



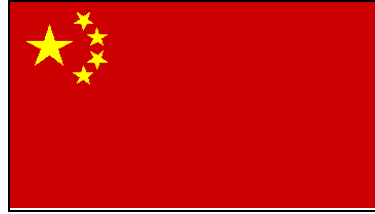
CANADA-CHINA ENVIRONMENTAL COOPERATION

REPORT CARD 2000

Prepared by the Secretariat to the
Canada-China Joint Committee on Environment Cooperation (JCEC)
Environment Canada/State Environment Protection Administration

Table of Contents

- 1.0 A History of Cooperation: Framework Statement and Action Plan**
 - 2.0 Canada-China Joint Committee on Environment Cooperation (JCEC)**
 - 3.0 Action Plan Priorities**
 - 3.1 Energy and Environment**
 - 3.2 Pollution Prevention**
 - 3.3 Utilization and Management of Natural Resources**
 - 4.0 China Council for International Cooperation on Environment and Development (CCICED)**
 - 5.0 Global Environment Issues**
 - 5.1 Climate Change**
 - 6.0 Future Opportunities and Challenges**
-
- ANNEX 1: Canada-China Development Cooperation Projects**
 - ANNEX 2: List of Memoranda of Understanding with China on the Environment and Natural Resources**



Dear Prime Minister Chrétien and Premier Zhu:

The Canada-China bilateral relationship on environmental issues continues to be a model for the world. In November 1998, our partnership was given a new momentum by the signature, in your presence, of the Framework Statement for Cooperation on Environment into the 21st Century. Today, on the occasion of the Team Canada mission to China, we are proud to present the "Report Card 2000: Canada-China Environmental Cooperation", which highlights the achievements under this Framework and its related Action Plan signed in April 1999.

Canada and China share many common goals in the field of environmental management and sustainable development. This shared vision translates into close working relationships between Canadian and Chinese partners from government, the private sector, non-governmental organizations, and the academic and scientific communities.

Our history of co-operation provides us with a solid foundation for meeting the challenges of the new millennium. We believe the cooperative activities enable our two countries to further strengthen partnerships, among others, in the areas of energy and the environment, pollution prevention, and the utilization and management of natural resources.

With your ongoing support, our countries can continue to play a part in resolving major environmental challenges including climate change, biodiversity, water resources and sustainable development that are now permanent features of the world's political agenda.

A handwritten signature in black ink that reads "David Anderson".

David Anderson, P.C., M.P.
Minister of the Environment

Xie Zhenhua
Minister, State Environmental
Protection Administration

1. A History of Cooperation: Framework Statement and Action Plan

Canada and China have enjoyed a strong bilateral relationship in environmental cooperation for many years. The two countries share many common goals concerning environmental protection and sustainable development. Their cooperation is strengthened by the fact that they are both nations with a vast territory (together they make up 13% of the world's land mass) and diverse populations, topographies, and climates.

China is an important partner in solving global environmental problems. It is the third largest country in the world, with more than 20% of the world's population living inside its borders. These factors alone make it a major environmental player, but Canada has a particular interest in working with China on environmental and sustainable development issues. According to scientists, hazardous air pollutants from Asia are making their way into the Canadian Arctic. By strengthening their relationship and sharing expertise, the two countries create a win-win situation.

China is home to about 4% of the world's wetlands, 4.5% of forests and nearly 7% of renewable fresh water.

Canada-China bilateral activities have ranged from study tours to the exchange of scientific information to large development projects. (Please see Annex 1 for a list of Canada-China Development Cooperation projects.) Through these bilateral activities, China has:

- increased its ability to integrate environmental considerations into economic development;
- increased the sustainable use of resources through better planning and management;
- introduced environmentally friendly technologies in industry and reduced the consumption of resources and the emission of pollutants;
- increased awareness of environmental issues in government, industry and the public eye;
- improved the monitoring and prediction of environmental conditions; and,
- improved the livelihoods of communities particularly in poor rural areas.

"I believe the Sino-Canadian environmental cooperation will become a model of international environmental cooperation in the 21st century."

Minister Xie Zhenhua, 1st JCEC

In November 1998, the partnership between Canada and China was given new momentum with the signing of the Framework Statement for Cooperation on Environment into the 21st Century witnessed by Prime Minister Jean Chrétien and Premier Zhu Rongji. This Framework Statement is an umbrella for Canada-China bilateral environmental arrangements. Since then, the two countries have signed four additional Memoranda of Understanding on forestry, fire management, sustainable development in the mining industry and geomatics (please see Annex 2). A host of new activities are being implemented under these MOUs.

In April 1999, the Honourable Christine S. Stewart, former Minister of the Environment, and Xie Zhenhua, Minister of the State Environmental Protection Administration, signed the Canada-China Action Plan developed under the Framework Statement. The Plan

reflects a mutual interest in expanding cooperation on a broad array of priority environmental issues. This cooperation extends beyond the national level to the private sector and other levels of government.

2. Canada-China Joint Committee on Environment Cooperation (JCEC)

Under the Framework Statement, the two countries have also established the Canada-China Joint Committee on Environment Cooperation (JCEC) as a forum to discuss environmental issues. The JCEC held its inaugural meeting in Vancouver, Canada, in March 2000. Taking a “Team Canada-Team China” approach,¹ representatives discussed global environmental trends and challenges such as climate change and looked ahead to future bilateral cooperative efforts. The meeting focused primarily on the three Action Plan priorities:

- **energy and the environment;**
- **pollution prevention; and**
- **the utilization and management of natural resources.**

“...we have the possibility of engaging the brightest minds and best technologies to mutual and enduring benefit.”

The Hon. David Anderson, Minister of the Environment, 1st JCEC

The next JCEC will be held in China in the first half of 2001.

3. Action Plan Priorities

This Report Card presents a review of activities relating to the Action Plan priorities. It covers the period from the signing of the Framework Statement (November 1998) until November 2000.

Action plan activities equip governments to better address priority areas. They take many forms, including joint workshops, exchange programs, study tours, training, technology demonstrations, joint instruments, and the sharing of approaches and documentation. Delegations have visited Canadian and Chinese facilities to learn more about municipal sewage treatment, gas recovery from landfills, producing energy from waste materials, pulp and paper production, and the fertilizer and mining industries. They have also participated in environmental technology exhibitions, such as the Globe 2000 event in Vancouver.

1Team Canada

Environment Canada
Department of Foreign Affairs and International Trade
Canadian International Development Agency
Natural Resources Canada
Industry Canada

Team China

State Environmental Protection Administration
Ministry of Foreign Affairs
State Development and Planning Commission
State Economic and Trade Commission
Ministry of Foreign Trade and Economic Cooperation
Ministry of Water Resources
Ministry of Agriculture
Ministry of Science and Technology
China Meteorological Administration

Work is also ongoing to enhance China's ability to monitor and predict atmospheric change, including the influence of transboundary and urban pollution. The twinning of the Beijing Meteorological Bureau with the Ottawa Regional Weather Centre provides many opportunities for the two countries to work together.

3.1 Energy and Environment

The development of efficient, reliable and sustainable energy technologies is critical to any industrialized or industrializing economy in the 21st century. By developing alternative and renewable energy technologies, for example, countries can reduce greenhouse gas (GHG) emissions and improve air quality. They not only meet industry's needs for energy, but enhance the quality of life for their citizens.

China is introducing Canadian energy conservation approaches and measures and reducing GHG emissions.

Since Canada and China signed the Framework Statement, and building on previous cooperation, the two countries have launched several projects to build capacity and transfer technology in the fields of energy and the environment, such as:

- **Qingdao Urban Rehabilitation and Conservation, Feasibility Study** — A feasibility study is under way for an urban rehabilitation and community energy planning project in an old neighborhood of Qingdao. The project's benefits range from the conservation of cultural resources and community structure to the reduction of greenhouse gas emissions.
- **Photovoltaic Module Production, Viability Study** — A Canadian company is exploring the viability of establishing a joint venture to produce solar energy panels in China. Photovoltaic, or solar energy, technology can replace diesel and coal generators and helps to reduce greenhouse gas emissions and global warming. If the project is implemented, Canadian technology will be transferred to China.
- **Fushun 100-MW Thermo-Electric Power Project** — A Canadian company is conducting a feasibility study to create a joint venture company to develop and operate a privately owned 100-MW thermo-electric power plant in Liaoning Province. The plant would eliminate the need for many of the district's old and inefficient steam heating facilities, which are harmful to air quality. The power plant would also use a local source of bituminous shale, a by-product of coal exploitation, for its fuel supply. The disposal methods and storage of this by-product threaten air and soil quality.

The Government of Canada and Canadian private sector companies also participated in the China Environment, Renewables and Energy Efficiency Exhibition and Conference from November 28 to December 2 in Beijing. This international trade show featured environmental technologies in the energy sector.

3.2 Pollution Prevention

Over the last 10 years, the global approach to international environment protection has shifted from repairing the damage from pollution to implementing comprehensive prevention strategies. Many countries, including Canada and China, are adopting cleaner production methods and pollution prevention measures.

Both countries recognize that cleaner production and pollution reduction are beneficial and can improve economic performance while reducing risks to human health and the environment. In particular, they have focused their efforts on ensuring appropriate technologies, policies and regulations are adopted. Over the last two years, through bilateral trade and investment, a growing number of Canadian companies have brought their technology and services to help China reduce and control pollution in the air (vehicle emissions, desulphurization) on the land and in the water. Other bilateral initiatives include:

Through a joint clean production project, China is changing its central policies and regulations to further promote clean production in its industries.

- **Establishing an Environmental Technology Verification (ETV) Program in China** — The Chinese government is establishing an environmental management system that conforms to a market economy. An ETV program would support this work since it finds innovative technological solutions to human and environmental problems stemming from economic development. Canada provided policy options for establishing an ETV program in China and helped to increase the capacity of policy makers and government institutions in this area.
- **Environmental Monitoring and Control, Project Support** — A Canadian company is establishing a wholly foreign-owned enterprise in Beijing to manufacture and install environmental monitoring and control equipment. This equipment will help China mitigate the negative impact of gaseous emissions from mining and other industrial sectors.

3.3 Utilization and Management of Natural Resources

China and Canada share a common challenge: to meet the growing demand for natural resources while ensuring their wise and sustainable use and maintaining a healthy ecosystem.

This challenge opens the door to sharing expertise in such areas as: biodiversity conservation; wetland conservation; sustainable agriculture and livestock production; flood prevention and water resource management; sustainable forestry; and sustainable management of nature reserves.

Canada is steward of 25% of the world's wetlands, 15% of forests and 9% of renewable fresh water.

The management of natural resources and the broader challenge of sustainable development are tough issues. Through the Action Plan, Canada and China have made an ongoing commitment to address sustainable development in partnership.

While the two countries have been working in cooperation for some time, the following initiatives have been launched over the past two years:

- ***Biodiversity Protection and Community Development in Inner Mongolia Autonomous Region (IMAR)*** — This project will help the IMAR-Environmental Protection Bureau and related government organizations to manage nature reserves. Pilot activities will show how local communities in and around the reserves can earn a living through the sustainable use of natural resources without compromising biodiversity.
- ***Sustainable Agriculture Development in IMAR*** -- Farmers and herders in the IMAR grasslands are learning more about sustainable agriculture and livestock production through this project. Four demonstration sites are being created to focusing on ways of rehabilitating denuded grasslands and sustaining rangeland for livestock production, as well as transferring minimum tillage techniques and small-scale minimum tillage technology.
- ***Study on Sustainable Management Policy of China's Nature Reserves*** — The conflict between biodiversity conservation and economic development in China poses serious problems for the country's sustainable development. Officials and experts from both countries proposed changes to existing policies and procedures for 15 nature reserves to harmonize the two objectives. The resulting recommendations are contributing to the implementation of China's Agenda 21 and Biodiversity Action Plan.
- ***Designing Complementary and Supporting Policies for the Implementation of China's National Forest Protection Plan*** — China's National Forest Protection Plan, while much needed to preserve the forest resources, has imposed severe constraints on local economies and the timber supply. The Public Policy Options Project is helping to raise awareness of the need to adopt complementary policies, enhance policy research, and promote sustainable forest management in China. The supporting policies will target the development of communities affected by the logging ban and the preparation of a sustainable national strategy for timber supply.
- ***Forest Fire Management Training*** — Twenty-two senior Chinese forest fire managers took a one-month comprehensive training course on fire management. Participants got “hands-on” experience and were exposed to a wide range of Canada's leading-edge fire management technology, tools and equipment.
- ***Reforming Urban Utilities: Shanghai Municipal Waterworks*** — With China's changing economy, the public use of water has become a major part of the public urban economy. To help China manage the use of this resource more efficiently, Canada provided policy options for reforming and developing services to supply water in Shanghai.

4. China Council for International Cooperation on Environment and Development (CCICED)

Over the past 17 years, the environment sector has gained a prominent position in the Canadian International Development Agency's (CIDA) China Program. The environmental portfolio currently accounts for 30% of the Program's funding commitments — a sign that environmental sustainability is important to both China and Canada. CIDA supports many projects referred to in this Report Card (see Annex 1).

The impetus behind this expanded cooperation can be traced back to the China Council for International Cooperation on Environment and Development (CCICED). This project is the flagship of Sino-Canadian cooperation in environmentally sustainable development and its Council includes key international organizations such as the United Nations for Environment Protection (UNEP), the World Conservation Union-(WCU-IUCN), the World Wildlife Fund for Nature (WWF) and the World Bank (WB).

CCICED recommendations have reached the senior leadership of the Chinese government and have directly influenced new environmental legislation, regulations, policies and strategies. Since 1992, nearly one-third of the Chinese government's actions were either directly or indirectly related to CCICED recommendations.

For example, in recent years China has:

- enacted a comprehensive legal framework to preserve natural resources and control environmental pollution, including 16 major environmental laws;
- implemented 362 national and industrial environmental standards to guide China's managers;
- increased the rate of industrial wastewater treatment from 32% to 76%.

"The Council is a superb innovative instrument set up by Chinese policy-makers, which allows them to draw on the timely expertise and advice of top environmentalists from China and the world alike."

Len Good
International Vice
Chair, CCICED
and President of CIDA

According to Earth Council Chairman Maurice Strong, the CCICED'S recommendations and the actions of the Chinese government constitute the world's most impressive response to the 1992 UN conference on the Environment.

Last year's CCICED meeting has been held from October 31 to November 2, 2000, in Beijing and has focused on environmental protection and development of western China. As China embarks on a major initiative in this ecologically complex area, it is critical to ensure a sustainable approach to development.

5. Global Environment Issues

“The world’s environmental condition has become an unprecedented and prominent fixture on the global political agenda.”

The Hon. David Anderson, 1st JCEC

Globalization is affecting the environment as well. Since pollution knows no boundaries, international cooperation is needed to solve domestic environmental problems. With environmental issues high on the world's agenda, the pace of ministerial meetings between the two countries has quickened. Prime Minister Jean Chrétien's visit to China in 1998 was followed by Premier Zhu Rongji's visit to Ottawa the following year. In January 2000, Natural Resources Minister Ralph Goodale led a mission to China to discuss resource management policy, and in March of that year, Minister David Anderson and Minister Xie Zhenhua met during the 1st JCEC in Vancouver, Canada.

These increased high-level discussions have translated into a growing number of activities to address global issues such as climate change.

5.1 Climate Change

Canada and China share common but differentiated responsibilities to address global climate change. Canada is working with China to strengthen existing capacities to deal with this important global issue. The 1st JCEC gave further momentum to climate change activities by offering a forum for dialogue and the submission of proposals. In April 1999, a workshop on climate change in Beijing established a strong basis for future dialogue and cooperation between China and Canada on climate change issues. Building on this foundation, a joint Canada-China study identified key areas for collaboration and further explored China's needs and Canada's ability to respond.

In July 2000, representatives from various Chinese ministries and institutes participated in the Canada-China Cooperation Climate Change Study Tour. Exchanges focused on activities under the Clean Development Mechanism and National Communications and Awareness Building. As a result, Canada and China will develop a bilateral program to help China build the capacity to implement climate change measures and a collaborative research program.

If current emission trends continue, concentrations of CO₂ in the atmosphere are expected to double during the 21st century.

Based on the study tour, Canada and China identified the Canada-China Cooperation in Climate Change Project. The Workshop on the project was held in Beijing from December 5 to 7, 2000. Officials and experts from both sides made detailed suggestion on capacity building to implement climate change measures. This project will be funded through the Canada Climate Change Development Fund, a \$100-million initiative announced in the Government of Canada's Budget 2000. This fund provides assistance for technology transfer and related activities to help developing countries reduce their greenhouse gas emissions and promote sustainable development.

Climate change issues are also addressed through Canada-China MOUs on environmental cooperation, renewable energy and energy efficiency, and meteorological matters. For example, the MOU on meteorological matters includes workshops on climate change, such as the Workshop on Global Observing Systems held in Beijing in December 1998, and ongoing support to the Global Atmosphere Watch site at Mt.

Waliguan. These and other meteorological activities help China monitor the global environment so that it can inform its citizens of short and long term changes. Other cooperative activities include:

- flood forecasting to mitigate natural disasters;
- identifying climate change impacts; and
- identifying the relationship between climate change and extreme events.

6. Future Opportunities and Challenges

The challenge for the future will be to focus bilateral efforts on priority areas and to deepen the Canada-China relationship. The next meeting of the JCEC offers an opportunity to measure progress and target the top environmental problems facing both countries.

"I expect that the two countries will continuously strengthen their environmental cooperation, safeguard the harmonious coexistence of mankind and earth..."

Minister Xie Zhenhua,
1st JCEC

Through their growing bilateral partnership, Canada and China will follow up on the excellent results of the past and focus their attention on current and upcoming activities. One possible area for cooperation is climate change science and adaptation. For example, China's new Energy Conservation Law offers opportunities to emphasize sustainable development/technology transfer activities — especially in clean production, energy efficiency and natural gas technologies — that reduce GHG emissions. The exchange of expertise in climate change modelling, remote sensing and geographical information

systems will be key to addressing many of the problems facing the two countries over the long term.

Several exciting projects are expected to be launched prior to the 2nd JCEC meeting:

- **Development of China's Coalbed Methane Technology Carbon Dioxide (CO₂) Sequestration Project** — This project will address the issue of climate change by storing or "sequestering" CO₂ in coalbeds. The project will provide China with energy from methane, a much cleaner source of energy, and create better environmental conditions for the population.
- **Canada-China Cooperation in Climate Change** — Canada will help China develop its capacity to deal with climate change issues by focusing on three areas: — the Clean Development Mechanism (CDM); National Communications and; knowledge and awareness building for key stakeholders in China.
- **MOU on Reciprocity** — Building on past efforts in Environmental Technology Verification (ETV), Canada and China are pursuing a Memorandum of Understanding on Reciprocity to develop an ETV system to replace the current evaluation methods.

Building on past successes and the recognition of mutual interests in environmental issues, partnering agencies and research institutes from both countries have strengthened their relationship over the past two years. The inaugural meeting of the JCEC was a significant step toward a more fruitful and coordinated relationship between Canada and China. The meeting also highlighted the good relationships and trust which had been built through earlier successful cooperative activities. The challenge will be to build on that trust and expand support from other partners, such as the private sector, provinces and cities, academia and youth, and take a more integrated approach to this environmental relationship. Addressing pressing environmental problems together is an opportunity as well as a challenge for the 21st century.

“Our partnership as concerned global citizens is a logical extension of our national aspirations toward a healthier world.”

The Hon. David
Anderson,
1st JCEC

Annex 1. Canada-China Development Cooperation Projects

The focus of each project is described in parentheses.

- China Council for International Cooperation on Environment and Development (environmentally sustainable development)
- Increasing Energy Efficiency in Buildings (reducing energy consumption; improved atmospheric quality)
- China-Canada Cooperation Project in Cleaner Production (reduction of harmful industrial emissions)
- Conservation and Sustainable Utilization of Natural Resources in the Tarim Basin (pollution detection, water conservation, oil development in fragile areas)
- Dam Safety and Management (irrigation and flood control)
- Canada-China Jiangsu Small and Medium Enterprise Applied Management and Environment Project (waste minimization and cleaner production)
- Biodiversity Protection and Community Development in Inner Mongolia Autonomous Regions (IMAR) (strengthening protected areas management)
- Sustainable Agriculture Development in IMAR (sustainable grasslands and rangeland management)
- Canada-China Higher Education Project :
 - Microwave Processing in China: Towards Cleaner Industry and Environment (reduction of the use of fossil fuels and chemicals in food production)
- Special University Linkage Consolidation Program
 - Society, Economy and Environment (sustainable development among ethnic minorities)
 - GIS-Based Erosion Management Outreach Program (erosion management)
- Public Policy Options Project:
 - Establishing an Environmental Technology Verification (ETV) Program in China
 - Study on Sustainable Management Policy of China's Nature Reserves (nature conservation and economic development)
 - Designing Complementary and Supporting Policies for the Implementation of China's National Forest Action Plan (public awareness and policy development)
- Reforming Urban Utilities: Shanghai Municipal Waterworks (urban public water management)

- Qingdao Urban Rehabilitation and Conservancy, Feasibility Study (community energy planning to reduce greenhouse gases)
- Photovoltaic Module Production, Viability Study (mitigation of greenhouse gases and global warming)
- Fushun 100-MW Thermo-Electric Power Project (new fuel supply)
- Environmental Monitoring and Control, Project Support (mitigation of greenhouse gases)

Annex 2. List of Memoranda of Understanding with China on the Environment and Natural Resources

- Memorandum of Understanding on Cooperative Meteorological Matters (signed: 1986; renewed: 1997)
- Memorandum of Understanding to Cooperate on the Renewable Energy and Energy Efficiency Technologies (signed: 1997)
- Memorandum of Understanding on Environmental Cooperation (signed: 1992; renewed: 1998)
- Memorandum of Understanding on Environmental Collaboration with Hong Kong (signed: 1992, renewed: 1998)

Agreements signed since the Framework Statement

- Memorandum of Understanding on Cooperation in the Forest Sector (signed: 1998)
- Letter of Intent on Fire Management Training (signed: 2000)
- Memorandum of Understanding on Sustainable Development and Mining Resources (signed: 2000)
- Memorandum of Understanding on Geomatics Cooperation (signed: 2000)