiaoping's position was solidified by his election as a vice chairman of the CCP and as a member of the Political Bureau and its Standing Committee. Deng also was installed as China's first civilian chief of PLA General Staff Department.⁴

The year 1976 saw the deaths of the three most senior officials in the CCP and the state apparatus: Zhou Enlai in January, Zhu De (then chairman of the Standing Committee of the National People's Congress and de jure head of state) in July, and Mao Zedong in September. Deng Xiaoping, the logical successor as premier, received a temporary setback after Zhou's death, when radicals launched a major counterassault against him. In April 1976 Deng was once more removed from all his public posts, and a relative political unknown,

⁴ ibid, p.756

Hua Guofeng, a Political Bureau member, vice premier, and minister of public security, was named acting premier and party first vice chairman.

Even though Mao Zedong's role in political life had been sporadic in his later years, it was crucial. His influence in the months before his death remained such that his orders to dismiss Deng and appoint Hua Guofeng were accepted immediately by the Political Bureau. The political system had polarized in the years before Mao's death into increasingly bitter and irreconcilable factions. While Mao was alive, the contending forces were held in check. His death resolved only some of the problems inherent in the succession struggle. The radical clique most closely associated with Mao and the Cultural Revolution became vulnerable after Mao died, as Deng had been after Zhou Enlai's demise. In October, less than a month after Mao's death, Jiang Qing and her three principal associates—denounced as the Gang of Four—were arrested with the assistance of two senior Political Bureau members, Minister of National Defense

Ye Jianying (1897-1986) and Wang Dongxing, commander of the CCP's elite bodyguard. Within days it was formally announced that Hua Guofeng had assumed the positions of party chairman, chairman of the party's Central Military Commission, and premier.

Nature and Characteristics of Domestic debate after 1978

In the post- Mao era, one highly significant dimension of China's official programme of reform and integration into the international economy has been the commitment to legal construction. This commitment has included a sustained effort to fashion a basic corpus of environment protection law alongside supportive institutions, administrative norms and policies, in order to create a "basic legal system of environmental protection". (Michael Palmer, 1998, p.789)

Despite the fact that Deng Xiaoping's era leadership blamed some of China's environmental problems on the policies of that of the earlier period, a realisation at the top leadership level that something has to be done to control environmental degradation was already apparent in the early 1970s. It is fair to say however, that environmental protection and conservation have continued to have low priority compared to political stability and economic growth during the last two decades.¹

¹ Michael Palmer, Environmental Regulation in the PRC: The Face of Domestic Law, China Quarterly, December, 1998, p.790.

Viewed comparatively, the PRC's embrace of environmental protection regime was somewhat belated, only properly commencing after its participation in the 1972 UN Conference on Human Environment (UNCHE) held in Stockholm. The concern with the construction and revision of a substantial body of environmental law was further enhanced by China's participation in the 1992 UN Conference on Environment and Development (UNCED) held in Rio De Janiero.

The path of relatively rapid growth and gradual improvements in the quality of development must be taken in order to meet the Chinese people's current and future needs for basic necessities and their desires for higher living standards, and in order to consolidate strength. While the economy is undergoing national development, it will be necessary to ensure rational utilisation of natural resources and protection of environment. Thus Premier Li after Earth Summit. "made а commitment Peng. the conscientiously implement resolutions adopted at the conference."2 (Palmer 1998)

Besides participating in the international conferences on environment, we see that a concern with environmental protection was being revived within China since early 1970s.³ In 1973, at the first national conference on environmental protection held in Beijing by the State Council, a firm decision was taken on the need for environmental

² China's Agenda 21 – White Paper on China's Population, Environment and Developmentin the 21st Century, p.2.

safekeeping. The tentative and draft 1973 Several Rules on Protecting and Improving the Environment provided a basic programme for environmental protection and in 1974 this protection was extended to maritime sphere through the Provisional Regulations on Prevention of Pollution of Coastal Waters. In due course, this programme manifested itself in the 1979 Environmental Protection Law. The general drift towards safeguarding environmental welfare was accelerated by the embrace of the concept of environmental protection in the 1978 Constitution which declared at Art.11, that, "the State protects the environment and natural resources, and prevents and eliminates pollution and other hazards to the public." This constitutional commitment was reaffirmed and expanded in the 1982 Constitution with Art. 26 proclaiming that "the State protects and improves the environment in which people live and the ecological environment. It prevents and controls pollution and other hazards..." Art. 9 states: "the State ensures the rational use of natural resources." and protects rare animals and plants." These provisions clearly indicates that there existed a concern with environment among the upper echelons of the chinese leadership even before and in the early stages of reform. They tended to cover almost all areas of environmental protection.4

However, a conservative ideological significantly inhibiting the embrace of environmental rights in China is the idea of "co-ordinated"

Lester Ross, Environmental Protection and International Norms, <u>China Quarterly</u>, December, 1998, p.810.
 Michael Palmer, Environmental Regulation in the PRC: The Face of Domestic Law, <u>China Quarterly</u>.
 December, 1998, p.791.

development". The PRC characterising itself as the part of the developing world, gave explicit priority to economic growth for many years in order that it might first solve basic problems of overpopulation and poverty before adopting a more environmentalllysensitive approach. The conceptual device for this attitude to environmental protection was the principle of 'xietiao fazhan' or coordinated development under which environmental protection is given same importance as the development of national economy, latter being the chief objective after opening up in 1978. Thus environmental welfare and economic growth are congruent. The notion of coordinated development means that environmental protection is regarded as one sector or dimension of economy, and is therefore in essence an economic issue rather than a social issue. This in turn, encourages a short term view of environmental degradation, with administrators concentrating on some sort of immediate cost-balance analysis between the needs of economic growth and environment protection. Thus, an essential difference between "sustainable development" and "coordinated development" appears to be former's emphasis on the rights of future generations. The principle of coordinated development was manifested most prominently in Art 4 of 1989 Environmental Protection Law: "the plans for environmental protection formulated by state must be incorporated in the national economic and social development plans; the state shall adopt economic and technological policies and measures favourable for environmental protection so as to coordinate the work of the environmental protection and economic construction and social development.⁵

The policy of the coordinated development now appears to have been supplanted to a significant extent by the concept of sustainable development as a result of China's participation in the 1992 Rio Confernce and State Council's adoption of China's Agenda 21 – "White Paper on China's Population, Environment and Development in the 21st century". The latter has been incorporated in the PRC's Ninth Five Year Plan of National and Social Development and the Outline of Long-Term Targets for the year 2010.

China's Agenda 21

The Agenda 21 adopted at Rio demands that all the countries involved should develop and enforce integrated, sanction obliging and effective laws and regulations which are in compliance with the well concieved social, ecological, economic and scientific principles. The Constitution of PRC further stipulates that "the State defends the unity and dignity of the socialist legal system". While China has been reforming and opening up in the process of establishing its socialist market economy, legal processes have increasingly permeated

⁵ ibid, p; 791-92.

social, political and economic life. China has acceded to many international environmental regimes.⁶

It is asserted in China's Agenda 21 that its sustainable development will be based upon the sustainable utilisation of resources and preserving a healthy environment. The country is obliged to shoulder the following obligations:

- Protect all life suppoting systems;
- Protect the integrity of the ecological systems and biodiversity;
- Address major ecological issues, such as soil erosion and desertification;
- Protect natural resources:
- Maintain sustainable supply capabilities;
- Reduce damage to fragile ecological systems;
- Extend forest coverage;
- Improve urban and rural environmental conditions;
- Prevent and control environmental damage and pollution;

⁶ China's Agenda 21 – White Paper on China's Population, Environment and Developmentin the 21st Century, p.2.

- Reclaim and restore damaged and polluted environments;
- Take an active part in international cooperation in this area.

It was expected that by 2000, environmental pollution should basically be brought under control and the quality of environment in major cities should be improved. Further targets were set to bring environment protection in coordination with economic and social development.

National Security and Environmental Stress Linkage in the domestic context

Political Considerations

The future political path of China is unclear. For many westerners, the political disintegration of the USSR and the collapse of communist regimes in Eastern Europe have raised the spectre of when, not if, a similar upheaval would end Communist Party rule in China. This is an overly simplistic scenario, although the decline or rethinking of traditional socialism, increased political pluralism and liberalization, and succession questions all contribute to uncertainty about how China will be governed and what China is becoming. Given the heightened uncertainty involving the coherence and direction of the social mediation factors, it is even more difficult than normal to draw

firm conclusions on how environmental stress or non-renewable resource scarcity will be addressed. ⁷

Social Considerations

During the reform era, China has seen significant social change (such as increased labour mobility) and in the future may see even more dramatic social changes in the relationship between the state and its citizens. Yet social change in general, and specifically social change related to environmental pressure, need not result in violence. For the social effects of environmental stress to become violent, certain conditions appear to be needed.

First, there must be sustained dissatisfaction with the environmental conditions. Second, there must be obstacles to the public expressing preferences on environmental issues in a peaceful manner, or a lack of governmental response to environmental problems of interest to the populace. Moreover, for serious challenges to authority, although not necessarily through violent confrontation, disenchantment needs to be organized. However, interest groups may stem from a number of origins, such as specific issues, ethnicity, religion, politics or social class. In China, there is currently no strong, well-organized interest group supportive of environmental issues.⁸ Nor does it appear that

R. Stranks, N. Strizzi, Policy Paper, China: Environmental Stress and National Security, February 1996, p. 18

Stephen M. Young, "Post-Tiananmen Chinese Politics and Prospects for Democratization," Asian Survey, Vol. XXXV, No. 7, July 1995, pp. 664-5.

the entrepreneurial class, at any level, including those associated with TVEs or state enterprises, is eager to become environmental activists and assume a leadership role. Certainly, the growing entrepreneurial class of *getihu* (privatized) business people are focused on making money, not broader social causes, such as income redistribution, equity and environmental protection.

An illustrative case of how the Chinese regime has recently responded to public or nonofficial views on environmental issues is the Three Gorge dam construction project. The Three Gorges project, which will take until 2009 to complete, will result in a reservoir stretching 385 miles up the Yangtze River. The government's view is that the megadam will provide electricity, improve river navigation, contribute to economic growth and control potential floods. The government has also noted that by providing hydroelectric power, there is less need for alternative sources, i.e., coal, and that this provides an environmental benefit of less air pollution and global warming than would otherwise be the case.

Critics of the project contend that it will disrupt the lives of nearly 1.4 million people, submerge archeological and historic treasures, create the risk of a giant flood, destroy ecosystems and cultivated farm land, endanger biodiversity and alter the Yangtze's distribution of silt both upstream and down stream. The lot of scattered domestic critics of the dam project has not been a good one. In May 1992, members of the Democratic Youth Party in Kai Country were arrested and

"charged with counterrevolutionary activities aimed at sabotaging the progress of the Three Gorges project. The fate of the youth members is unknown. Critics in the Chinese scientific community have also been accused of disloyalty: books have been banned, and publishers imprisoned. Clearly, the Chinese regime has not sought an open dialogue on the project, nor welcomed unsolicited interventions or views on the project's environmental effects. Yet, it must also be said that the Three Gorges protests have largely been predictably unarticulated and isolated and easily "managed" by the regime.

Chinese Domestic Environmental Strategy

Environmental problems will pose a significant challenge to sustainable development in China in the future. Rapid economic growth and development and environmental issues are inextricably linked. The structure of the economy and general economic policies and management largely determine the nature of environmental problems and the framework for environmental policies and programmes in any country.¹⁰

While Chinese efforts to date have slightly reduced pollution per unit of output, these improvements have been offset by the rapid economic and population growth that China has experienced.¹¹

⁹ World Resources Institute, World Resource, 1994-5 p.68.

¹⁰ World Bank, "China's Environmental Strategy Paper," Report No. 9669-CHA, 1992, p.2.

Harry G. Broadman, "Meeting the Challenge of Chinese enterprise reform," World Bank Discussion Paper, No. 283, April 1995, p.17.

Environmental problems in China are more severe than at comparable periods of economic development in most industrialized countries, primarily because of the size of the country's population, and natural resource constraints. As a result, they are more likely to impede economic growth seriously if action is not taken soon to address both the direct and indirect or underlying causes. In general, until price and enterprise reforms are undertaken more extensively, neither pollution fees nor fines nor administrative regulations are likely to carry sufficient force or be systematically applied to encourage the most cost-effective means of reducing environmental degradation.¹²

Unlike many developing countries, China has a comprehensive legal basis to guide the development of environmental policy. ¹³ The Constitution, the highest law in China, provides for environmental quality. The basic law governing environmental issues is the Environmental Protection Law (EPL), first implemented in 1979 and amended in 1989. Three specific laws, the Water Pollution Prevention and Control Law, the Air Pollution Prevention and Control Law, and the Marine Environmental Protection Law govern specific subjects that are addressed more generally in the EPL. Other statutes, such as those governing wildlife protection, land management, fisheries, and water and soil conservation also serve to protect the environment.

¹² ibid p.47

ibid pp.5-6

The national laws are supplemented by State Council regulations. There are over 20 such regulations, which generally are more technical and specific than the statutes. These regulations apply to a diverse range of areas, such as noise control, environmental pollution in offshore oil exploration and the prevention of vessel-induced sea pollution. Some of the regulations, for example the Implementing Regulations for the Water Pollution and Control Law, clarify the administration of environmental statutes.

The national laws and State Council regulations are supported by regional implementing regulations. Chinese laws still tend to emphasis basic principles and provide only broad administrative guidelines. It is the responsibility of provincial governments (and in the case of Beijing, Shanghai and Tianjin, the municipal governments) to implement regulations that take into account their respective "special circumstances". Consequently, while China has national environmental laws, there are in effect regional variations throughout the country. ¹⁴

The State Environmental Protection Commission (SEPC), which includes the heads of ministries and agencies, is the highest national level consultative body for environmental issues. Other commissions, notably the State Planning Commission (SPC), which coordinates China's economic policies, and the State Science and Technology Commission (SSTC) also actively participate in the formulation of

¹⁴ Stranks, N. Strizzi, Policy Paper, China: Environmental Stress and National Security, February 1996, p. 18

environmental policy. 15 China's principal environmental organization is the National Environmental Protection Agency (NEPA). It became an independent agency in 1988, but does not have full status as a ministry. The NEPA reports to both the State Council and the SEPC, for which it acts as a secretariat. In practice, the SPC likely plays a dominant role "balancing" in environmental and economic development plans. 16

The NEPA is responsible for all aspects of environmental policy and management of environmental protection, although it shares authority for certain specific natural resources with other agencies. For example, marine environment affairs are managed primarily by the State Oceanographic Administration and the Ministry of Agriculture and Fisheries. Authority in conservation issues rests primarily with the natural resources ministries, such as the Ministry of Forestry and the Ministry of Energy. The NEPA has a small staff of about 300 at the national level. But this number is misleading, as several institutions report to NEPA.¹⁷ Moreover, most environmental protection policy is implemented at the subnational level. Below the national level, the environmental protection network includes provincial, municipal and environmental protection agencies. Collectively, these bureaus employ about 60,000 people. 18 Additional staff employed in specific ministries would further increase the total number of people

¹⁵ World Resource Institute, "World Resources", 1994-5, p.64.

¹⁶ Stranks, N. Strizzi, Policy Paper, China: Environmental Stress and National Security, February 1996, p. 18.

¹⁷ ibid, p.64. ¹⁸ ibid

engaged in environmental activities. All told, China has a substantial bureaucracy to address environmental issues.

In response to the United Nations Conference on Environment and Development call for all countries to develop sustainable development policies, the Chinese government tasked the State Planning Commission and the State Science and Technology Commission in consultation with appropriate ministries and agencies to formulate such policies. This work concluded with State Council approval in March 1994 of the "White Paper on China's Population, Environment, and Development in the 21st Century", otherwise known as "China's Agenda 21". A Priority Programme document sets out initial work to support the implementation of China's Agenda 21. The governments intent is that China's Agenda 21 will "function as a guide document for drawing up medium and long-term plans on economic and social development."19

The White Paper and the Priority Programme are extensive. China's Agenda 21 is set out in 20 chapters which the Chinese have grouped nto four major sections. The first section deals with overall strategies for sustainable development, including enhanced public participation. The second discusses aspects of the sustainable development of society, with an emphasis on population control and family planning. The third focuses on sustainable development of the economy, nocluding challenges in the coal-based energy sector. And the last

⁹ Government of China, "White Paper on China's Population, Environment and Development in 21 st century, Beijing 1994, p.3.

section is concerned with resource conservation. The Priority Programme contains sixty-two projects, such as environmental water treatment in northern Jiangsu province and the conservation of dinosaur egg fossils in Xixia, under nine priority areas. It is planned that these projects will be executed in a "rolling and flexible way" and new projects will gradually be incorporated.

China's Agenda 21 contains the right rhetoric and good intentions. Like UNCED, it recognizes environmental problems, but is short on practical approaches. The objectives of China's Agenda 21 are more of a wish list, than a long-term vision to guide sustainable development. A key short-coming is the lack of real public participation. China's Agenda 21 highlights public participation in the policy process, but it is really stressing the continuation of existing mechanisms and not the development of autonomous views on environmental stewardship or sustainability. A notable absence in China Agenda 21's Chapter 20 on Public Participation in Sustainable Development, is public participation through development or environmental non-governmental organizations. Chapter 20 proposes enhanced participation through government-affiliated, controlled, entities such as the All-China Women's Federation, the All-China Federation of Trade Unions, the Communist Youth League of China, and the China Science and Technology Association.

In theory, China's pollution levy system provides an incentive for companies to reduce pollution. Under the system, violators pay a fine for failing to meet emission standards, and if violations continue companies may face additional fines. But in practice, fees and fines can be low, and do not provide enough incentive for firms to operate their pollution control equipment. In Shenyang, for example, there have been reports that firms routinely pay a RMB300,000 a year fine for polluting, rather than install and operate new pollution abatement equipment. Another problem is that part of the fees collected by local environmental agencies goes into their budget, thus creating an incentive to tolerate pollution to maintain the budget. With these problems and with an eye to reform, in June 1994 the NEPA began a two-year study of the pollution levy system. ²⁰ Most environmental protection policy is implemented at the subnational level.

Unfortunately, under the current system in many situations the state the both the principal polluter and environmental manager/regulator. As a result, it is often difficult for regulators to carry out objective reviews or assessments of the actions of state entities, or to take contrary positions. It has also been reported that Chinese environmental officials place a high priority on the largescale polluter, which are often large state-run enterprises. Lack of staff and resources hinder action on smaller enterprises, which may use older, less environmentally sound equipment and often lack pollution control equipment.²¹ In practice, China does not have a strong, consistent and effective environmental enforcement agency.²²

²¹ ibid, p.26.

²⁰ Robert Livernash, "The Future of Populous Economies: China and India shape their destines", Environment, Vol. 37, No. 6, Jul/ Aug 1995, p.26.

²² "Green Rules", China Trade Report, December 1995, p.5.

In conclusion, it can be said, that, though China has formulated various domestic regulations to prevent environmental pollution, the main problem lies with the implementation. In an authoritarian state like PRC compliance is easily sought due to the fear of punishment. Despite all these domestic problems China has always tried to fulfill its international obligations.

International Environment Regimes and its influence on China

Despite the many environmental regimes and action plans negotiated in the past quarter century, important gaps still exists in the international environmental policy framework. The framework has not developed in any systematic or strategic way. Rather it's a collection of numerous treaties, each addressing relatively discrete global or regional environmental issues.

Environment protection in the international context constitutes a type of soft or functional regime directed at the control of behavior by states, which generally does not pose an even threat to their neighbors. Rather, principal danger is one of the everyday social or economic activity presenting risks within the states in which it originates, to that state's neighbors and possibly to the global commons. Control is complicated with sovereignty issues, which becomes paramount when externalities cross boundaries and affect originator's neighbors and wider international community. Although there have been cases of countries obtaining judicial relief for

¹ Lester Ross, "Environmental Protection and International Norms," China Quarterly, December 1998, p. 809.

environmental harms originated in other countries, such issues are overwhelmingly non-justifiable.²

Despite the paucity of judicial means of dispute resolution, international regimes have been established in increasing numbers in the environmental area. Hence, the question here arise that why states establish and participate in such regimes. And because the activity of members are not well defined, why they comply with the norms of such regimes after they become participants. Keohane et al argue that the key variable is the "degree of domestic environmental pressure in major industrialized democracies, not the decision making rules of the relevant international institutions.³

However, China provides a contradictory model to the above assertion. Despite nearly two decades of rapid industrialization and a measure of political reform, China ranks well below the advanced industrialized countries of the world on a per capita basis with respect to economic development. It is also an assertive defender of national sovereignty, both it's own and as a principle against external interference. Thus for China where low income levels and restriction on political participation limit the present potential for domestic environmentalist pressure and the external interference is treated warily by the state, the question arises that whether and why China has become more participatory in international environmental

² ibid.

³ R.O. Keohne, P. Hass, M. Levy, "The effectiveness of international environmental institutions," in P. HAss, R. Keohane and M. Levy (eds.) "Institutions of Earth: Sources of Effective Environmental Protection." Cambridge, MA: The MIT Press, 1994, p.14.

regimes; whether the quality of China's participation varies by substantive area, the threat of sanctions or other variables; and whether constructive engagement can shape China's participation.

International Environmental Diplomacy

As discussed earlier, International environmental agreements, addressing external effects both on global commons and within another country's frontiers, have increased in number and entered into force more rapidly since UNCHE and UNCED. Although initially an environmental laggard, China has become a more active participant. A recent compendium edited by SEPA's policy and law section listed 29 multi lateral environmental agreements to which China has become parity.⁵ (See Appendix 1)

Nature of Participation in International Organization- To What extent it compromised with various principles

China began to manifest an awareness of environmental problems in the early 70's, during the later stages of Cultural Revolution.⁶ This was at approximately the same time that the PRC was awarded the China's seat in UN and in the midst of the early stages of normalizing with US. Specifically, in 1971, a leading small group for

⁴ Edna Ross, "The North-South Divide" as in www. unu.edu.

⁵ Lester Ross, "Environmental Protection and International Norms," China Quarterly, December 1998, p. 815.

environmental protection was established informally under the State Council to supervise preparation for the June 1972 UNCHE in Stockholm. Thus, China's first high-level environmental policy body was established in direct and urgent response to an impending international conference.⁷

However, China did not play a particularly constructive role at UNCHE. Like developing countries in general, it assigned principal responsibility for pollution control to advanced industrialized countries and defended the right of developing countries to exploit their own resources without external interference. Although the declaration was eventually approved by consensus, in part to avoid recorded vote, China publicly announced that it had not taken part in the voting. In other words China was a 'laggard' (Lester Ross, 1998, p. 811) participant in this international regime, avoiding international obligations by shunning treaty commitments on exhibiting a disdainful attitude towards compliance obligations.

UNCHE is widely regarded as the origin of international diplomacy¹⁰ of particular importance it gave to China and other developing countries to create an environment policy, notwithstanding their fear that advanced industrialised countries would make use of the

⁶ ibid, p. 810.

ibid, p. 810-11.

⁸ Lyton Keith Caldwell, International Environmental Policy: Emergence and dimensions; Dusham: Duke University Press, 1984; Peking Review, 23 June 1972,pg 8; Leter Ross, Environmental Policy in China, Bloomington; Indiana University Press 1988, pg. 137

⁹ Keohane, Hass and Levy, The effectiveness of international environmental institutions, pg. 16]
¹⁰ Peter M. Hass with Jan Sundgren, "Evolving international environmental law: changing practices of national sovereignty," in Nazli Choucri (ed.), *Global Accord: Environmental Challenges and international responses* (Cambridge, MA: The MIT Press, 1993), pp.405, 410-11.

environmental concerns to curtail their economic potential. As already shown in the preceding chapter the growth and elaboration of China's environmental bureaucracy both have their origin in China's participation in UNCHE.

However, as we have seen China resists the imposition of obligations that are deemed to be incompatible with its development level, and opposes environmental diplomatic initiatives if they threaten to constrain its development potential or justifiably interferes in its internal affairs. This position was articulated in advance of the 1992 UNCED when China convened a forum attended by some 41 developing countries. This forum resulted in the promulgation of the "Beijing Ministerial Declaration on Environment and Development". The declaration acknowledged the need for international cooperation to promote environmental protection and sustainable development while demanding financial assistance, and asserted the right to development and to oppose interference in internal affairs of developing countries.11 This position gained ground in the mid nineties and was reaffirmed by President Jiang Zemin in his address to the Fourth National Environmental Protection Conference on 16 July 1996. In that address President Jiang acknowledged that environmental protection ahs entered the arenas of international politics, economics, trade and culture, and expressed China's willingness to play a positive role in global environmental protection. However, any such role has to be commensurate with its level of economic development, and he rejected any interference in domestic

politics in the name of environmental diplomacy. Although the concept of parallel economic development and environment was preserved, its prominence was reduced and modified to apply to an overall balance of economic, social and environmental interests.¹²

However, some variations can be noticed in China's stand at the 1992 Earth summit. The Convention on Biodiversity, adopted at the UNCED in 1992, was seen as imposing substantial constraints on the development in selected, generally undeveloped areas, in order to conserve biological diversity within and in some cases outside the jurisdiction of the country. This would not impose broad constraints on development in an economy as a whole. In this respect it is perhaps not surprising that China not only participated in the Convention, that Premier Li Peng endorsed the Convention in his address at UNCED and China was the first major state to ratify the Convention. The Biodiversity Convention nevertheless does present potential constraints on China's development.

China took a less prominent position at the Rio UN Framework Convention on Climate Change (the "Framework Convention"). Though China ratified the Framework Convention on the same date as the Biodiversity Convention, it took a more cautious stand in the former, despite in this respect its position was not necessarily

14 Ibid.

^{11 14-19} June 1991.

¹² State Council, "Decisions concerning certain issues in environmental protection (August 13, 1996)," China Environmental News, 13 August, 1996, p.1.

¹³ Lester Ross, "Environmental Protection and International Norms", China Quarterly, December 1998, p. 816.

different from that of most other states, including the US. China participated in the UNEP/ Global Environmental Facility (GEF) project on greenhouse gases and sinks (absorbents of greenhouse gases such as forests and oceans), completed a paper assessing the impact of climate change on China using Global Circulation Model results, conducted various pilot studies and became an active participant in the UNDP project on least-cost emissions reduction.¹⁵

At Kyoto global warming summit in 1997, China strongly resisted the imposition of any binding or even voluntary obligations on developing countries — including itself — with respect to greenhouse gas emissions. ¹⁶ However, China is already a major contributor to global warming, with 800 million tons of carbon emissions in 1995, placing it second behind only U.S. aggregate (but not per capita) greenhouse gas emissions. ¹⁷

The fear of international isolation cannot be ignored. China can take shelter behind the reluctance of such major countries as the U.S. and Australia to accept compulsory controls on their greenhouse gas emissions; it would fear mush more pressure to control its own emissions if all of the world's leading countries took action as well. Because of resistance to doing so, particularly in the U.S. Congress, a simultaneous or nearly so commitment to obligations of differing

¹⁵ Jan Fuglestvedt et al. "A review of country case studies on climate change," Global Environmental Facility Working Paper (Washington: The World Bank, 1994), No.7, p. 30.

¹⁶ Tom Korski, "Chinese official says Western nations attempting to shirk climate responsibility," BNA: Daily Report for Executives, 10 December 1997, p.B-5.

¹⁷ The World Bank, "Clear Waters, Blue Skies, China's Environment in the new century," Washington DC: The World Bank, 1997, p.34.

magnitude and time sequences may be the most feasible solution for China. 18

China thus appears to have become more of a leader in the area concerned with Biodiversity Convention than Global Climate Change. This does not necessarily mean it has been obstructionist in the latter, rather that it has been more reluctant to assume obligations beyond the extent of research or pilot projects.¹⁹

Environmental Stress and National Security

Understanding the link between the environment and security requires that a distinction be made between environmental stress, i.e., negative environmental effects, and the more general, but intricately linked, case of scarcity and resources.

The very concept of security is now being redefined in a different and totally all-encompassing manner. The UNDP now maintains that security is concerned "with how people live and breathe". With such a definition one would expect security studies to be pre-occupied with absolutely everything from nutrition, development, unemployment to pollution and drug trafficking.²⁰

¹⁹ Lester Ross, "Environmental Protection and International Norms", China Quarterly, December 1998, p. 818.

¹⁸ Robert Repetto and Jonathan Lash, "Planetary roulette: gambling with the climate," Foreign Policy (Fall 1997), p. 97; Cheryl Hogue, "U.S. not ready to reject Kyoto deal, Eizenstat tells House of Science Committee," BNA: Daily Report for Executives, 6 March 1998.

²⁰ UNDP, "Human Development Report, 1994," New York: Oxford University Press, 1994, p.2.

It is widely recognised that China faces severe environmental problems, including widespread pollution and ecological degradation. But such environmental stress in itself, no matter how severe, does not pose serious threat to its national security. For the social effects of environmental stress to become violent, certain conditions appear to be needed. First, there must be sustained public dissatisfaction with environmental conditions. Second, there must be obstacles to the public expressing preferences on environmental issues in a peaceful manner, or a lack of governmental response to environmental problems of interests to the populace. Third, for the serious challenges to the authority, although not necessarily through violent confrontation, disenchantment needs to be organised.

In considering the linkages between environment and national security in China, it is therefore important not only to clarify how the term national security is being defined, but also to identify as clearly as possible what type of "environmental factor" is being discussed. It will be misleading to cast the net so wide that all conflicts over resources, intrastate or international, are characterised as environmental stress conflict.²¹

However, the conditions necessary to spurt violent conflict over environmental issues are not at present met in China. Foremost given the choices the Chinese public needs to make between

²¹ Robert Strank snd Nicolino Strizzi, "Policy Paper, China: Environmental Stress and National Security", February 1996, p.6.

environmental stress and economic growth, there is little to suggest that there exists widespread dissatisfaction with the state of environment.²² Certainly the growing entrepreneurial classes are focused on making money, not broader social causes. Many of the most dynamic people focussed their considerable energy and talent where the Chinese system has encouraged independence – growth and wealth creation. There is little evidence that there exists a major government-public disconnect on environmental issues, at least for the time being.²³

An even more serious dilemma is whether China might experience more domestic violence by foregoing economic growth. A sharp reduction in economic growth in China could well threaten the legitimacy of the government and spark potentially violent political instability, which could in turn have negative environmental consequences. Any suggestions that polluted air degraded ecosystems or seasonal water scarcities will force China to attack its neighbours, or make it the victim of foreign military incursions or guerilla attacks before 2020, seems to be dubious. (Vaclav Smil, 1997, p.5)

However, when viewed in historical perspective, environmental pollution could be seen as merely regrettable and often surprisingly temporary byproducts of changes that allowed impressive declines of infant mortality, steady increase in life-expectancy, larger disposable

²² ibid, p.7. ²³ ibid.

incomes and greater social mobility. China has quickly developed some of the world's worst environmental quality indicators, but it has also experienced unusually impressive in major quality-of-life indicators.

The national security linkage is not a classic case of environmental spillovers where one or a number of countries' actions affect the environment of other countries. The ability of environmental stress to generate or add to violent conflict adds a new dimension to thinking of the use of extrajurisdictional trade measures. The threat of environmental stress leading to violence, in addition to negative implications of environmental degradations itself makes a strong case for international cooperation on environmental issues.²⁴

One potential policy response is financial assistance provided for reducing environmental stress or improving social conditions that work to reduce social tensions that could turn into violent conflicts. For the greatest impact aid would need to provide new and additional resources. This was agreed to in principle at UNCED, but has proven to be politically difficult for developed countries.²⁵

Technology transfer is also an important mechanism. Priorities for China include, renewable energy generation, waste management and methods for reducing material and intensity energy in

²⁴ ibid, p. 21. ²⁵ ibid.

manufacturing.²⁶ A key variable for China is rate of technological progress, from both domestic and foreign sources, and dissemination of innovation throughout the economy.²⁷

China's Environmental Strategy at the Global Level

As has been already discussed in the previous chapter, China has embarked on a long-term process of formulating and implementing increasingly stringent environmental policies. Following are some of its policy implications.

China's determination to develop its economy by safeguarding its access to export markets and enhancing its attractiveness for foreign investments can make sanctions an effective incentive for compliance and participation.²⁸ China continues to maintain barriers to free flow of information, as evidenced by the expulsion of foreign Greenpeace activists in 1996 and restrictions on reporting of negative news. Nevertheless, information is more widely available on scientific and technical matters, and there are few relatively few barriers to receiving such information and acting upon it.²⁹

In addition, to opportunities in environmental industries itself, many transnational business recognise the need and even the desirability

²⁶ Richard N. Cooper, "Environment and Resource Policies for World Economy", The Brookings Institution, Washington DC: 1994, p. 38.

⁻ ibid

²⁸ Lester Ross, "Environmental protection and International Norms", China Quarterly, December 1998, p. 831.

²⁹ ibid.

of establishing and adhering to high standards of environmental compliance.³⁰ As foreign investments have increased, many foreign investors have themselves have become more aware of the compliance burdens issued by current Chinese regulatory regimes.

To conclude, despite many problems faced by the developing countries, China's achievements in environmental protection, especially in legislation and implementation of international environmental law, not only demonstrates China's positive function in international environmental endeavours, but also shows other developing countries that they too have a role to play.

³⁰ Sun Hong, "Foreign investment sought for ecological protection," China Daily, 7 August 1995, p.B8.

Conclusion: Uncertainties Abound

It is generally argued that if sustainable development is to be realised, the structural and economic inequities between the north and south must be bridged. In this context the question which inevitably arises is that how do the structural inequalities in the global economic system and the gap between the rich and poor drive environmental destruction?

Poverty can be very easily linked with the causes of environmental degradation. As I have mentioned earlier, that Brundtland pointed out in the report prepared for the World Commission on Environment and Development – Our Common Future – that "poverty is both a major cause and effect of global environmental problems". The poor will often destroy their immediate environment in order to survive. China also being one of these developing countries cannot be an exception.

Given the complexity of the ecological, social, economic and political forces at work, predicting what amounts to China of 21st century is highly speculative. In retrospect, the development of environmental law in PRC is noteworthy for its relatively early embrace of the notion of environment welfare. Although a late starter compared to many other jurisdictions, there are indications that some efforts were made

¹http://inx.sism.unsw.edu.au/

to protect the environment through law even before the Cultural Revolution, and it is significant that efforts were made to protect environment through law at that stage. The efforts in 1970s, too, culminated in the 1979, Environment Protection Law — one of the seven major codes that, in a very real sense, marked the Chinese leadership's decision to pursue more orthodox policies of socialist legal development. There has also been an increased cautious willingness to learn from foreign experience, and although the reality may well be less convincing than the rhetoric, some of China's most senior officials claim that the PRC has become a major player in international conventions on environmental protection — "since 1979 China has successively participated in nearly 30 international conventions... [and]...as a matter of fact has always carried out its obligations in the international conventions on environmental protection."

Environmental laws seem to fit the "semi-paternalistic" Chinese partestate as it does with western style liberal-democratic political systems. Indeed, in some respects it may be easier to impose more rigorous standards of environmental protection in a non-democratic milieu such as that of PRC. The promotion of environmental welfare and the introduction of laws that do enable elements of civil society to a higher standards of environmental protection, are very important

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² Yang Chaofei, "Environmental Protection and Environmental Culture", Beijing, Zhongguo zhengfa daxue chubanshe, 1994, p.6.

³ Dong Songjiao, "To protect the environment in line with the law and to beautify our homeland," pp.4-6, p.6.

⁴ Michael Palmer, Environmental Regulations in PRC: The Face of Domestic Law, China Quarterly, December, 1998, p. 807.

developments, but it is also significant that the line between environmental protection and social control may sometimes be difficult to draw in the authoritarian political context of PRC.

Moreover, the body of environment protection legislation is proving insufficient for safe-guarding environmental welfare. Despite the very considerable body of recently enacted legislation on environmental protection, and membership of a number of important international conventions on environmental protection, the condition of the Chinese environment continues to deteriorate. Although Chinese environmental lawyers feel that China has basically established its system of environmental legal regulation and resources protection to a level that suits the PRC's national conditions, it remains a system with serious flaws. It is essentially administrative than legal with lawyers having very little role to play; it does not also deal with historical issue of land contamination; there is a clear need to establish clearer parameters of liability, and system places too much emphasis on punishment as opposed to material incentives to secure compliance. In addition, to the administrative ethos of the system as a whole it is important not to overlook ideological influence of Mao's theory of contradictions. This tends to encourage, on the one hand, the use of consensual methods of education, persuasion and mediation for the resolution of routine environmental problems and disputes and, on the other, a reliance on coercive methods to solve more fundamental problems. The "Law" occupying something of an "interstitial position"⁵, still play an uncertain and ambiguous role.

The analysis suggests that Chinese decision-makers need to take into account the links between environmental stress and national security to enhance policy making. The concept of national security is no longer confined to military activities and national political sovereignty. The government would be prudent to take a more systematic and committed approach to addressing environmental stress-national security issues. This includes problem identification, the requirement to anticipate emerging environmental stresses, and the analysis of how such stress may become factored into national security interests. In all fairness, it must also be said the China's Agenda 21 is a step in the right direction.⁶

Chinese reformers must come to view environmental management as part of the larger process of economic reform and industrial restructuring.⁷ In the short term, the objective of promoting economic growth, alleviating poverty and protecting the environment are not always easily compatible, and governments often confront difficult choices in pursuing them simultaneously. Nevertheless, in the long term they are mutually supportive objectives. Systemic economic reform should be linked to better environmental management. It

⁵ R. Stranks and N. Strizzi, Policy Paper, China: Environmental Stress and National Security, February, 1996, p. 23.

⁶ Robert T. Stranks & Nicolino Strizzi, "Policy Paper, China: Environmental Stress and National Security", February 1996. p.20.

⁷ Harry G. Broadman, "Meeting the chalenges of chinese enterprise reform," World Bank Discussion Papers, No. 283, April 1995, p.37.

should improve efficiency, such as by using modern technology, to reduce pressures on the environment; make the enforcement of environmental policies more effective by strengthening the operational independence of regulatory authorities; and promote a pricing system that reflects the marginal cost of resources.

Moreover, a longer-range, more holistic focus would link the adjustment of environmental priorities with the vagaries and necessities of political immediacy.

The main converging point of my dissertation was to show the paradigmatic shift that has taken place in Chinese policies after it opened up in 1978. As it participated in various international environmental protection conventions, at the same time it has also tried to change its domestic administrative set up in line with the international agreements it acceded to. Yet it is concerned lest such regimes infringe on its sovereignty and hamper its development potential. China is not simply a "naysayer" or a violator of its international obligations. Rather, it has embarked on a long term course to formulate and implement increasingly stringent environmental policies. Because of China's importance with respect to the solution of global and regional problems, it is particularly important that it continues along this track and further expands its participation in international environmental agreements on a positive basis.

⁸ World Development Report, 1992, p.51.

⁹ Harry G. Broadman, "Meeting the chalenges of chinese enterprise reform," World Bank Discussion Papers, No. 283, April 1995, p.37.

Bibliography

Primary Sources

White Paper on China's Population, Environment and Development – China's Agenda 21, www.accsu.edu.

Report on United Nations Conference on Environment and Development (UNCED), Rio De Janiero, 3-14 June 1992 – Chapter IX: "Protection of Atmosphere".

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Report on United Nations Conference on Environment and Development (UNCED), Rio De Janiero, 3-14 June 1992 – Annex I: "Rio Declaration on Environment and Development".

Li Peng, "Protecting the environment is a major task facing China," translated by Lester Ross & Mitchell A. Silk, *Environment Law and Policy in People's Republic of China*; Westport, CT: Greenwood Press, 1987.

Law on Environmental Noise Pollution Prevention and Control (1996). Principle 21, United Nations Conference on Human Environment.

Robert T. Stranks, "A view of forest: Environmental Stress, Violent conflict and National Security," Policy Staff Paper No. 95/ 05, Department of Foreign Affairs and International Trade, April 1995.

Vaclav Smil, "Environmental Change as a source of conflict and economic losses in China," Occasional Paper No. 2, Project on *Environmental Change and Acute Conflict,* A joint paper of the University of Toronto and American Academy of Arts and Sciences, December 1992.

UN Framework Convention on Climate Change, www.rrojasdatabank.org.

State Planning Commission and SSTC, "Priority Programme for China's Agenda 21,".

China Trade Report, China Today, December 1995, Vol. 33.

Environment Protection Law of PRC, People's Daily, 17 September 1979.

The Water Pollution Prevention and Control Law, People's Daily, 13 May 1984.

Marine Environmental Protection Law of PRC, People's Daily, 23 August 1983.

World Wildlife Fund Agreement on Protection of Wildlife resources, Xinhua General Overseas News Services, 1 July, 1980.

State Council, "Decisions concerning certain issues in environmental protection (August 3, 1996)"; China's Environment News, 13 August 1996, p.1.

Institutional Papers

The Case Study of China – Elizabeth Economy; Council on Foreign Relation, Section V, VI, VII.

PRC Environmental "Grave Concerns" – Part I; A February 1999 Report from U.S. Embassy, Beijing.

NEPA, 1980-1994, Annual Reports on Environmental Quality, Beijng: NEPA.

World Bank, 1994. China energy conservation study, February 4, Washington DC: World Bank.

PRC-US Agreement on Scientific and Technological Co-operation, T.I.A.S. No. 10921, 12 January 1984.

UNDP, Human Development Report, 1994, New York, Oxford University Press.

Harry G. Broadman, "Meeting the challenges of Chinese enterprise reform," World Bank Discussion Papers, No. 283, April 1995.

World Bank, World Development Report 1992: Development and Environment.

World Bank, China Environmental Strategy Paper, Report No. 9669-CHA, 1992.

World Resource Institute, World Resource, 1994-95: A Guide to Global Environment, New York, NY: Oxford University Press, Chapter 2, "Population and Environment".

Robert T. Stranks and Nicolino Strizzi, "Policy Paper, China: Environmental Stress and National Security", February 1996, SP74A, 96/01.

Secondary Sources

Books

Vaclav Smil, <u>China's Environment and Natural Resources</u> in Christopher Hudson (ed.) <u>China Handbook</u>, Fitzroy Dearborn Publication, Chicago, London, 1997.

Michael B. McElroy, Chris P. Nielson, Peter Lydon (ed.) <u>Energising</u>
China: Reconciling Environmental Protection and Economic Growth;
Harvard University Press, 1998.

Zhang Kunmin, *National* Report on investment on environmental protection, 1992, Beijing, Tsinghua University Press.

Michael Oksenberg and Elizabeth Economy (eds.) China Joins the World: Progress and Prospects.

Peter M. Hass, Robert O. Keohane and Marc A. Levy, "The effectiveness of international environmental institutions", in Peter M. Hass, Robert O. Keohane and Marc A. Levy (eds.) <u>Institutions of Earth: Sources of effective international environmental protection</u>, Cambridge MA: MIT Press, 1994.

Abram Chayes and Antonia H. Chayes, <u>The New Sovereignty:</u>

<u>Compliance with international regulatory agreements</u>; Cambridge:

Harvard University Press, 1995.

Lynton K. Caldwell, <u>International Environmental Policy: Emergence</u> and <u>Dimensions</u>; Durham: Duke University Press, 1984.

Lester Ross, <u>Environmental Policy in China</u>; Bloomington: Indiana University Press, 1988.

Peter M. Hass with Jan Sundgren "Evolving international environmental law: Changing practices of national sovereignty" in Nazli Choucri (ed.) <u>Global Accord: Environmental challenges and international responses</u>; Cambridge MA: The MIT Press, 1993.

David Vogel, <u>Green and Global: A review of trading up: consumer and environmental regulations in a global economy</u>; Harvard University Press, 1995.

Cheng Chu-yuan, <u>China's Economic Development: Growth and Structural Change</u>, Boulder, Colorado: Westview, 1982.

Janos Kornai, The Road to Free Economy, New York, Norton 1990.

Luo Hanxian, <u>Economic Changes in Rural China</u>, Beijing: New World Press, 1985.

Vaclav Smil, China's Environmental Crisis: An inquiry into the limits of national development, Armonk: M. E. Sharpe, 1993.

Qu Geping and Li Jinchang, translated by Jiang Baozhang and Gu Ran, <u>Population and Environment in China</u>, Boulder: Lynne Reinner Publishers, 1994.

Shiu-Hung Luk and Joseph Whitney (eds.), <u>Megaproject: A case</u> study of China's Three Gorges Project, New York: M.E. Sharpe, Inc., 1993.

Qu Geping, <u>Environmental Management in China</u>, Beijing: China Environmental Press, 1991.

Vaclav Smil, <u>Global Ecology: Environmental change and social</u> <u>flexibility</u>, London: Routledge, 1993.

Philippe Sands (ed.), <u>Greening International Law</u>, London: Earthscan Publications Limited, 1993.

Richard N. Cooper, <u>Environment and Resource Policies for World Economy</u>, The Brookings Institution, Washington DC, 1994.

Vaclav Smil, Energy in World History" Boulder, Co: Westview, 1994.

Carl Riskin, China's Political Economy: The Quest for Development since 1949, Oxford University Press, 1987.

Mark Selden, <u>The PRC: A documentary history of Revolutionary</u> change, Monthly Review Press, New York, London, 1997.

Mark Selden, <u>China in Revolution: The Yenan Way Revisited</u>, M. E. Sharpe, London, 1997.

Mark Blecher, <u>China Against the Tides: The Restructuring through</u>
Revolution, Radicalism and Reform, Pinter, London, Washington,
1997.

Maurice Miesner, <u>Mao's China: The history of People's Republic</u>, The Free Press, Macmillan Publications Company, 1977.

Stuart R. Schram, <u>Authority Particiapation and Cultural Change in China</u>, Cambridge University Press, 1973.

Articles from books and journals

Mark Elvin, "The Environmental Legacy of Imperial China"; China Quarterly, No. 156, December 1998, pp.733-756.

A. R. Jahiel, "Organisation of Environmental Protection in China"; China Quarterly, No. 156, December 1998, pp.757-787.

Vaclav Smil, "China's Energy and Resource Uses: Continuity and Change"; China Quarterly, No. 156, December 1998, pp.935-951.

Michael Palmer, "Environmental Regulation in PRC: Face of Domestic Law"; China Quarterly, No. 156, December 1998, pp.788-808.

Lester Ross, "Policy Trends, Patterns of Participation in Regimes and Compliance with International Norms"; China Quarterly, No. 156, December 1998, pp.809-835.

Judith Banister, "Population, Public Health and Environment in China"; China Quarterly, No. 156, December 1998, pp. 986-1015.

Frank Ching, "China's attitude to the rest"; Far Eastern Economic Review, Vol. 161, No. 28, 1998, p.32.

Koon Kwai Wong and Hon S. Chan, "The environmental awareness of environmental protection bureaucrats in PRC"; <u>The Environmentalist</u>, No. 16, 1996, pp.215, 218.

Jiang Zemin, "Speech at the Fourth national Environmental Protection Conference"; <u>People's Daily</u> (overseas edition), 19 July 1996, p.1.

China's signs Kyoto Protocol on Climate change – <u>Asian Wall Street</u>
<u>Journal</u>, 1 June 1998, p.16.

Li Daqun, "China's Environment Policy Options: New Diplomatic Endeavors concerning world environment", <u>International Studies</u>, 1990, no. 4.

Lisbeth Gronlund and David Wright, "East meets West: Public interest science comes to China"; Nucleus, Vol 15, NO. 1, Spring 1993, p. 31.

Josef C. Brada and Arthur E. King, "Sequencing Measures for the transfer of Socialist economies to Capitalism", Research Paper Series # 13, Washington DC: Socialist Reform Unit, World Bank, 1991.

K. Chen, G. Jefferson and I.J. Sing, "Lessons from China's Economic Reform," <u>Journal of Comparative Economies</u>, Vol. 16, No. 2, June 1992, pp.201-225.

Shenggen Fan,"Efforts of Technological change and institutional reform on production growth in Chinese agriculture," <u>American</u>

<u>Journal of Agricultural Economics</u>, Vol. 73, No.2, May 1991, pp. 265-75.

R. Gordon and Wei Li, "Chinese Enterprise Behaviour under the Reforms", <u>American Economic Review: Paper and Proceedings</u>, Vol. 81, No. 2, May 1991, pp.202-06.

Justin Yifu Lin, "Rural Reforms and Agricultural Growth in China", American Economic Review. Vol. 82, No.1, March 1992, pp.34-51.

Rex Li, "China and Asia-Pacific Security in the Post Cold War Era," Security Dialogue, Vol. 26, No.3, September 1995, p.336.

Thomas F. Homer-Dixon, "On the threshold: Environmental Changes as the causes of Violent Conflict", <u>International Security</u>, Fall 1991, Vol.16, No. 2, pp.76-116.

Tang Shubiao, "Three Gorges Project: Relocating People", <u>China</u> <u>Today</u> (North American Edition), Vol XLIV, no. 3. March 1995, p. 25.

Robert Livernash, "The future of populous economies: China and India shape their destinies", <u>Environment</u>, Vol. 37, No. 6, July/ August 1995, pp.25-26.

Li Tan, "Population flow into big cities," <u>Beijing Review</u>, August 1-8, 1994, p. 17.

Zhao Zhiyang, "Advance along the road towards socialism with Chinese characteristics," People's Daily, 4 November, p.2.

Vaclav Smil, "China's Environmental Refugees: Causes, Dimensions and Risks of Emerging Problem," in K.R. Spillmann and G. Bachler (eds.) Environmental Crisis: Regional conflicts and Ways of cooperation, Ber: Swiss Peace Foundation, 1995, pp.75-91.

Robert Kaplan, "The Coming Anarchy," <u>Atlantic Monthly</u>, 273:2, 1994, pp. 44-76.

Websites on Environment

www.usembassy-china.org.en
www.enr.berkeley.edu
www.jinx.sistm.unsw.edu.au
www.egj.lib.uidaho.edu
www.aasianst.org
www.ucsusa.org
www.rrojasdatabank.org
www.unu.edu
www.fraserinstitute.ca
www.chineseculture.about
www.ciesin.org
www.worldbank.org
www.state.gov

www.nautilus.org
www.muse.jhu.edu
www.dfid.gov.uk
www.ecsp.si.edu
www.chaos.umd.edu
www.tsp_environment.pdf

Global International Norms and China's Participation

1972 Stockholm Declaration (United Nations Conference on Human Environment), China participated.

1972 Convention for the Prevention of Marine Pollution by Dumping from Ships and Aircraft, Oslo.

1972 Convention for the Conservation of Antarctic Seals, London.

1972 Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxic Weapons, and on their Destruction, London, Washington, Moscow.

1972 Convention for the Prevention of Dumping of Wastes and Other Matters, London, Mexico City, Washington, Moscow.

1973 Convention on International Trade on Endangered Species of Wild Faunas and Floras, Washington

1973 Convention on the Prevention of Pollution by Ships, London.

1974 Nordic Convention on the Protection of the Environment, Stockholm.

- 1974 Convention on the Protection of the Environment, Stockholm
- **1974** Convention for the prevention of Marine population from land based sources, Paris
- 1978 Protocol relating to the 1973 International Convention for the prevention of pollution from ships, London
- 1979 Convention on the conservation of migratory species of wild animals, Bonn
- 1979 Convention on long range transboundary air pollution, Geneva
- **1980** Convention on conservation of Antarctic Marine living resources, Canberra
- 1981 African Charter on human rights and peoples' rights, Banjul
- 1982 World Charter for Nature
- 1982 UN Conventions on the law of the sea, Montego Bay
- 1985 Convention on the protection of the Ozone layer, Vienna
- 1985 Protocol on the reduction of Sulphur Emissions or their Transboundary fluxes by atleast 30 percent, Helsinki

1987 Protocol on the substances that deplete the Ozo0ne layer, Montreal

1989 Convention on the control of Transboundary movement of hazardous wastes and disposal, Basel

1991 Convention on the environmental impact assessment in a Transboundary context, Espo

1991 Protocol on Environmental Protection to the Antarctic Treaty, Madrid

1992 Rio Declaration, June, Rio De Janiero, China participated.

1992 Treaty on European Union, Maactrict

1992 Convention on the protection and use of Transboundary water courses and International lakes, Helsinki

1992 UN\ ECE Convention on Transboundary effects of Industrial Accidents, Helsinki

1992 UN Framework Convention on the Climate change, New York, China participated.

1992 Convention on the Biological Diversity, Rio de Janeiro, China participated.

1992 North American Free Trade Agreement, Washington, Ottawa and Mexico City

Appendix 2

China's Domestic Regulations in Response to International Environmental Norms

| 1973 | Several rules on protecting and improving the environment |
|------|--|
| 1974 | Provisional regulations on prevention of pollution of coastal Waters |
| 1978 | Constitutional amendment of <i>Article 11</i> : "State protects the environment and natural resources, and prevents and eliminates pollution and other hazards of public |
| 1979 | Environment protection Law |
| 1982 | Marine Environmental Protection Pollution Law |
| 1982 | Constitution of PRC, Article 26: "The State protects and Improves the environment in which people live and ecological environment" Article 9: "The state ensures the rational use of natural resources and protects rare animals and plants. Approximations or damaging of natural resources by any organisation or individual by whatever means is prohibited." |
| 1983 | Water Pollution Prevention and Control Law |
| 1984 | Provisions on Strengthening Environmental management of Rural townships and Neighborhood Enterprises |
| 1985 | Regulations on Ocean Dumping |
| 1986 | Regulations on Environmental Management in Special Economic areas open to the World |
| 1986 | Forestry Law |
| 1986 | Mineral Resource Law |

| | 1987 | Law on Prevention and Control of Atmospheric Pressure |
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| | 1987 | Land Administration Law |
| | 1988 | Water Law |
| | 1988 | Law on Protection of Wildlife |
| | 1989 | Environment Protection Law |
| | 1989 | Regulations on Implementation of Law on Prevention and Control of Water pollution |
| | 1990 | Administrative Regulations on Prevention and Control of pollution and damage caused to Marine Environment by Coastal Construction Projects |
| | 1990 | Decision on further Strengthening of Environmental Protection Work |
| | 1990 | Regulations on the Construction of Coastal Projects |
| | 1991 | Law on Water and Soil Conservation |
| | 1993 | Regulations on Emergency Management of Nuclear Accidents. |
| | 1994 | Regulations on Natural Resources |
| | 1995 | Law on Prevention and Control of Environmental Pollution by Solid Wastes |
| | 1995 | Food Hygiene Law |
| | 1996 | Law on Prevention and Control of Environmental Pollution caused by Solid Wastes |
| | 1997 | Flood Control Law |
| · · | 1997 | Law on Control and Treatment of Pollution |

- 1997 Amendment of Criminal law 1979 to include: "the crime of Sabotaging the protection of environment and resources"
- 1998 National Environment Protection Agency upgraded.