SecM93-680

FROM: Vice President and Secretary

July 7, 1993

PROJECT COMPLETION REPORT

CHINA - Rural Health and Medical Education Project

(Credit 1472-CHA)

Attached is a copy of a memorandum from Mr. Picciotto with its accompanying report entitled "Project Completion Report: China - Rural Health and Medical Education Project (Credit 1472-CHA)" dated June 22, 1993 (Report No. 12046) prepared by the East Asia and Pacific Regional Office, with Part II contributed by the Borrower.

Distribution

Executive Directors and Alternates
Office of the President
Executive Vice Presidents, IFC and MIGA
Vice Presidents, Bank, IFC and MIGA
Directors and Department Heads, Bank

Document of

The World Bank

FOR OFFICIAL USE ONLY

Report No. 12046

PROJECT COMPLETION REPORT

CHINA

RURAL HEALTH AND MEDICAL EDUCATION PROJECT
(CREDIT 1472-CHA)

JUNE 22, 1993

Environment, Human Resources and
Urban Development Operations Division
Country Department II
East Asia and Pacific Regional Office

CURRENCY EQUIVALENT

Currency = Renminbi (RMB)
Currency Unit = Yuan (Y)
Y1.00 = 100 fen

At Appraisal:		At Credit Closing:	
US$1.00 =	Y 2.0	US$1.00 =	Y 5.42
US$1.00 =	SDR 1.06	US$1.00 =	SDR 1.43

ABBREVIATIONS

CNTIC	-	Chinese National Technical Import Corporation
MCH	-	Maternal and Child Health
MOPH	-	Ministry of Public Health
UNICEF	-	United Nations Children's Fund
WHO	-	World Health Organization

FISCAL YEAR

January 1 - December 31

THE WORLD BANK
Washington, D.C. 20433
U.S.A.

Office of Director-General
Operations Evaluation

June 22, 1993

MEMORANDUM TO THE EXECUTIVE DIRECTORS AND THE PRESIDENT

SUBJECT: Project Completion Report on China
Rural Health and Medical Education Project (Credit 1472-CHA)

Attached is the Project Completion Report on China - Rural Health and Medical Education Project (Credit 1472-CHA) prepared by the East Asia and Pacific Regional Office. Part II was prepared by the Borrower.

The project objectives were to strengthen the national health planning capability, reform higher medical education, and modernize rural health services. To accomplish these objectives the project supported development of 3 national health research institutes, upgrading of facilities and teaching at 13 medical universities, and modernization of management, health facilities, technology, training, and prevention programs in 46 rural counties.

Apart from underestimates of the time that implementation would take and of the recurrent costs required to support the new technologies, implementation was highly satisfactory and substantial institutional development occurred. The objectives were achieved and appear to be sustainable. As this was the Bank's first loan for health in China, an audit is planned.

Attachment

CHINA

RURAL HEALTH AND MEDICAL EDUCATION PROJECT
(Credit 1472-CHA)
PROJECT COMPLETION REPORT

TABLE OF CONTENTS

CHINA

RURAL HEALTH AND MEDICAL EDUCATION PROJECT
(Credit 1472-CHA)

PROJECT COMPLETION REPORT

PREFACE

This is the Project Completion Report for the Rural Health and Medical Education Project in China, for which Credit 1472-CHA in the amount of SDR 80.2 million (US$85 million equivalent) approved on May 8, 1984. Appraisal took place in September 1983. The Credit closing date was December 31, 1991, two years behind schedule. The Credit fully disbursed and the last disbursement was on April 24, 1992.

The PCR was jointly prepared by the Environment, Human Resources and Urban Development Operations Division, China and Mongolia Department of the East Asia and Pacific Region (Preface, Evaluation Summary, Parts I and III), and the Borrower (Part II).

Preparation of this PCR was started during the Bank's final supervision mission of the project in 1991, and is based, inter alia, on the Staff Appraisal Report, Staff Case Studies and Technical Notes, the Development Credit and Project Agreements, supervision reports, correspondence between the Association and the Borrower, and internal Bank Group memoranda.

CHINA

RURAL HEALTH AND MEDICAL EDUCATION PROJECT
(Credit 1472-CHA)

EVALUATION SUMMARY

Project Objectives

1. This was the first Bank Group-supported health project in China. The Project evolved from the Government's objectives to: strengthen the national health planning capability; reform higher medical education; and modernize rural health services. The project supported: a) the development of three national health research institutions to assist in the first objective; b) upgrading of facilities and teaching at 13 leading medical universities to support the second; and c) the modernization of management, health facilities, medical technology, personnel training and preventive programs in 46 rural counties of Sichuan, Heilongjiang and Shandong Provinces and Ningxia Hui Autonomous Region as pilot areas in which to demonstrate practical policies for the third objective.

Implementation Experience

2. Implementation was efficient but somewhat slower than planned, particularly in the case of procurement. Utilization of foreign technical assistance by the universities presented some difficulty and rather hasty construction of rural hospital buildings affected the design and quality of some new facilities. The personnel training program in rural areas far exceeded the planned requirement. Equipment provided was generally suitable and well utilized by the universities, but rural Counties tended to over-estimate the level of sophistication necessary. All beneficiaries under-estimated the recurrent costs of supporting the new technology.

Results

3. The project significantly improved the planning and evaluation capabilities of the Ministry of Public Health (MOPH) by establishing the three national health planning and research institutes. A good model for future rural public health services was developed which is in the process of review and replication throughout the nation. Medical education benefitted significantly from modernization of the 13 universities.

Sustainability

4. The project outcomes in terms of the planned modernization of China's health services and medical education are likely to be sustained. The new "One-third Counties Upgrading Program", initiated by the Government, now has clearer protocols for health facility rebuilding, re-equipment and personnel training. Initial reform of curricula and teaching methodologies for higher medical education has been accomplished and educational research goals and review mechanisms established.

Findings and Lessons Learned

5. The project provided the following valuable lessons to China for future health projects and to IDA for similar efforts in China and elsewhere.

a) Large-scale overseas professional training and technical assistance components yield best returns and become most cost-effective only when the placement of the trainees and the follow-up activities are planned properly.

b) It is important to ensure that competent hospital architectural services are available to plan technical building proposals for satisfactory functioning, durability and ease of maintenance.

c) The establishment of well-organized and staffed project management offices at all operational levels made a very significant contribution to the smooth implementation of the project. Projects should always include necessary personnel training and equipment for these offices, including, where necessary, foreign training and technical assistance.

d) In the case of new and innovative project components, clear guidelines should be developed to enable proper planning of the component. In this project, counties and universities experienced difficulties in developing strategies for chronic disease prevention on their own.

e) Sophisticated items of equipment should be acquired after careful reviews not only of their need but also of the availability of future recurrent expenditure, spare parts, availability of properly trained operators, and the system for monitoring their use and maintenance.

f) China urgently needs to establish a national office of medical technology assessment.

g) The Project in this new sector would have benefitted from the provision of greater assistance to develop the Borrower's procurement skills.

h) The gains made in improvements and management of the universities must now be followed by advancements in financial planning and budgeting as teaching costs would inevitably rise due to the demands generated by the reforms.

CHINA

RURAL HEALTH AND MEDICAL EDUCATION PROJECT
(Credit 1472-CHA)
PROJECT COMPLETION REPORT

PART I: PROJECT REVIEW FROM IDA'S PERSPECTIVE

1. Project Identity

Project Name:	Rural Health and Medical Education
Credit number:	1472 CHA
RVP unit:	East Asia and Pacific Region
Country:	China
Sector:	Health

2. Project Background

2.1 In three decades since its inception in 1949, the People's Republic of China had improved the health status of its population to levels well beyond those of most developing countries, doubling the average expectation of life from its previous low level of 34 years. However, a substantial proportion of the poorer rural population (roughly 20%) failed to benefit from the general improvement. By the early 1980's, large investments were needed to modernize the mostly outdated rural health facilities and to alleviate a severe shortage of adequately trained health manpower. This was largely the result of ten years of isolation from world progress in medical education after the Cultural Revolution, which left medical colleges in substantial need of educational reform. Furthermore, a shortage of village health workers was an unintended result of the introduction of the responsibility system in agriculture in 1980, when many village 'barefoot doctors' gave up health work to pursue more profitable farming or other small scale rural enterprises, leaving village clinics understaffed. In the meantime, the pattern of illness also changed to increased prevalence of chronic diseases due to changes in demography and lifestyle. This, in turn, created demands for more sophisticated health facilities, better trained health staff and effective preventive measures against newer leading causes of death.

2.2. In response, the Government declared high priorities to: a) rebuild the rural health care network; b) improve the quality of training of higher level health personnel; c) develop research institutions capable of elucidating the epidemiological transition facing the country; d) retrain village doctors to a three-year professional level; and e) improve health management.

2.3. In the rural health area, in 1980, the Ministry of Public Health (MOPH), in association with provincial and local governments, began to upgrade health care in the nation's 2,100 counties in three stages, each of 5-years duration. National and provincial governments jointly contributed about half of the capital needed while county governments, health bureaux and end-user institutions made up the remainder. Early results were

disappointing due to funding, planning and implementation weaknesses. Wealthy counties benefitted most while poorer ones, usually those with the worst facilities and least trained staff, could rarely approach the standards set by the Ministry.

2.4. For improvements in medical education, MOPH designated 13 leading medical universities, including two specialized in traditional Chinese medicine, as 'key' institutions to restore standards of scholarship and research after the Cultural Revolution and to speed up the flow of high level graduates into the health services. They were provided with modest increases in budget, and permitted to reinstate older professional staff displaced by the Cultural Revolution. The rights to send teachers overseas for training and to invite foreign visiting faculty were restored and undergraduate medical curricula were lengthened to a minimum of five years. These reforms required the colleges to recruit or train teaching faculty who would be aware of international progress in medical education and were able to develop and introduce new curricula and teaching methods. Modern facility planning skills and large civil works outlays were also needed to update or rebuild libraries, laboratories and teaching hospitals, many of which were in poor structural and functional condition.

2.5. The promotion of effective Chinese traditional medicine techniques as an integral component of the health services is a basic objective of Government health policy. There were few institutions in China capable of the necessary research to validate the therapeutic properties of the vast national store of medicinal herbs. Therefore, MOPH instituted modernization of a respected research institution, the Sichuan Institute of Chinese Materia Medica, which had relatively good research staff and access to large botanical gardens for experimental cultivation of medicinal plants.

2.6. Both the rural health and medical education initiatives were conceived as pilot activities to provide up-to-date planning and budgeting information to guide the modernization of the nation's entire health services. There were, however, no suitably staffed national institutions to provide timely and reliable research data to support public health planning and evaluation needs. To remedy this problem the Ministry created a new Research Center for Health Statistics, in 1982, with a mandate to improve and coordinate the national health statistics systems. Similarly, although there were a number of national technical institutions responsible for advanced studies in public health, such as the Institutes of Epidemiology, Parasitic Disease, Virology and Industrial Hygiene, their concerns were mainly with pure research, rather than with operational studies of the nation's emerging problems in public health, health management and the preventive medicine needs identified in a recent health sector study. This task needed close coordination of the several institutes under a common management and with a greatly strengthened capability in modern epidemiological methods, including those applicable to chronic disease prevention. Therefore, in 1983, the Ministry established a National Center for Preventive Medicine.

3. Project Objective and Description

3.1. The main goal of the project was to support the high priority objectives of the Government, namely: to develop a cost effective strategy to upgrade the rural health services; to modernize medical education in the nation's most advanced medical colleges; and to develop national institutions capable of providing the scientific, statistical and epidemiological bases needed to strengthen national health planning and disease surveillance.

3.2. The project consisted of the following three parts:

Part A. A rural health component, about 30% of the total investment, in 46 selected counties of three provinces and one autonomous region, serving over 30 million people. The project included financing for the rehabilitation and upgrading of the health facilities, provision of essential equipment, personnel training, technical assistance, and a small amount of incremental staff recruitment and training costs. It also included inputs to strengthen management capabilities of the four Provincial and 46 County Health Bureaux.

Part B. A medical education component, about 60% of the investment, covering 13 key medical universities. The project financed necessary construction and equipment, faculty training, technical assistance for modernizing teaching, research, and developments of continuing education.

Part C. Strengthening of national management capability, about 10% of the investment, in: a) the National Center for Preventive Medicine (later the Chinese Academy of Preventive Medicine) to undertake research, coordinated national disease surveillance, advanced training and public health information services; b) the Research Center for Health Statistics (later the Central Health Statistics Institute) to carry out health policy analyses, research, and data collection and processing for the MOPH; c) the Sichuan Institute of Chinese Materia Medica to undertake research on the efficacy, safety and modern production of therapeutically important traditional medicines; and d) the two MOPH bureaux responsible for management of rural health services and medical education as well as the Ministry's World Bank Loan Office (later the Foreign Loan Office). The project provided appropriate physical facilities, equipment, staff training and technical assistance.

4. Project Design and Organization

4.1. The project concept was based on the findings of the Bank's health sector work (China, The Health Sector, April 1984), which was carried out by a mission that visited China in September/October 1982, and on the experience under UNICEF and WHO primary health care activities in the early 1980's. In line with the recommendations of the sector report, the project was designed to meet both existing and projected health problems of the rural population, to begin reorganization of the training of health manpower in China, and to assist in strengthening MOPH's planning

capability. This project was China's largest internationally assisted health project at the time, helping major reforms in the most influential medical universities as well as improving rural health care directly benefiting over 30 million people.

4.2. Timing of the project was fortunate, meeting the need to provide technical and financial data to guide the Government's recently proposed plan to upgrade rural health services in "One-third Counties" upgrading scheme. It also provided timely assistance in the development of the 13 key medical universities, begun in 1977 but inhibited by lack of adequate funding and technical support.

4.3. There were three new features in the medical education component in the Chinese context. Firstly, it introduced new subjects into the curriculum, notably the social and behavioral sciences and chronic disease aspects of preventive medicine. Secondly, it piloted the introduction of modern learner-centered teaching methods in place of outdated didactic teaching. Thirdly, each university was required to assume an expanded role in further education by establishing national specialized centers in some of the newly introduced clinical and pedagogical disciplines.

4.4. A major design factor which was to contribute to successful implementation was the prompt establishment of project leading groups as well as the well-staffed World Bank Loan Office (later renamed the Foreign Loan Office) in MOPH, and similar offices in the provinces and the concerned institutions. An expert advisory group was set up to coordinate the activities of the medical universities and, in 1987, the first of several annual national conferences on the progress of the medical education project was held to review initial outcomes and to inform all higher medical universities in the country of the progress of curricular and methodology reforms.

5. Project Implementation

5.1. Implementation of most project components went better than might have been expected in view of their complexity, the wide dispersion of project units, the radical nature of the educational reforms and the weaknesses of rural health service management. However, the project was completed in seven years, two years behind the appraisal estimate. The main reasons for the delay were the time required to build necessary institutions, to gain experience with Bank Group procedures and to carry out additional activities mentioned in the next paragraph. Procurement under the project took longer than expected because of the delay in familiarizing the newly established MOPH Loan Office and the Chinese National Technical Import Corporation (CNTIC) responsible for importing the equipment under the Bank Group's procurement procedures. Due to inexperience, cumbersome methods were used in preparation of large tendering packages, evaluating bids, arranging contracts and opening letters of credit. End-users were frustrated by resulting delays in delivery. Towards the end of the project, MOPH undertook more frequent and smaller tendering to reduce the workload.

5.2. Midway through project implementation, it was evident that the project required a careful review to take stock of the progress achieved and to identify additional steps needed to meet the original project objectives as well as to address a few emerging priorities. There were also unused credit funds due to difficulties in utilizing allocations for technical assistance (see next paragraph) as well as due to appreciation of the SDR vis-a-vis the US dollar. Therefore, in mid-1989, the credit was reallocated through some reductions in technical assistance and increased funding for equipment, program support, and for disease surveillance and prevention, including activities related to chronic diseases.

5.3. The government was able to utilize foreign technical assistance provided under the project less effectively than was previously anticipated. This was mainly due to the inexperience of the government departments in providing adequate guidance to the end-users in the selection and briefing of appropriate experts, insufficient planning and preparation of in-country activities to yield maximum benefits to all parties, and lack of overseas follow-up. MOPH has now taken serious interest in strengthening its capacity to utilize external technical assistance.

5.4. In the rural health component, the upgrading of equipment, capital construction and training goals surpressed expectations as the local governments provided up to 50% more counterpart funds than planned. As indicated in Table 6 (Part III), there have been significant improvements in health indicators. Referrals from lower levels to the county hospitals decreased to about 50% in Shandong and Sichuan and to about one-third in Heilongjiang and Ningxia. Bed occupancy and average length of patient stay in hospitals were both positive. A total of about 85,000 health workers were trained in the project areas as compared to the target of about 41,000 workers; the proportion of 3-year trained village doctors rose by 30% to 50%; the numbers and capabilities of higher level clinicians and laboratory workers increased dramatically. Both infant and maternal mortality indicators showed pronounced improvements; and the prevalence of common infectious diseases recorded substantial decline. There were also substantial management gains, including improved and better utilized health information networks, disease surveillance, program planning and equipment management. All project provinces and counties established equipment maintenance centers.

5.5. There were some problems in the rural component, however. Most counties tended to give priority to strengthening the higher level curative services to the detriment of primary care and prevention. Sometimes, new services and clinical or laboratory procedures were developed that were inappropriate to the role of county level institutions. Construction of new rural hospitals was frequently undertaken too soon after the project began and, in some cases, both the appropriateness of design and the quality of construction were suboptimal to the demands of modern medical and nursing practice. Hospital buildings were often more difficult and expensive to maintain because of poor quality construction. Most counties overestimated the level of sophistication of equipment needed and sometimes rejected quite satisfactory Chinese-made items in favor of more costly

imports without due regard to the utilization rates, long-term recurrent costs and likely benefits of the equipment. There was also a tendency to make a profit by over-using new procedures and equipment to generate revenue for the institutions, regardless of clinical need. After a review of equipment utilization by the MOPH in 1987, the equipment plan for rural counties was revised to counteract these trends and there was a considerable improvement during the later years.

5.6. The medical education component sharply increased both the numbers and the proportion of trained faculty, as more than 1,000 teachers benefitted from overseas training. In-country selection and preparation of candidates for overseas training, including language and computer literacy, were generally performed well. A few problems arose from the failure to plan the location and duration of overseas training posts adequately, and from the distribution of fellowships pro-rata to departments rather than according to institution-wide needs. On the whole, the overseas training experience was highly beneficial. A small percentage of teachers has so far failed to return to China after training, most having obtained temporary or permanent positions in the host countries. Nevertheless, in many cases, they continue to provide useful linkages between their Chinese institutions and host colleges. Foreign technical assistance was neither fully implemented nor utilized as well as possible by most of the 13 universities.

5.7. Overall, student-centered learning was given a much higher profile with more uncommitted study time available for the students, supplemented by better access to improved library resources, modern audiovisual teaching aids, computers, well equipped laboratories, and foreign language training. Practical clinical training was improved by partial decentralization from tertiary teaching hospitals to include field experience in small hospitals and clinics at new community teaching bases, which enabled the students to undertake epidemiological studies of common problems and brought them into closer socio-medical contact with the rural people and their health problems. Enrichment of continuing medical education was a particularly effective subcomponent, with more than 70,000 in-service students enrolled in various types of general and specialist courses. Stomatology, an area of manpower shortage prior to the project and a weak area all over China, was considerably expanded by many colleges.

5.8. The Chinese Academy of Preventive Medicine (CAPM) implemented the project smoothly. By 1987, it had established a computerized disease surveillance system for the whole country, routinely collecting data from 71 surveillance points in 29 provinces. The program was, however, shown to under-represent the poorer rural areas and in 1989, 145 randomly selected surveillance points were added, leading to more accurate and timely data on infectious diseases. More recently, work has begun to add some major non-communicable diseases to the network. The Academy has carried out much major research; examples include the study of the national prevalence of hepatitis B; national smoking-related mortality and costs; occupational disease patterns in rural enterprises; and the early diagnosis of naso-pharyngeal cancer. It collaborated with Cornell and Oxford Universities in one of the largest studies of risk factors for chronic disease ever

undertaken and with WHO and UNICEF in studying nutrition in rural children. These studies have contributed important data for health policy analysis. CAPM has also developed rapid and cheap laboratory methods for diagnosis of the common viral diseases and has become the nation's leading producer of hepatitis B vaccine. The academy has implemented a large program of technical assistance to the provinces, including professional training in epidemiology, direct consultations, and support for field research and program development.

5.9. When the project began, China had no unified nationwide health statistics reporting system and no regular tabulations of data on health manpower, facilities, workloads, economics or effectiveness of public health programs. The National Center for Health Statistics lacked trained staff and equipment to achieve its objectives. In 1985, external technical assistance helped to plan and organize the unit, establish links with leading foreign institutions, develop a staff training plan and identify necessary computer and other equipment needed. During the project period, the number of professional staff reached 30, two thirds of whom received substantial training overseas. The Center has developed into a training institution since 1987. In addition, several universities introduced training for specialists in health statistics and computer science, thereby providing about 130 graduates to staff the national and provincial institutions involved in the processing of health statistics. A large and well housed computer system with database library, survey analysis capability, signal/image processing and nationwide networking was provided, together with appropriate commercial software. The center is now producing software for specific national statistical needs and for the operational needs of the line departments of the Ministry. Production of computerized national health statistics has been implemented in phases, initially, in 1986, using floppy disks mailed by provinces to the Center. By 1989, several provinces were able to transfer data electronically and the basic in-house Ministry network has now been completed.

5.10. Under the project, the Sichuan Institute of Materia Medica received overseas training for ten executive staff, external technical assistance, in-country training for 60 supporting research personnel, re-equipping with modern analytical facilities, revision of research methodology, clinical trials, and new buildings (from counterpart funding) for a library and several laboratories. The library has developed an impressive collection of Chinese and foreign texts and journals and at the same time initiated English language training for many of the staff of 400 technical personnel. Eight significant research projects were initially developed and five were successfully concluded. Many other studies have since commenced on the therapeutic efficacy of frequently prescribed and empirically effective herbs. The Institute has developed an extensive training program in modern analytical and clinical pharmacological methods for research workers of other Chinese traditional medicine institutes. It has also become the main reference center for native plant studies in China with extensive international connections.

6. Project Results

6.1. The project was very successful in achieving practically all of its basic objectives. As stated above, the original project targets were exceeded in many key areas, including the construction of hospitals, provision of essential equipment and materials, the training of rural doctors as well as the improvements in higher medical education. There was remarkable progress in the building of important national health institutions. The manpower study was completed in two provinces in 1988 and that provided valuable planning information. Improved management methods, in the context of project preparation and implementation, benefitted considerably the MOPH, provinces and counties. Notable improvements in the approaches to equipment requests and the planning of hospital facilities were evident in the later parts of the project. Many long- term agreements have been concluded between the major Chinese colleges and institutes included in the project and leading overseas centers. Major reforms were achieved in the key medical universities whose effects and academic exchanges have favorably influenced the curricula and teaching methods of other non-project medical colleges in China. The number of higher academic posts increased in all colleges.

6.2. Project Impact. The training of village doctors, the provision of equipment, and the improvements in management practices introduced under the project have significantly improved the quality and utilization of the health services in all project counties. Most rural hospitals have reported lower average lengths of stay for patients and a rise in the proportion of outpatient attendance. The availability of more adequate transport greatly strengthened field supervision and enabled more rapid life-saving emergency services to be provided for maternal, neonatal and other cases of acute illness. Utilization rates of lower level services have risen with a reduction in referral rates for higher level care. At provincial level, the quality of planning and supervision of rural health programs has improved as a result of the management training, and its impact has extended beyond the project counties and benefitted rural areas province-wide. The MOPH has reported that the response of the project provinces to the "one-third counties upgrading program" has been far better than that in non-project provinces, in terms of increased local interest and funding, better disease surveillance, efficiency in immunization and MCH activities and the prevention of chronic diseases. However, two issues have been identified for further attention by most counties: the improvement in the training of epidemic prevention station (EPS) staff and the strengthening of the county level management awareness of EPS and MCH staff in modern health education theory and practices.

6.3. Medical technology policy in China has benefitted greatly from analysis of cost-benefit relationships and of recurrent costs as they relate to the provision of advanced medical equipment under the project. However, despite the existence of stricter guidelines for requests by end users, China still lacks a national office of medical technology assessment. This is a serious weakness which is retarding improvements in the quality of care and cost containment efforts.

7. Project Sustainability and Replicability

7.1. There is little doubt that all project beneficiaries will have both the interest and ability to sustain the reforms introduced under the project. However, it is also clear that the rural health service units as well as the medical universities will have to do a better job of estimating and providing the necessary recurrent costs for expendables, spare parts and maintenance in the future if the modern equipment and procedures introduced under the project are to be continuously and effectively used. Provision for amortization and equipment replacement must also be made from the revenues accruing from its use, but care should be exercised by the county health bureaux to prevent over-use of tests and procedures solely to raise income and without clear clinical benefit. Regular maintenance of the new and renovated hospitals will be essential if they are to remain in good functional and hygienic condition; this implies the need for proper maintenance and for economic use of expendables.

7.2. Educational reforms in the 13 universities have progressed to the point where reversal to outdated didactic teaching is most unlikely to occur. But the reforms are not yet complete. The new emphasis on student self-learning requires that libraries be fully developed as learning resource centers. Future training of faculty will need to ensure that the attitudes and skills of younger staff are consistent with the new teaching theory and practice. There is some risk that the teaching of strategies for preventing diseases, including long-term care and rehabilitation, may decline in importance after the project has ended. This can be avoided if preventive medicine is emphasized in teaching by all the clinical disciplines, not only by departments of public health, and if sufficient program support funds are made available to maintain the essential community based experience for senior medical students. The subjects of mental health, geriatrics and child development still require further development by most of the colleges. The MOPH should consider the establishment of more National Centers at selected colleges to encourage research and enrichment of teaching in preventive and social medicine.

7.3. Improved financial management by the colleges, and possibly a change to global budgeting of colleges by the MOPH, will be necessary as the colleges absorb the full burden of operational costs. The rural counties may need to divert a proportion of their diagnostic and treatment revenues to support the important but non-revenue operating costs for the preventive program.

7.4. Replicability of many of the project inputs and methodology to the nation's rural health and higher medical education systems is feasible and the process has actually begun in rural health as well as in medical education. MOPH should analyze the costs and benefits of various components in collaboration with specialist line bureaux to identify critically important follow up actions, such as: a) review of the cost-effective aspects of the project that could modernize teaching in the provincial medical colleges; b) establishment of a national center for medical technology assessment; and c) strengthening of Foreign Loan Offices in the provinces to reinforce the improvements in rural health.

8. Association Performance

8.1. This project was the IDA's first experience working with the Chinese MOPH and it was an intensive learning exercise, for both parties, in identifying the components that matched the modernization objectives of the Government and that were also potentially replicable to the rest of the nation. The strength of the Bank Group's contribution lay in thorough preparation by a large team of Bank Group staff and expert consultants, supplemented by inputs of WHO and UNICEF. The 1982 health sector study clarified the dynamics of China's health system and its changing health needs. This information was supplemented by case studies in each project province and some medical universities. The IDA assisted the MOPH to establish efficient loan management departments for the project. These efforts were effective in ensuring an efficient administration for all future health projects.

8.2. The Association's missions provided important technical know-how. There were eight supervision missions with experts in many disciplines, such as computer science, technology assessment, institutional development, audio-visual production, hospital design, technical assistance management and equipment maintenance.

9. Borrower Performance

9.1. The Borrower's performance was excellent, especially because of well-organized and staffed loan management offices at the center as well as at local levels. Lack of familiarity with the Bank Group's management, financial, procurement and supervision requirements posed some problems in the beginning, but these were soon overcome as staff were trained. During the life of the project, the MOPH has adopted many of the lessons learned on project preparation, data presentation, reporting, facility design, equipment selection and procurement and project management in its regular practice.

10. Project Relationships

10.1. Relationships between the Bank, the MOPH, provincial governments, health bureaus and health institutions were cordial. Throughout the project, the effectiveness of post-mission meetings with the provincial authorities, the Minister or Vice Minister of Public Health, supported by appropriate line bureau staff, and UN agencies was noteworthy.

11. Consulting Services

11.1. The project depended heavily on the technical assistance provided by more than 200 foreign and many local experts. Some disciplines were new or poorly developed in China, e.g., health management and economics, clinical epidemiology, social medicine, medical psychology and health education.

12. Project Documentation and Data

12.1. Several background working papers were prepared by IDA staff on the health status and services of the four provinces. The Staff Appraisal Report provided satisfactory guidance for project implementation. The Development Credit Agreement was amended, in mid-1989, to reallocate the unspent credit balance from the technical assistance component and savings generated by SDR appreciation to cover unforeseen local costs of some rural counties, to add additional training for one province and to postpone the Closing Date for two years.

13. Project Monitoring

13.1. MOPH carried out the overall coordination of the project activities through its Foreign Loan Office (FLO), which is the successor of the World Bank Loan Office established in connection with this project. Although FLO initially suffered from the unfamiliarity of the Bank procedures, it gradually developed into a very efficient department of MOPH and was effective in monitoring the project's progress and coordinating different components of the project. Similarly, Loan Offices were also established in each of the other implementation units, like the universities and the provincial and county-level health agencies responsible for the implementation of different components of the project.

PART II: PROJECT REVIEW FROM THE BORROWER'S PERSPECTIVE

1. Comments on Part I

1.1 In PART I of the World Bank Project Completion Report, a brief introduction was given to the background of the project, its objectives, implementation plan, components, and goals expected to attain through the implementation of activities under each respective component. It has analyzed the implementation process, the achievements and experiences, the existing problems, and the tendencies of a general nature as observed in its implementation. In the Borrower's view, this is a good, comprehensive summary of the project.

1.2 The evaluation in PART I of the Project Completion Report has mirrored, in the main, the actual reality including the level of sophistication and utilization of equipment. In fact, the situation of over-sophistication and under-utilization of equipment did exist in the initial stage of project activities performed in certain county epidemic prevention stations (EPS). Professional staff at county EPSs in all project provinces were found unfamiliar with, and incapable of, handling these certain advanced monitoring and surveillance equipment. Therefore, the health bureaux of project provinces sponsored training courses with the hope to help them understand, in a shortest possible time, the way of its operation. The under-utilization of some equipment has thus been overcome leading to the attainment of the goals established for the project and to the fulfillment of the surveillance tasks assigned to them by the project. But due to the lack of experiences, a few project provinces (i.e. Ningxia) got some more advanced and sophisticated equipment which were not suitable for the EPSs. The provinces corrected this by assigning those equipment to the higher level institutions and providing the county EPSs with more suitable ones.

1.3 Compared to EPS, the problems of over-sophistication and under-utilization of equipment were not so terrible at hospitals, both at county- and township-levels. It has been found that the advanced equipment, as purchased, have enabled them to improve and strengthen the quality of their diagnostic and therapeutic services. Actually, through the strengthening and improvement of equipment, the hospitals both at county- and township-levels enhanced their capability in providing qualified services, hence, reduced the rate of referral.

1.4 The Bank report has stated that the input from the counterpart funds to capital construction surpassed the original planned figures. It indicated that government at various levels were determined firmly to remedy the lack of health service facilities caused by the past "Great Cultural Revolution" by increasing financial input from the counterpart funds on one hand; and on the other, it indicated the inappropriateness of

plan. Since the project preparation had not paid attention to the entire plan, the Government had to increase the counterpart fund for construction during the project implementation. The rising cost was another major factor causing increase in counterpart funds.

1.5 The irrational designing and inadequate quality in hospital construction, as seen in the project implementation, have aroused the attention of the Ministry of Public Health, and governments of the project provinces, who have respectively set up specific institutions to cope with it and adopted measures for a remedy. For instance, the Department of Planning and Finance under the Ministry of Public Health has set up an office specifically for the study of hospital construction design. The office is to take up the overall responsibility for the examination and verification of the conceptual design and blueprints of hospital construction with the aims to standardize the hospital design and construction, to ensure the functioning of hospital facilities to meet medical services' needs, and to improve quality of construction. Corresponding institutions and mechanism have been set up at all project provinces; and the system of examination and verification have been applied in the implementation on Health II and, even more effectively, in Health III projects[1].

1.6 Certain challenges and difficulties in organization and finance were encountered in the carrying out of chronic disease prevention and control at the county level, but these are problems over the whole nation. The Ministry of Public Health has become aware of it and has taken lead in the carrying out of control activities of the four target diseases in large municipalities such as Beijing and Tianjin where conditions are ripe as pilots.

1.7 At the initial stage of the project implementation, there was an issue of inadequate project operation and recurrent costs. This reflected the general tendency of putting more emphasis, when planning and financing health services, on one-time investment, including the physical facilities, but less attention on program activities and their operation and recurrent costs. The project provinces tried with every effort to re-adjust their plan and to find remedies. And, the Chinese Government and the World Bank decided, after discussion, to establish a disbursement category of "program support" to partly solve the issue of lack of operation and recurrent costs, and the shortage of these costs was overcome. The establishment of "program support" has played a supportive role in the implementation of the project at the later stage. It is particularly crucial to the successful completion of a number of sub-items of research arising in the course of the project implementation; and the Program Support is of help to construction of community training bases for medical universities.

---

[1]. Health I means the Rural Health and Medical Education Project (Cr. 1472-CHA), the subject of this PCR, Health II means the Rural Health and Preventive Medicine Project (Ln 2723/Cr. 1713-CHA, of January 1987), and Health III means the Integrated Regional Health Development Project (Cr. 2009-CHA, of September 1989).

However, its optimal solution depends on certain changes and re-adjustments of policy at the national level.

2. Evaluation of IDA's Performance

2.1 Health I project was the first project with foreign loans implemented through the cooperation of the World Bank and the Ministry of Public Health of China. The Bank officials have contributed fruitfully to the project in its course of preparation and evaluation as well as in the aspects of giving guidance and supervision in its implementation.

2.2 Most of the Bank officials and the consultants invited for the project were most competent, and many of them were familiar with the conditions of the China. Their instruction and guidance have greatly inspired the project managerial staff of this side.

2.3 During their stay in China, officials on the Bank missions have manifested themselves with a rigorous scientific working style, and with an experienced and managerial skill. Their admirable performance is an inseparable constituent part to the success of the project.

2.4 In the first three years since the implementation of the project, five missions were despatched by the World Bank for investigation and supervision, and more than three missions for supervision were sent in the following years. The missions had an important role to play in the supervision of the project implementation, particularly so for departments concerned that are responsible for the implementation of project with foreign loans for the first time. We hope the Bank would continue the effort of making such supervision.

3. Evaluation of Borrower's Own Performance

3.1 The Health I project is the first project undertaken by MOPH with large amount of loans from external sources. The project covers the sensitive issues in areas of rural health development, medical education reforms, and the raising of capability at the central level in managerial activities and policy studies. However, project managerial staff at all levels of this country are inadequate in their experience and are unfamiliar with the managerial procedures. As a remedy, foreign loan offices were set up and properly staffed respectively under MOPH and under each of the project provinces and counties.

3.2 In order to play its role to the maximum, the Foreign Loan Office of MOPH serves as a department directly under the Ministry and has due authority in the management and supervision of project activities performed by project provinces. While paying attention to the development of hardware facilities, it stressed much on activities relating to technical assistance and manpower development. It is through the visits of consultants and training of its working staff that the managerial capability of the Office has smoothly undertaken the increased workload arising from new health projects, including Health II, III, the Infectious

and Endemic Disease Control Project (Cr. 2317-CHA of December 1991) and others under preparation, with a few additional new recruits.

3.3 Another causative factor of the smooth implementation of the project was the proper handling of working relationship in all departments concerned. They include the departments of MOPH and other ministries, commissions at the central level, the State Planning Commission, the Ministry of Finance, and the Ministry of Foreign Economic Relations and Trade. In health sector, the concerned departments were: the Foreign Loan Office of MOPH and other departments under the Ministry, including the Department of Medical Education, the Department of Medical Administration, and the Department of Planning and Finance; and the governments and health bureaux of project provinces. The project objectives were unlikely to attain without the cooperation and support of all departments listed above. It was, therefore, the coordination role played by the MOPH and its Foreign Loan Office that facilitated the coordinated efforts of all departments and thus ensured the success of the project.

3.4 Foreign loan offices at the provincial level have played a prominent role in the implementation of project mainly in the management, supervision and giving guidance to activities performed by the foreign loan offices at the county-level. They have been proved competent not only in their managerial capability over the project counties, but also in their guidance to the routine health activities of non-project counties of the province, particularly in their dissemination of the modern managerial procedure as learnt from the World Bank. Health services as a whole in all counties of the provinces have been strengthened. Take the disease surveillance activities, for instance. With the establishment of the project with foreign loans, the provincial network of disease surveillance has taken shape and perfected. It helps to further improve the accuracy of data collected and further lower the drop-out rate. Thanks to the efforts and work performance of the foreign loan offices at the provincial level, health and other services of the project counties have become, in general, model and exemplary counties of the province.

4. Project Relationship

4.1 In the course of implementation of the project, there has been a good cooperative relationship between this side and the World Bank, and between MOPH and its affiliated Foreign Loan Office and the World Bank is particularly fruitful. There has been an attitude of friendly cooperation and mutual support prevailing in the past seven years of project implementation between China and the World Bank.

4.2 The World Bank has rendered important support and guidance relating to hard- and soft-ware facilities to the MOPH and its Foreign Loan Office by despatching its top-ranking consultants to this side. Errors and difficulties in implementation activities have been properly handled after reaching a consensus through consultation. In the course of implementation, both sides tried, with every efforts, to exchange views and opinions in order to attain common understanding and agreement for solution of issues.

4.3 The fruitful cooperation between this side and the World Bank has found its expression also in the close communication by the electronic mail between the two sides. The Foreign Loan Office of MOPH has maintained a very frequent contact with the World Bank, which ensures a prompt feedback to all information and proposals provided, and both sides are well informed of the latest progress of the implementation activities of the project.

5. Evaluation of Co-financiers' Performance

5.1 This project received, from its preparation stage till its completion, valuable help and support from all departments concerned within the country and all international organizations from outside, a clear manifestation of their solicitude for the project. Of particularly worthy of mention is the efforts extended by the World Health Organization (WHO) in the preparation stage of the project. WHO played an important promotional role in the establishment of the first health project in this country with loans from the World Bank. The Chinese side is deeply impressed with the efforts extended by all international organizations concerned towards this project.

5.2 Due contributions have been made towards this project by the State Planning Commission, the Ministry of Finance, the governments at provincial and county levels, and local health bureaux of project provinces and counties. The guidance and input of the State Planning Commission and Ministry of Finance is a good manifestation of the importance attached to and supports toward the health
services of the country, as well as the strong determination of the state for the realization of China's modernization. The active inputs (in terms of manpower, material and finance) of provincial and county governments is a clear indication of their confidence in the success of the project. The endeavor of all staff of health bureaux and all professionals at the grassroots have been proved fruitful constituting a basic guarantee to the successful fulfillment of the project.

6. Comments on Part III Tables

6.1 It is confirmed that the factual information provided in Part III are adequate and accurate.

PART III

Table 1 - Related Bank Loans and IDA Credits

Loan/Credit Title	Purpose	Year of Approval	Status
Rural Health & Preventive Medicine Project	Improve access and quality of rural health, immunization, drug quality and chronic and communicable diseases care.	June 1986	All components satisfactorily completed. Vaccine plants under construction.
Integrated Satisfactory Regional Health Devel. Project	Introduce new approaches to health policy/planning of integrated health to improve health services.	April 1989	progress.
Infectious & Endemic Disease Control Project	Support national program to control TB and schistosomiasis and to strengthen related institutions.	December 1991	Implementation started satisfactorily.

Table 2 - Project Timetable

Item	Date Planned	Actual Date
Identification		December 1, 1982
Preparation		June 1983
Appraisal		September 1983
Negotiations		March 1984
Board approval		May 8, 1984
Credit Signing		June 1, 1984
Credit Effectiveness	September 4, 1984	August 29, 1984
Project Completion	June 30, 1989	December 31, 1991
Credit Closing	December 31, 1989	December 31, 1991

Table 3: Cumulative Estimated and Actual Disbursements
(US$ million)

Bank FY	Appraisal Estimates	Estimated Cumulative	Actual Disbursement	Cumulative Actual Disbursement	Actal as % of Cumulative	Actual as % of Total
1985						
1st	--	--	1.90	1.90	--	2%
2nd	15.5	15.5	4.61	6.51	42%	7%
1986						
1st	15.5	31.0	18.84	25.35	82%	26%
2nd	13.0	44.0	15.26	40.61	92%	42%
1987						
1st	13.0	57.0	7.46	48.07	84%	50%
2nd	9.5	66.5	8.62	56.69	85%	59%
1988						
1st	9.5	76.0	3.66	60.35	79%	62%
2nd	3.0	79.0	13.67	74.02	94%	77%
1989						
1st	3.0	82.0	1.32	75.34	92%	78%
2nd	1.5	83.5	1.16	76.5	92%	79%
1990						
1st	1.5	85.0	1.33	77.83	92%	81%
2nd	--	85.0	4.49	82.32	97%	85%
1991						
1st	--	85.0	3.49	85.81	101%	89%
2nd	--	85.0	2.85	88.66	104%	92%
1992						
1st	--	85.0	5.85	94.51	111%	98%
2nd	--	85.0	2.16	96.67a/	114%	100%

a/ The actual amount disbursed increased in terms of US$ due to devaluation US$ vs. SDR during implementation.

Source: MIS Disbursement Information

Table 4a. Project Implementation in Provinces

Rural Counties:	Shandong			Heilongjiang			Sichuan			Ningxia		
	Planned	Actual	Remarks	Planned	Actual	Remarks	Planned	Actual	Remarks	Planned	Actual	Remarks
Total construction (m)	91400	164637	(1)	63874.5	152494		190486	320087		37202	50455	
Hospital beds/1000	1.01	1.18		1.46	1.66		1.18	1.26	(6)	1.10	1.18	
Equipment provided (US $1000)	7900	8829	(2)	7000	7768		10605	11792		3219	3821.00	
Total county techn.pers./1000	1.41	1.55		1.77	2.12			1.49		1.70	1.78	
Chief & attending physn./1000	0.0004	0.021		0.0034	0.022			0.29			0.32	
Village doctors/1000	1.54	1.61		0.7	0.84			1.29		0.9	0.97	
Vill. Drs. & Jun.med. trained %	15	47		3906	10874	(5)	50	72.01		80	81.13	
Total tech. persons trained	7008	19414	(3)	8578	20771	(5)	13399	23579		966	1896	
	(4581)	(9738)	(4)									

Remarks:

1. The number of 91400 m is composed of 290 m contructed for the province level.
2. The diference between Planned and Actual is caused by the exchange rate.
3. In this line, the number of village doctors trained is included.
4. In this line, the number of village doctors trained is not included.
5. Person times
6. "Hospital beds/1000" of 1.18 under the column of "Planned" in Sichuan is the number in 1984.

TABLE 5

A. PROJECT COSTS (US DOLLARS 1,000)

Category	Appraisal Estimate		Actual	
	Local Costs	Foreign Costs	Local Costs	Foreign Costs
Construction	140,986		245,408	
Equipmnt, Vehicles	497,769	65,436	100,539	74,412
Training	10,168	9,221	5,824	9,054
Tech. assistance	1,999	6,974	1,809	3,215
Personnel Recruitment	4,929		22,279	

B. PROJECT FINANCING (US $ 1,000)

Source of Funds	Planned	Actual
IDA		
A. Rural Health	28,800	37,406
B. Medical Education	36,000	46,000
C. Strengthening of Management evaluation research	4,800	6,482
D. Project Implement.	2,700	6,694
E. Contingencies	12,700	
SUBTOTAL 1/	85,000	96,582
DOMESTIC		
A. Central Govt.	178,400	124,663
B. Provincial Govt.	14,300	82,105
C. County Govt.	38,400	
D. Sub-County sources	6,700	
SUBTOTAL 2/	237,800	206,768
TOTAL FINANCING	322,800	303,350

1/ IDA share increased in terms of US dollars as SDR appreciated

2/ Fincancial reorganization in China changed the shares of different parties.

TABLE 4b: Project Implementation - Universities' Enrollments and Faculty Staff

Universities	Enrollment				Staffing					
	Undergraduate (number)		Graduate (number)		Faculty Staff posis. total		Faculty Staff Prof. & Assoc.		Faculty Staff Lectr. & Assist.	
	Before Project (1983)	After Project (1991)	Before Project (1983)	After Project (1991)	Before Project (1983)	After Project (1991)	Before Project (1983)	After Project (1991)	Before Project (1983)	After Project (1991)
Beijing College of TCM	240	258	24	316	261	434	47	145	234	289
Beijing Medical University	426	630	130	267	529	1086	281	359	248	727
Peking Union Medical University							121			
China Medical University	536	435	164	184	956	969		92	266	377
Guangzhou College of TCM					383	785	35	151	348	634
Hunan Medical University	248	630	51	125		916	138	283	156	508
Norman Bethune Medical Univer	496	630	13	130		919	281	443	154	476
Shanghai Medical University	400	566	78	241		878	310	575	154	603
Shandong Medical University	353	516	40	96	572	753	87	215	156	538
West China Medical University	342	610	80	165	1224	1012	160	291	160	720
Tongji Medical University	473	600	63	202		859	257	293	158	620
Xian Medical University	240	540	37	82		1104		314	168	790
Sun Yatsen Univ. of Med. Sc.	400	470	62	183		650	152	189	179	479
Total	4154	5885	742	1991	3925	10365	1869	3350	2381	6761

TABLE 6. PROJECT RESULTS

	Shandong			Heilongjiang			Ningxia			Sichuan		
	Before Project	After Project	Remarks	Before Project	After Project	Remarks	Before Project	After Project	Remarks	Before Project	After Project	Remarks
Infant mortality rate	21.65	19.67		35.53	23.21		45.50	34.41		42.09	31.34	
Maternal mortality rate	0.05	0.04		0.06	0.02		0.11	0.09		0.12	0.06	
Antenatal exam. rate	62.66	85.38		68.90	97.30		54.51	84.75		61.95	75.05	
Incidence infectious disease	339.28	127.76		243.90	142.14		490.81	238.14		436.64	351.41	
Incidence TB	338.68	163.48		528.54	445.33		1155.80	567.70		743.24	531.44	
Incidence infant pneumonia	4.77	4.24		6.88	6.71		30.38	5.68		4.71	3.17	
Incidence infant diarrhoea	16.59	15.13		7.26	6.99		56.49	11.96		11.29	6.66	
4-vaccine rate children	89.05	97.56		88.56	97.73		91.79	97.26		74.53	93.58	
Hospital occupancy rate	38.21	59.04		56.45	57.03		69.70	77.61		61.33	60.96	
Referral to county rate	0.10	0.06		0.10	0.03		0.14	0.04		0.01	0.01	
Average length hosp. stay	7.55	8.74		7.43	6.18		12.24	10.56		7.09	7.22	
Health education staff nos.	243.00	330.00		56.00	190.00		88.00	105.00		745.00	1109.00	
% health educ. in primary school	0.81	70.21		12.32	80.99		2.05	52.42		5.81	59.74	
% health educ. in secondary sch	16.16	82.95		3.22	80.40		12.84	43.90		7.02	80.18	

Comments on Table 6 (results) Selected positive indicators

1. Substantial falls in IMR and MMR, following improvements in MCH care.
   The improvement was less in Shandong, where pre-project IMR and MMR were already low.
2. All provinces report large reductions in communicable diseases.
3. Health education programs have been considerably developed.
4. Immunization of school children has reached almost 100% coverage.

Table 7 - Status of Covenants

Covenant	Subject	Deadline	Status
Credit Agreement			
Section 3.02	Borrower to pass part of Credit to local Entities under terms satisfactory to IDA/GOC	N.A.	Fulfilled
Section 3.03	Employ consultants with terms/qualifications satisfactory to IDA	N.A	Fulfilled
Section 3.06	(a) Carry out health manpower study;	6/30/86	Completed in June 1988
	(b) furnish report for IDA's comments	--	Fulfilled
Section 3.09	Maintain MOPH Loan Office with appropriate staffing	--	Fulfilled
Section 4.01	Submit audited accounts	Each 6/30	Fulfilled
Project Agreement			
Section 2.01 (a)	Each Local Entity to provide adequate funds to implement its part.	--	Fulfilled
Section 2.02	Each Local Entity to maintain a Loan Office throughout project implementation	---	Fulfilled

Table 8 - Bank Group Staff Input
(Staff weeks)

Stage of Project Cycle	Planned	Actual
Preappraisal		80.2
Appraisal		62.2
Negotiations		28.0
Supervision		124.7
Total		295.1

Table 9 - Bank Group Missions

Project Cycle	Month/ Year	No of Persons	Specialization[1]	Performance Rating
Reconnaissance	3/82	4	PH, EP, EC	-
Identification	9/82	5	EC, PH, EP HE, PE	-
Preparation	1/83	4	EC, ME, PH	-
Preparation	3/83	2	PH	-
Preparation	4/83	2	EC, ME	-
Preparation	6/83	3	PH, FM	-
Appraisal	9/83	7	EC, PH, FM, AR, ME	-
Post-Appraisal	2/84	3	EC, PH	-
Supervision	7/84	3	EC, PH, ME	1
Supervision	3/85	2	PH, EC	1
Supervision	8/85	3	PH, PR	NA
Supervision	5/86	7	EC, HE, PH, ME	1
Supervision	10/86	1	FM	1
Supervision	12/86	3	FM, EC, PH	1
Supervision	3/87	3	PH	1
Supervision	11/87	1	FM	1
Supervision	9/88	6	FM, CM, PH, ME	1
Supervision	4/90	1	FM	1

[1] Specialization:

AR - Architect
CM - Computer Specialist
EC - Economist
EP - Epidemiologist
FM - Finance & Management
HE - Health Economist
ME - Medical Educator
PE - Population Economist
PH - Public Health Specialist
PR - Pharmacist

THE WORLD BANK/IFC/MIGA

OFFICE MEMORANDUM

DATE: December 20, 1993

TO: Mr. Pieter P. Bottelier, Chief, Resident Mission, China

FROM: Graham Donaldson, Chief, OEDD1

EXTENSION: 31730

SUBJECT: CHINA: Rural Health and Medical Education Project (Credit 1472-CHA)
Project Completion Report

Kindly distribute the enclosed final Project Completion Report and cover letters to the officials concerned. After requesting from the Region the names of the officials working in the different entities mentioned in the distribution list, the Task Manager stated that the name of the bureau was sufficient. A copy is also enclosed for your records.

Enclosures

CHINA: Rural Health and Medical Education Project (Cr. 1472-CHA)
PROJECT COMPLETION REPORT

Ministry of Finance
Beijing, China

Foreign Loan Office
Ministry of Public Health
Beijing, China

Provincial Project Office
of Shandong
China

Provincial Project Office
of Heilongjilang
China

Provincial Project Office
of Ningxia
China

Provincial Project Office
of Sichuan
China

The World Bank
INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT
INTERNATIONAL DEVELOPMENT ASSOCIATION

1818 H Street, N.W.
Washington, D.C. 20433
U.S.A.

(202) 477-1234
Cable Address: INTBAFRAD
Cable Address: INDEVAS

December 20, 1993

Provincial Project Office
of Sichuan
China

Dear Sirs,

Re: CHINA: Rural Health and Medical Education Project (Credit 1472-CHA)
Final Project Completion Report

The final version of the report has now been distributed to the Bank's Board of Executive Directors and it is my pleasure to send you a copy for your information.

Yours sincerely,

Graham Donaldson, Chief
Agriculture and Human Development Division
Operations Evaluation Department

Attachment

The World Bank
INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT
INTERNATIONAL DEVELOPMENT ASSOCIATION

1818 H Street, N.W.
Washington, D.C. 20433
U.S.A.

(202) 477-1234
Cable Address: INTBAFRAD
Cable Address: INDEVAS

December 20, 1993

Ministry of Finance
Beijing, China

Dear Sirs,

Re: CHINA: Rural Health and Medical Education Project (Credit 1472-CHA)
Final Project Completion Report

The final version of the report has now been distributed to the Bank's Board of Executive Directors and it is my pleasure to send you a copy for your information.

Yours sincerely,

Graham Donaldson, Chief
Agriculture and Human Development Division
Operations Evaluation Department

Attachment

The World Bank
INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT
INTERNATIONAL DEVELOPMENT ASSOCIATION

1818 H Street, N.W.
Washington, D.C. 20433
U.S.A.

(202) 477-1234
Cable Address: INTBAFRAD
Cable Address: INDEVAS

December 20, 1993

Provincial Project Office
of Heilongjilang
China

Dear Sirs,

Re: CHINA: Rural Health and Medical Education Project (Credit 1472-CHA)
Final Project Completion Report

The final version of the report has now been distributed to the Bank's Board of Executive Directors and it is my pleasure to send you a copy for your information.

Yours sincerely,

Graham Donaldson, Chief
Agriculture and Human Development Division
Operations Evaluation Department

Attachment

The World Bank
INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT
INTERNATIONAL DEVELOPMENT ASSOCIATION

1818 H Street, N.W.
Washington, D.C. 20433
U.S.A.

(202) 477-1234
Cable Address: INTBAFRAD
Cable Address: INDEVAS

December 20, 1993

Provincial Project Office
of Ningxia
China

Dear Sirs,

Re: CHINA: Rural Health and Medical Education Project (Credit 1472-CHA)
Final Project Completion Report

The final version of the report has now been distributed to the Bank's Board of Executive Directors and it is my pleasure to send you a copy for your information.

Yours sincerely,

Graham Donaldson, Chief
Agriculture and Human Development Division
Operations Evaluation Department

Attachment

The World Bank
INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT
INTERNATIONAL DEVELOPMENT ASSOCIATION

1818 H Street, N.W.
Washington, D.C. 20433
U.S.A.

(202) 477-1234
Cable Address: INTBAFRAD
Cable Address: INDEVAS

December 20, 1993

Foreign Loan Office
Ministry of Public Health
Beijing, China

Dear Sirs,

Re: CHINA: Rural Health and Medical Education Project (Credit 1472-CHA)
Final Project Completion Report

The final version of the report has now been distributed to the Bank's Board of Executive Directors and it is my pleasure to send you a copy for your information.

Yours sincerely,

Graham Donaldson, Chief
Agriculture and Human Development Division
Operations Evaluation Department

Attachment

The World Bank
INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT
INTERNATIONAL DEVELOPMENT ASSOCIATION

1818 H Street, N.W.
Washington, D.C. 20433
U.S.A.

(202) 477-1234
Cable Address: INTBAFRAD
Cable Address: INDEVAS

December 20, 1993

Provincial Project Office
of Shandong
China

Dear Sirs,

Re: CHINA: Rural Health and Medical Education Project (Credit 1472-CHA)
Final Project Completion Report

The final version of the report has now been distributed to the Bank's Board of Executive Directors and it is my pleasure to send you a copy for your information.

Yours sincerely,

Graham Donaldson, Chief
Agriculture and Human Development Division
Operations Evaluation Department

Attachment

9306138

This form must be typed

THE WORLD BANK GROUP
PRINTING REQUEST

Read instructions on reverse

(Leave This Space Blank)

RECEIVED

Title (or Description) of Item to be Printed	Report or Form No.	Report or Revision Date
CHINA: Rural Health and Medical Education Project (Credit 1472-CHA). PROJECT COMPLETION REPORT.		06/22/93

Select One

☒ Report ☐ Form ☐ Letterhead ☐ Complimentary Slip ☐ Other (specify) _____

No. of Pages	Quantity	Job	Classification (for reports only)	Date and Time Required
31	640	☒ New ☐ Rerun		

Requested By	Ext.	Room No.	Dept./Div. Acronyms	Dept./Div. Nos.
RONALD RIKER/PILAR BARQUERO	31757	T9-017	OEDD1	175/10

SPECIFICATIONS

SIZE: ☐ 8-1/2x11 ☐ 8-1/2x14 ☐ 11x17 ☐ Other _____

TEXT: Color of Paper White No. of Pages _____ Print ☐ 1 side ☐ 2 sides

COVER: Color of Paper White Print ☐ 1 side ☐ 2 sides

COVER HEADING: ☐ World Bank ☐ IFC ☐ MIGA Masthead _____

CONSTRUCTION: ☐ Assemble ☐ Saddle-stitch ☐ Perfect Bind ☐ Staple upper left corner ☐ Staple two on side ☐ Pad ☐ Fold Finished Size _____ No. of Holes to be Punched: on top _____ on side _____ ☐ Carbonless No. of Parts _____

MAPS – Requesting departments are responsible for clearing all new, revised or previously printed maps with the Cartography Section, GSDPG. The Print Shop requires clearance before any map is printed or released from shelf stock.

Map Cleared By	Date	List ALL MAPS (by IBRD No.) in this space	Charts (by no.) in this space

Order of Assembly/Additional Instructions

1. Title Page: Back-up by Country Exchange Rates (White hard cover. Doc. of WB. Off. use and Caveat).
2. Covering memo: Off. use. Caveat. Facsim. signature of DGO. No Back-up).
3. Abbreviations: with Official use and Caveat. No Back-up.
4. Table of Contents: 1 page. No back-up
5. Preface: 1 page. No back-up.
6. Evaluation Summary: 2 pages.
7. Main Report: 1 - 24

Delivery Instructions

545	copies to	Secretary's Office	room no.	D-1100
25	copies to	Internal Documents Unit	room no.	HB1-151
62	copies to	Distribution Unit	room no.	D-114
	copies to		room no.	
	copies to		room no.	
	copies to		room no.	
	copies to		room no.	

PRINTING APPROVAL: reports that require report numbers must be cleared by the IDU, HB-151.	Initials	Date	Signature	Date

FOR PRINT SHOP USE ONLY

Special Instructions

WHITE, YELLOW, PINK & GOLDENROD - Read Instructions on Reverse

14 (6-92)

FORM 152
(6-88)

THE WORLD BANK/IFC
DISTRIBUTION OF REPORTS

REPORT TITLE	REPORT NO.
CHINA: Rural Health and Medical Education Project (Credit 1472-CHA) PROJECT COMPLETION REPORT	12046

REPORT DATE	FORM PREPARED BY	EXT.
	PILAR BARQUERO	31757

REMARKS

COLOR OF COVER
- ☐ Gray/Buff
- ☒ White
- ☐ Other_____

DISTRIBUTION TO STAFF BELOW DEPARTMENT DIRECTOR LEVEL

Do not duplicate distribution made by Secretary's Dept. to Department Directors and above.

NAME	ROOM NO.	NO. OF COPIES	NAME	ROOM NO.	NO. OF COPIES
G.Donaldson (P. Barquero)	T9-017	30			
OED Library	T9-080	5			
Asia Inf. Center		1			
		36			
		1			

FOR PRINT SHOP USE ONLY

Distributed by	Date

WHITE/YELLOW - Documentation Center; PINK - Originator

THE WORLD BANK/IFC/M.I.G.A.

ROUTING SLIP	DATE: June 18, 1993
NAME	ROOM NO.
Mr. Robert Picciotto, DGO	

	URGENT		PER YOUR REQUEST
	FOR COMMENT		PER OUR CONVERSATION
	FOR ACTION		SEE MY EMAIL
	FOR APPROVAL/CLEARANCE		FOR INFORMATION
	FOR SIGNATURE		LET'S DISCUSS
	NOTE AND CIRCULATE		NOTE AND RETURN

RE:

REMARKS: CHINA: Rural Health and Medical Education Project (Credit 1472-CHA) PCR

For your signature prior to printing.
No comments have been received from the Region.

FROM: Graham Donaldson	ROOM NO.:	EXTENSION: 31730

D.G.O.
'93 JUN 18 PM 5 41

6/21

THE WORLD BANK/IFC/M.I.G.A.

ROUTING SLIP	DATE: June 3, 1993
NAME	ROOM NO.
Mr. Robert Picciotto	
THRU: Mr. H. Eberhard Köpp	

D. G. O.
'93 JUN 4 AM 10 08

GO

RGR

OK...

OK Proceed

6/7

	URGENT		PER YOUR REQUEST
	FOR COMMENT		PER OUR CONVERSATION
	FOR ACTION		SEE MY EMAIL
	FOR APPROVAL/CLEARANCE		FOR INFORMATION
	FOR SIGNATURE		LET'S DISCUSS
	NOTE AND CIRCULATE		NOTE AND RETURN

RE:

REMARKS: CHINA: Rural Health and Medical Education Project (Credit 1472-CHA)

Please find attached, for your approval, the above PCR together with Project Information Form, draft Review Note from you to the Board, and a draft memorandum from the Director, OED to the Country Director concerned.

FROM: Graham Donaldson, Chief, OEDD1	ROOM NO.:	EXTENSION: 31730

OPERATIONS EVALUATION DEPARTMENT
PCR REVIEW/AUDIT PROCESS /1

CONTROL SHEET

Project: CHINA: Rural Health and Medical Education Project
Credit No. 1472-CHA
PCR Format: Old-Style / New-Style
Evaluating Officer: Ronald G. Ridker **Date:** 5-26-93
Approved by: Graham Donaldson, Chief, OEDDI **Date:** 5.28.93

	Date (mo/dy/yr)
A. Timetable	
- PCR logged in by Division	02/17/93
- If incomplete, PCR returned to Region	_____
- If PCR is unlogged	_____
In case evaluating officer requests Region to revise draft PCR: /2	
- Memo to Sector Division Chief	_____
- Follow-up memo from Division Chief, OED, to Sector Division Chief, Region, if revision delayed	_____
- Satisfactorily revised PCR received from Region	_____

B. If PCR Returned to Region for Revision

Nature of revision requested (circle one): **minor** **major**

Degree of hassle involved (circle one): **none** **minor** **major**

/1 In the case of a PPAR which does not include the PCR complete section E only.

/2 Please attach copy of note to regional task manager and follow-up memos if any.

C. **Complete for Old-style PCRs**

	YES	NO
Covenant requiring Borrower to prepare PCR /3	___	___
PCR prepared by		
I. Borrower		
- Borrower staff or agencies	___	___
- FAO/CP or consultants /4	___	___
II. Bank		
- Bank staff	___	___
- Some input from Borrower	___	___
- Inadequate/incomplete Borrower PCR	___	___
Use of Borrower PCR in final document /5		
- As final PCR	___	___
- With overview	___	___
- An Annex to Bank PCR	___	___
- On file, Bank prepared its own PCR	___	___

D. **Complete for New-style PCRs**

Did Borrower complete Part II of the PCR?	✓	___
If yes,		
- Part II agrees with Parts I and III	✓	___
- Part II disagrees with Parts I and III	___	___

E. **OED Staff and Consultants Input**

	Days
Staff	3
Consultants	___
Total	3

Attachment(s): (See footnote 1, page 1)

/3 Please remember that a standard clause has been included in general conditions since January 1, 1985 (Article IX).

/4 The PCR is clearly identifiable as a consultancy firm product.

/5 Applies to item I.

OPERATIONS EVALUATION DEPARTMENT
PCR REVIEW/AUDIT PROCESS /1

CONTROL SHEET

Project: CHINA: Rural Health and Medical Education Project
Credit No. 1472-CHA
PCR Format: Old-Style / New-Style
Evaluating Officer: Ronald G. Ridker **Date:** 5-26-93
Approved by: Graham Donaldson, Chief, OED **Date:** 5.28.93

	Date (mo/dy/yr)
A. Timetable	
- PCR logged in by Division	02/17/93
- If incomplete, PCR returned to Region	_____
- If PCR is unlogged	_____
In case evaluating officer requests Region to revise draft PCR: /2	
- Memo to Sector Division Chief	_____
- Follow-up memo from Division Chief, OED, to Sector Division Chief, Region, if revision delayed	_____
- Satisfactorily revised PCR received from Region	_____

B. If PCR Returned to Region for Revision

Nature of revision requested (circle one): **minor** **major**

Degree of hassle involved (circle one): **none** **minor** **major**

/1 In the case of a PPAR which does not include the PCR complete section E only.

/2 Please attach copy of note to regional task manager and follow-up memos if any.

C. Complete for Old-style PCRs

	YES	NO
Covenant requiring Borrower to prepare PCR /3	___	___
PCR prepared by		
I. Borrower		
- Borrower staff or agencies	___	___
- FAO/CP or consultants /4	___	___
II. Bank		
- Bank staff	___	___
- Some input from Borrower	___	___
- Inadequate/incomplete Borrower PCR	___	___
Use of Borrower PCR in final document /5		
- As final PCR	___	___
- With overview	___	___
- An Annex to Bank PCR	___	___
- On file, Bank prepared its own PCR	___	___

D. Complete for New-style PCRs

Did Borrower complete Part II of the PCR?	✓	___
If yes,		
- Part II agrees with Parts I and III	✓	___
- Part II disagrees with Parts I and III	___	___

E. OED Staff and Consultants Input

	Days
Staff	3
Consultants	___
Total	3

Attachment(s): (See footnote 1, page 1)

/3 Please remember that a standard clause has been included in general conditions since January 1, 1985 (Article IX).
/4 The PCR is clearly identifiable as a consultancy firm product.
/5 Applies to item I.

THE WORLD BANK/IFC/MIGA

OFFICE MEMORANDUM

DATE: June 9, 1993

TO: Mr. Shahid Javed Burki, Director, EA2

FROM: Graham Donaldson, Acting Director, OEDDR

EXTENSION: 31700

SUBJECT: CHINA: Rural Health and Medical Education Project (Credit 1472-CHA)
Project Completion Report (PCR)

1. Attached is the Review Note from the Director-General, Operations Evaluation on the above PCR. It is scheduled to be sent together with the PCR to the Print Shop two weeks from today, for release to the Executive Directors and the President.

2. Based on OED's review of the PCR, we intend to include in the Annual Review database, the following ratings of the operation:

Overall Assessment:	Satisfactory
Sustainability:	Likely
Institutional Development:	Substantial

Should the project be audited at a later date, the ratings will be reevaluated at that time.

Attachment

THE WORLD BANK/IFC/MIGA

OFFICE MEMORANDUM

DATE: June 9, 1993

TO: Mr. Shahid Javed Burki, Director, EA2

FROM: H. Eberhard Köpp, Director, OEDDR

EXTENSION: 31700

SUBJECT: CHINA: Rural Health and Medical Education Project (Credit 1472-CHA)
Project Completion Report (PCR)

1. Attached is the Review Note from the Director-General, Operations Evaluation on the above PCR. It is scheduled to be sent together with the PCR to the Print Shop two weeks from today, for release to the Executive Directors and the President.

2. Based on OED's review of the PCR, we intend to include in the Annual Review database, the following ratings of the operation:

Overall Assessment:	Satisfactory
Sustainability:	Likely
Institutional Development:	Substantial

Should the project be audited at a later date, the ratings will be reevaluated at that time.

Attachment

R.Ridker/G.Donaldson/pb

PCR/PIF COVER SHEET Run Date: 9/22/93

OED ID: C1472 *Division: 1

*Country: China
*Project Description: Rural Health & Medical Educ
*Sector: 04 / Human Resource
*Subsector: 04.04 / Education/Multisector
Lending Instrument Type: SIL
L/C: C1472
Original IDA/IBRD Commitments: 85,000,000 ($US)
Total Cancellations: 0 ($US)

Key Dates	ORIGINAL	ACTUAL
Approval		5/08/84
Signing/Agreement		6/01/84
Effectiveness	9/04/84	8/29/84
Closing	12/31/89	12/31/91
PCR Receipt in OED		2/17/93

ASSIGNED TO: R Ridker

SIGNATURE: R Ridker DATE: 12-17-93

Please confirm the "*" fields above, sign this sheet and return a photo-copy to Helen Sioris. Pass this sheet as the PIF cover to the Eval. Officer.

********** TO BE COMPLETED BY EVALUATION OFFICER **********

Date of Review: 05/25/93 (mm/dd/yy)

Name of Reviewer: R. RIDKER

Type of Evaluation: PCR Review [✓] PAR Review [ ]

If this is a PAR Review, are there major differences in the judgements from those made in the PCR Review?

Yes [ ] No [ ]

If Yes, please discuss in detail on page 26 of the PIF

	ORIGINAL	LATEST
Date of Physical Completion	06/30/89 (mm/dd/yy)	12/31/91 (mm/dd/yy)
Total Project Cost ($US mill)	$323.8	$303.4
Applicable Disbursement Profile: (see note 11 in the PIF, page 31)	8.5	
Number of Supervision Missions:	10	

FACTORS AFFECTING ACHIEVEMENT OF MAJOR OBJECTIVES

	Substantial (✓)	Partial (✓)	Negligible (✓)	Not Available (✓)	Not Applicable (✓)
Categorize achievement of **MAJOR OBJECTIVES** (original or revised) for *(p.6 Jan 93 PIF; p.4 Interim PIF)*					
Financial Objectives	☑	☐	☐	☐	☐

If there were major increases or decreases in project COSTS, indicate the major reasons(s) with a (+) or (-): *(p.8 Jan 93 PIF; p.6 Interim PIF)*

	(+ or - or blank)
Change in prices/tariffs/taxes	☐

IDENTIFICATION, BANK PERFORMANCE

Categorize the quality of Bank performance in the **IDENTIFICATION** of the project: *(p.16 Jan 93 PIF; p.15 Interim PIF)*

	Highly Satisfactory (✓)	Satisfactory (✓)	Deficient (✓)	Not Available (✓)	Not Applicable (✓)
Project innovativeness	☐	☐	☐	☐	☑

PREPARATION, BANK PERFORMANCE

Indicate whether the following factor had a positive(+) or negative(-) effect on the OVERALL assessment of Bank's performance in **PREPARATION** assistance: *(p.16 Jan 93 PIF; p.16 Interim PIF)*

	(+ or - or blank)
Economic and sector work	☐

APPRAISAL, BANK PERFORMANCE

Indicate whether the following factor had a positive(+) or negative(-) effect on the OVERALL quality assessment of the Bank's performance in project **APPRAISAL:** *(p.17 Jan 93 PIF; p.18 Interim PIF)*

	(+ or - or blank)
Coordination with other donors	☐

IMPLEMENTATION, BORROWER/IMPLEMENTING AGENCY PERFORMANCE

(p.21 Jan 93 PIF; p.19 Interim PIF)

Categorize the quality of project **IMPLEMENTATION** in this area:

	Highly Satisfactory (✓)	Satisfactory (✓)	Deficient (✓)	Not Available (✓)	Not Applicable (✓)
Financial objectives	☐	☑	☐	☐	☐

Indicate whether the following factors had a positive(+) or negative(-) effect on the OVERALL quality of project **IMPLEMENTATION:**

	(+ or - or blank)
Staff quantity	☐
Level or timeliness of counterpart funding	☐

Report No. 12046
Date 6-22-93

A. PIF Processing Information

Date of review: May 25 1993

Name of reviewer: R Ridker

Type of Evaluation:

PCR review ☑ PAR review ☐

If this is a PAR review, are there major differences in the judgements from those in the PCR Review:

Yes ☐ No ☐

If yes, comment on the differences: _____

B. Project Processing Information

ject Identification

Country: China

Project Name: Rural Health & Medical Education

Sector/Subsector: Health

Lending Instrument: Investment Project

Loan or Credit #s': Credit 1472-CHA

C. Achievement of Project Objectives

Project Objectives

a) Were major project objectives substantially changed during implementation? **2/**

Yes ☑ No ☐

OPERATIONS EVALUATION DEPARTMENT

PRIORITY OF PROJECT FOR PERFORMANCE AUDIT AND IMPACT EVALUATION[1/]

1. Project Identification

Country: China

Project Name: Rural Health & Medical Education

Sector/Subsector: Health

Lending Instrument: Investment loan

Loan or Credit No: CR 1472-CHA

Date of Review: 5-25

Evaluating Officer: R Ridker

Division Chief: C. Donaldson

A. Performance Audit

2. The priority of the project for performance audit is:

High ☐ Medium ☑ Low ☐

3. If the priority is high or medium, indicate reason(s):

Project is an adjustment operation ☐

Project is the first of its type in the subsector in the country ☑

Project is part of a series of projects which are suitable for packaging in a combined audit ☐

1/ To be completed for every PCR

Project is large and complex	☐
Project has especially innovative and unusual features	☐
Project was highly successful in a difficult sector/ country	☐
PCR was incomplete/not satisfactory	☐
Project is likely to have high priority for impact evaluation	☐
OED and Operations disagree on performance rating	☐
An Executive Director has proposed audit	☐
Project is or is likely to be of considerable public interest	☑
Audit is required for special studies	☐
Other (specify): _____	☐

4. If the priority is high or medium, what are the major issues on which the audit should focus?

a) Value added & sustainability of rural component. (This seems to have been added on secondarily – Central thrust was the urban components. – (But not a very important reason for audit)

b)

c)

B. Impact Evaluation

5. The preliminary priority of the project for impact evaluation is:

High ☐ Medium ☑ Low ☐

(in future)

6. If the priority is high or medium, indicate reason(s):

*Project has a high or medium priority for performance audit or a satisfactory PCR	☑
*A satisfactory data/monitoring and evaluation system for the project exists	☑
Project gives high priority to special emphases (e.g., public sector reform, social concerns, environment, private sector development)	☐
Project is reasonably representative for sector/ subsector	☐
Project has experimental/innovative features	☐
Project is large and complex	☐
Project has considerable indirect costs and benefits/externalities	☐
Project is likely to be in operation at time of impact study	☐
Project sustainability is uncertain	☐
Project is part of a series of projects which are suitable for packaging in a combined evaluation	☐
Evaluation is required for special studies	☐
Project is or is likely to be of considerable public interest	☐
Project type not well covered by previous impact evaluations	☑
Other (specify): _____	☐

---

* These criteria are prerequisites for impact evaluation.

If yes, were the objectives:

Reduced ☐ Increased ☑ Otherwise modified ☐

b) Taking into account the country's level of development and the competence of the implementing agency, was the project and its major objectives:

	Very	Par-tially	No	Not Available
i. Relevant for country/sector:3/				
Original Project	☑	☐	☐	☐
Revised Project	☑	☐	☐	☐
ii. Demanding on Borrower/Implementing Agency:				
Original Project	☑	☐	☐	☐
Revised Project	☑	☐	☐	☐
iii. Complex:4/				
Original Project	☐	☑	☐	☐
Revised Project	☐	☑	☐	☐
iv. Risky:				
Original Project	☐	☑	☐	☐
Revised Project	☐	☑	☐	☐

c) Were the criteria for judging achievement of major objectives adequately quantified in the Staff Appraisal Report:

Yes ☐ Partially ☑ No ☐

2. Extent of Achievement of Project Objectives 5/

a) If an economic rate of return (ERR) was calculated for the project, indicate (in %):

Appraisal Estimate	Re-estimated at Completion
_____	_____

On what percentage of estimated total project costs was the original ERR based ? _____

On what percentage of total projects costs (final/latest estimate) was the re-estimated ERR based ? _____

If an ERR was not re-estimated indicate reason(s):

- Project not implemented ☐
- Inadequate data ☐
- Other (specify): _____ ☐

If the re-estimated ERR differs significantly from the appraisal estimate, indicate the reason(s):

- Cost changes ☐
- Output changes ☐
- Output delays ☐
- Changes in methodology/analysis ☐
- Other (specify): _____ ☐

If an ERR was not calculated, was the cost-effectiveness of the project estimated in the PCR:

Same or higher than in the SAR ☐

Lower than in the SAR ☐

Information not available ☑

b) If a financial rate of return (FRR) (or other financial indicator) was calculated for the project, indicate: **6/**

Appraisal Estimate	Re-estimated at Completion
_____	_____

If a FRR (or other financial indicator) was not re-estimated, indicate reason:

Project not implemented ☐

Inadequate data ☐

Other (specify): _____ ☐

If the re-estimated FRR (or other financial indicator) differs significantly from the appraisal estimate, indicate the reason(s):

Cost changes ☐

Output changes ☐

Changes in prices/tariffs/user charges ☐

Changes in methodology/analysis ☐

Other (specify): _____ ☐

c) Categorize achievement of major objectives (original or revised) in these areas: 7/

	Substantial	Partial	Negligible	Not Available
Macro policies	☐	☐	☐	☐
Sector policies	☑	☐	☐	☐
Institutional development	☑	☐	☐	☐
Physical Objectives	☑	☐	☐	☐

3. Factors Affecting Extent of Achievement

a) Indicate the extent to which the following positive(+) or negative(-) factors significantly affected achievement of major objectives:

	Substantial	Partial	Negligible	Not Available
Factors Not Generally Subject to Government Control				
World markets/prices	☐	☐	☐	☐
Natural disasters	☐	☐	☐	☐
Bank performance	☐+	☐	☐	☐
Cofinancier(s) performance	☐+	☐	☐	☐
Performance of contractors/ consultants 8/	☐+	☐	☐	☐
War/civil disturbances	☐	☐	☐	☐
Other (specify):_____	☐	☐	☐	☐

Factors Generally Subject to Government Control

Macro policies/conditions	☐	☐	☐	☐
Sector policies	+	☐	☐	☐
Government commitment	+	☐	☐	☐
Appointment of key staff	+	☐	☐	☐
Counterpart funds	☐	−	☐	☐
Administrative procedures	+	☐	☐	☐
Other (specify): Weak capacity to manage/utilize IA	☐	☐	☐	☐

Factors Generally Subject to Implementing Agency Control

Management	+	☐	☐	☐
Staffing	+	☐	☐	☐
Cost changes	☐	☐	☐	☐
Implementation delays	☐	−	☐	☐
Use of technical assistance	☐	−	☐	☐
Monitoring and evaluation 9/	☐	+	☐	☐
Beneficiary participation	☐	☐	☐	✓
Other (specify):	☐	☐	☐	☐

b) If cost changes were a substantial or partial factor, indicate the major reasons(s): **10/**

- Change in project scope/scale/design ☐
- Deficient estimate of physical quantities ☐
- Deficient estimate of base unit costs ☐
- Deficient price contingencies ☐
- Changes in exchange rates ☐
- Implementation delay ☐
- Performance of contractor(s) ☐
- Other (specify): _____ ☐

c) If implementation delays were a substantial or partial factor, indicate period from signing to physical completion (or final disbursement for adjustment loans) (in years):

Appraisal Estimate	Actual or Latest Estimate	Applicable Disbursement Profile **11/**
6	8	8.5

+/-

Indicate the major reason(s) for implementation delays:

- Implementation schedule unrealistic ☑ –
- Project preparation incomplete ☐
- Unexpected technical difficulties ☐

Change(s) in project scope	☐	
Quality of management	☐	
Delays in selecting staff	☐	
Delays in selecting consultants	☐	
Delays in receiving counterpart funds	☐	
Delays in receiving funds from Bank/ cofinanciers	☐	
Inefficient procurement procedures	☑	− +/−
Inefficient disbursement procedures	☐	
Security problems	☐	
Natural disasters	☐	
Other (specify): Took longer to build necessary institutions and gain experience with Bank procedures, esp procurement.	☑	−

4. Project Sustainability

a) To what extent is the project likely to maintain an acceptable level of net benefits throughout its economic life?

Likely	Unlikely	Uncertain
☑	☐	☐

If sustainability is likely or unlikely, indicate the major reason(s):

+/-

Government commitment	☑	+
Policy Environment	☑	+
Institution/management effectiveness	☑	+
Economic viability	☐	
Technical viability	☐	
Financial viability	☐	
Environmental viability	☐	
Social impact/local participation	☐	
Other (specify): _____	☐	

b) Does the project include a plan for longer-term project operations after Bank participation has terminated?

Plan satisfactory ☐ Plan unsatisfacatory ☐ No plan ☑ ←

D. Special Emphases

1. Public Policy Reform **12/**

Did the project objectives include reform of public policies?

Yes ☐ No ☑

If yes, categorize the extent of achievement of these objectives:

	Substantial	Partial	Negligible	Not Available
a. Planning public investments/expenditures	☐	☐	☐	☐
b. Budget process	☐	☐	☐	☐
c. Tax system	☐	☐	☐	☐
d. Monetary reform	☐	☐	☐	☐
e. Debt management	☐	☐	☐	☐
f. Exchange rate management	☐	☐	☐	☐
g. Trade/tariff/etc.	☐	☐	☐	☐
h. Civil service reform	☐	☐	☐	☐
i. Regulation of private sector	☐	☐	☐	☐
j. Government relation to public enterprises	☐	☐	☐	☐
k. Restructuring of public enterprises	☐	☐	☐	☐
l. Procurement policies	☐	☐	☐	☐
m. Labor legislation	☐	☐	☐	☐
m. Other (specify):_____	☐	☐	☐	☐
Overall	☐	☐	☐	☐

If overall achievement was substantial or negligible, indicate the major reason(s):

- Sufficiency of Government commitment ☐
- Adequacy of preparation/design ☐
- Institutional effectiveness ☐
- Realism of objectives ☐
- Other (specify): _____ ☐

2. Social Concerns

a) Did the project address specific social groups?

Yes ☐ No ☑

If yes, what characterized these groups?

a. Socio-economic status (i.e. poverty) **13/** ☐
b. Gender (i.e., women, girls) **14/** ☐
c. Ethnicity (i.e. indigenous or tribal peoples) **15/** ☐
d. Community type or locale (e.g. resettlement) **16/** ☐
e. Other (specify): _____ ☐

Categorize extent of achievement of (original or revised) social objectives:

Substantial	Partial	Negligible	Not Available
☐	☐	☐	☐

If achievement was substantial or negligible, indicate the major reason(s), and in the parentheses give the letter(s) indicating to which group(s) the reason applies:

Adequacy of project design	( ) ( )	☐
Sufficiency of Government/borrower commitment	( ) ( )	☐
Institutional effectiveness	( ) ( )	☐
Sufficiency of NGO/beneficiary participation	( ) ( )	☐
Realism of objectives	( ) ( )	☐
Other (specify): _____	( ) ( )	☐

b) Did the project have significant unintended/unexpected positive or negative effect(s) on special groups?

Positive ☐ Negative ☐ No ☑ Unknown ☐

Comment(s):_____

_____

_____

3. Environmental Concerns 17/

a) Did the project objectives include enhancement or protection of the environment?

Yes ☐ No ☑

If yes, in what area(s):

Natural resource management ☐

Biological Diversity	☐
Air quality	☐
Water quality	☐
Soil quality	☐
Global warming/ozone depletion	☐
Noise	☐
Preservation of cultural heritage **18/**	☐
Other (specify): _____	☐

Categorize extent of achievement of environmental objectives:

Substantial	Partial	Negligible	Not Available
☐	☐	☐	☐

If achievement was substantial or negligible, indicate the major reasons(s):

Adequacy of design/environmental assessment	☐
Consistency with National Environmental Action Plan	☐
Sufficiency of government/borrower commitment	☐
Institutional effectiveness	☐
Consultants	☐
NGOs/beneficiaries participation	☐
Realism of objectives	☐
Other (specify): _____	☐

Did the project have significant unintended/unexpected positive or negative effect(s) on the environment?

Positive ☐ Negative ☐ No ☑ Unknown ☐

Comment(s): _____

_____

_____

4. Private Sector Development 19/

Did the project include objectives to enhance/strengthen the role of the private sector?

Yes ☐ No ☑

If yes, categorize the extent of achievement of these objectives:

Substantial	Partial	Negligible	Not Available
☐	☐	☐	☐

If achievement was substantial or negligible, indicate the major reason(s):

Adequacy of preparation/design ☐

Sufficiency of government/borrower commitment ☐

Adequacy of legal framework ☐

Degree of private sector interest ☐

Institutional strengths/weaknesses ☐

Realism of objective(s) ☐

Other (specify): _____ ☐

E. Bank/Borrower Performance

I. Bank Performance

1. Categorize the quality of Bank performance in the identification of the project: **20/**

	Highly Satis-factory	Satis-factory	Deficient	Not Avail able
Project consistency with Government development strategy priority	☐	☑	☐	☐
Project consistency with Bank strategy for country	☐	☑	☐	☐
Other (specify):_____	☐	☐	☐	☐
Overall	☐	☑	☐	☐

2. Categorize the quality of Bank performance in assisting the Borrower with project preparation by major areas and overall:**20/**

	Highly Satisfactory	Satis-factory	Deficient	Not Available
Technical	☐	☐	☐	☐
Financial	☐	☐	☐	☐
Economic	☐	☐	☐	☐
Commercial	☐	☐	☐	☐
Institutional	☐	☐	☐	☐
Environment	☐	☐	☐	☐
Sociological	☐	☐	☐	☐
Overall	☐	☐	☐	☐

If the overall assessment of preparation assistance is highly satisfactory or deficient, identify the major reason(s):

- Staff quantity ☐
- Degree of Bank involvement ☐
- Staff quality (skill mix, continuity) ☐
- Consultants ☐
- Other (specify): _____ ☐

3. Categorize the quality of Bank performance in project appraisal by major areas and overall:21/

	Highly Satisfactory	Satis-factory	Deficient	Not Available
Technical	☐	☑	☐	☐
Financial	☐	☑	☐	☐
Economic	☐	☑	☐	☐
Commercial	☐	☐	☐	☐
Institutional	☐	☐	☐	☐
Environment	☐	☐	☐	☐
Sociological	☐	☐	☐	☐
Overall	☐	☐	☐	☐

Categorize the quality of appraisal by major generic subject(s):

	Highly Satis-factory	Satis-factory	Deficient	Not Available
Appraisal of commitment of government/implementing agency/ beneficiaries	☐	☑	☐	☐
Appraisal of borrower/implementing agency capacity	☐	☑	☐	☐
Project complexity	☐	☐	☐	☑
Recognition of project risks/key variables **22/**	☐	☐	☐	☑
Adequacy of implementation plan/ performance indicators	☐	☐	☐	☑
Suitability of lending instrument	☐	☐	☐	☑
Taking into account adequately past experience	☐	☐	☐	☑
Other (specify)	☐	☐	☐	☑

If the overall assessment of appraisal is highly satisfactory or deficient, identify the major reason(s):

Staff quantity	☐	☐	☐	☐
Staff quality (skill mix, continuity	☐	☐	☐	☐
Consultants (quality, continuity)	☐	☐	☐	☐
Other (specify) _____	☐	☐	☐	☐

4. Categorize the quality of Bank supervision: 23/

	Highly Satis-factory	Satis-factory	Deficient	Not Available
Reporting of project implementation progress	☐	☑	☐	☐
Identification/assessment of implementation problems	☐	☑	☐	☐
Attention to likely development impact	☐	☐	☐	☑
Advice to implementing agency	☐	☑	☐	☐
Adequacy of follow-up on advice/ decisions	☐	☑	☐	☐
Enforcement of loan covenants/ exercise of remedies	☐	☑	☐	☐
Flexibility in suggesting/ approving modifications	☐	☑	☐	☐
Other (specify) _____	☐	☐	☐	☐
Overall	☐	☑	☐	☐

If the overall assessment of supervision is highly satisfactory or deficient, identify the major reason(s):

Staff quantity	☐	☑	☐	☐
Sufficiency of time in field	☐	☑	☐	☐
Staff quality (skill mix, continuity)	☐	☑	☐	☐
Consultants (quality, continuity)	☐	☐	☐	☐

Supervision plans	☐	☐	☐	☑
Timing of supervision missions	☐	☐	☐	☑
Country implementation reviews	☐	☐	☐	☑
Other (specify) _____	☐	☐	☐	☐

II. Government/Implementing Agency Performance

1. Categorize the quality of project preparation in these areas and overall: **20/**

	Highly Satisfactory	Satis-factory	Deficient	Not Avail-able
Technical	☐	☑	☐	☐
Financial	☐	☑	☐	☐
Economic	☐	☑	☐	☐
Commercial	☐	☐	☐	☐
Institutional	☐	☑	☐	☐
Environment	☐	☑	☐	☐
Sociological	☐	☐	☐	☐
Overall	☐	☑	☐	☐

2. Categorize the quality of project implementation in these areas and overall:

	Highly Satisfactory	Satis-factory	Deficient	Not Avail-able
a. Macro policies	☐	☐	☐	☐
b. Sector policies	☐	☑	☐	☐
c. Institutional development	☐	☑	☐	☐
d. Physical objectives	☐	☑	☐	☐
e. Social objectives	☐	☐	☐	☐
Overall	☐	☑	☐	☐

If the overall assessment of project implementation is highly satisfactory or deficient, identify the major reason(s):

- Quality of management ☐
- Quality of staff ☐
- Performance of contractor(s) ☐
- Performance of consultant(s) 8/ ☐
- Government commitment ☐
- Government interference ☐
- Adequacy of project monitoring/ evaluation ☐
- Other (specify): _____ ☐

3. To what extent did the Government/Implementing Agency comply with major loan covenants/commitments:

	Substantial	Partial	Negligible	Not Available
Macro policies	☐	☐	☐	☐
Sector policies	☑	☐	☐	☐
Institutional changes	☑	☐	☐	☐
Effective management/ staffing	☑	☐	☐	☐
Financial improvements (tariffs, user charges, etc.) **24/**	☑	☐	☐	☐
Provision of counterpart funds	☐	☑	☐	☐
Increased efficiencies/ cost reductions	☐	☑	☐	☐
Procurement **25/**	☐	☑	☐	☐
Progress reports	☑	☐	☐	☐
Accounts and Audits **26/**	☑	☐	☐	☐
Use of technical assistance **27/**	☐	☑	☐	☐
Studies	☐	☐	☐	☐
Other (specify): _____	☐	☐	☐	☐
Overall	☑	☐	☐	☐

F. Overall Performance Assessment

1. Considering the project objectives (original or revised) and the extent of their achievement, give your assessment of the overall success (or likely success) of the project:

Highly Satisfactory	Project achieved or exceeded all its major relevant objectives and has achieved or is certain to achieve substantial development results, without major shortcomings.	☑
Satisfactory	Project achieved most of its major relevant objectives and has achieved or is expected to achieve satisfactory development results with only few major shortcomings.	☐
Unsatisfactory	Project failed to achieve most of its major relevant objectives, has not and is not expected to yield substantial development results and has significant shortcomings.	☐
Highly Unsatisfactory	Project failed to achieve any of its major relevant objectives and has not and is not expected to yield any worthwhile development results.	☐

Note: An ERR of 10% or more for a major portion of the total investment, or other significant benefits if the ERR was less than 10%, is necessary to meet the minimal requirements for a "Satisfactory" project. Projects with an ERR of more than 10% might be "Unsatisfactory" if major policy/institutional objectives were not met or if significant external costs are omitted. Where ERRs are not estimated, the overall performance rating is made on the basis of cost-effectiveness in achieving project objectives.

2. Does the above assessment differ from that in the PCR?

Yes ☐ No ☑ Not available ☐

If yes, comment on the difference(s):

_____

_____

3. Is this an outstanding project, for one or more of the following reasons:

Project has exceeded ~~all~~ some of its major objectives	☑
Project highly innovative	☐
Project success highly replicable	☐
Other (specify): _____	☐

G. Key Lessons Learned

On the basis of the above evaluation, list the most significant positive and negative lessons learned from the success or failure of the project. Mark with an asterisk (*) those lessons most relevant for similar projects in sector/subsector or the country:

* a. Large scale overseas training yields best returns when placement of trainees are planned properly.

b. Ensure competent architectural services in hospitals

c. Need well organized & staffed project implementation unit.

H. Comments*

---

* Comments are optional. They might include, for example, clarifying ambiguities in the ratings or important issues not brought out in the ratings. Comments of a confidential nature should be made in a separate note to the Division Chief.

EXPLANATORY NOTES *

1. The purpose of the Project Information Form (PIF) is to evaluate the project and abstract relevant findings and conclusions for use in OED's Annual Reviews. It standardizes and classifies most answers to facilitate data entry in a computerized form for easy aggregation (Bankwide, by region, country, sector, lending instrument, etc.). It is a core PIF, intended to capture important information generic to most sectors, and may be supplemented by sector-specific forms as determined by each Division. The PIF is to be completed for each project both for PCRs and Performance Audits. Boxes are to be marked only if applicable.

2. This includes only projects which have been restructured following a formal agreement between the borrower and the Bank that has been approved by or reported to the Executive Directors.

3. See relevant Country Brief or Country Strategy Paper; for SALs, see Policy Framework Paper.

4. Complexity is determined by such factors as the range of policy and institutional improvements, the number of institutions involved, the number of project components and their geographic dispersion, the number of cofinanciers, etc.

5. The objectives and how well they were achieved should be judged by the standards prevailing at the time of loan approval, not those at the time of the PCR. However, if the standards have changed during that period, this may be mentioned under Comments.

6. OD 10.50 deals with Financial Analysis and Management.

7. Section D covers more specific objectives such as public policy reforms, poverty alleviation, and environmental improvements.

8. OD 11.10, Annex F deals with the Evaluation of Consultant Performance and OD 11.13 with Reporting of Consultants' Performance.

9. OD 10.70 deals with Project Monitoring and Evaluation.

10. OD 6.50 deals with Project Cost Estimates and Contingency Allowances.

11. OD 6.50, Annex C deals with Disbursement Profiles.

---

* Not all ODs referred to have been issued but the Table of Contents to the Operational Manual provides references to relevant OMSs, OPNs or other guidelines.

12. OD 5.00 deals with Public Sector Management and OD 5.10 with Public Enterprise and Divestiture.

13. OD 4.15 deals with Poverty Reduction; OD 10.40, Annex E with Estimating the Poverty Impact of Projects.

14. OD 4.10 deals with Women in Development.

15. OD 4.20 deals with Indigenous People.

16. OD 4.30 deals with Involuntary Resettlement.

17. ODs 4.00, 4.01, and 4.02 deal with Environmental Policies, Assessment and Action Plans.

18. OD 4.25 deals with Cultural Property.

19. OD 5.20 deals with Private Sector Development.

20. OD 10.00 deals with Project Generation and Preparation.

21. OD 10.10 deals with Project Appraisal and ODs 10.20-40 deal more specifically with Technical, Sociological, Institutional and Economic criteria.

22. OD 10.40, Annex C deals with Risk and Sensitivity Analysis.

23. OD 13.05 deals with Project Supervision.

24. OD 6.00 deals with Cost Recovery and the Pricing of Public Goods.

25. ODs 11.00, 11.02 and 11.03 deal with Procurement.

26. OD 13.10 deals with Borrower Compliance with Audit Covenants.

27. OD 8.40 deals with Technical Assistance.

OPERATIONS EVALUATION DEPARTMENT

QUALITY OF PROJECT COMPLETION REPORT (PCR)[1/]

1. Project Identification

Country: China

Project Name: Rural Health & Medical Education

Sector/Subsector: H. Ed.

Lending Instrument: Investment Loan

Loan or Credit No: CR 1472-CHA

Date of Review: May 25 93

Evaluating Officer: R Ridker

Division Chief: G. Donaldson

A. PCR Quality

2. The quality of the PCR is:

	Highly Satisfactory:[2/]	Satisfactory [3/]	Unsatisfactory [4/]	Highly Unsatisfactory [5/]
Coverage of important subject(s)	☐	☑	☐	☐
Availability of key data	☑	☐	☐	☐

1/ To be completed for every PCR

2/ No significant qualifications.

3/ Some qualifications but generally acceptable.

4/ Significant qualifications but they would have been readily susceptible to improvement.

5/ Significant qualifications which would not have been readily susceptible to improvement.

Soundness of judgment(s)				
(i) internal consistencies	☐	☑	☐	☐
(ii) evidence complete/convincing	☐	☑	☐	☐
Adequacy of analysis	☐	☑	☐	☐
Consistency with SAR/ revised project	☐	☑	☐	☐
Presentation	☐	☑	☐	☐
Other (specify):_____	☐	☐	☐	☐
Overall	☐	☐	☐	☐

Comments: _____

_____

_____

B. Borrower Views

3. Are the views of the borrower included in the PCR?

Yes ☑ No ☐

If no, give reason(s):

_____

_____

If yes, are there significant differences between Bank and Borrower views?

Yes ☐ No ☑

If yes, comment:

_____

_____

C. **OED Database**

4. Identify key data in the PCR (including relevant Annexes) which are missing, incorrect or dubious and indicate whether they should be included, qualified, corrected or excluded from the OED database:

a) (i) Original data _____

(ii) Treatment in OED database _____

b) (i) Original data _____

(ii) Treatment in OED database _____

THE WORLD BANK/IFC/MIGA

OFFICE MEMORANDUM

DATE: June 9, 1993

TO: Mr. Shahid Javed Burki, Director, EA2

FROM: Graham Donaldson, Acting Director, OEDDR

EXTENSION: 31700

SUBJECT: CHINA: Rural Health and Medical Education Project (Credit 1472-CHA)
Project Completion Report (PCR)

1. Attached is the Review Note from the Director-General, Operations Evaluation on the above PCR. It is scheduled to be sent together with the PCR to the Print Shop two weeks from today, for release to the Executive Directors and the President.

2. Based on OED's review of the PCR, we intend to include in the Annual Review database, the following ratings of the operation:

Overall Assessment:	Satisfactory
Sustainability:	Likely
Institutional Development:	Substantial

Should the project be audited at a later date, the ratings will be reevaluated at that time.

Attachment

THE WORLD BANK/IFC/M.I.G.A.

ROUTING SLIP	DATE: June 18, 1993
NAME	ROOM NO.
Mr. Graham Donaldson, Chief, OEDD1	

	URGENT		PER YOUR REQUEST
	FOR COMMENT		PER OUR CONVERSATION
	FOR ACTION		SEE MY EMAIL
	FOR APPROVAL/CLEARANCE		FOR INFORMATION
	FOR SIGNATURE		LET'S DISCUSS
	NOTE AND CIRCULATE		NOTE AND RETURN

RE:

REMARKS: CHINA: Rural Health and Medical Education Project (Credit 1472-CHA) PCR

For your approval to print.

OK 6/18

FROM: Ronald Ridker, OEDD1	ROOM NO.:	EXTENSION: 31729

THE WORLD BANK/IFC/M.I.G.A.

ROUTING SLIP	DATE: June 18, 1993
NAME	ROOM NO.
Mr. Robert Picciotto, DGO	

	URGENT		PER YOUR REQUEST
	FOR COMMENT		PER OUR CONVERSATION
	FOR ACTION		SEE MY EMAIL
	FOR APPROVAL/CLEARANCE		FOR INFORMATION
	FOR SIGNATURE		LET'S DISCUSS
	NOTE AND CIRCULATE		NOTE AND RETURN

RE:

REMARKS: CHINA: Rural Health and Medical Education Project (Credit 1472-CHA) PCR

For your signature prior to printing.
No comments have been received from the Region.

FROM: Graham Donaldson	ROOM NO.:	EXTENSION: 31730

THE WORLD BANK
Washington, D.C. 20433
U.S.A.

Office of Director-General
Operations Evaluation

MEMORANDUM TO THE EXECUTIVE DIRECTORS AND THE PRESIDENT

SUBJECT: Project Completion Report on China
Rural Health and Medical Education Project (Credit 1472-CHA)

Attached is the Project Completion Report on China - Rural Health and Medical Education Project (Credit 1472-CHA) prepared by the East Asia and Pacific Regional Office. Part II was prepared by the Borrower.

The project objectives were to strengthen the national health planning capability, reform higher medical education, and modernize rural health services. To accomplish these objectives the project supported development of 3 national health research institutes, upgrading of facilities and teaching at 13 medical universities, and modernization of management, health facilities, technology, training, and prevention programs in 46 rural counties.

Apart from underestimates of the time that implementation would take and of the recurrent costs required to support the new technologies, implementation was highly satisfactory and substantial institutional development occurred. The objectives were achieved and appear to be sustainable. As this was the Bank's first loan for health in China, an audit is planned.

Attachment

THE WORLD BANK
Washington, D.C. 20433
U.S.A.

Office of Director-General
Operations Evaluation

MEMORANDUM TO THE EXECUTIVE DIRECTORS AND THE PRESIDENT

SUBJECT: Project Completion Report on China
Rural Health and Medical Education Project (Credit 1472-CHA)

Attached is the Project Completion Report on China - Rural Health and Medical Education Project (Credit 1472-CHA) prepared by the East Asia and Pacific Regional Office. Part II was prepared by the Borrower.

The project objectives were to strengthen the national health planning capability, reform higher medical education, and modernize rural health services. To accomplish these objectives the project supported development of 3 national health research institutes, upgrading of facilities and teaching at 13 medical universities, and modernization of management, health facilities, technology, training, and prevention programs in 46 rural counties.

Apart from underestimates of the time that implementation would take and of the recurrent costs required to support the new technologies, implementation was highly satisfactory and substantial institutional development occurred. The objectives were achieved and appear to be sustainable. As the Bank's first loan for health in China, an audit is planned.

Attachment

PROJECT COMPLETION REPORT

CHINA

RURAL HEALTH AND MEDICAL EDUCATION PROJECT
(CREDIT 1472-CHA)

Environment, Human Resources and
Urban Development Operations Division
Country Department II
East Asia and Pacific Regional Office

CURRENCY EQUIVALENT

Currency = Renminbi (RMB)
Currency Unit = Yuan (Y)
Y1.00 = 100 fen

At Appraisal:		At Credit Closing:	
US$1.00 =	Y 2.0	US$1.00 =	Y 5.42
US$1.00 =	SDR 1.06	US$1.00 =	SDR 1.43

ABBREVIATIONS

CNTIC	-	Chinese National Technical Import Corporation
MCH	-	Maternal and Child Health
MOPH	-	Ministry of Public Health
UNICEF	-	United Nations Children's Fund
WHO	-	World Health Organization

FISCAL YEAR

January 1 - December 31

CHINA

RURAL HEALTH AND MEDICAL EDUCATION PROJECT
(Credit 1472-CHA)
PROJECT COMPLETION REPORT

TABLE OF CONTENTS

CHINA

RURAL HEALTH AND MEDICAL EDUCATION PROJECT
(Credit 1472-CHA)

PROJECT COMPLETION REPORT

PREFACE

This is the Project Completion Report for the Rural Health and Medical Education Project in China, for which Credit 1472-CHA in the amount of SDR 80.2 million (US$85 million equivalent) approved on May 8, 1984. Appraisal took place in September 1983. The Credit closing date was December 31, 1991, two years behind schedule. The Credit fully disbursed and the last disbursement was on April 24, 1992.

The PCR was jointly prepared by the Environment, Human Resources and Urban Development Operations Division, China and Mongolia Department of the East Asia and Pacific Region (Preface, Evaluation Summary, Parts I and III), and the Borrower (Part II).

Preparation of this PCR was started during the Bank's final supervision mission of the project in 1991, and is based, inter alia, on the Staff Appraisal Report, Staff Case Studies and Technical Notes, the Development Credit and Project Agreements, supervision reports, correspondence between the Association and the Borrower, and internal Bank Group memoranda.

CHINA

RURAL HEALTH AND MEDICAL EDUCATION PROJECT
(Credit 1472-CHA)

EVALUATION SUMMARY

Project Objectives

1. This was the first Bank Group-supported health project in China. The Project evolved from the Government's objectives to: strengthen the national health planning capability; reform higher medical education; and modernize rural health services. The project supported: a) the development of three national health research institutions to assist in the first objective; b) upgrading of facilities and teaching at 13 leading medical universities to support the second; and c) the modernization of management, health facilities, medical technology, personnel training and preventive programs in 46 rural counties of Sichuan, Heilongjiang and Shandong Provinces and Ningxia Hui Autonomous Region as pilot areas in which to demonstrate practical policies for the third objective.

Implementation Experience

2. Implementation was efficient but somewhat slower than planned, particularly in the case of procurement. Utilization of foreign technical assistance by the universities presented some difficulty and rather hasty construction of rural hospital buildings affected the design and quality of some new facilities. The personnel training program in rural areas far exceeded the planned requirement. Equipment provided was generally suitable and well utilized by the universities, but rural Counties tended to over-estimate the level of sophistication necessary. All beneficiaries under-estimated the recurrent costs of supporting the new technology.

Results

3. The project significantly improved the planning and evaluation capabilities of the Ministry of Public Health (MOPH) by establishing the three national health planning and research institutes. A good model for future rural public health services was developed which is in the process of review and replication throughout the nation. Medical education benefitted significantly from modernization of the 13 universities.

Sustainability

4. The project outcomes in terms of the planned modernization of China's health services and medical education are likely to be sustained. The new "One-third Counties Upgrading Program", initiated by the Government, now has clearer protocols for health facility rebuilding, re-equipment and personnel training. Initial reform of curricula and teaching methodologies for higher medical education has been accomplished and educational research goals and review mechanisms established.

Findings and Lessons Learned

5. The project provided the following valuable lessons to China for future health projects and to IDA for similar efforts in China and elsewhere.

a) Large-scale overseas professional training and technical assistance components yield best returns and become most cost-effective only when the placement of the trainees and the follow-up activities are planned properly.

b) It is important to ensure that competent hospital architectural services are available to plan technical building proposals for satisfactory functioning, durability and ease of maintenance.

c) The establishment of well-organized and staffed project management offices at all operational levels made a very significant contribution to the smooth implementation of the project. Projects should always include necessary personnel training and equipment for these offices, including, where necessary, foreign training and technical assistance.

d) In the case of new and innovative project components, clear guidelines should be developed to enable proper planning of the component. In this project, counties and universities experienced difficulties in developing strategies for chronic disease prevention on their own.

e) Sophisticated items of equipment should be acquired after careful reviews not only of their need but also of the availability of future recurrent expenditure, spare parts, availability of properly trained operators, and the system for monitoring their use and maintenance.

f) China urgently needs to establish a national office of medical technology assessment.

g) The Project in this new sector would have benefitted from the provision of greater assistance to develop the Borrower's procurement skills.

h) The gains made in improvements and management of the universities must now be followed by advancements in financial planning and budgeting as teaching costs would inevitably rise due to the demands generated by the reforms.

CHINA

RURAL HEALTH AND MEDICAL EDUCATION PROJECT
(Credit 1472-CHA)
PROJECT COMPLETION REPORT

PART I: PROJECT REVIEW FROM IDA'S PERSPECTIVE

1. Project Identity

Project Name:	Rural Health and Medical Education
Credit number:	1472 CHA
RVP unit:	East Asia and Pacific Region
Country:	China
Sector:	Health

2. Project Background

2.1 In three decades since its inception in 1949, the People's Republic of China had improved the health status of its population to levels well beyond those of most developing countries, doubling the average expectation of life from its previous low level of 34 years. However, a substantial proportion of the poorer rural population (roughly 20%) failed to benefit from the general improvement. By the early 1980's, large investments were needed to modernize the mostly outdated rural health facilities and to alleviate a severe shortage of adequately trained health manpower. This was largely the result of ten years of isolation from world progress in medical education after the Cultural Revolution, which left medical colleges in substantial need of educational reform. Furthermore, a shortage of village health workers was an unintended result of the introduction of the responsibility system in agriculture in 1980, when many village 'barefoot doctors' gave up health work to pursue more profitable farming or other small scale rural enterprises, leaving village clinics understaffed. In the meantime, the pattern of illness also changed to increased prevalence of chronic diseases due to changes in demography and lifestyle. This, in turn, created demands for more sophisticated health facilities, better trained health staff and effective preventive measures against newer leading causes of death.

2.2. In response, the Government declared high priorities to: a) rebuild the rural health care network; b) improve the quality of training of higher level health personnel; c) develop research institutions capable of elucidating the epidemiological transition facing the country; d) retrain village doctors to a three-year professional level; and e) improve health management.

2.3. In the rural health area, in 1980, the Ministry of Public Health (MOPH), in association with provincial and local governments, began to upgrade health care in the nation's 2,100 counties in three stages, each of 5-years duration. National and provincial governments jointly contributed about half of the capital needed while county governments, health bureaux and end-user institutions made up the remainder. Early results were

disappointing due to funding, planning and implementation weaknesses. Wealthy counties benefitted most while poorer ones, usually those with the worst facilities and least trained staff, could rarely approach the standards set by the Ministry.

2.4. For improvements in medical education, MOPH designated 13 leading medical universities, including two specialized in traditional Chinese medicine, as 'key' institutions to restore standards of scholarship and research after the Cultural Revolution and to speed up the flow of high level graduates into the health services. They were provided with modest increases in budget, and permitted to reinstate older professional staff displaced by the Cultural Revolution. The rights to send teachers overseas for training and to invite foreign visiting faculty were restored and undergraduate medical curricula were lengthened to a minimum of five years. These reforms required the colleges to recruit or train teaching faculty who would be aware of international progress in medical education and were able to develop and introduce new curricula and teaching methods. Modern facility planning skills and large civil works outlays were also needed to update or rebuild libraries, laboratories and teaching hospitals, many of which were in poor structural and functional condition.

2.5. The promotion of effective Chinese traditional medicine techniques as an integral component of the health services is a basic objective of Government health policy. There were few institutions in China capable of the necessary research to validate the therapeutic properties of the vast national store of medicinal herbs. Therefore, MOPH instituted modernization of a respected research institution, the Sichuan Institute of Chinese Materia Medica, which had relatively good research staff and access to large botanical gardens for experimental cultivation of medicinal plants.

2.6. Both the rural health and medical education initiatives were conceived as pilot activities to provide up-to-date planning and budgeting information to guide the modernization of the nation's entire health services. There were, however, no suitably staffed national institutions to provide timely and reliable research data to support public health planning and evaluation needs. To remedy this problem the Ministry created a new Research Center for Health Statistics, in 1982, with a mandate to improve and coordinate the national health statistics systems. Similarly, although there were a number of national technical institutions responsible for advanced studies in public health, such as the Institutes of Epidemiology, Parasitic Disease, Virology and Industrial Hygiene, their concerns were mainly with pure research, rather than with operational studies of the nation's emerging problems in public health, health management and the preventive medicine needs identified in a recent health sector study. This task needed close coordination of the several institutes under a common management and with a greatly strengthened capability in modern epidemiological methods, including those applicable to chronic disease prevention. Therefore, in 1983, the Ministry established a National Center for Preventive Medicine.

3. Project Objective and Description

3.1. The main goal of the project was to support the high priority objectives of the Government, namely: to develop a cost effective strategy to upgrade the rural health services; to modernize medical education in the nation's most advanced medical colleges; and to develop national institutions capable of providing the scientific, statistical and epidemiological bases needed to strengthen national health planning and disease surveillance.

3.2. The project consisted of the following three parts:

Part A. A rural health component, about 30% of the total investment, in 46 selected counties of three provinces and one autonomous region, serving over 30 million people. The project included financing for the rehabilitation and upgrading of the health facilities, provision of essential equipment, personnel training, technical assistance, and a small amount of incremental staff recruitment and training costs. It also included inputs to strengthen management capabilities of the four Provincial and 46 County Health Bureaux.

Part B. A medical education component, about 60% of the investment, covering 13 key medical universities. The project financed necessary construction and equipment, faculty training, technical assistance for modernizing teaching, research, and developments of continuing education.

Part C. Strengthening of national management capability, about 10% of the investment, in: a) the National Center for Preventive Medicine (later the Chinese Academy of Preventive Medicine) to undertake research, coordinated national disease surveillance, advanced training and public health information services; b) the Research Center for Health Statistics (later the Central Health Statistics Institute) to carry out health policy analyses, research, and data collection and processing for the MOPH; c) the Sichuan Institute of Chinese Materia Medica to undertake research on the efficacy, safety and modern production of therapeutically important traditional medicines; and d) the two MOPH bureaux responsible for management of rural health services and medical education as well as the Ministry's World Bank Loan Office (later the Foreign Loan Office). The project provided appropriate physical facilities, equipment, staff training and technical assistance.

4. Project Design and Organization

4.1. The project concept was based on the findings of the Bank's health sector work (China, The Health Sector, April 1984), which was carried out by a mission that visited China in September/October 1982, and on the experience under UNICEF and WHO primary health care activities in the early 1980's. In line with the recommendations of the sector report, the project was designed to meet both existing and projected health problems of the rural population, to begin reorganization of the training of health manpower in China, and to assist in strengthening MOPH's planning

capability. This project was China's largest internationally assisted health project at the time, helping major reforms in the most influential medical universities as well as improving rural health care directly benefiting over 30 million people.

4.2. Timing of the project was fortunate, meeting the need to provide technical and financial data to guide the Government's recently proposed plan to upgrade rural health services in "One-third Counties" upgrading scheme. It also provided timely assistance in the development of the 13 key medical universities, begun in 1977 but inhibited by lack of adequate funding and technical support.

4.3. There were three new features in the medical education component in the Chinese context. Firstly, it introduced new subjects into the curriculum, notably the social and behavioral sciences and chronic disease aspects of preventive medicine. Secondly, it piloted the introduction of modern learner-centered teaching methods in place of outdated didactic teaching. Thirdly, each university was required to assume an expanded role in further education by establishing national specialized centers in some of the newly introduced clinical and pedagogical disciplines.

4.4. A major design factor which was to contribute to successful implementation was the prompt establishment of project leading groups as well as the well-staffed World Bank Loan Office (later renamed the Foreign Loan Office) in MOPH, and similar offices in the provinces and the concerned institutions. An expert advisory group was set up to coordinate the activities of the medical universities and, in 1987, the first of several annual national conferences on the progress of the medical education project was held to review initial outcomes and to inform all higher medical universities in the country of the progress of curricular and methodology reforms.

5. Project Implementation

5.1. Implementation of most project components went better than might have been expected in view of their complexity, the wide dispersion of project units, the radical nature of the educational reforms and the weaknesses of rural health service management. However, the project was completed in seven years, two years behind the appraisal estimate. The main reasons for the delay were the time required to build necessary institutions, to gain experience with Bank Group procedures and to carry out additional activities mentioned in the next paragraph. Procurement under the project took longer than expected because of the delay in familiarizing the newly established MOPH Loan Office and the Chinese National Technical Import Corporation (CNTIC) responsible for importing the equipment under the Bank Group's procurement procedures. Due to inexperience, cumbersome methods were used in preparation of large tendering packages, evaluating bids, arranging contracts and opening letters of credit. End-users were frustrated by resulting delays in delivery. Towards the end of the project, MOPH undertook more frequent and smaller tendering to reduce the workload.

5.2. Midway through project implementation, it was evident that the project required a careful review to take stock of the progress achieved and to identify additional steps needed to meet the original project objectives as well as to address a few emerging priorities. There were also unused credit funds due to difficulties in utilizing allocations for technical assistance (see next paragraph) as well as due to appreciation of the SDR vis-a-vis the US dollar. Therefore, in mid-1989, the credit was reallocated through some reductions in technical assistance and increased funding for equipment, program support, and for disease surveillance and prevention, including activities related to chronic diseases.

5.3. The government was able to utilize foreign technical assistance provided under the project less effectively than was previously anticipated. This was mainly due to the inexperience of the government departments in providing adequate guidance to the end-users in the selection and briefing of appropriate experts, insufficient planning and preparation of in-country activities to yield maximum benefits to all parties, and lack of overseas follow-up. MOPH has now taken serious interest in strengthening its capacity to utilize external technical assistance.

5.4. In the rural health component, the upgrading of equipment, capital construction and training goals surpressed expectations as the local governments provided up to 50% more counterpart funds than planned. As indicated in Table 6 (Part III), there have been significant improvements in health indicators. Referrals from lower levels to the county hospitals decreased to about 50% in Shandong and Sichuan and to about one-third in Heilongjiang and Ningxia. Bed occupancy and average length of patient stay in hospitals were both positive. A total of about 85,000 health workers were trained in the project areas as compared to the target of about 41,000 workers; the proportion of 3-year trained village doctors rose by 30% to 50%; the numbers and capabilities of higher level clinicians and laboratory workers increased dramatically. Both infant and maternal mortality indicators showed pronounced improvements; and the prevalence of common infectious diseases recorded substantial decline. There were also substantial management gains, including improved and better utilized health information networks, disease surveillance, program planning and equipment management. All project provinces and counties established equipment maintenance centers.

5.5. There were some problems in the rural component, however. Most counties tended to give priority to strengthening the higher level curative services to the detriment of primary care and prevention. Sometimes, new services and clinical or laboratory procedures were developed that were inappropriate to the role of county level institutions. Construction of new rural hospitals was frequently undertaken too soon after the project began and, in some cases, both the appropriateness of design and the quality of construction were suboptimal to the demands of modern medical and nursing practice. Hospital buildings were often more difficult and expensive to maintain because of poor quality construction. Most counties overestimated the level of sophistication of equipment needed and sometimes rejected quite satisfactory Chinese-made items in favor of more costly

imports without due regard to the utilization rates, long-term recurrent costs and likely benefits of the equipment. There was also a tendency to make a profit by over-using new procedures and equipment to generate revenue for the institutions, regardless of clinical need. After a review of equipment utilization by the MOPH in 1987, the equipment plan for rural counties was revised to counteract these trends and there was a considerable improvement during the later years.

5.6. The medical education component sharply increased both the numbers and the proportion of trained faculty, as more than 1,000 teachers benefitted from overseas training. In-country selection and preparation of candidates for overseas training, including language and computer literacy, were generally performed well. A few problems arose from the failure to plan the location and duration of overseas training posts adequately, and from the distribution of fellowships pro-rata to departments rather than according to institution-wide needs. On the whole, the overseas training experience was highly beneficial. A small percentage of teachers has so far failed to return to China after training, most having obtained temporary or permanent positions in the host countries. Nevertheless, in many cases, they continue to provide useful linkages between their Chinese institutions and host colleges. Foreign technical assistance was neither fully implemented nor utilized as well as possible by most of the 13 universities.

5.7. Overall, student-centered learning was given a much higher profile with more uncommitted study time available for the students, supplemented by better access to improved library resources, modern audiovisual teaching aids, computers, well equipped laboratories, and foreign language training. Practical clinical training was improved by partial decentralization from tertiary teaching hospitals to include field experience in small hospitals and clinics at new community teaching bases, which enabled the students to undertake epidemiological studies of common problems and brought them into closer socio-medical contact with the rural people and their health problems. Enrichment of continuing medical education was a particularly effective subcomponent, with more than 70,000 in-service students enrolled in various types of general and specialist courses. Stomatology, an area of manpower shortage prior to the project and a weak area all over China, was considerably expanded by many colleges.

5.8. The Chinese Academy of Preventive Medicine (CAPM) implemented the project smoothly. By 1987, it had established a computerized disease surveillance system for the whole country, routinely collecting data from 71 surveillance points in 29 provinces. The program was, however, shown to under-represent the poorer rural areas and in 1989, 145 randomly selected surveillance points were added, leading to more accurate and timely data on infectious diseases. More recently, work has begun to add some major non-communicable diseases to the network. The Academy has carried out much major research; examples include the study of the national prevalence of hepatitis B; national smoking-related mortality and costs; occupational disease patterns in rural enterprises; and the early diagnosis of naso-pharyngeal cancer. It collaborated with Cornell and Oxford Universities in one of the largest studies of risk factors for chronic disease ever

undertaken and with WHO and UNICEF in studying nutrition in rural children. These studies have contributed important data for health policy analysis. CAPM has also developed rapid and cheap laboratory methods for diagnosis of the common viral diseases and has become the nation's leading producer of hepatitis B vaccine. The academy has implemented a large program of technical assistance to the provinces, including professional training in epidemiology, direct consultations, and support for field research and program development.

5.9. When the project began, China had no unified nationwide health statistics reporting system and no regular tabulations of data on health manpower, facilities, workloads, economics or effectiveness of public health programs. The National Center for Health Statistics lacked trained staff and equipment to achieve its objectives. In 1985, external technical assistance helped to plan and organize the unit, establish links with leading foreign institutions, develop a staff training plan and identify necessary computer and other equipment needed. During the project period, the number of professional staff reached 30, two thirds of whom received substantial training overseas. The Center has developed into a training institution since 1987. In addition, several universities introduced training for specialists in health statistics and computer science, thereby providing about 130 graduates to staff the national and provincial institutions involved in the processing of health statistics. A large and well housed computer system with database library, survey analysis capability, signal/image processing and nationwide networking was provided, together with appropriate commercial software. The center is now producing software for specific national statistical needs and for the operational needs of the line departments of the Ministry. Production of computerized national health statistics has been implemented in phases, initially, in 1986, using floppy disks mailed by provinces to the Center. By 1989, several provinces were able to transfer data electronically and the basic in-house Ministry network has now been completed.

5.10. Under the project, the Sichuan Institute of Materia Medica received overseas training for ten executive staff, external technical assistance, in-country training for 60 supporting research personnel, re-equipping with modern analytical facilities, revision of research methodology, clinical trials, and new buildings (from counterpart funding) for a library and several laboratories. The library has developed an impressive collection of Chinese and foreign texts and journals and at the same time initiated English language training for many of the staff of 400 technical personnel. Eight significant research projects were initially developed and five were successfully concluded. Many other studies have since commenced on the therapeutic efficacy of frequently prescribed and empirically effective herbs. The Institute has developed an extensive training program in modern analytical and clinical pharmacological methods for research workers of other Chinese traditional medicine institutes. It has also become the main reference center for native plant studies in China with extensive international connections.

6. Project Results

6.1. The project was very successful in achieving practically all of its basic objectives. As stated above, the original project targets were exceeded in many key areas, including the construction of hospitals, provision of essential equipment and materials, the training of rural doctors as well as the improvements in higher medical education. There was remarkable progress in the building of important national health institutions. The manpower study was completed in two provinces in 1988 and that provided valuable planning information. Improved management methods, in the context of project preparation and implementation, benefitted considerably the MOPH, provinces and counties. Notable improvements in the approaches to equipment requests and the planning of hospital facilities were evident in the later parts of the project. Many long- term agreements have been concluded between the major Chinese colleges and institutes included in the project and leading overseas centers. Major reforms were achieved in the key medical universities whose effects and academic exchanges have favorably influenced the curricula and teaching methods of other non-project medical colleges in China. The number of higher academic posts increased in all colleges.

6.2. Project Impact. The training of village doctors, the provision of equipment, and the improvements in management practices introduced under the project have significantly improved the quality and utilization of the health services in all project counties. Most rural hospitals have reported lower average lengths of stay for patients and a rise in the proportion of outpatient attendance. The availability of more adequate transport greatly strengthened field supervision and enabled more rapid life-saving emergency services to be provided for maternal, neonatal and other cases of acute illness. Utilization rates of lower level services have risen with a reduction in referral rates for higher level care. At provincial level, the quality of planning and supervision of rural health programs has improved as a result of the management training, and its impact has extended beyond the project counties and benefitted rural areas province-wide. The MOPH has reported that the response of the project provinces to the "one-third counties upgrading program" has been far better than that in non-project provinces, in terms of increased local interest and funding, better disease surveillance, efficiency in immunization and MCH activities and the prevention of chronic diseases. However, two issues have been identified for further attention by most counties: the improvement in the training of epidemic prevention station (EPS) staff and the strengthening of the county level management awareness of EPS and MCH staff in modern health education theory and practices.

6.3. Medical technology policy in China has benefitted greatly from analysis of cost-benefit relationships and of recurrent costs as they relate to the provision of advanced medical equipment under the project. However, despite the existence of stricter guidelines for requests by end users, China still lacks a national office of medical technology assessment. This is a serious weakness which is retarding improvements in the quality of care and cost containment efforts.

7. Project Sustainability and Replicability

7.1. There is little doubt that all project beneficiaries will have both the interest and ability to sustain the reforms introduced under the project. However, it is also clear that the rural health service units as well as the medical universities will have to do a better job of estimating and providing the necessary recurrent costs for expendables, spare parts and maintenance in the future if the modern equipment and procedures introduced under the project are to be continuously and effectively used. Provision for amortization and equipment replacement must also be made from the revenues accruing from its use, but care should be exercised by the county health bureaux to prevent over-use of tests and procedures solely to raise income and without clear clinical benefit. Regular maintenance of the new and renovated hospitals will be essential if they are to remain in good functional and hygienic condition; this implies the need for proper maintenance and for economic use of expendables.

7.2. Educational reforms in the 13 universities have progressed to the point where reversal to outdated didactic teaching is most unlikely to occur. But the reforms are not yet complete. The new emphasis on student self-learning requires that libraries be fully developed as learning resource centers. Future training of faculty will need to ensure that the attitudes and skills of younger staff are consistent with the new teaching theory and practice. There is some risk that the teaching of strategies for preventing diseases, including long-term care and rehabilitation, may decline in importance after the project has ended. This can be avoided if preventive medicine is emphasized in teaching by all the clinical disciplines, not only by departments of public health, and if sufficient program support funds are made available to maintain the essential community based experience for senior medical students. The subjects of mental health, geriatrics and child development still require further development by most of the colleges. The MOPH should consider the establishment of more National Centers at selected colleges to encourage research and enrichment of teaching in preventive and social medicine.

7.3. Improved financial management by the colleges, and possibly a change to global budgeting of colleges by the MOPH, will be necessary as the colleges absorb the full burden of operational costs. The rural counties may need to divert a proportion of their diagnostic and treatment revenues to support the important but non-revenue operating costs for the preventive program.

7.4. Replicability of many of the project inputs and methodology to the nation's rural health and higher medical education systems is feasible and the process has actually begun in rural health as well as in medical education. MOPH should analyze the costs and benefits of various components in collaboration with specialist line bureaux to identify critically important follow up actions, such as: a) review of the cost-effective aspects of the project that could modernize teaching in the provincial medical colleges; b) establishment of a national center for medical technology assessment; and c) strengthening of Foreign Loan Offices in the provinces to reinforce the improvements in rural health.

8. Association Performance

8.1. This project was the IDA's first experience working with the Chinese MOPH and it was an intensive learning exercise, for both parties, in identifying the components that matched the modernization objectives of the Government and that were also potentially replicable to the rest of the nation. The strength of the Bank Group's contribution lay in thorough preparation by a large team of Bank Group staff and expert consultants, supplemented by inputs of WHO and UNICEF. The 1982 health sector study clarified the dynamics of China's health system and its changing health needs. This information was supplemented by case studies in each project province and some medical universities. The IDA assisted the MOPH to establish efficient loan management departments for the project. These efforts were effective in ensuring an efficient administration for all future health projects.

8.2. The Association's missions provided important technical know-how. There were eight supervision missions with experts in many disciplines, such as computer science, technology assessment, institutional development, audio-visual production, hospital design, technical assistance management and equipment maintenance.

9. Borrower Performance

9.1. The Borrower's performance was excellent, especially because of well-organized and staffed loan management offices at the center as well as at local levels. Lack of familiarity with the Bank Group's management, financial, procurement and supervision requirements posed some problems in the beginning, but these were soon overcome as staff were trained. During the life of the project, the MOPH has adopted many of the lessons learned on project preparation, data presentation, reporting, facility design, equipment selection and procurement and project management in its regular practice.

10. Project Relationships

10.1. Relationships between the Bank, the MOPH, provincial governments, health bureaus and health institutions were cordial. Throughout the project, the effectiveness of post-mission meetings with the provincial authorities, the Minister or Vice Minister of Public Health, supported by appropriate line bureau staff, and UN agencies was noteworthy.

11. Consulting Services

11.1. The project depended heavily on the technical assistance provided by more than 200 foreign and many local experts. Some disciplines were new or poorly developed in China, e.g., health management and economics, clinical epidemiology, social medicine, medical psychology and health education.

12. Project Documentation and Data

12.1. Several background working papers were prepared by IDA staff on the health status and services of the four provinces. The Staff Appraisal Report provided satisfactory guidance for project implementation. The Development Credit Agreement was amended, in mid-1989, to reallocate the unspent credit balance from the technical assistance component and savings generated by SDR appreciation to cover unforeseen local costs of some rural counties, to add additional training for one province and to postpone the Closing Date for two years.

13. Project Monitoring

13.1. MOPH carried out the overall coordination of the project activities through its Foreign Loan Office (FLO), which is the successor of the World Bank Loan Office established in connection with this project. Although FLO initially suffered from the unfamiliarity of the Bank procedures, it gradually developed into a very efficient department of MOPH and was effective in monitoring the project's progress and coordinating different components of the project. Similarly, Loan Offices were also established in each of the other implementation units, like the universities and the provincial and county-level health agencies responsible for the implementation of different components of the project.

PART II: PROJECT REVIEW FROM THE BORROWER'S PERSPECTIVE

1. Comments on Part I

1.1 In PART I of the World Bank Project Completion Report, a brief introduction was given to the background of the project, its objectives, implementation plan, components, and goals expected to attain through the implementation of activities under each respective component. It has analyzed the implementation process, the achievements and experiences, the existing problems, and the tendencies of a general nature as observed in its implementation. In the Borrower's view, this is a good, comprehensive summary of the project.

1.2 The evaluation in PART I of the Project Completion Report has mirrored, in the main, the actual reality including the level of sophistication and utilization of equipment. In fact, the situation of over-sophistication and under-utilization of equipment did exist in the initial stage of project activities performed in certain county epidemic prevention stations (EPS). Professional staff at county EPSs in all project provinces were found unfamiliar with, and incapable of, handling these certain advanced monitoring and surveillance equipment. Therefore, the health bureaux of project provinces sponsored training courses with the hope to help them understand, in a shortest possible time, the way of its operation. The under-utilization of some equipment has thus been overcome leading to the attainment of the goals established for the project and to the fulfillment of the surveillance tasks assigned to them by the project. But due to the lack of experiences, a few project provinces (i.e. Ningxia) got some more advanced and sophisticated equipment which were not suitable for the EPSs. The provinces corrected this by assigning those equipment to the higher level institutions and providing the county EPSs with more suitable ones.

1.3 Compared to EPS, the problems of over-sophistication and under-utilization of equipment were not so terrible at hospitals, both at county- and township-levels. It has been found that the advanced equipment, as purchased, have enabled them to improve and strengthen the quality of their diagnostic and therapeutic services. Actually, through the strengthening and improvement of equipment, the hospitals both at county- and township-levels enhanced their capability in providing qualified services, hence, reduced the rate of referral.

1.4 The Bank report has stated that the input from the counterpart funds to capital construction surpassed the original planned figures. It indicated that government at various levels were determined firmly to remedy the lack of health service facilities caused by the past "Great Cultural Revolution" by increasing financial input from the counterpart funds on one hand; and on the other, it indicated the inappropriateness of

plan. Since the project preparation had not paid attention to the entire plan, the Government had to increase the counterpart fund for construction during the project implementation. The rising cost was another major factor causing increase in counterpart funds.

1.5 The irrational designing and inadequate quality in hospital construction, as seen in the project implementation, have aroused the attention of the Ministry of Public Health, and governments of the project provinces, who have respectively set up specific institutions to cope with it and adopted measures for a remedy. For instance, the Department of Planning and Finance under the Ministry of Public Health has set up an office specifically for the study of hospital construction design. The office is to take up the overall responsibility for the examination and verification of the conceptual design and blueprints of hospital construction with the aims to standardize the hospital design and construction, to ensure the functioning of hospital facilities to meet medical services' needs, and to improve quality of construction. Corresponding institutions and mechanism have been set up at all project provinces; and the system of examination and verification have been applied in the implementation on Health II and, even more effectively, in Health III projects[1].

1.6 Certain challenges and difficulties in organization and finance were encountered in the carrying out of chronic disease prevention and control at the county level, but these are problems over the whole nation. The Ministry of Public Health has become aware of it and has taken lead in the carrying out of control activities of the four target diseases in large municipalities such as Beijing and Tianjin where conditions are ripe as pilots.

1.7 At the initial stage of the project implementation, there was an issue of inadequate project operation and recurrent costs. This reflected the general tendency of putting more emphasis, when planning and financing health services, on one-time investment, including the physical facilities, but less attention on program activities and their operation and recurrent costs. The project provinces tried with every effort to re-adjust their plan and to find remedies. And, the Chinese Government and the World Bank decided, after discussion, to establish a disbursement category of "program support" to partly solve the issue of lack of operation and recurrent costs, and the shortage of these costs was overcome. The establishment of "program support" has played a supportive role in the implementation of the project at the later stage. It is particularly crucial to the successful completion of a number of sub-items of research arising in the course of the project implementation; and the Program Support is of help to construction of community training bases for medical universities.

---

[1]. Health I means the Rural Health and Medical Education Project (Cr. 1472-CHA), the subject of this PCR, Health II means the Rural Health and Preventive Medicine Project (Ln 2723/Cr. 1713-CHA, of January 1987), and Health III means the Integrated Regional Health Development Project (Cr. 2009-CHA, of September 1989).

However, its optimal solution depends on certain changes and re-adjustments of policy at the national level.

2. Evaluation of IDA's Performance

2.1 Health I project was the first project with foreign loans implemented through the cooperation of the World Bank and the Ministry of Public Health of China. The Bank officials have contributed fruitfully to the project in its course of preparation and evaluation as well as in the aspects of giving guidance and supervision in its implementation.

2.2 Most of the Bank officials and the consultants invited for the project were most competent, and many of them were familiar with the conditions of the China. Their instruction and guidance have greatly inspired the project managerial staff of this side.

2.3 During their stay in China, officials on the Bank missions have manifested themselves with a rigorous scientific working style, and with an experienced and managerial skill. Their admirable performance is an inseparable constituent part to the success of the project.

2.4 In the first three years since the implementation of the project, five missions were despatched by the World Bank for investigation and supervision, and more than three missions for supervision were sent in the following years. The missions had an important role to play in the supervision of the project implementation, particularly so for departments concerned that are responsible for the implementation of project with foreign loans for the first time. We hope the Bank would continue the effort of making such supervision.

3. Evaluation of Borrower's Own Performance

3.1 The Health I project is the first project undertaken by MOPH with large amount of loans from external sources. The project covers the sensitive issues in areas of rural health development, medical education reforms, and the raising of capability at the central level in managerial activities and policy studies. However, project managerial staff at all levels of this country are inadequate in their experience and are unfamiliar with the managerial procedures. As a remedy, foreign loan offices were set up and properly staffed respectively under MOPH and under each of the project provinces and counties.

3.2 In order to play its role to the maximum, the Foreign Loan Office of MOPH serves as a department directly under the Ministry and has due authority in the management and supervision of project activities performed by project provinces. While paying attention to the development of hardware facilities, it stressed much on activities relating to technical assistance and manpower development. It is through the visits of consultants and training of its working staff that the managerial capability of the Office has smoothly undertaken the increased workload arising from new health projects, including Health II, III, the Infectious

and Endemic Disease Control Project (Cr. 2317-CHA of December 1991) and others under preparation, with a few additional new recruits.

3.3 Another causative factor of the smooth implementation of the project was the proper handling of working relationship in all departments concerned. They include the departments of MOPH and other ministries, commissions at the central level, the State Planning Commission, the Ministry of Finance, and the Ministry of Foreign Economic Relations and Trade. In health sector, the concerned departments were: the Foreign Loan Office of MOPH and other departments under the Ministry, including the Department of Medical Education, the Department of Medical Administration, and the Department of Planning and Finance; and the governments and health bureaux of project provinces. The project objectives were unlikely to attain without the cooperation and support of all departments listed above. It was, therefore, the coordination role played by the MOPH and its Foreign Loan Office that facilitated the coordinated efforts of all departments and thus ensured the success of the project.

3.4 Foreign loan offices at the provincial level have played a prominent role in the implementation of project mainly in the management, supervision and giving guidance to activities performed by the foreign loan offices at the county-level. They have been proved competent not only in their managerial capability over the project counties, but also in their guidance to the routine health activities of non-project counties of the province, particularly in their dissemination of the modern managerial procedure as learnt from the World Bank. Health services as a whole in all counties of the provinces have been strengthened. Take the disease surveillance activities, for instance. With the establishment of the project with foreign loans, the provincial network of disease surveillance has taken shape and perfected. It helps to further improve the accuracy of data collected and further lower the drop-out rate. Thanks to the efforts and work performance of the foreign loan offices at the provincial level, health and other services of the project counties have become, in general, model and exemplary counties of the province.

4. Project Relationship

4.1 In the course of implementation of the project, there has been a good cooperative relationship between this side and the World Bank, and between MOPH and its affiliated Foreign Loan Office and the World Bank is particularly fruitful. There has been an attitude of friendly cooperation and mutual support prevailing in the past seven years of project implementation between China and the World Bank.

4.2 The World Bank has rendered important support and guidance relating to hard- and soft-ware facilities to the MOPH and its Foreign Loan Office by despatching its top-ranking consultants to this side. Errors and difficulties in implementation activities have been properly handled after reaching a consensus through consultation. In the course of implementation, both sides tried, with every efforts, to exchange views and opinions in order to attain common understanding and agreement for solution of issues.

4.3 The fruitful cooperation between this side and the World Bank has found its expression also in the close communication by the electronic mail between the two sides. The Foreign Loan Office of MOPH has maintained a very frequent contact with the World Bank, which ensures a prompt feedback to all information and proposals provided, and both sides are well informed of the latest progress of the implementation activities of the project.

5. Evaluation of Co-financiers' Performance

5.1 This project received, from its preparation stage till its completion, valuable help and support from all departments concerned within the country and all international organizations from outside, a clear manifestation of their solicitude for the project. Of particularly worthy of mention is the efforts extended by the World Health Organization (WHO) in the preparation stage of the project. WHO played an important promotional role in the establishment of the first health project in this country with loans from the World Bank. The Chinese side is deeply impressed with the efforts extended by all international organizations concerned towards this project.

5.2 Due contributions have been made towards this project by the State Planning Commission, the Ministry of Finance, the governments at provincial and county levels, and local health bureaux of project provinces and counties. The guidance and input of the State Planning Commission and Ministry of Finance is a good manifestation of the importance attached to and supports toward the health
services of the country, as well as the strong determination of the state for the realization of China's modernization. The active inputs (in terms of manpower, material and finance) of provincial and county governments is a clear indication of their confidence in the success of the project. The endeavor of all staff of health bureaux and all professionals at the grassroots have been proved fruitful constituting a basic guarantee to the successful fulfillment of the project.

6. Comments on Part III Tables

6.1 It is confirmed that the factual information provided in Part III are adequate and accurate.

PART III

Table 1 - Related Bank Loans and IDA Credits

Loan/Credit Title	Purpose	Year of Approval	Status
Rural Health & Preventive Medicine Project	Improve access and quality of rural health, immunization, drug quality and chronic and communicable diseases care.	June 1986	All components satisfactorily completed. Vaccine plants under construction.
Integrated Satisfactory Regional Health Devel. Project	Introduce new approaches to health policy/planning of integrated health to improve health services.	April 1989	progress.
Infectious & Endemic Disease Control Project	Support national program to control TB and schistosomiasis and to strengthen related institutions.	December 1991	Implementation started satisfactorily.

Table 2 - Project Timetable

Item	Date Planned	Actual Date
Identification		December 1, 1982
Preparation		June 1983
Appraisal		September 1983
Negotiations		March 1984
Board approval		May 8, 1984
Credit Signing		June 1, 1984
Credit Effectiveness	September 4, 1984	August 29, 1984
Project Completion	June 30, 1989	December 31, 1991
Credit Closing	December 31, 1989	December 31, 1991

Table 3: Cumulative Estimated and Actual Disbursements
(US$ million)

Bank FY	Appraisal Estimates	Estimated Cumulative	Actual Disbursement	Cumulative Actual Disbursement	Actal as % of Cumulative	Actual as % of Total
1985						
1st	--	--	1.90	1.90	--	2%
2nd	15.5	15.5	4.61	6.51	42%	7%
1986						
1st	15.5	31.0	18.84	25.35	82%	26%
2nd	13.0	44.0	15.26	40.61	92%	42%
1987						
1st	13.0	57.0	7.46	48.07	84%	50%
2nd	9.5	66.5	8.62	56.69	85%	59%
1988						
1st	9.5	76.0	3.66	60.35	79%	62%
2nd	3.0	79.0	13.67	74.02	94%	77%
1989						
1st	3.0	82.0	1.32	75.34	92%	78%
2nd	1.5	83.5	1.16	76.5	92%	79%
1990						
1st	1.5	85.0	1.33	77.83	92%	81%
2nd	--	85.0	4.49	82.32	97%	85%
1991						
1st	--	85.0	3.49	85.81	101%	89%
2nd	--	85.0	2.85	88.66	104%	92%
1992						
1st	--	85.0	5.85	94.51	111%	98%
2nd	--	85.0	2.16	96.67a/	114%	100%

a/ The actual amount disbursed increased in terms of US$ due to devaluation US$ vs. SDR during implementation.

Source: MIS Disbursement Information

Table 4a. Project Implementation in Provinces

Rural Counties:	Shandong			Heilongjiang			Sichuan			Ningxia		
	Planned	Actual	Remarks	Planned	Actual	Remarks	Planned	Actual	Remarks	Planned	Actual	Remarks
Total construction (m)	91400	164637	(1)	63874.5	152494		190486	320087		37202	50455	
Hospital beds/1000	1.01	1.18		1.46	1.66		1.18	1.26	(6)	1.10	1.18	
Equipment provided (US $1000)	7900	8829	(2)	7000	7768		10605	11792		3219	3821.00	
Total county techn.pers./1000	1.41	1.55		1.77	2.12			1.49		1.70	1.78	
Chief & attending physn./1000	0.0004	0.021		0.0034	0.022			0.29			0.32	
Village doctors/1000	1.54	1.61		0.7	0.84			1.29		0.9	0.97	
Vill. Drs. & Jun.med. trained %	15	47		3906	10874	(5)	50	72.01		80	81.13	
Total tech. persons trained	7008	19414	(3)	8578	20771	(5)	13399	23579		966	1896	
	(4581)	(9738)	(4)									

Remarks:

1. The number of 91400 m is composed of 290 m contructed for the province level.
2. The difference between Planned and Actual is caused by the exchange rate.
3. In this line, the number of village doctors trained is included.
4. In this line, the number of village doctors trained is not included.
5. Person times
6. "Hospital beds/1000" of 1.18 under the column of "Planned" in Sichuan is the number in 1984.

TABLE 5

A. PROJECT COSTS (US DOLLARS 1,000)

Category	Appraisal Estimate		Actual	
	Local Costs	Foreign Costs	Local Costs	Foreign Costs
Construction	140,986		245,408	
Equipmnt, Vehicles	497,769	65,436	100,539	74,412
Training	10,168	9,221	5,824	9,054
Tech. assistance	1,999	6,974	1,809	3,215
Personnel Recruitment	4,929		22,279	

B. PROJECT FINANCING (US $ 1,000)

Source of Funds	Planned	Actual
IDA		
A. Rural Health	28,800	37,406
B. Medical Education	36,000	46,000
C. Strengthening of Management evaluation research	4,800	6,482
D. Project Implement.	2,700	6,694
E. Contingencies	12,700	
SUBTOTAL 1/	85,000	96,582
DOMESTIC		
A. Central Govt.	178,400	124,663
B. Provincial Govt.	14,300	82,105
C. County Govt.	38,400	
D. Sub-County sources	6,700	
SUBTOTAL 2/	237,800	206,768
TOTAL FINANCING:	322,800	303,350

1/ IDA share increased in terms of US dollars as SDR appreciated

2/ Fincancial reorganization in China changed the shares of different parties.

TABLE 4b: Project Implementation - Universities' Enrollments and Faculty Staff

Universities	Enrollment				Staffing					
	Undergraduate (number)		Graduate (number)		Faculty Staff posts. total		Faculty Staff Prof. & Assoc.		Faculty Staff Lectr. & Assist.	
	Before Project (1983)	After Project (1991)	Before Project (1983)	After Project (1991)	Before Project (1983)	After Project (1991)	Before Project (1983)	After Project (1991)	Before Project (1983)	After Project (1991)
Beijing College of TCM	240	258	24	316	261	434	47	145	234	289
Beijing Medical University	426	630	130	267	529	1086	281	359	248	727
Peking Union Medical University							121			
China Medical University	536	435	164	184	956	969		92	266	377
Guangzhou College of TCM					383	785	35	151	348	634
Hunan Medical University	248	630	51	125		916	138	283	156	508
Norman Bethune Medical Univer	496	630	13	130		919	281	443	154	476
Shanghai Medical University	400	566	78	241		878	310	575	154	603
Shandong Medical University	353	516	40	96	572	753	87	215	156	538
West China Medical University	342	610	80	165	1224	1012	160	291	160	720
Tongji Medical University	473	600	63	202		859	257	293	158	620
Xian Medical University	240	540	37	82		1104		314	168	790
Sun Yatsen Univ. of Med. Sc.	400	470	62	183		650	152	189	179	479
Total	4154	5885	742	1991	3925	10365	1869	3350	2381	6761

TABLE 6. PROJECT RESULTS

	Shandong			Heilongjiang			Ningxia			Sichuan		
	Before Project	After Project	Remarks	Before Project	After Project	Remarks	Before Project	After Project	Remarks	Before Project	After Project	Remarks
Infant mortality rate	21.65	19.67		35.53	23.21		45.50	34.41		42.09	31.34	
Maternal mortality rate	0.05	0.04		0.06	0.02		0.11	0.09		0.12	0.06	
Antenatal exam. rate	62.66	85.38		68.90	97.30		54.51	84.75		61.95	75.05	
Incidence infectious disease	339.28	127.76		243.90	142.14		490.81	238.14		436.64	351.41	
Incidence TB	338.68	163.48		528.54	445.33		1155.80	567.70		743.24	531.44	
Incidence infant pneumonia	4.77	4.24		6.88	6.71		30.38	5.68		4.71	3.17	
Incidence infant diarrhoea	16.59	15.13		7.26	6.99		56.49	11.96		11.29	6.66	
4-vaccine rate children	89.05	97.56		88.56	97.73		91.79	97.26		74.53	93.58	
Hospital occupancy rate	38.21	59.04		56.45	57.03		69.70	77.61		61.33	60.96	
Referral to county rate	0.10	0.06		0.10	0.03		0.14	0.04		0.01	0.01	
Average length hosp. stay	7.55	8.74		7.43	6.18		12.24	10.56		7.09	7.22	
Health education staff nos.	243.00	330.00		56.00	190.00		88.00	105.00		745.00	1109.00	
% health educ. in primary school	0.81	70.21		12.32	80.99		2.05	52.42		5.81	59.74	
% health educ. in secondary sch	16.16	82.95		3.22	80.40		12.84	43.90		7.02	80.18	

Comments on Table 6 (results) Selected positive indicators

1. Substantial falls in IMR and MMR, following improvements in MCH care.
   The improvement was less in Shandong, where pre-project IMR and MMR were already low.
2. All provinces report large reductions in communicable diseases.
3. Health education programs have been considerably developed.
4. Immunization of school children has reached almost 100% coverage.

Table 7 - Status of Covenants

Covenant	Subject	Deadline	Status
Credit Agreement			
Section 3.02	Borrower to pass part of Credit to local Entities under terms satisfactory to IDA/GOC	N.A.	Fulfilled
Section 3.03	Employ consultants with terms/qualifications satisfactory to IDA	N.A	Fulfilled
Section 3.06	(a) Carry out health manpower study;	6/30/86	Completed in June 1988
	(b) furnish report for IDA's comments	--	Fulfilled
Section 3.09	Maintain MOPH Loan Office with appropriate staffing	--	Fulfilled
Section 4.01	Submit audited accounts	Each 6/30	Fulfilled
Project Agreement			
Section 2.01 (a)	Each Local Entity to provide adequate funds to implement its part.	--	Fulfilled
Section 2.08	Each Local Entity to maintain a Loan Office throughout project implementation	---	Fulfilled

Table 8 - Bank Group Staff Input
(Staff weeks)

Stage of Project Cycle	Planned	Actual
Preappraisal		80.2
Appraisal		62.2
Negotiations		28.0
Supervision		124.7
Total		295.1

Table 9 - Bank Group Missions

Project Cycle	Month/ Year	No of Persons	Specialization[1]	Performance Rating
Reconnaissance	3/82	4	PH, EP, EC	-
Identification	9/82	5	EC, PH, EP HE, PE	-
Preparation	1/83	4	EC, ME, PH	-
Preparation	3/83	2	PH	-
Preparation	4/83	2	EC, ME	-
Preparation	6/83	3	PH, FM	-
Appraisal	9/83	7	EC, PH, FM, AR, ME	-
Post-Appraisal	2/84	3	EC, PH	-
Supervision	7/84	3	EC, PH, ME	1
Supervision	3/85	2	PH, EC	1
Supervision	8/85	3	PH, PR	NA
Supervision	5/86	7	EC, HE, PH, ME	1
Supervision	10/86	1	FM	1
Supervision	12/86	3	FM, EC, PH	1
Supervision	3/87	3	PH	1
Supervision	11/87	1	FM	1
Supervision	9/88	6	FM, CM, PH, ME	1
Supervision	4/90	1	FM	1

[1] Specialization:

AR - Architect
CM - Computer Specialist
EC - Economist
EP - Epidemiologist
FM - Finance & Management
HE - Health Economist
ME - Medical Educator
PE - Population Economist
PH - Public Health Specialist
PR - Pharmacist

THE WORLD BANK / IFC / MIGA

OFFICE MEMORANDUM

Revision 1

DATE: February 9, 1993

TO: Mr. Hans-Eberhard Kopp, Director, OED

THROUGH: Mr. Shahid Javed Burki, Director EA2

FROM: Zafer Ecevit, EA2EH Z.E.

EXTENSION: 84072

SUBJECT: CHINA: Rural Health and Medical Education Project (Credit 1472-CHA)
Project Completion Report

1. Attached please find a final draft Project Completion Report (original plus three copies) for the China Rural Health and Medical Education Project. The project was closed on December 31, 1991 and fully disbursed on April 24, 1992.

2. Parts I and III of the attached report were drafted by EA2EH. The draft was reviewed within the Department and by the Legal and Loan Departments, and was found satisfactory. Part II was prepared by the Foreign Loan Office under the Ministry of Public Health. The draft was cleared and forwarded to the Department by the Borrower (Ministry of Public Health). Part II has been incorporated into the main report unedited. The Task Manager for the project is Mr. Jagadish Upadhyay.

3. Borrower agencies and co-financiers to whom the final PCR should be sent include:

Ministry of Finance (borrower)
Foreign Loan Office, MOPH (national implementing agency)
Provincial Project Offices of Shandong, Heilongjilang, Ningxia, Sichuan (local implementing agencies)

Attachments

cc: Messrs./Mmes. Henriod (EAPVP); Kimura (EA2DR); Pearce (EA2CO); Boehm, Hohnen (EA2EH); Koch-Weser (ASTES); Manley (LEGEA) Morris (LOAAS); Measham (PHRHN); van der Lugt, Stott, Hou (EA2CH)

EA2EH Division Files
Asia Information Center

JUpadhyay:irh

Revision 1

~~Report No.~~

- PROJECT COMPLETION REPORT

CHINA

RURAL HEALTH AND MEDICAL EDUCATION PROJECT
(CREDIT 1472-CHA)

February 8, 1993

Environment, Human Resources and
Urban Development Operations Division
China and Mongolia Department
East Asia and Pacific Region

CURRENCY EQUIVALENT

Currency - Renminbi (RMB)
Currency Unit - Yuan (Y)
Y1.00 - 100 fen

At Appraisal:		At Credit Closing:	
US$1.00 =	Y 2.0	US$1.00 =	Y 5.42
US$1.00 =	SDR 1.06	US$1.00 =	SDR 1.43

ABBREVIATIONS

CNTIC	-	Chinese National Technical Import Corporation
MCH	-	Maternal and Child Health
MOPH	-	Ministry of Public Health
UNICEF	-	United Nations Children's Fund
WHO	-	World Health Organization

FISCAL YEAR

January 1 - December 31

CHINA

RURAL HEALTH AND MEDICAL EDUCATION PROJECT
(Credit 1472-CHA)
PROJECT COMPLETION REPORT

TABLE OF CONTENTS

CHINA

RURAL HEALTH AND MEDICAL EDUCATION PROJECT
(Credit 1472-CHA)

PROJECT COMPLETION REPORT

PREFACE

This is the Project Completion Report for the Rural Health and Medical Education Project in China, for which Credit 1472-CHA in the amount of SDR 80.2 million (US$85 million equivalent) approved on May 8, 1984. Appraisal took place in September 1983. The Credit closing date was December 31, 1991, two years behind schedule. The Credit fully disbursed and the last disbursement was on April 24, 1992.

The PCR was jointly prepared by the Environment, Human Resources and Urban Development Operations Division, China and Mongolia Department of the East Asia and Pacific Region (Preface, Evaluation Summary, Parts I and III), and the Borrower (Part II).

Preparation of this PCR was started during the Bank's final supervision mission of the project in 1991, and is based, inter alia, on the Staff Appraisal Report, Staff Case Studies and Technical Notes, the Development Credit and Project Agreements, supervision reports, correspondence between the Association and the Borrower, and internal Bank Group memoranda.

CHINA

RURAL HEALTH AND MEDICAL EDUCATION PROJECT
(Credit 1472-CHA)

EVALUATION SUMMARY

Project Objectives

1. This was the first Bank Group-supported health project in China. The Project evolved from the Government's objectives to: strengthen the national health planning capability; reform higher medical education; and modernize rural health services. The project supported: a) the development of three national health research institutions to assist in the first objective; b) upgrading of facilities and teaching at 13 leading medical universities to support the second; and c) the modernization of management, health facilities, medical technology, personnel training and preventive programs in 46 rural counties of Sichuan, Heilongjiang and Shandong Provinces and Ningxia Hui Autonomous Region as pilot areas in which to demonstrate practical policies for the third objective.

Implementation Experience

2. Implementation was efficient but somewhat slower than planned, particularly in the case of procurement. Utilization of foreign technical assistance by the universities presented some difficulty and rather hasty construction of rural hospital buildings affected the design and quality of some new facilities. The personnel training program in rural areas far exceeded the planned requirement. Equipment provided was generally suitable and well utilized by the universities, but rural Counties tended to over-estimate the level of sophistication necessary. All beneficiaries under-estimated the recurrent costs of supporting the new technology.

Results

3. The project significantly improved the planning and evaluation capabilities of the Ministry of Public Health (MOPH) by establishing the three national health planning and research institutes. A good model for future rural public health services was developed which is in the process of review and replication throughout the nation. Medical education benefitted significantly from modernization of the 13 universities.

Sustainability

4. The project outcomes in terms of the planned modernization of China's health services and medical education are likely to be sustained. The new "One-third Counties Upgrading Program", initiated by the Government, now has clearer protocols for health facility rebuilding, re-equipment and personnel training. Initial reform of curricula and teaching methodologies for higher medical education has been accomplished and educational research goals and review mechanisms established.

Findings and Lessons Learned

5. The project provided the following valuable lessons to China for future health projects and to IDA for similar efforts in China and elsewhere.

a) Large-scale overseas professional training and technical assistance components yield best returns and become most cost-effective only when the placement of the trainees and the follow-up activities are planned properly.

b) It is important to ensure that competent hospital architectural services are available to plan technical building proposals for satisfactory functioning, durability and ease of maintenance.

c) The establishment of well-organized and staffed project management offices at all operational levels made a very significant contribution to the smooth implementation of the project. Projects should always include necessary personnel training and equipment for these offices, including, where necessary, foreign training and technical assistance.

d) In the case of new and innovative project components, clear guidelines should be developed to enable proper planning of the component. In this project, counties and universities experienced difficulties in developing strategies for chronic disease prevention on their own.

e) Sophisticated items of equipment should be acquired after careful reviews not only of their need but also of the availability of future recurrent expenditure, spare parts, availability of properly trained operators, and the system for monitoring their use and maintenance.

f) China urgently needs to establish a national office of medical technology assessment.

g) The Project in this new sector would have benefitted from the provision of greater assistance to develop the Borrower's procurement skills.

h) The gains made in improvements and management of the universities must now be followed by advancements in financial planning and budgeting as teaching costs would inevitably rise due to the demands generated by the reforms.

CHINA

RURAL HEALTH AND MEDICAL EDUCATION PROJECT
(Credit 1472-CHA)
PROJECT COMPLETION REPORT

PART I: PROJECT REVIEW FROM IDA'S PERSPECTIVE

1. Project Identity

Project Name:	Rural Health and Medical Education
Credit number:	1472 CHA
RVP unit:	East Asia and Pacific Region
Country:	China
Sector:	Health

2. Project Background

2.1 In three decades since its inception in 1949, the People's Republic of China had improved the health status of its population to levels well beyond those of most developing countries, doubling the average expectation of life from its previous low level of 34 years. However, a substantial proportion of the poorer rural population (roughly 20%) failed to benefit from the general improvement. By the early 1980's, large investments were needed to modernize the mostly outdated rural health facilities and to alleviate a severe shortage of adequately trained health manpower. This was largely the result of ten years of isolation from world progress in medical education after the Cultural Revolution, which left medical colleges in substantial need of educational reform. Furthermore, a shortage of village health workers was an unintended result of the introduction of the responsibility system in agriculture in 1980, when many village 'barefoot doctors' gave up health work to pursue more profitable farming or other small scale rural enterprises, leaving village clinics understaffed. In the meantime, the pattern of illness also changed to increased prevalence of chronic diseases due to changes in demography and lifestyle. This, in turn, created demands for more sophisticated health facilities, better trained health staff and effective preventive measures against newer leading causes of death.

2.2. In response, the Government declared high priorities to: a) rebuild the rural health care network; b) improve the quality of training of higher level health personnel; c) develop research institutions capable of elucidating the epidemiological transition facing the country; d) retrain village doctors to a three-year professional level; and e) improve health management.

2.3. In the rural health area, in 1980, the Ministry of Public Health (MOPH), in association with provincial and local governments, began to upgrade health care in the nation's 2,100 counties in three stages, each of 5-years duration. National and provincial governments jointly contributed about half of the capital needed while county governments, health bureaux and end-user institutions made up the remainder. Early results were

disappointing due to funding, planning and implementation weaknesses. Wealthy counties benefitted most while poorer ones, usually those with the worst facilities and least trained staff, could rarely approach the standards set by the Ministry.

2.4. For improvements in medical education, MOPH designated 13 leading medical universities, including two specialized in traditional Chinese medicine, as 'key' institutions to restore standards of scholarship and research after the Cultural Revolution and to speed up the flow of high level graduates into the health services. They were provided with modest increases in budget, and permitted to reinstate older professional staff displaced by the Cultural Revolution. The rights to send teachers overseas for training and to invite foreign visiting faculty were restored and undergraduate medical curricula were lengthened to a minimum of five years. These reforms required the colleges to recruit or train teaching faculty who would be aware of international progress in medical education and were able to develop and introduce new curricula and teaching methods. Modern facility planning skills and large civil works outlays were also needed to update or rebuild libraries, laboratories and teaching hospitals, many of which were in poor structural and functional condition.

2.5. The promotion of effective Chinese traditional medicine techniques as an integral component of the health services is a basic objective of Government health policy. There were few institutions in China capable of the necessary research to validate the therapeutic properties of the vast national store of medicinal herbs. Therefore, MOPH instituted modernization of a respected research institution, the Sichuan Institute of Chinese Materia Medica, which had relatively good research staff and access to large botanical gardens for experimental cultivation of medicinal plants.

2.6. Both the rural health and medical education initiatives were conceived as pilot activities to provide up-to-date planning and budgeting information to guide the modernization of the nation's entire health services. There were, however, no suitably staffed national institutions to provide timely and reliable research data to support public health planning and evaluation needs. To remedy this problem the Ministry created a new Research Center for Health Statistics, in 1982, with a mandate to improve and coordinate the national health statistics systems. Similarly, although there were a number of national technical institutions responsible for advanced studies in public health, such as the Institutes of Epidemiology, Parasitic Disease, Virology and Industrial Hygiene, their concerns were mainly with pure research, rather than with operational studies of the nation's emerging problems in public health, health management and the preventive medicine needs identified in a recent health sector study. This task needed close coordination of the several institutes under a common management and with a greatly strengthened capability in modern epidemiological methods, including those applicable to chronic disease prevention. Therefore, in 1983, the Ministry established a National Center for Preventive Medicine.

3. Project Objective and Description

3.1. The main goal of the project was to support the high priority objectives of the Government, namely: to develop a cost effective strategy to upgrade the rural health services; to modernize medical education in the nation's most advanced medical colleges; and to develop national institutions capable of providing the scientific, statistical and epidemiological bases needed to strengthen national health planning and disease surveillance.

3.2. The project consisted of the following three parts:

Part A. A rural health component, about 30% of the total investment, in 46 selected counties of three provinces and one autonomous region, serving over 30 million people. The project included financing for the rehabilitation and upgrading of the health facilities, provision of essential equipment, personnel training, technical assistance, and a small amount of incremental staff recruitment and training costs. It also included inputs to strengthen management capabilities of the four Provincial and 46 County Health Bureaux.

Part B. A medical education component, about 60% of the investment, covering 13 key medical universities. The project financed necessary construction and equipment, faculty training, technical assistance for modernizing teaching, research, and developments of continuing education.

Part C. Strengthening of national management capability, about 10% of the investment, in: a) the National Center for Preventive Medicine (later the Chinese Academy of Preventive Medicine) to undertake research, coordinated national disease surveillance, advanced training and public health information services; b) the Research Center for Health Statistics (later the Central Health Statistics Institute) to carry out health policy analyses, research, and data collection and processing for the MOPH; c) the Sichuan Institute of Chinese Materia Medica to undertake research on the efficacy, safety and modern production of therapeutically important traditional medicines; and d) the two MOPH bureaux responsible for management of rural health services and medical education as well as the Ministry's World Bank Loan Office (later the Foreign Loan Office). The project provided appropriate physical facilities, equipment, staff training and technical assistance.

4. Project Design and Organization

4.1. The project concept was based on the findings of the Bank's health sector work (China, The Health Sector, April 1984), which was carried out by a mission that visited China in September/October 1982, and on the experience under UNICEF and WHO primary health care activities in the early 1980's. In line with the recommendations of the sector report, the project was designed to meet both existing and projected health problems of the rural population, to begin reorganization of the training of health manpower in China, and to assist in strengthening MOPH's planning

capability. This project was China's largest internationally assisted health project at the time, helping major reforms in the most influential medical universities as well as improving rural health care directly benefiting over 30 million people.

4.2. Timing of the project was fortunate, meeting the need to provide technical and financial data to guide the Government's recently proposed plan to upgrade rural health services in "One-third Counties" upgrading scheme. It also provided timely assistance in the development of the 13 key medical universities, begun in 1977 but inhibited by lack of adequate funding and technical support.

4.3. There were three new features in the medical education component in the Chinese context. Firstly, it introduced new subjects into the curriculum, notably the social and behavioral sciences and chronic disease aspects of preventive medicine. Secondly, it piloted the introduction of modern learner-centered teaching methods in place of outdated didactic teaching. Thirdly, each university was required to assume an expanded role in further education by establishing national specialized centers in some of the newly introduced clinical and pedagogical disciplines.

4.4. A major design factor which was to contribute to successful implementation was the prompt establishment of project leading groups as well as the well-staffed World Bank Loan Office (later renamed the Foreign Loan Office) in MOPH, and similar offices in the provinces and the concerned institutions. An expert advisory group was set up to coordinate the activities of the medical universities and, in 1987, the first of several annual national conferences on the progress of the medical education project was held to review initial outcomes and to inform all higher medical universities in the country of the progress of curricular and methodology reforms.

5. Project Implementation

5.1. Implementation of most project components went better than might have been expected in view of their complexity, the wide dispersion of project units, the radical nature of the educational reforms and the weaknesses of rural health service management. However, the project was completed in seven years, two years behind the appraisal estimate. The main reasons for the delay were the time required to build necessary institutions, to gain experience with Bank Group procedures and to carry out additional activities mentioned in the next paragraph. Procurement under the project took longer than expected because of the delay in familiarizing the newly established MOPH Loan Office and the Chinese National Technical Import Corporation (CNTIC) responsible for importing the equipment under the Bank Group's procurement procedures. Due to inexperience, cumbersome methods were used in preparation of large tendering packages, evaluating bids, arranging contracts and opening letters of credit. End-users were frustrated by resulting delays in delivery. Towards the end of the project, MOPH undertook more frequent and smaller tendering to reduce the workload.

5.2. Midway through project implementation, it was evident that the project required a careful review to take stock of the progress achieved and to identify additional steps needed to meet the original project objectives as well as to address a few emerging priorities. There were also unused credit funds due to difficulties in utilizing allocations for technical assistance (see next paragraph) as well as due to appreciation of the SDR vis-a-vis the US dollar. Therefore, in mid-1989, the credit was reallocated through some reductions in technical assistance and increased funding for equipment, program support, and for disease surveillance and prevention, including activities related to chronic diseases.

5.3. The government was able to utilize foreign technical assistance provided under the project less effectively than was previously anticipated. This was mainly due to the inexperience of the government departments in providing adequate guidance to the end-users in the selection and briefing of appropriate experts, insufficient planning and preparation of in-country activities to yield maximum benefits to all parties, and lack of overseas follow-up. MOPH has now taken serious interest in strengthening its capacity to utilize external technical assistance.

5.4. In the rural health component, the upgrading of equipment, capital construction and training goals surpressed expectations as the local governments provided up to 50% more counterpart funds than planned. As indicated in Table 6 (Part III), there have been significant improvements in health indicators. Referrals from lower levels to the county hospitals decreased to about 50% in Shandong and Sichuan and to about one-third in Heilongjiang and Ningxia. Bed occupancy and average length of patient stay in hospitals were both positive. A total of about 85,000 health workers were trained in the project areas as compared to the target of about 41,000 workers; the proportion of 3-year trained village doctors rose by 30% to 50%; the numbers and capabilities of higher level clinicians and laboratory workers increased dramatically. Both infant and maternal mortality indicators showed pronounced improvements; and the prevalence of common infectious diseases recorded substantial decline. There were also substantial management gains, including improved and better utilized health information networks, disease surveillance, program planning and equipment management. All project provinces and counties established equipment maintenance centers.

5.5. There were some problems in the rural component, however. Most counties tended to give priority to strengthening the higher level curative services to the detriment of primary care and prevention. Sometimes, new services and clinical or laboratory procedures were developed that were inappropriate to the role of county level institutions. Construction of new rural hospitals was frequently undertaken too soon after the project began and, in some cases, both the appropriateness of design and the quality of construction were suboptimal to the demands of modern medical and nursing practice. Hospital buildings were often more difficult and expensive to maintain because of poor quality construction. Most counties overestimated the level of sophistication of equipment needed and sometimes rejected quite satisfactory Chinese-made items in favor of more costly

imports without due regard to the utilization rates, long-term recurrent costs and likely benefits of the equipment. There was also a tendency to make a profit by over-using new procedures and equipment to generate revenue for the institutions, regardless of clinical need. After a review of equipment utilization by the MOPH in 1987, the equipment plan for rural counties was revised to counteract these trends and there was a considerable improvement during the later years.

5.6. The medical education component sharply increased both the numbers and the proportion of trained faculty, as more than 1,000 teachers benefitted from overseas training. In-country selection and preparation of candidates for overseas training, including language and computer literacy, were generally performed well. A few problems arose from the failure to plan the location and duration of overseas training posts adequately, and from the distribution of fellowships pro-rata to departments rather than according to institution-wide needs. On the whole, the overseas training experience was highly beneficial. A small percentage of teachers has so far failed to return to China after training, most having obtained temporary or permanent positions in the host countries. Nevertheless, in many cases, they continue to provide useful linkages between their Chinese institutions and host colleges. Foreign technical assistance was neither fully implemented nor utilized as well as possible by most of the 13 universities.

5.7. Overall, student-centered learning was given a much higher profile with more uncommitted study time available for the students, supplemented by better access to improved library resources, modern audiovisual teaching aids, computers, well equipped laboratories, and foreign language training. Practical clinical training was improved by partial decentralization from tertiary teaching hospitals to include field experience in small hospitals and clinics at new community teaching bases, which enabled the students to undertake epidemiological studies of common problems and brought them into closer socio-medical contact with the rural people and their health problems. Enrichment of continuing medical education was a particularly effective subcomponent, with more than 70,000 in-service students enrolled in various types of general and specialist courses. Stomatology, an area of manpower shortage prior to the project and a weak area all over China, was considerably expanded by many colleges.

5.8. The Chinese Academy of Preventive Medicine (CAPM) implemented the project smoothly. By 1987, it had established a computerized disease surveillance system for the whole country, routinely collecting data from 71 surveillance points in 29 provinces. The program was, however, shown to under-represent the poorer rural areas and in 1989, 145 randomly selected surveillance points were added, leading to more accurate and timely data on infectious diseases. More recently, work has begun to add some major non-communicable diseases to the network. The Academy has carried out much major research; examples include the study of the national prevalence of hepatitis B; national smoking-related mortality and costs; occupational disease patterns in rural enterprises; and the early diagnosis of naso-pharyngeal cancer. It collaborated with Cornell and Oxford Universities in one of the largest studies of risk factors for chronic disease ever

undertaken and with WHO and UNICEF in studying nutrition in rural children. These studies have contributed important data for health policy analysis. CAPM has also developed rapid and cheap laboratory methods for diagnosis of the common viral diseases and has become the nation's leading producer of hepatitis B vaccine. The academy has implemented a large program of technical assistance to the provinces, including professional training in epidemiology, direct consultations, and support for field research and program development.

5.9. When the project began, China had no unified nationwide health statistics reporting system and no regular tabulations of data on health manpower, facilities, workloads, economics or effectiveness of public health programs. The National Center for Health Statistics lacked trained staff and equipment to achieve its objectives. In 1985, external technical assistance helped to plan and organize the unit, establish links with leading foreign institutions, develop a staff training plan and identify necessary computer and other equipment needed. During the project period, the number of professional staff reached 30, two thirds of whom received substantial training overseas. The Center has developed into a training institution since 1987. In addition, several universities introduced training for specialists in health statistics and computer science, thereby providing about 130 graduates to staff the national and provincial institutions involved in the processing of health statistics. A large and well housed computer system with database library, survey analysis capability, signal/image processing and nationwide networking was provided, together with appropriate commercial software. The center is now producing software for specific national statistical needs and for the operational needs of the line departments of the Ministry. Production of computerized national health statistics has been implemented in phases, initially, in 1986, using floppy disks mailed by provinces to the Center. By 1989, several provinces were able to transfer data electronically and the basic in-house Ministry network has now been completed.

5.10. Under the project, the Sichuan Institute of Materia Medica received overseas training for ten executive staff, external technical assistance, in-country training for 60 supporting research personnel, re-equipping with modern analytical facilities, revision of research methodology, clinical trials, and new buildings (from counterpart funding) for a library and several laboratories. The library has developed an impressive collection of Chinese and foreign texts and journals and at the same time initiated English language training for many of the staff of 400 technical personnel. Eight significant research projects were initially developed and five were successfully concluded. Many other studies have since commenced on the therapeutic efficacy of frequently prescribed and empirically effective herbs. The Institute has developed an extensive training program in modern analytical and clinical pharmacological methods for research workers of other Chinese traditional medicine institutes. It has also become the main reference center for native plant studies in China with extensive international connections.

6. Project Results

6.1. The project was very successful in achieving practically all of its basic objectives. As stated above, the original project targets were exceeded in many key areas, including the construction of hospitals, provision of essential equipment and materials, the training of rural doctors as well as the improvements in higher medical education. There was remarkable progress in the building of important national health institutions. The manpower study was completed in two provinces in 1988 and that provided valuable planning information. Improved management methods, in the context of project preparation and implementation, benefitted considerably the MOPH, provinces and counties. Notable improvements in the approaches to equipment requests and the planning of hospital facilities were evident in the later parts of the project. Many long- term agreements have been concluded between the major Chinese colleges and institutes included in the project and leading overseas centers. Major reforms were achieved in the key medical universities whose effects and academic exchanges have favorably influenced the curricula and teaching methods of other non-project medical colleges in China. The number of higher academic posts increased in all colleges.

6.2. Project Impact. The training of village doctors, the provision of equipment, and the improvements in management practices introduced under the project have significantly improved the quality and utilization of the health services in all project counties. Most rural hospitals have reported lower average lengths of stay for patients and a rise in the proportion of outpatient attendance. The availability of more adequate transport greatly strengthened field supervision and enabled more rapid life-saving emergency services to be provided for maternal, neonatal and other cases of acute illness. Utilization rates of lower level services have risen with a reduction in referral rates for higher level care. At provincial level, the quality of planning and supervision of rural health programs has improved as a result of the management training, and its impact has extended beyond the project counties and benefitted rural areas province-wide. The MOPH has reported that the response of the project provinces to the "one-third counties upgrading program" has been far better than that in non-project provinces, in terms of increased local interest and funding, better disease surveillance, efficiency in immunization and MCH activities and the prevention of chronic diseases. However, two issues have been identified for further attention by most counties: the improvement in the training of epidemic prevention station (EPS) staff and the strengthening of the county level management awareness of EPS and MCH staff in modern health education theory and practices.

6.3. Medical technology policy in China has benefitted greatly from analysis of cost-benefit relationships and of recurrent costs as they relate to the provision of advanced medical equipment under the project. However, despite the existence of stricter guidelines for requests by end users, China still lacks a national office of medical technology assessment. This is a serious weakness which is retarding improvements in the quality of care and cost containment efforts.

7. Project Sustainability and Replicability

7.1. There is little doubt that all project beneficiaries will have both the interest and ability to sustain the reforms introduced under the project. However, it is also clear that the rural health service units as well as the medical universities will have to do a better job of estimating and providing the necessary recurrent costs for expendables, spare parts and maintenance in the future if the modern equipment and procedures introduced under the project are to be continuously and effectively used. Provision for amortization and equipment replacement must also be made from the revenues accruing from its use, but care should be exercised by the county health bureaux to prevent over-use of tests and procedures solely to raise income and without clear clinical benefit. Regular maintenance of the new and renovated hospitals will be essential if they are to remain in good functional and hygienic condition; this implies the need for proper maintenance and for economic use of expendables.

7.2. Educational reforms in the 13 universities have progressed to the point where reversal to outdated didactic teaching is most unlikely to occur. But the reforms are not yet complete. The new emphasis on student self-learning requires that libraries be fully developed as learning resource centers. Future training of faculty will need to ensure that the attitudes and skills of younger staff are consistent with the new teaching theory and practice. There is some risk that the teaching of strategies for preventing diseases, including long-term care and rehabilitation, may decline in importance after the project has ended. This can be avoided if preventive medicine is emphasized in teaching by all the clinical disciplines, not only by departments of public health, and if sufficient program support funds are made available to maintain the essential community based experience for senior medical students. The subjects of mental health, geriatrics and child development still require further development by most of the colleges. The MOPH should consider the establishment of more National Centers at selected colleges to encourage research and enrichment of teaching in preventive and social medicine.

7.3. Improved financial management by the colleges, and possibly a change to global budgeting of colleges by the MOPH, will be necessary as the colleges absorb the full burden of operational costs. The rural counties may need to divert a proportion of their diagnostic and treatment revenues to support the important but non-revenue operating costs for the preventive program.

7.4. Replicability of many of the project inputs and methodology to the nation's rural health and higher medical education systems is feasible and the process has actually begun in rural health as well as in medical education. MOPH should analyze the costs and benefits of various components in collaboration with specialist line bureaux to identify critically important follow up actions, such as: a) review of the cost-effective aspects of the project that could modernize teaching in the provincial medical colleges; b) establishment of a national center for medical technology assessment; and c) strengthening of Foreign Loan Offices in the provinces to reinforce the improvements in rural health.

8. Association Performance

8.1. This project was the IDA's first experience working with the Chinese MOPH and it was an intensive learning exercise, for both parties, in identifying the components that matched the modernization objectives of the Government and that were also potentially replicable to the rest of the nation. The strength of the Bank Group's contribution lay in thorough preparation by a large team of Bank Group staff and expert consultants, supplemented by inputs of WHO and UNICEF. The 1982 health sector study clarified the dynamics of China's health system and its changing health needs. This information was supplemented by case studies in each project province and some medical universities. The IDA assisted the MOPH to establish efficient loan management departments for the project. These efforts were effective in ensuring an efficient administration for all future health projects.

8.2. The Association's missions provided important technical know-how. There were eight supervision missions with experts in many disciplines, such as computer science, technology assessment, institutional development, audio-visual production, hospital design, technical assistance management and equipment maintenance.

9. Borrower Performance

9.1. The Borrower's performance was excellent, especially because of well-organized and staffed loan management offices at the center as well as at local levels. Lack of familiarity with the Bank Group's management, financial, procurement and supervision requirements posed some problems in the beginning, but these were soon overcome as staff were trained. During the life of the project, the MOPH has adopted many of the lessons learned on project preparation, data presentation, reporting, facility design, equipment selection and procurement and project management in its regular practice.

10. Project Relationships

10.1. Relationships between the Bank, the MOPH, provincial governments, health bureaus and health institutions were cordial. Throughout the project, the effectiveness of post-mission meetings with the provincial authorities, the Minister or Vice Minister of Public Health, supported by appropriate line bureau staff, and UN agencies was noteworthy.

11. Consulting Services

11.1. The project depended heavily on the technical assistance provided by more than 200 foreign and many local experts. Some disciplines were new or poorly developed in China, e.g., health management and economics, clinical epidemiology, social medicine, medical psychology and health education.

12. Project Documentation and Data

12.1. Several background working papers were prepared by IDA staff on the health status and services of the four provinces. The Staff Appraisal Report provided satisfactory guidance for project implementation. The Development Credit Agreement was amended, in mid-1989, to reallocate the unspent credit balance from the technical assistance component and savings generated by SDR appreciation to cover unforeseen local costs of some rural counties, to add additional training for one province and to postpone the Closing Date for two years.

13. Project Monitoring

13.1. MOPH carried out the overall coordination of the project activities through its Foreign Loan Office (FLO), which is the successor of the World Bank Loan Office established in connection with this project. Although FLO initially suffered from the unfamiliarity of the Bank procedures, it gradually developed into a very efficient department of MOPH and was effective in monitoring the project's progress and coordinating different components of the project. Similarly, Loan Offices were also established in each of the other implementation units, like the universities and the provincial and county-level health agencies responsible for the implementation of different components of the project.

PART II: PROJECT REVIEW FROM THE BORROWER'S PERSPECTIVE

1. Comments on Part I

1.1 In PART I of the World Bank Project Completion Report, a brief introduction was given to the background of the project, its objectives, implementation plan, components, and goals expected to attain through the implementation of activities under each respective component. It has analyzed the implementation process, the achievements and experiences, the existing problems, and the tendencies of a general nature as observed in its implementation. In the Borrower's view, this is a good, comprehensive summary of the project.

1.2 The evaluation in PART I of the Project Completion Report has mirrored, in the main, the actual reality including the level of sophistication and utilization of equipment. In fact, the situation of over-sophistication and under-utilization of equipment did exist in the initial stage of project activities performed in certain county epidemic prevention stations (EPS). Professional staff at county EPSs in all project provinces were found unfamiliar with, and incapable of, handling these certain advanced monitoring and surveillance equipment. Therefore, the health bureaux of project provinces sponsored training courses with the hope to help them understand, in a shortest possible time, the way of its operation. The under-utilization of some equipment has thus been overcome leading to the attainment of the goals established for the project and to the fulfillment of the surveillance tasks assigned to them by the project. But due to the lack of experiences, a few project provinces (i.e. Ningxia) got some more advanced and sophisticated equipment which were not suitable for the EPSs. The provinces corrected this by assigning those equipment to the higher level institutions and providing the county EPSs with more suitable ones.

1.3 Compared to EPS, the problems of over-sophistication and under-utilization of equipment were not so terrible at hospitals, both at county- and township-levels. It has been found that the advanced equipment, as purchased, have enabled them to improve and strengthen the quality of their diagnostic and therapeutic services. Actually, through the strengthening and improvement of equipment, the hospitals both at county- and township-levels enhanced their capability in providing qualified services, hence, reduced the rate of referral.

1.4 The Bank report has stated that the input from the counterpart funds to capital construction surpassed the original planned figures. It indicated that government at various levels were determined firmly to remedy the lack of health service facilities caused by the past "Great Cultural Revolution" by increasing financial input from the counterpart funds on one hand; and on the other, it indicated the inappropriateness of

plan. Since the project preparation had not paid attention to the entire plan, the Government had to increase the counterpart fund for construction during the project implementation. The rising cost was another major factor causing increase in counterpart funds.

1.5 The irrational designing and inadequate quality in hospital construction, as seen in the project implementation, have aroused the attention of the Ministry of Public Health, and governments of the project provinces, who have respectively set up specific institutions to cope with it and adopted measures for a remedy. For instance, the Department of Planning and Finance under the Ministry of Public Health has set up an office specifically for the study of hospital construction design. The office is to take up the overall responsibility for the examination and verification of the conceptual design and blueprints of hospital construction with the aims to standardize the hospital design and construction, to ensure the functioning of hospital facilities to meet medical services' needs, and to improve quality of construction. Corresponding institutions and mechanism have been set up at all project provinces; and the system of examination and verification have been applied in the implementation on Health II and, even more effectively, in Health III projects[1].

1.6 Certain challenges and difficulties in organization and finance were encountered in the carrying out of chronic disease prevention and control at the county level, but these are problems over the whole nation. The Ministry of Public Health has become aware of it and has taken lead in the carrying out of control activities of the four target diseases in large municipalities such as Beijing and Tianjin where conditions are ripe as pilots.

1.7 At the initial stage of the project implementation, there was an issue of inadequate project operation and recurrent costs. This reflected the general tendency of putting more emphasis, when planning and financing health services, on one-time investment, including the physical facilities, but less attention on program activities and their operation and recurrent costs. The project provinces tried with every effort to re-adjust their plan and to find remedies. And, the Chinese Government and the World Bank decided, after discussion, to establish a disbursement category of "program support" to partly solve the issue of lack of operation and recurrent costs, and the shortage of these costs was overcome. The establishment of "program support" has played a supportive role in the implementation of the project at the later stage. It is particularly crucial to the successful completion of a number of sub-items of research arising in the course of the project implementation; and the Program Support is of help to construction of community training bases for medical universities.

---

[1]. Health I means the Rural Health and Medical Education Project (Cr. 1472-CHA), the subject of this PCR, Health II means the Rural Health and Preventive Medicine Project (Ln 2723/Cr. 1713-CHA, of January 1987), and Health III means the Integrated Regional Health Development Project (Cr. 2009-CHA, of September 1989).

However, its optimal solution depends on certain changes and re-adjustments of policy at the national level.

2. Evaluation of IDA's Performance

2.1 Health I project was the first project with foreign loans implemented through the cooperation of the World Bank and the Ministry of Public Health of China. The Bank officials have contributed fruitfully to the project in its course of preparation and evaluation as well as in the aspects of giving guidance and supervision in its implementation.

2.2 Most of the Bank officials and the consultants invited for the project were most competent, and many of them were familiar with the conditions of the China. Their instruction and guidance have greatly inspired the project managerial staff of this side.

2.3 During their stay in China, officials on the Bank missions have manifested themselves with a rigorous scientific working style, and with an experienced and managerial skill. Their admirable performance is an inseparable constituent part to the success of the project.

2.4 In the first three years since the implementation of the project, five missions were despatched by the World Bank for investigation and supervision, and more than three missions for supervision were sent in the following years. The missions had an important role to play in the supervision of the project implementation, particularly so for departments concerned that are responsible for the implementation of project with foreign loans for the first time. We hope the Bank would continue the effort of making such supervision.

3. Evaluation of Borrower's Own Performance

3.1 The Health I project is the first project undertaken by MOPH with large amount of loans from external sources. The project covers the sensitive issues in areas of rural health development, medical education reforms, and the raising of capability at the central level in managerial activities and policy studies. However, project managerial staff at all levels of this country are inadequate in their experience and are unfamiliar with the managerial procedures. As a remedy, foreign loan offices were set up and properly staffed respectively under MOPH and under each of the project provinces and counties.

3.2 In order to play its role to the maximum, the Foreign Loan Office of MOPH serves as a department directly under the Ministry and has due authority in the management and supervision of project activities performed by project provinces. While paying attention to the development of hardware facilities, it stressed much on activities relating to technical assistance and manpower development. It is through the visits of consultants and training of its working staff that the managerial capability of the Office has smoothly undertaken the increased workload arising from new health projects, including Health II, III, the Infectious

and Endemic Disease Control Project (Cr. 2317-CHA of December 1991) and others under preparation, with a few additional new recruits.

3.3 Another causative factor of the smooth implementation of the project was the proper handling of working relationship in all departments concerned. They include the departments of MOPH and other ministries, commissions at the central level, the State Planning Commission, the Ministry of Finance, and the Ministry of Foreign Economic Relations and Trade. In health sector, the concerned departments were: the Foreign Loan Office of MOPH and other departments under the Ministry, including the Department of Medical Education, the Department of Medical Administration, and the Department of Planning and Finance; and the governments and health bureaux of project provinces. The project objectives were unlikely to attain without the cooperation and support of all departments listed above. It was, therefore, the coordination role played by the MOPH and its Foreign Loan Office that facilitated the coordinated efforts of all departments and thus ensured the success of the project.

3.4 Foreign loan offices at the provincial level have played a prominent role in the implementation of project mainly in the management, supervision and giving guidance to activities performed by the foreign loan offices at the county-level. They have been proved competent not only in their managerial capability over the project counties, but also in their guidance to the routine health activities of non-project counties of the province, particularly in their dissemination of the modern managerial procedure as learnt from the World Bank. Health services as a whole in all counties of the provinces have been strengthened. Take the disease surveillance activities, for instance. With the establishment of the project with foreign loans, the provincial network of disease surveillance has taken shape and perfected. It helps to further improve the accuracy of data collected and further lower the drop-out rate. Thanks to the efforts and work performance of the foreign loan offices at the provincial level, health and other services of the project counties have become, in general, model and exemplary counties of the province.

4. Project Relationship

4.1 In the course of implementation of the project, there has been a good cooperative relationship between this side and the World Bank, and between MOPH and its affiliated Foreign Loan Office and the World Bank is particularly fruitful. There has been an attitude of friendly cooperation and mutual support prevailing in the past seven years of project implementation between China and the World Bank.

4.2 The World Bank has rendered important support and guidance relating to hard- and soft-ware facilities to the MOPH and its Foreign Loan Office by despatching its top-ranking consultants to this side. Errors and difficulties in implementation activities have been properly handled after reaching a consensus through consultation. In the course of implementation, both sides tried, with every efforts, to exchange views and opinions in order to attain common understanding and agreement for solution of issues.

4.3 The fruitful cooperation between this side and the World Bank has found its expression also in the close communication by the electronic mail between the two sides. The Foreign Loan Office of MOPH has maintained a very frequent contact with the World Bank, which ensures a prompt feedback to all information and proposals provided, and both sides are well informed of the latest progress of the implementation activities of the project.

5. Evaluation of Co-financiers' Performance

5.1 This project received, from its preparation stage till its completion, valuable help and support from all departments concerned within the country and all international organizations from outside, a clear manifestation of their solicitude for the project. Of particularly worthy of mention is the efforts extended by the World Health Organization (WHO) in the preparation stage of the project. WHO played an important promotional role in the establishment of the first health project in this country with loans from the World Bank. The Chinese side is deeply impressed with the efforts extended by all international organizations concerned towards this project.

5.2 Due contributions have been made towards this project by the State Planning Commission, the Ministry of Finance, the governments at provincial and county levels, and local health bureaux of project provinces and counties. The guidance and input of the State Planning Commission and Ministry of Finance is a good manifestation of the importance attached to and supports toward the health
services of the country, as well as the strong determination of the state for the realization of China's modernization. The active inputs (in terms of manpower, material and finance) of provincial and county governments is a clear indication of their confidence in the success of the project. The endeavor of all staff of health bureaux and all professionals at the grassroots have been proved fruitful constituting a basic guarantee to the successful fulfillment of the project.

6. Comments on Part III Tables

6.1 It is confirmed that the factual information provided in Part III are adequate and accurate.

PART III

Table 1 - Related Bank Loans and IDA Credits

Loan/Credit Title	Purpose	Year of Approval	Status
Rural Health & Preventive Medicine Project	Improve access and quality of rural health, immunization, drug quality and chronic and communicable diseases care.	June 1986	All components satisfactorily completed. Vaccine plants under construction.
Integrated Regional Health Devel. Project	Introduce new approaches to health policy/planning of integrated health to improve health services.	April 1989	Satisfactory progress.
Infectious & Endemic Disease Control Project	Support national program to control TB and schistosomiasis and to strengthen related institutions.	December 1991	Implementation started satisfactorily.

Table 2 - Project Timetable

Item	Date Planned	Actual Date
Identification		December 1, 1982
Preparation		June 1983
Appraisal		September 1983
Negotiations		March 1984
Board approval		May 8, 1984
Credit Signing		June 1, 1984
Credit Effectiveness	September 4, 1984	August 29, 1984
Project Completion	June 30, 1989	December 31, 1991
Credit Closing	December 31, 1989	December 31, 1991

Table 3: Cumulative Estimated and Actual Disbursements
(US$ million)

Bank FY	Appraisal Estimates	Estimated Cumulative	Actual Disbursement	Cumulative Actual Disbursement	Actal as % of Cumulative	Actual as % of Total
1985						
1st	--	--	1.90	1.90	--	2%
2nd	15.5	15.5	4.61	6.51	42%	7%
1986						
1st	15.5	31.0	18.84	25.35	82%	26%
2nd	13.0	44.0	15.26	40.61	92%	42%
1987						
1st	13.0	57.0	7.46	48.07	84%	50%
2nd	9.5	66.5	8.62	56.69	85%	59%
1988						
1st	9.5	76.0	3.66	60.35	79%	62%
2nd	3.0	79.0	13.67	74.02	94%	77%
1989						
1st	3.0	82.0	1.32	75.34	92%	78%
2nd	1.5	83.5	1.16	76.5	92%	79%
1990						
1st	1.5	85.0	1.33	77.83	92%	81%
2nd	--	85.0	4.49	82.32	97%	85%
1991						
1st	--	85.0	3.49	85.81	101%	89%
2nd	--	85.0	2.85	88.66	104%	92%
1992						
1st	--	85.0	5.85	94.51	111%	98%
2nd	--	85.0	2.16	96.67a/	114%	100%

a/ The actual amount disbursed increased in terms of US$ due to devaluation US$ vs. SDR during implementation.

Source: MIS Disbursement Information

Table 4a. Project Implementation in Provinces

	Shandong			Heilongjiang			Sichuan			Ningxia		
Rural Counties:	Planned	Actual	Remarks	Planned	Actual	Remarks	Planned	Actual	Remarks	Planned	Actual	Remarks
Total construction (m)	91400	164637	(1)	63874.5	152494		190486	320087		37202	50455	
Hospital beds/1000	1.01	1.18		1.46	1.66		1.18	1.26	(6)	1.10	1.18	
Equipment provided (US $1000)	7900	8829	(2)	7000	7768		10605	11792		3219	3821.00	
Total county techn.pers./1000	1.41	1.55		1.77	2.12			1.49		1.70	1.78	
Chief & attending physn./1000	0.0004	0.021		0.0034	0.022			0.29			0.32	
Village doctors/1000	1.54	1.61		0.7	0.84			1.29		0.9	0.97	
Vill. Drs. & Jun.med. trained %	15	47		3906	10874	(5)	50	72.01		80	81.13	
Total tech. persons trained	7008	19414	(3)	8578	20771	(5)	13399	23579		966	1896	
	(4581)	(9738)	(4)									

Remarks:

1. The number of 91400 m is composed of 290 m contructed for the province level.
2. The diference between Planned and Actual is caused by the exchange rate.
3. In this line, the number of village doctors trained is included.
4. In this line, the number of village doctors trained is not included.
5. Person times
6. "Hospital beds/1000" of 1.18 under the column of "Planned" in Sichuan is the number in 1984.

TABLE 5

A. PROJECT COSTS (US DOLLARS 1,000)

Category	Appraisal Estimate		Actual	
	Local Costs	Foreign Costs	Local Costs	Foreign Costs
Construction	140,986		245,408	
Equipmnt, Vehicles	497,769	65,436	100,539	74,412
Training	10,168	9,221	5,824	9,054
Tech. assistance	1,999	6,974	1,809	3,215
Personnel Recruitment	4,929		22,279	

B. PROJECT FINANCING (US $ 1,000)

Source of Funds	Planned	Actual
IDA		
A. Rural Health	28,800	37,406
B. Medical Education	36,000	46,000
C. Strengthening of Management evaluation research	4,800	6,482
D. Project Implement.	2,700	6,694
E. Contingencies	12,700	
SUBTOTAL 1/	85,000	96,582
DOMESTIC		
A. Central Govt.	178,400	124,663
B. Provincial Govt.	14,300	82,105
C. County Govt.	38,400	
D. Sub-County sources	6,700	
SUBTOTAL 2/	237,800	206,768
TOTAL FINANCING:	322,800	303,350

1/ IDA share increased in terms of US dollars as SDR appreciated

2/ Fincancial reorganization in China changed the shares of different parties.

TABLE 4b: Project Implementation - Universities' Enrollments and Faculty Staff

Universities	Enrollment				Staffing					
	Undergraduate (number)		Graduate (number)		Faculty Staff posis. total		Faculty Staff Prof. & Assoc.		Faculty Staff Lectr. & Assist.	
	Before Project (1983)	After Project (1991)	Before Project (1983)	After Project (1991)	Before Project (1983)	After Project (1991)	Before Project (1983)	After Project (1991)	Before Project (1983)	After Project (1991)
Beijing College of TCM	240	258	24	316	261	434	47	145	234	289
Beijing Medical University	426	630	130	267	529	1086	281	359	248	727
Peking Union Medical University							121			
China Medical University	536	435	164	184	956	969		92	266	377
Guangzhou College of TCM					383	785	35	151	348	634
Hunan Medical University	248	630	51	125		916	138	283	156	508
Norman Bethune Medical Univer	496	630	13	130		919	281	443	154	476
Shanghai Medical University	400	566	78	241		878	310	575	154	603
Shandong Medical University	353	516	40	96	572	753	87	215	156	538
West China Medical University	342	610	80	165	1224	1012	160	291	160	720
Tongji Medical University	473	600	63	202		859	257	293	158	620
Xian Medical University	240	540	37	82		1104		314	168	790
Sun Yatsen Univ. of Med. Sc.	400	470	62	183		650	152	189	179	479
Total	4154	5885	742	1991	3925	10365	1869	3350	2381	6761

TABLE 6. PROJECT RESULTS

	Shandong			Heilongjiang			Ningxia			Sichuan		
	Before Project	After Project	Remarks	Before Project	After Project	Remarks	Before Project	After Project	Remarks	Before Project	After Project	Remarks
Infant mortality rate	21.65	19.67		35.53	23.21		45.50	34.41		42.09	31.34	
Maternal mortality rate	0.05	0.04		0.06	0.02		0.11	0.09		0.12	0.06	
Antenatal exam. rate	62.66	85.38		68.90	97.30		54.51	84.75		61.95	75.05	
Incidence infectious disease	339.28	127.76		243.90	142.14		490.81	238.14		436.64	351.41	
Incidence TB	338.68	163.48		528.54	445.33		1155.80	567.70		743.24	531.44	
Incidence infant pneumonia	4.77	4.24		6.88	6.71		30.38	5.68		4.71	3.17	
Incidence infant diarrhoea	16.59	15.13		7.26	6.99		56.49	11.96		11.29	6.66	
4-vaccine rate children	89.05	97.56		88.56	97.73		91.79	97.26		74.53	93.58	
Hospital occupancy rate	38.21	59.04		56.45	57.03		69.70	77.61		61.33	60.96	
Referral to county rate	0.10	0.06		0.10	0.03		0.14	0.04		0.01	0.01	
Average length hosp. stay	7.55	8.74		7.43	6.18		12.24	10.56		7.09	7.22	
Health education staff nos.	243.00	330.00		56.00	190.00		88.00	105.00		745.00	1109.00	
% health educ. in primary school	0.81	70.21		12.32	80.99		2.05	52.42		5.81	59.74	
% health educ. in secondary sch	16.16	82.95		3.22	80.40		12.84	43.90		7.02	80.18	

Comments on Table 6 (results) Selected positive indicators

1. Substantial falls in IMR and MMR, following improvements in MCH care.
   The improvement was less in Shandong, where pre-project IMR and MMR were already low.
2. All provinces report large reductions in communicable diseases.
3. Health education programs have been considerably developed.
4. Immunization of school children has reached almost 100% coverage.

Table 7 - Status of Covenants

Covenant	Subject	Deadline	Status
Credit Agreement			
Section 3.02	Borrower to pass part of Credit to local Entities under terms satisfactory to IDA/GOC	N.A.	Fulfilled
Section 3.03	Employ consultants with terms/qualifications satisfactory to IDA	N.A	Fulfilled
Section 3.06	(a) Carry out health manpower study;	6/30/86	Completed in June 1988
	(b) furnish report for IDA's comments	--	Fulfilled
Section 3.09	Maintain MOPH Loan Office with appropriate staffing	--	Fulfilled
Section 4.01	Submit audited accounts	Each 6/30	Fulfilled
Project Agreement			
Section 2.01 (a)	Each Local Entity to provide adequate funds to implement its part.	--	Fulfilled
Section 2.08	Each Local Entity to maintain a Loan Office throughout project implementation	---	Fulfilled

Table 8 - Bank Group Staff Input
(Staff weeks)

Stage of Project Cycle	Planned	Actual
Preappraisal		80.2
Appraisal		62.2
Negotiations		28.0
Supervision		124.7
Total		295.1

Table 9 - Bank Group Missions

Project Cycle	Month/ Year	No of Persons	Specialization[1]	Performance Rating
Reconnaissance	3/82	4	PH, EP, EC	-
Identification	9/82	5	EC, PH, EP HE, PE	-
Preparation	1/83	4	EC, ME, PH	-
Preparation	3/83	2	PH	-
Preparation	4/83	2	EC, ME	-
Preparation	6/83	3	PH, FM	-
Appraisal	9/83	7	EC, PH, FM, AR, ME	-
Post-Appraisal	2/84	3	EC, PH	-
Supervision	7/84	3	EC, PH, ME	1
Supervision	3/85	2	PH, EC	1
Supervision	8/85	3	PH, PR	NA
Supervision	5/86	7	EC, HE, PH, ME	1
Supervision	10/86	1	FM	1
Supervision	12/86	3	FM, EC, PH	1
Supervision	3/87	3	PH	1
Supervision	11/87	1	FM	1
Supervision	9/88	6	FM, CM, PH, ME	1
Supervision	4/90	1	FM	1

[1] Specialization:

AR - Architect
CM - Computer Specialist
EC - Economist
EP - Epidemiologist
FM - Finance & Management
HE - Health Economist
ME - Medical Educator
PE - Population Economist
PH - Public Health Specialist
PR - Pharmacist

THE WORLD BANK / IFC / MIGA

OFFICE MEMORANDUM

DATE: February 9, 1993

FEB 17 1993

TO: Mr. Hans-Eberhard Kopp, Director, OED

THROUGH: Mr. Shahid Javed Burki, Director EA2

FROM: Zafer Ecevit, EA2EH

EXTENSION: 84072

SUBJECT: CHINA: Rural Health and Medical Education Project (Credit 1472-CHA)
Project Completion Report

1. Attached please find a final draft Project Completion Report (original plus three copies) for the China Rural Health and Medical Education Project. The project was closed on December 31, 1991 and fully disbursed on April 24, 1992.

2. Parts I and III of the attached report were drafted by EA2EH. The draft was reviewed within the Department and by the Legal and Loan Departments, and was found satisfactory. Part II was prepared by the Foreign Loan Office under the Ministry of Public Health. The draft was cleared and forwarded to the Department by the Borrower (Ministry of Public Health). Part II has been incorporated into the main report unedited. The Task Manager for the project is Mr. Jagadish Upadhyay.

3. Borrower agencies and co-financiers to whom the final PCR should be sent include:

Ministry of Finance (borrower)
Foreign Loan Office, MOPH (national implementing agency)
Provincial Project Offices of Shandong, Heilongjilang, Ningxia, Sichuan (local implementing agencies)

Attachments

cc: Messrs./Mmes. Henriod (EAPVP); Kimura (EA2DR); Pearce (EA2CO); Boehm, Hohnen (EA2EH); Koch-Weser (ASTES); Manley (LEGEA) Morris (LOAAS); Measham (PHRHN); van der Lugt, Stott, Hou (EA2CH)

EA2EH Division Files
Asia Information Center

JUpadhyay:irh