Pace International Law Review

Volume 18
Issue 1 *Spring 2006*

Article 9

4-1-2006

The Current and Future Trends in Chinese Environmental and Energy Law and Policy

Mingde Cao

Follow this and additional works at: http://digitalcommons.pace.edu/pilr

Recommended Citation
Mingde Cao, *The Current and Future Trends in Chinese Environmental and Energy Law and Policy*, 18 Pace Int'l L. Rev. 253 (2006)
Available at: http://digitalcommons.pace.edu/pilr/vol18/iss1/9

This Article is brought to you for free and open access by the School of Law at DigitalCommons@Pace. It has been accepted for inclusion in Pace International Law Review by an authorized administrator of DigitalCommons@Pace. For more information, please contact cpittson@law.pace.edu.

THE CURRENT AND FUTURE TRENDS IN CHINESE ENVIRONMENTAL AND ENERGY LAW AND POLICY

Mingde Cao†

I. Chinese Environmental and Energy Law and Policy: Transmitting from First Generation to Second Generation 255
II. The Current and Future Trends in Chinese Environmental and Energy Law and Policy 258
A. Ethical Transition from Anthropocentrism to Eco-centrism 258
B. Transition from a Development Economy to Recycling and Cleaning Production Economy in Environmental and Resource Law 262
C. Transition from Restricting Development and Utilization of Non-renewable Energies to Encouraging Investment and Operation of Renewable Energies 266
III. Conclusion 268

In the period from 1979 to 2003, the yearly average growth rate of gross domestic product (GDP) in China was 9.4 percent,[1] while, at the same time, sixteen of the world's twenty most air-polluted cities were in China, according to the World Health Or-

---

† Mingde Cao, PhD, is professor of law at Southwest University of Political Science and Law in Chongqing, China. He also serves as associate editor-in-chief of *Modern Law Science* and was the 2004 recipient of one of the ten most distinguished jurist nominations for his achievements in jurisprudence. Prof. Cao was vice mayor of Nanchuan City in Chongqing municipality from July 1997 to July 1998. He is an experienced lawyer, and was a visiting scholar at Pace Law School until June 2005. The author expresses his sincere thanks to his supervisor, former congressman, Dean Emeritus, Professor Richard L. Ottinger.

[1] Jonathan Watts, *Satellite Data Reveals Beijing as Air Pollution Capital of the World*, The Guardian, Oct. 31, 2005, *available at* http://www.guardian.co.uk/waste/story/0,12188,1605147,00.html.

ganization.[2] China recently moved into second place (behind the United States) among the world's largest energy consumers.[3] China is by far the world's largest coal consumer, devouring almost forty percent of total global coal production annually.[4] Oil demand is also surging this decade. As a result, China has become the third largest oil importer in the world after the United States and Japan.[5] China's current greenhouse gas emissions rank second in the world, lagging only behind the United States.[6] The World Bank estimates that China's greenhouse gas emissions will surpass the United States by the year 2015, ranking China first in the world.[7] Also, according to the U.S. Energy Information Administration (EIA), China's emission of carbon dioxide, the main by-product of fossil fuel combustion, which is regarded as the chief pollutant implicated in global warming, is likely to surpass the United States as the world's number one carbon dioxide emitter within two decades.[8] As a responsible country, China is a contracting party to the United Nations Framework Convention on Climate Change (UNFCCC)[9] and the Kyoto Protocol.[10] However, it did not commit to a mandatory CO_2 reduction by 2012, as Annex 1 developed countries did. Accordingly, the trends of China's environmental and energy law and policy have attracted, and will continue to attract, the attention of countries around the world. Therefore, this article will offer several ideas

---

[2] DENIS HAYES, A DRAGON ON STEROIDS! SIDE EFFECTS OF CHINA'S GROWTH 3 (Envt'l Grantmakers Assoc. ed., 2005), *available at* http://www.ega.org/resources/EGANewsSum2005.pdf (last visited Apr. 5, 2006).

[3] Energy Information Agency, Country Analysis Brief – China 1, *available at* http://www.eia.doe.gov/emeu/cabs/china.pdf.

[4] *Id.* at 7.

[5] Doug Ogden, *China's Energy Challenge*, *in* THE ENERGY FOUNDATION, 2004 ANNUAL REPORT 4 (2004), *available at* http://www.ef.org/documents/AR2004_Final.pdf (last visited Apr. 5, 2006).

[6] *See supra* note 4, at 2.

[7] China Environment, http://web.worldbank.org/WBSITE/EXTERNAL/COUNTRIES/EASTASIAPACIFICEXT/EXTEAPREGTOPENVIRONMENT/0,,contentMDK:20266322~menuPK:537827~pagePK:34004173~piPK:34003707~theSitePK:502886,00.html. (last visited May 26, 2006).

[8] Ogden, *supra* note 5, at 5.

[9] United Nations Framework Convention on Climate Change, May 9, 1992, S. Treaty Doc No. 102-38, 1771 UNTS 107. [hereinafter UNFCCC].

[10] Kyoto Protocol to the United Nations Framework Convention on Climate Change, Dec. 10, 1997, 37 I.L.M. 22.

on how to judge the current and future developmental trends of China's environmental and energy law and policy.

I. Chinese Environmental and Energy Law and Policy: Transmitting from First Generation to Second Generation

International environmental law scholars failed to reach a consensus on what constituted the environmental law of the first generation and the second generation.[11] The environmental law of the first generation focused on how to utilize natural resources, in order to prevent pollution and best to treat it, specifically end-of-pipe treatment. This sort of environmental law and policy was a response to environmental pollution and other adverse consequences caused during the process of economic development. The main approach to remedying pollution under this theory is command and control. On the other hand, the environmental law of the second generation introduced the new concept of "sustainable development" simultaneously with a new and advanced concept of protection. This concept of "sustainable development" is based on a new philosophy that holds that human beings should respect and care for the community of life, recognize that all beings are interdependent and that every form of life has value regardless of its worth to human beings.[12] Therefore, human beings should treat other forms of life as neighbors, loving as we love ourselves.[13] We should also strive to please others, and not merely ourselves.[14] Moreover, the new generation of environmental law replaced the traditional mode of "parks with fences," with the mode of "ecosystem" or "beyond parks." Thus, the new model emphases zoning, planning and the new method of ecosystem management, which includes the earth as an integral ecosystem. The environmental

[11] Some leading scholars in international environmental law hold that the environmental law in the world has developed over one hundred years. It can be divided into different phases and categories according its different philosophies, principles, methods, and characteristics, but, international environmental law scholars have not reached a consensus on how to divide these phases and upon which criteria.

[12] *See* Nicholas A. Robinson, *Enforcing Environmental Norms: Diplomatic and Judicial Approaches*, 26 Hastings Int'l & Comp. L. Rev. 387, 387-89(2003).

[13] Leviticus 19:18.

[14] Romans 15:2 says "[e]ach of us should please his neighbor for his good, to build him up."

laws of the second generation also embody the spirit of law in the earth charter that "all living forms have a living and existing right" and "humans and nature should live harmoniously".[15]

The distinguished environmental law professor, Nicholas A. Robinson, emphasized that environmental law was the premise of sustainable development in the very beginning of his article, "Challenges Faced by the Unceasing Development of the Environmental Law of the Second Generation".[16] In the latter part of his article, Robinson analyzed the five development stages for the environmental law of the first generation, ranging from the development from the traditional rule of tort law, including the public consignment in Roman law to protection law,[17]to the development of law on pollution control and the development of a legislative framework or procedure for the purpose of entire protection and intensifying protection (i.e., the rules for the environment impact assessment (EIA), the development of a constitutional protection of the environment, and finally the development and confirmation of a citizen's basic environmental right.)[18]

Professor Robinson emphasized that one priority is to heighten the capacity of environmental law and to improve the effectiveness of environmental laws at all levels.[19] Meanwhile, he also proposed seven issues that should be considered in developing the environmental law of the second generation.[20] First, there should be basic values and rules of ethics: "environmental ethics is the jurisprudential basis for environmental law of the second generation."[21] Second, the environmental laws should be related to each other, and thus should be beyond the limit of states, regions, and even international laws, but they

---

[15] For a more thorough reading on these principles see the Earth Charter, *available at* http://www.earthcharter.org/files/charter/charter.pdf .

[16] Nicholas A. Robinson, *Challenges Confronting the Progressive Development of a Second Generation of Environmental Laws, in* TOWARDS A "SECOND GENERATION" IN ENVIRONMENTAL LAWS IN THE ASIAN AND PACIFIC REGION 27-32 (Lye Lin-Heng & Maria Socorro Z. Manguiat, eds., IUCN Environmental Policy and Law, Paper No. 48 2003).

[17] *Id.* at 28.

[18] *Id.* at 29.

[19] *Id.* at 29.

[20] *Id.* at 30.

[21] *Id.* at 30.

should build a working relationship between governments of different levels.[22] Third, international environmental laws should be based on science and technology, thereby combining law and science. The environmental law of the next generation should be taught with science to realize "the global ecosystem science" and "sustainable science."[23] Fourth, environmental law is not an isolated legal area, but a network, and the same legal instrument should be fully understood and used in each aspect.[24] Fifth, besides the current concern with utilitarian values, we should respect the natural cultural tradition and life to promote the understanding between different societies.[25] Sixth, the environmental laws should establish a system for removing waste and the recycling use of waste.[26] In the end, Professor Robinson proposed that a new approach should be applied to protect our common environment as, for example, the administration or management to protect the ecosystem.[27]

China's environmental law began its transfer from the first generation to the second generation after 2000, exemplified by the issuance of several important laws such as the Law of People's Republic of China on Enviromental Impact Assessment in 2002,[28] the Law of People's Republic of China on The Promotion of Clean Production in 2002,[29] the Law on Energy Conservation of the People's Republic of China,[30] and the Renewable Energy Law of the People's Republic of China in 2005.[31]

---

[22] *Id.* at 30, 31.

[23] *Id.* at 31.

[24] *Id.* at 31.

[25] *Id.* at 31.

[26] *Id.* at 32.

[27] *Id.* at 32.

[28] Environmental Impact Assessment Act, (P.R.C.), http://www.lexadin.nl/wlg/legis/nofr/oeur/lxwechi.htm#Environmental%20Law (last visited May 26, 2006).

[29] Cleaner Production Promotion Law (promulgated by the Standing Committee of the Nat'l People's Congress, June 29, 2002, effective Jan. 1, 2003)(P.R.C.) *available at* http://www.chinacp.com/eng/cppolicystrategy/cp_law2002.html .

[30] The Law on Energy Conservation (promulgated by the Standing Committee of the Nat'l People's Congress, Nov. 1, 1997, effective Jan. 1, 1998((P.R.C.) *available at* http://www.ccchina.gov.cn/english/source/ca/ca2003090201.htm.

[31] Renewable Energy Law, Standing Committee of the Nat'l People's Congress, Feb. 28, 2005) (P.R.C.), *available at* http://www.ccchina.gov.cn/english/source/ca/ca2005110901.htm.

II. The Current and Future Trends in Chinese Environmental and Energy Law and Policy

The current and future trends in China's environmental and energy law and policy embody various aspects. First, it highly values the relationship between humans and nature. It has transformed the narrow anthropocentric concept into a search for harmony between humans and nature as the new ethical basis for China's environmental and energy law and policy of the second generation. Concerning the purpose of legislation for environmental law and policy, the concept of placing economic growth first was transferred into the concept of a recycling economy and clean production. This new concept emphasizes that from the raw materials to the process of production, the end of the life cycle of a product should be environmentally friendly, with no consequent damage to the environment. The priority of placing the economy first and the environment second is incapable of protecting the environment from deterioration or preventing the depletion of natural resources. As a matter of fact, the local government officials focused on developing the economy and paid little attention to environmental protections. Thus, China should change the traditional mode of economic development to a sustainable development model. Some newly enacted laws regulate the recycling economy and clean production as mentioned above. China's energy law also began restricting the development and use of nonrenewable resources, encouraging the investment, production, operation and consumption of renewable resources.

A. *Ethical Transition from Anthropocentrism to Eco-centrism*

China's environmental and energy law and policy before 2000 was built upon the ethical basis of a narrow anthropocentrism, whose concept for legislation and tenet embodied the concept of utilitarianism. On the relationship between humans and nature, it also emphasized the development and use of natural resources by humans.[32] Though it was provided by law

[32] *See* Law on Environmental Protection, *available at* http://www.ccchina.gov.cn/english/ (follow "Laws & Regulations" hyperlink; then follow "Environmental Protection Law of the People's Republic of China" hyperlink)..., Article 1, and Article 4. Article 1 provides, "This Law is formulated for the purpose of protecting and improving people's environment and the ecological environment, preventing and

that natural resources should be protected and used fully,[33] the purpose of protecting natural resources was, in fact, to make better use of natural resources. Legislation placed more emphasis on the utility and practicability of natural resources to humans, rather than the relationship between humans and nature. Humans were the subject and purpose, and possessed rights and inner values, while nature was the object and instrument without the right to life and without inner values. Traditional Chinese environmental laws[34] have the characteristic of command and control. These laws illustrate that they are the reactions to the severe results of environmental pollution on humans. They focus on the remediation of many types of pollution and they cannot effectively prevent environmental pollution. These laws result in the contradiction, conflict and disharmony of the relationship between humans and nature, which seriously threaten the survival of humans. The narrow anthropocentrism was the mental origin of the present eco-crisis, whose concept of environmental ethics apparently rejected the nonhuman life form entering the scope of ethics and, whose concept of law obviously took nonhuman life form as the sub-

---

controlling pollution and other public hazards, safeguarding human health and facilitating the development of socialist modernization." *Id.*

Article 4 provides that "the plans for environmental protection formulated by the state must be incorporated into the national economic and social development plans; the state shall adopt economic and technological policies and measures favorable for environmental protection so as to coordinate the work of environmental protection with economic construction and social development."

[33] *Id.*

[34] The Prevention and Control of Atmospheric Pollution Act, (promulgated by the Standing Committee of the Ninth Nat'l People's Congress, Apr. 29, 2000, effective Sept. 1, 2000)(P.R.C.) http://www.fdi.gov.cn/resupload/epdf/e01407.pdf; The Prevention and Control of Water Pollution Act, (promulgated by the Standing Committee of the Sixth Nat'l People's Congress, May 11, 1984, amended on May 15, 1996)(P.R.C.) *available at* http://www.lehmanlaw.com/lib/library/Laws_regulations/environment/water_pollution.htm; The Prevention and Control of Solid Waste Act, *available at* http://www.ccchina.gov.cn/english/source/ca/ca20030918 04.htm; The Prevention and Control of Environmental Noise Pollution Act, (promulgated by the Standing Committee of the Eighth Nat'l People's Congress, Oct. 29, 1996, effective on Mar. 1, 1997) http://www.lehmanlaw.com/lib/library/Laws_regulations/environment/noise_pollution.htm; Prevention and Control of Radioactive Pollution Act, (promulgated by the Standing Committee of the Tenth Nat'l People's Congress, June 28, 2003, effective Oct. 1, 2003)(P.R.C.), *available at* http://english.gov.cn/laws/2005-09/06/content_29737.htm.

stance, object and property, rejecting its right to live and exist, while the right in essence was inalienable and inherited.[35]

The new natural concept of harmony aims to pursue stable relations between humans and nature, which itself includes respect of nature and nonhuman life forms. In light of this new theory, environmental law should recognize the inner values of the other forms of life, and their right to live and exist.[36] The methodology of the new natural concept of harmony abandons the positivism method of dichotomy between subject and object, and holds that humans in essence are a kind of species like other forms of life on this planet. This new theory believes environmental or eco-ethics are not only the norms of behaviors between human beings, but also the norms between human beings and the other life forms in the biosphere. This environmental ethic should address the relationship between humans and their neighbors, namely, the other sorts of species in the community of life. As Aldo Leopold, the founder of Land Ethics, pointed out, the goal of Land Ethics is to extend the border and scope of moral community to include the community comprised of the soil, water, plants and animals, and make humans change the idea from the conqueror of the land community into a plain member and citizen of the land community. This environmental ethics implies the idea of respecting every member of the life community and the community itself. In his Sand County Almanac, Leopold advanced the thought of biology rights. He affirmed that the animals, plants and other forms of life have the "rights of living," holding that living beings sharing the earth with humans have the right to live.[37] Leopold's ideas about land ethics greatly influenced U.S. environmental law and the current international environmental law. "Land ethics" has been recognized as a principle of law in many states within the United States.[38] The Earth Charter recognizes as its

---

[35] "Respect and care for the community of life, respect earth and life in all its diversity.", Earth Charter, Principle 1.1, http://www.earthcharter.org/files/charter.pdf (last visited April 5, 2006).

[36] *Id.*

[37] ALDO LEOPOLD, A SAND COUNTY ALMANAC, 194 (1997), (Chinese version, translated by Hou Wenhui). *See also* Excerpts from the Works of Aldo Leopold, http://gargravarr.cc.utexas.edu/chrisj/leopold-quotes.html (last visited May 22, 2006).

[38] Nicholas A. Robinson, *Enforcing Environmental Norms: Diplomatic and Judicial Approaches*, MODERN L. SCIENCE 131-44 (2004).

first principle "Respect and Care for The Community of Life" that one should respect earth and life in all its diversity, and that all beings are interdependent and every form of life has value regardless of its worth to human beings.[39]

The animal liberators also hold that animals, including wildlife, have some natural, unalienable or indeprivable rights. They criticized the argument that humans are superior to animals, calling this theory "speciesism" or human-chauvinism.[40]

After the Severe Acute Respiratory Syndrome (SARS) epidemic broke out across China, a controversial debate arose about revising the Law on Protecting the Wildlife of China. Environmental law professors as well as laymen began to discuss ways to protect the wild animals. In my opinion, wild animals should have the right to live independently in a natural state, the right to equal treatment, and and the right to basic dignity. To allow anything otherwise is a maltreatment of animals. The law on protecting wildlife in China should reflect universal animal welfare standards, which require: (a) freedom from thirst, hunger and malnutrition; (b) freedom from pain, injury and disease; (c) freedom from fear and distress; (d) freedom from physical unease of the heat; and (e) freedom to express normal patterns of behavior.[41] However, this law has not yet been revised[42] to include these standards because it is controversial. Fortunately, there is a growing consensus relating to the enhancement of animal welfare.

In fact, the concept of harmonious nature has deep cultural roots in China. There is a history of environmental protectionism in China's traditional culture, and this valued cultural tradition should be implemented into modern Chinese law. China's traditional concept of nature consists of a tolerant and broad-minded attitude towards nature. Rather than viewing nature as controlling and conquering, traditional views present

---

[39] *Id.*

[40] *See generally* PETER SINGER, ANIMAL LIBERATION (2001).

[41] *See, e.g.*, AGAINST ANIMAL CRUELTY TASMANIA, INC., REVIEW OF THE TASMANIAN ANIMAL WELFARE ACT (Oct. 2005), http://www.aact.org.au/Tas_Act_review.pdf.

[42] The Law on the Protection of Wildlife (promulgated by the Standing Nat'l Committee of the Seventh Nat'l People's Congress, Nov. 8, 1988, effective Mar. 1, 1989) *available at* http://www.china.org.cn/english/environment/34349.htm. The current law primarily protects rare and endangered species.

nature as a god to be worshipped. For example, Confucianism[43] professed that "nature and man understand each other," and that "nature and man are one."[44] Tung Chung-shu, the successor of Han Confucianism, believed in a close relationship between human beings and nature and suggested that a person's deeds, especially those of the sovereign, are often responsible for unusual events in nature. Because of the sovereign's authority, he or she is to blame for such phenomena as fire, flood, earthquake, and eclipse. These ill omens can descend on earth as a warning to humanity that all is not well in this world.[45] Taoism[46] similarly advocates for a simple, honest life and non-interference with the course of natural events. Taoism further holds that man should follow the rules of nature, and adapt to her, rather than effect change. Buddhism[47] had the same view as the environmental ethics urging man to " respect life," especially the lives of animals. This philosophy advocates for vegetarianism and teaches followers not to kill animals. The teachings and credos of Buddhism stress ideals such as respect for other life forms, the right to co-exist, and the recognition of intrinsic value in these other life forms. Regarding the relationship between humans and nature, Confucianism, Taoism and Buddhism all reached similar goals, though each took different routes in Chinese history.[48] This excellent cultural heritage and its concept of respecting nature should continue and implemented even today.[49]

B. *Transition from a Development Economy to Recycling and Cleaning Production Economy in Environmental and Resource Law*

The laws and policies of China's first generation sought to promote economic growth.[50] Article 1 of the Law on Environ-

---

[43] Confucianism is the major system of thought in China, developed from the teachings of Confucius and his disciples.

[44] *See* http://www.connect.net/ron/confucianism.html (last visited April 5, 2006).

[45] *Id.*

[46] Taoism is the philosophical system developed by Lao-tzu and Chuang-tzu.

[47] Buddhism was introduced into Chinese culture by India in 1 A.D.

[48] Mingde Cao & Yi-xiang Xu, *The Codification of China's Civil law and Environmental Protection*, 4 MODERN L. SCIENCE 13 (2003).

[49] *Id.*

[50] *Supra* note 33, at art. 1.

mental Protection provided: "This law is formulated for the purpose of protecting and improving people's environment and the ecological environment, preventing and controlling pollution and other public hazards, safeguarding human health; and facilitating the development of socialist modernization."[51] This kind of multi-purpose environmental legislation was created to protect the environment and prevent pollution, while also promoting economic growth, even though such goals are seemingly ambiguous and paradoxical. In enforcing environmental law, economic growth became a prime target, and with economic growth, environmental protection was often neglected.

Article 4 of China's Law on Environmental Protection provides:

> The plans for environmental protection formulated by the state must be incorporated into the national economic and social development plans; the state shall adopt economic and technological policies and measures favorable to environmental protection so as to coordinate the work of environmental protection with economic construction and social development.[52]

This provision stands for one of the most basic principles in Chinese environmental law, and stands to reiterate the dual purpose of the legislation.[53] What is the effect of carrying out this legal principle? China's increasingly serious ecological situation has answered this question in the negative. As such, environmental protectionism should become the sole goal of all subsequent environmental legislation passed by the People's Republic of China in the years to come.

In fact, many countries have passed legislation that has prioritized environmental protection as a tenet of environmental law and policy.[54] For example, the U.S. National Environmental Policy Act (NEPA) provides that:

---

[51] *Id.* at art. 4.

[52] *Id.*

[53] Mingde Cao, *Fundamental Principles of Ecological Law*, U. WUHAN L. REV. 39 (2002) (P.R.C.).

[54] The United States, Japan, Germany, the United Kingdom, and other European countries established prioritized environmental protection in their environmental law and policies. *See, e.g.* The National Environmental Policy Act of 1969, 42 U.S.C. §§ 4321-4347 (2000).

> Congress, recognizing the profound impact of man's activity on the interrelations of all components of the natural environment, [. . .] recognizing further the critical importance of restoring and maintaining environmental quality to the overall welfare and development of man, [. . .] to create and maintain conditions under which man and nature can exist in productive harmony, and fulfill the social, economic, and other requirements of present and future generations of Americans.[55]

NEPA also ensures that the government "fulfill the responsibilities of each generation as trustee of the environment for succeeding generations; assure for all Americans safe, healthful, productive, and aesthetically and culturally pleasing surroundings."[56] These provisions show that the United States has established environmental protection as a priority over economic growth, and such language stands as a tenet of American environmental law.

Japan is another country that, after suffering from the serious consequences of four public nuisance disasters, modified its original environmental legislation to effectuate the goal of focusing on environmental protection and the health of mankind, and moved away from the purpose of enhancing economic growth. The Basic Environment Law of Japan, Article 1, comprehensively and systematically promotes policies for environmental conservation to ensure healthy and cultured living for both the present and future generations of the nation, and contributes to the welfare of mankind through articulating the basic principles, clarifying the responsibilities of the state, local governments, corporations and citizens, and prescribing the basic policy considerations for environmental conservation.[57]

This law prioritized the environment and sought to maintain the ecosystem and protect citizens' health without asserting any emphasis on promoting economic growth. As the phrase "environmental law" implies, such legislation focuses on environmental protection, and is neither an industrial nor an economic promotion law.

---

[55] 42 U.S.C. § 4331

[56] *Id.* § 4331(b)(1)- (2)

[57] The Basic Environment Law, ch. 1, General Provisions (Japan), *available at* http://www.env.go.jp/en/laws/policy/basic/ch1.html.

After it entered the twenty-first century, although the present Law of People's Republic of China still considers the promotion of economic development a legislative priority, the National Standing Committee of the People's Congress has, in fact, considered modifications. It is believed that the top legislative body is working to reestablish the ideal of a peaceful coexistence between humans and nature through new environmental legislation. This goal is an important step in the creation of a harmonious society.[58]

The newest trend in Chinese environmental law presented a transformation from prioritizing economic growth in the 1980's to the requirement of harmony with environmental conservation at the turn of the century. Several new laws were passed which encouraged and promoted recycling and clean industrial production. The issuance of the Environmental Impact Assessment Act and the Promotion of Clean Production Act in 2002 are examples of this trend. In essence, clean production is a new industrial goal focused on technical plausibility, economic rationality and eco-efficiency. In working to create a less hazardous industry, production is regulated in accordance with ecological principles, and raw materials are recycled in a closed cycle. Compared with the "end-of-pipe treatment" approach taken in the traditional environmental law of the first generation, the second generation of environmental law is rather different. It works to control pollution from the start by regulating for clean energy and clean production, while also emphasizing pollution control throughout the entire process. This new method is substantially different from the traditional end-of-pipe control and command methods in environmental policy and law, and differs from the existing regime of energy supply, production process and products. China's Environment Impact Assessments Act not only requires carrying out such assessments on building projects, but also requires such environmental as-

[58] On Feb. 19, 2005, Chinese President Hu Jintao pointed out in the opening ceremony of the seminar on building up the capacity of building a harmonious socialist society for major cadres at the provincial leve,l that such a society should be of democracy and rule of law, of fairness and justice, of honesty and friendliness, full of vigor, and of a harmonious relationship between humans and nature. *See Building a Harmonious Society Important Task for CPC, President Hu*, PEOPLE'S DAILY ONLINE, Feb. 21, 2005, http://english.peopledaily.com.cn (last visited May 22, 2006).

sessment at the planning stages. This legislation requires an analysis, forecasting and evaluation of the environmental impact that may result from the implementation of the planning and construction project. Thus, it stands as a predictive evaluation policy. The purpose of the environmental impact assessment regime is to carry out the strategy of sustainable development, prevent harmful effects that may result from the implementation of planning and construction, and promote the coordinative development of economy, society and environment. This regime stands as an effective weapon in the working for "pollution prevention first" rather than the approach of "at first pollute, but later remediation, first destroy and then restitute." It is recognized as the pillar of the predictive environmental policy.

C. *Transition from Restricting Development and Utilization of Non-renewable Energies to Encouraging Investment and Operation of Renewable Energies*

Before 2000, China's energy laws and policies placed an emphasis on developing and using energy resources to serve Chinese economic growth.[59] At the same time, due to serious energy shortages and increased environmental pollution, legislation and policy encouraged saving and making full use of such limited energy resources. Such a policy presents a rather unethical approach to developing and using energy resources to meet the energy needs of the present generation, while failing to prevent energy problems in the future. In the late 1990's, China's energy law turned to restricting the exploitation of non-renewable energy, and abolishing, step-by-step, the subsidy for fossil fuels such as coal. Additionally, the new laws encouraged investment and operation of renewable energy by creating economic incentives.[60] In 2005, for example, the law of the People's Republic of China on Renewable Energy provided measures to

[59] Law of the People's Republic of China on Conserving Energy, (promulgated by the Standing Committee of the Eighth National People's Congress, Nov. 1, 1997, effective Jan. 1, 1998) art. 1 (P.R.C.), *available at* http://www.npc.gov.cn/zgrdw/english/news/newsDetail.jsp?id=2204&articleId=345098.

[60] Renewable Energy Law, Standing Committee of the Nat'l People's Congress, Feb. 28, 2005)(P.R.C.), *available at* http://www.ccchina.gov.cn/english/source/ca/ca2005110901.htm.

promote the economy.[61] The budget established a renewable energy development fund to support the following:

1. Scientific and technological research, standard establishment and a pilot project for the development and utilization of renewable energy;
2. Construction of renewable energy projects for domestic use in rural and pasturing areas;
3. Construction of independent renewable power systems in remote areas and islands;
4. Surveys, assessments of renewable energy resources, and the construction of relevant information systems; and
5. Localized production of equipment for the development and utilization ofrenewable energy.[62]

The law also provides tax advantages for projects that develop and use renewable energy. These tax incentives are in the form of credits and/or preferential loans by financial institutions that are subsidized by the government.[63]

The goal of this law indicates that China's energy law and policy has changed from one fostering the mindset of the first generation into one that has today adopted that of the second generation. The ethical implication of this second generation of environmental law embodies the sustainable use of energy with a focus on intergenerational protectionism. It also suggests that China is making great efforts to reduce the emissions of greenhouse gasses. Moreover, China is also a contracting party of the UNFCCC and the Kyoto Protocol. Even though China presently is not obliged to reduce greenhouse gas emissions, China would still like to reduce emissions.

As of now, the future of China's ecological and environmental existence is far from bright. As such, it is predicted that China's energy law and policy will further encourage the development, use, and consumption of renewable energy based through market instruments such as financial subsidies and support, tax advantages, government purchases, market distribution, and green consumption to support renewable energy industry and investment. Simultaneously, legislation will likely place more restrictions on the non-renewable energy industry

---

[61] *Id.* ch. 6, art 24.
[62] *Id.* art. 24.
[63] *Id.*

and investments, creating more preferential market conditions for fair competition in terms of renewable energy resources.

III. Conclusion

To satisfy the living and developmental needs of 1.3 billion people, China's environmental and natural resources will continue to face unceasing challenges. The only choice is to seek a harmonious co-existence between humans and nature, and to insist upon sustainable development. As such, the creation of a recycling economy with a focus on clean production is a necessity. The problems of environmental pollution and resource consumption will face pressures both home and abroad. A revival of citizens' awareness of environmental rights and the requirements for better living conditions will be necessary. The international community will also require China to assume the task of reducing greenhouse gas emissions and keeping with other environmental obligations. Therefore, China must properly deal with important issues such as environmental pollution and energy consumption. China's law and policy on the environment, resources, and energy law will surely face great challenges and will require substantial reform. The future of China's environmental policy should be condensed into three goals: 1) further encouragement of green production, green consumption and green investment; 2) very bright prospects for renewable energy; and 3) "greener" environmental and energy policy.