



China-Canada Cooperation Project in Cleaner Production: Project Overview

The China-Canada Cooperation Project in Cleaner Production is a five year, \$9 million project funded by the Canadian International Development Agency (CIDA). It is one of three CIDA- funded projects under the Chinese Agenda 21 priority program. The project was initiated in October 1996. The Canadian Executing Agency (CEA) implementing it consists of three Canadian companies: PricewaterhouseCoopers, SNC-Lavalin, and ESSA Technologies Ltd. They work in cooperation with the Chinese State Economic and Trade Commission (SETC) and the State Environmental Protection Agency (SEPA). (See Who's Who and What's What on page 2).

The project's goal is to promote environmentally sustainable development in China by enhancing its capacity to manage its environment. Specific purposes are:

- to assist China in implementing Cleaner Production (CP) in selected priority sectors (pulp and paper, fertilizer production, fermentation and dye stuffs);
- to strengthen the institutional capacity of SETC and SEPA to promote the implementation of Cleaner Production in the priority sectors;
- to support government agencies, industries and enterprises in the application of CP in priority sectors; and
- to foster co-operation between Chinese and Canadian counterparts.

Cleaner production (CP) is recognized as an important means of achieving sus-



Mr. Qi Hongwei of the Project Office checks the manual during installation of software at the Pulp and Paper Factory in Huainan. From left to right: Lu Qingmei, Wang Yijie, Qi Hongwei and Yu Ji.

tainable industrial development. It focuses on the production process rather than on "end-of-pipe" solutions. Audits are used to identify CP solutions, which include changes to existing management and information systems as well as the introduction of cleaner technologies. The result is improved production efficiencies with cost savings and a cleaner environment.

The CCCP is assisting the Chinese government in developing CP policies, regulations and guidelines. Two demonstration projects are being carried out in Anhui Province, located several hundred miles inland from Shanghai. Audits have been completed this year for the Anhui Pulp and Paper Mill and the Fuyang Chemical General Works to identify the most appropriate CP solutions; the solutions are being implemented over the next three years.

Training and information technologies play an important role in the transfer of skills as well as in awareness raising.

Cooperation with Chinese counterparts to ensure the smooth integration of gender and environment issues in every aspect of the project will be central to determining this project's success.

With a solid foundation now in place, the project is helping to make Cleaner Production part of China's way forward to a sustainable future.

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Summer/Fall 1998

For more information on the project please contact Ken Parent at PricewaterhouseCoopers at 613 237-3702, email kenneth.parent@ca.coopers.com

CP Information Systems

The implementation of the CP information systems was designed to support the other activities of the project. The emphasis has been on determining what already exists in each of the participating organizations, then designing an information technology implementation plan to assist the organizations in meeting their project goals. Work during the early stages of the project has concentrated on ensuring that each office has the computer hardware, software and training necessary to implement the project effectively.

After a review of information systems in the seven participating units, seven complete sets of hardware and software, including a microcomputer, laser printer, scanner, office automation software and Web Page development software, were purchased and installed.

Each of the seven units has been able to set up a connection to the Internet, including email. Each unit is successfully using email.

Two prototype web sites have been established, one in English and the other in Chinese. The English language site will focus mainly on project information, including the provision of links to web sites of interest to the project. This site is designed to provide information on cleaner production to the Chinese participants in the project and to provide a window on the project to Canadian businesses and other organizations.

The Chinese language web site is being designed as a true CP information system and is designed to assist the participating units and any interested organization in China in implementing cleaner production. At present both web sites are at the same location:

<http://www.chinacp.com>.

The project's work plan foresees a strengthening of the hardware and software resources of the participating units, increased training — including an Information Technology study tour to Canada during 1998, and the establishment of various cleaner production related databases in the two participating demonstration factories as well as in some of the other participating units.

For more information on CP information systems, please contact John Gordon at Grand River Informatics Inc., 519 843-7752, email gordon.gri@sympatico.ca

CP Planning and Implementation

Implementing CP involves reducing pollution and energy consumption, and using raw materials more efficiently. It begins with an audit of facilities to determine what solutions are most appropriate. The focus is on identifying ways of improving production processes, not on removing contaminants at the “end of pipe.” Improving production processes might include changes in management systems, information systems, and training, as well as new or modified technologies.

Audits have been completed for the two demonstration plants: the Anhui Paper Mill and the Fuyang Chemical General Plant. CP options have been identified for both.

The Anhui Paper Mill has applied to the World Bank for funding to build new facilities in order to increase production levels. This will be taken into account when considering the CP options for implementation.

The management of the Fuyang Plant immediately implemented six low-to-medium cost CP options. They ranged from eliminating leaks from valves and joints to clean up of a waste lagoon and scrap yard. Management estimates that they have saved 8–10% of the annual cost of production at the factory in the first year. More options will be considered over the next year.

For more information on CP planning and implementation, please contact Mark Osterman at SNC-Lavalin, 514 393-1000, email ostem@snc-lavalin.com

What's What

CEA	Canadian Executing Agency
CIDA	Canadian International Development Agency
JPSC	Joint Project Steering Committee
MOFTEC	Ministry of Foreign Trade and Economic Cooperation
SEPA	State Environmental Protection Agency
SETC	State Economic and Trade Commission

Policy and Regulation

The objective for policy and regulation activities is to change the focus of industrial pollution control from end-of-pipe treatment to pollution prevention through cleaner production, with an emphasis on incentives rather than punitive measures. The primary role of the CEA is as policy advisor to Chinese counterparts.

There are some similarities and many differences between regulatory and policy making processes in China and Canada. Similarities include the involvement of three different levels of government (national, provincial, and municipal) in "rule making," and in both "top down" and "bottom up" policy development processes. Both countries also share the challenge of learning how to harness healthy competition between ministries and levels of government to achieve environmental goals. Differences in policy and regulation activities between China and Canada reflect differences in economic systems and in the

degree to which transparency is part of the public policy formulating process.

A significant Chinese environmental policy framework exists, including regulations relating to the pulp and paper sector, and for prevention and control of pollution in the Huaihe River Drainage area, where the two demonstration projects are located. An analysis of policy barriers to implementing CP suggests that some existing policies may encourage end-of-pipe solutions, to the detriment of CP initiatives. Oversized waste treatment plants have been one outcome in North America. On the other hand, Executive Order #31 has resulted in the closure of many small industries, and the realization by enterprises that current environmental requirements are to be taken seriously.

The project's policy initiatives will shift from reviewing and comparing existing policies and regulatory context, to monitoring how policies are implemented at the agency and plant level.

For more information on Policy and Regulation, please contact Peter Higgins at HIG Environmental Consultants, 613 592-3074, email higenvcons@aol.com

Completed Study Tours

The CP Policies and Regulations Study Tour

Saturday Aug. 30 to Sunday, Sept. 14, 1997

The first study tour provide 11 senior project participants from China with an overview of the implementation of cleaner production in Canada, with special emphasis on policies and regulations. Participants visited sites in Vancouver, Toronto, Ottawa and Montreal. Sites visited included a river clean-up project, and the opportunity to discuss policy and regulations with representatives of the federal government, a provincial government, NGOs, industry representatives and private companies.

The CP Implementation Study Tour

Saturday Sept. 27 to Sunday, Oct. 12, 1997

The second study tour gave nine senior participants from China the opportunity to visit a river clean-up project, an oil refinery, a pulp and paper plant and a fertilizer plant as well as have discussions with the federal government, a provincial government, industry representatives and a major NGO. The study tour included stops in Vancouver, Toronto, Ottawa and Montreal.

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For more information on China-Canada Cooperation Project in Cleaner Production, please see our web site:
www.chinacp.com

Published by the Canada-China Cooperation Project in Cleaner Production

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