



1. Project Data:		Date Posted : 09/30/2003	
PROJ ID: P003632		Appraisal	Actual
Project Name: Environmental Technical Assistance Project	Project Costs (US\$M)	76	67.30
Country: China	Loan/Credit (US\$M)	50	48.90
Sector(s): Board: ENV - Central government administration (100%)	Cofinancing (US\$M)	0	0
L/C Number: C2522			
	Board Approval (FY)		93
Partners involved :	Closing Date	12/31/1998	12/30/2002
Prepared by :	Reviewed by :	Group Manager :	Group:
Ramachandra Jammi	Soniya Carvalho	Alain A. Barbu	OEDST
2. Project Objectives and Components			
a. Objectives			
<p>The provision of technical assistance (TA) to strengthen the capacities and selected policies and programs of two institutions of national importance in China ' s environment sector : (i) National Environmental Protection Agency or NEPA, later upgraded to State Environmental Protection Agency or SEPA); and (ii) Chinese Academy of Sciences (CAS). Specifically, the project supported the following objectives :</p> <p>(a) improve coordination of environmental monitoring and ecological research;</p> <p>(b) promote cleaner industrial production, pollution prevention and waste minimization technologies;</p> <p>(c) enhance economic policy instruments for pollution control, especially the pollution levy system;</p> <p>(d) strengthen the Chinese system of environmental assessments (EA); and</p> <p>(e) improve interagency and interministerial coordination for improved environmental management .</p> <p>Upon GOC's request in 1998, the Bank agreed to restructure the project to respond to a new initiative relating to a large-scale regional development program referred to as the "Great Opening Up of the West". Both CAS and SEPA developed new proposals for funding that were consistent with the project's overall objectives .</p>			
b. Components			
<p>At appraisal, the project consisted of three main components :</p> <p>(i) CAS ecological research and monitoring (which began in 1989) to design a Chinese Ecosystem Research Network (CERN) to strengthen long-term ecological research in China and to generate scientifically valid ecological information that could be used for sustainable natural resource management and agricultural development;</p> <p>(ii) NEPA (later upgraded to SEPA) technical assistance program; and</p> <p>(iii) environmental impact assessment system .</p> <p>The revised project components (after expansion of project scope in 1998) are stated in the ICR as follows:</p> <p>CAS Component: (US\$33.20 million, actual cost) To improve the knowledge and understanding of China's biological resources and ecological environment by upgrading long -term research, improving data collection and management systems for monitoring environmental changes, and linking research results to the policy -making process. These objectives would be achieved through investments in two programs being implemented by the Academy :</p> <ul style="list-style-type: none"> Chinese Ecosystem Research Network (CERN); and Biodiversity Research and Information Management (BRIM) program. <p>SEPA Component: (US\$34.10 million, actual cost) The SEPA component comprised a large number of sub -projects within five main categories of work :</p> <p>(i) Institutional Management and Capacity Building;</p> <p>(ii) Environmental Monitoring and Information Systems;</p> <p>(iii) Cleaner Industrial Production and Pollution Prevention;</p> <p>(iv) Environment and Ecological Studies; and</p> <p>(v) Environmental Impact Assessment Systems.</p> <p>Reallocation of Funds for SARS Emergency Project in 2003: In June, 2003, the IDA Board agreed to reallocate</p>			

approximately 0.8 million SDR of undisbursed funds from the project to permit an emergency response to a public health emergency in China. This activity is still under implementation and not part of this ICR.

c. Comments on Project Cost, Financing and Dates

Actual project cost was US\$67.30 million as against the appraisal estimate of US\$76 million. After the scope of the project was expanded in 1998 (as stated in section 2b above), the closing date of the IDA Credit was extended till December 2002, two years after the original closing date. GOC expenditures were US\$18.40 million against US\$26 million at appraisal.

3. Achievement of Relevant Objectives:

The project achieved its objectives in a satisfactory or highly satisfactory manner, though with some shortcomings of varying magnitude. The project was integrated into the core operations of both CAS and SEPA, and was an integral part of larger and substantive development programs to which the government was consistently committed. Specific achievements under each objective are as below:

(a) *to improve coordination of environmental monitoring and ecological research*: The BRIM program enhanced the research capacity of the participating institutes for carrying out bio-diversity related research, linked biodiversity information kept at various CAS institutes, popularized biodiversity concepts and provided relevant information to government policy makers, while attracting international funding for research. Specific achievements included: publication of 1800 scientific papers; and establishment of the Chinese Biodiversity Information System (CBIS) with 95 linked databases and 18 websites. These achievements appear financially sustainable due to committed funding from CAS and other sources. CBIS had yet to develop direct links to policy-making bodies. The scope, capacity and quality of CERN's research activities expanded opportunities for Chinese functionaries for research and training overseas; helped diversify sources of funding; and improved capacity to influence government policy. These outcomes appear financially sustainable due to expanding access to CAS and non-CAS funding. However, sustainability of the CERN information system under this subcomponent appears less likely unless current problems in design and implementation -- top-down planning and excessive centralization -- are addressed. Environmental Information Centers (EICs) were created in all EPBs. The upgrading of the country's Global Environmental Monitoring System (GEMS) led to it being rated as among the best in the world by the mid-1990s. The subcomponent for strengthening the reliability of environmental monitoring and measurement of standards succeeded in developing and testing standardized reference materials for environmental labs throughout China. The study on setting up a national ecological monitoring network produced four main sub-reports though no significant follow-up resulted.

(b) *to promote cleaner industrial production, pollution prevention and waste minimization technologies*: Under this objective, policy studies and training programs exceeded expectations in building awareness and capacity for research (the Chinese Research Academy of Environmental Sciences or CRAES) and regulation (SEPA). A new cleaner production (CP) law was introduced. Specific outcomes included the establishment of 54 CP centers nationwide, production and sale of 10,000 copies of guidelines on CP, training of about 1000 persons including 20 CP auditors who form the core expertise in the now independently funded National Cleaner Production Center. Of the 29 firms that undertook pilot CP audits, 17 are still realizing economic and environmental benefits from followup changes in their production processes. However, five pilot CP industrial investments were unable to achieve overall viability. The study on reducing pollution from town and village enterprises did not break much new ground in its recommendations. A report on CP for the chemical industry produced by the Environmental Protection Research Institute was not followed up due to reorganization involving the Ministry of Chemical Industry and limited involvement of SEPA.

(c) *to enhance economic policy instruments for pollution control, especially the pollution levy system*: A pollution levy study by CRAES paved the way for subsequent national law and regulations on the subject, consistent with GOC's overall financial and fiscal reform program of the late 1990s. Results from three pilot cities are being evaluated by an interagency group for development of follow-up regulations under the enabling law. The motor vehicle pollution control study raised awareness and capacity for research and policymaking in this area, though it was difficult to assess the impacts of vehicle testing and data collection. Following the study, there was a national phase-out of leaded gasoline, Euro 1 vehicle emissions standards were introduced in the country in 1999, and Beijing in particular is poised to move to Euro 3 standards. The study focusing on development policy for ecological agriculture was of low utility due to methodological and administrative issues as well as limited involvement of SEPA.

(d) *to strengthen the Chinese system of environmental assessments (EA)*: Case studies of sector and regional environmental assessments produced a few excellent reports but follow-up activities encountered difficulties mainly arising from SEPA's practice of on-lending project funds for participating Chinese institutions (see section 5), combined with limited SEPA involvement. Training on EA appears to have been partially successful in terms of numbers trained and quality of training, though costs per trainee seemed higher than for comparable training. Training has resulted in more effective use of human resources in SEPA and the provincial Environmental Protection Bureaus (EPBs), though a recent cutback in the number of officials in SEPA's personnel department - which is part of a larger administrative action -- may reduce the impact of the training.

(e) *to improve interagency and interministerial coordination for improved environmental management*: CERN needs to strengthen its management arrangements and rationalize parallel operational and advisory functions being performed by other parts of the bureaucracy. The Policy Research Center for Environmental Economics (PRCEE)

operates as a loose framework of individual contract researchers, and their contribution to institutional capacity is not clear.

4. Significant Outcomes/Impacts:

- The human resource development aspects of the project have been particularly successful in introducing new management approaches, facilitating international learning experience and adapting the learning to Chinese conditions;
- Several new legislation, guidelines, institutions and policies resulted from subprojects, their reports or recommendations including: State Clean Production Act; national/local cleaner production centers; revision of the national pollution levy structure; phase-out of lead in gasoline; and
- Study tours enabled senior researchers as well as younger scientists to make important face-to-face contacts that later turned into training opportunities.

5. Significant Shortcomings (including non-compliance with safeguard policies):

- There was relatively less impact from capacity-building directly on SEPA itself;
- Bank's procurement procedures could not keep up with the fast-changing technology in computing. In general, the Bank's procurement procedures may be too slow and complex for the requirements of scientific institutions, pointing to the need for greater flexibility and decentralization in such cases; and
- The MOF's policy of passing on Bank and IDA funds as loans rather than grants (a practice also in some other TA projects in China) undermined the incentive for better performance (see ICR page 22)

6. Ratings:	ICR	OED Review	Reason for Disagreement /Comments
Outcome:	Highly Satisfactory	Satisfactory	Project objectives were achieved in a satisfactory or highly satisfactory manner, though with some shortcomings of varying magnitude (see section 3).
Institutional Dev.:	Substantial	Substantial	
Sustainability:	Highly Likely	Highly Likely	Some concerns remain about the sustainability of specific activities, e.g., the CERN information system (See Section 3, (a)).
Bank Performance:	Highly Satisfactory	Highly Satisfactory	
Borrower Perf.:	Highly Satisfactory	Highly Satisfactory	
Quality of ICR:		Satisfactory	

NOTE: ICR rating values flagged with '*' don't comply with OP/BP 13.55, but are listed for completeness.

7. Lessons of Broad Applicability:

- For projects of this scope and size, longer implementation periods should be provided upfront, to allow a more logical relationship between Training/TA and procurement. A desirable sequence in this regard would be: T/TA, review of institute programs, identification of equipment needs, and procurement of equipment;
- Also, in TA projects such as this, a programmatic approach should be preferred, with general agreement on overall objectives and a first year workplan followed by iterative development of subsequent stages of the project based on experience and changing circumstances.
- The subprojects with the highest quality outputs and development impacts were most often those in which the functional or line departments of SEPA were actively involved and in which the training components were the most effectively implemented (e.g. GEMS monitoring, EPB training programs, pollution levy system and motor vehicle pollution control) as against those with less active involvement (e.g. national environment information system, review of environmental education, regional and sectoral impact assessments etc.)

8. Assessment Recommended? ☒ Yes ☐ No

Why? To document lessons from the project's experience.

9. Comments on Quality of ICR:

The ICR contains a comprehensive and objective discussion of the project experience. A wealth of detail has been provided, and although repetitive in some parts, the ICR provides a sound analysis of the project. In June, 2003, the IDA Board agreed to reallocate approximately 0.8 million SDR of undisbursed funds from the project to permit an emergency response to a public health emergency in China. This activity is still under implementation and not part of this ICR. OED had informed OPCS that it would be preferable to delay ICR issuance by a few months so as to include the assessment of the SARS activities.