

Document of
The World Bank

Report No: ICR2450

IMPLEMENTATION COMPLETION AND RESULTS REPORT
(IBRD-48630 TF-58298)

ON A

LOAN

IN THE AMOUNT OF US\$25 MILLION

AND A

DFID TRUST FUND GRANT

IN THE AMOUNT OF GBP£13,542,429

TO THE

PEOPLE'S REPUBLIC OF CHINA

FOR A

WESTERN PROVINCES RURAL WATER, SANITATION AND
HYGIENCE PROMOTION PROJECT

September 30, 2013

China and Mongolia Sustainable Development Unit
Sustainable Development Department
East Asia and Pacific Region

CURRENCY EQUIVELANTS

Currency Unit = Renminbi Yuan (RMB)
US\$ 1.00 = RMB 6.2 (as at March 29, 2013)

FISCAL YEAR
January 1 to December 31

ABBREVIATIONS AND ACRONYMS

AWP	Annual Work Plan
CAP	Country Assistance Plan (of DfID)
CBA	Cost Benefit Analysis
CDC	Communicable Disease Control
CDRB	County Development and Reform Bureau
CPMO	County Project Management Office
CPS	Country Partnership Strategy
DfID	Department for International Development (of the U.K.)
EA	Environmental Assessment
E(I)RR	Economic (Internal) Rate of Return
EMP	Environmental Management Plan
FM(S)	Financial Management (System)
FYP	Five Year Plan
GAAP	Governance and Anti-corruption Plans
GoC	Government of China
HEI	Health Education Institute
HH	Household
HP	Hygiene Promotion
HSRP	Health Sector Reform Program
HWWS	Hand Washing With Soap
ICB	International Competitive Bidding
II	Intermediate Indicator
INT	Integrity Vice Presidency of the World Bank
ISDS	Integrated Safeguard Data Sheet
KASH	Knowledge and Advocacy for Sanitation and Hygiene TA Project
KPIs	Key Performance Indicators
MDG	Millennium Development Goals
M&E	Monitoring & Evaluation
MES	Monitoring and Evaluation System
MIS	Management Information System
MoE	Ministry of Education
MoF	Ministry of Finance
MoH	Ministry of Health
MOM	Management, Operations and Maintenance
MOU	Memorandum of Understanding
MTR	Mid-Term Review
MWR	Ministry of Water Resources
NCB	National Competitive Bidding
NDRC	National Development and Reform Commission
NGO	Non-Governmental Organization
NPHCCO	National Patriotic Health Campaign Committee Office

NURISIAP	National Urban-Rural Integrated Sanitation Improvement Action Plan
PAD	Project Appraisal Document
PAO	Poverty Alleviation Office
PDO	Project Development Objective
PDRC	Provincial Development and Reform Commission
PFB	Provincial Finance Bureau
PHCCO	Patriotic Health Campaign Committee Office
PLGs	Project Leading Groups
POM	Project Operations Manual
PPMO	Provincial Project Management Office
PPR	Post Procurement Review
PWRB	Provincial Water Resources Bureau
RP	Resettlement Plan
RPF	Resettlement Policy Framework
RPM	Regional Procurement Manager
RWSSHP	Rural Water Supply, Sanitation and Hygiene Promotion
SA	Social Assessment
Sha	Shaanxi Province
Sic	Sichuan Province
SLHW	School Latrines and Handwashing Facilities Sichuan Water Comprehensive
SWCDCC	Development Consulting Company
TA	Technical Assistance
U.K.	United Kingdom
UNICEF	United Nations Fund For Children
WASH	Water, Sanitation and Hygiene
WCB	Water Conversancy Bureau
WPRWSSHP	Western Provinces Rural Water Supply, Sanitation & Hygiene Promotion
WRB	Water Resources Bureau
WRD	Water Resources Department
WTP	Willingness To Pay

Vice President:	Mr. Axel van Trotsenburg, EAP
Country Director:	Mr. Klaus Rohland, EACCF
Sector Manager:	Mr. Mark Lundell, EASCS
Project Team Leader:	Mr. Sing Cho, EASCS
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CHINA

Western Provinces Rural Water Supply, Sanitation and Hygiene Promotion Project

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Maps: IBRD 35312, IBRD 35313

A. Basic Information			
Country:	China	Project Name:	Western Provinces Rural Water Supply, Sanitation and Hygiene Promotion Project
Project ID:	P095315	L/C/TF Number(s):	IBRD-48630,TF-58298
ICR Date:	09/27/2013	ICR Type:	Core ICR
Lending Instrument:	SIL	Borrower:	PEOPLE'S REPUBLIC OF CHINA
Original Total Commitment:	USD 25.00M	Disbursed Amount:	USD 25.00M
Revised Amount:	USD 25.00M		
Environmental Category: B			
Implementing Agencies: Sichuan Provincial Development and Reform Commission (PDRC) Shaanxi Provincial DRC and Shaanxi Foreign Loan Support PMO Sichuan Rural Irrigation and Water Conservancy Bureau (RI&WCB)			
Cofinanciers and Other External Partners: DFID United Nations International Childrens' Education Fund (UNICEF)			

B. Key Dates				
Process	Date	Process	Original Date	Revised / Actual Date(s)
Concept Review:	08/30/2005	Effectiveness:	12/20/2007	12/20/2007
Appraisal:	12/04/2006	Restructuring(s):		05/12/2012 09/27/2012
Approval:	06/26/2007	Mid-term Review:	06/07/2010	06/07/2010
		Closing:	09/30/2012	03/29/2013

C. Ratings Summary			
C.1 Performance Rating by ICR			
Outcomes:	Moderately Unsatisfactory		
Risk to Development Outcome:	Substantial		
Bank Performance:	Moderately Unsatisfactory		
Borrower Performance:	Moderately Unsatisfactory		
C.2 Detailed Ratings of Bank and Borrower Performance (by ICR)			
Bank	Ratings	Borrower	Ratings
Quality at Entry:	Moderately	Government:	Moderately

	Unsatisfactory		Unsatisfactory
Quality of Supervision:	Moderately Satisfactory	Implementing Agency/Agencies:	Moderately Unsatisfactory
Overall Bank Performance:	Moderately Unsatisfactory	Overall Borrower Performance:	Moderately Unsatisfactory

C.3 Quality at Entry and Implementation Performance Indicators

Implementation Performance	Indicators	QAG Assessments (if any)	Rating
Potential Problem Project at any time (Yes/No):	No	Quality at Entry (QEA):	None
Problem Project at any time (Yes/No):	Yes	Quality of Supervision (QSA):	None
DO rating before Closing/Inactive status:	Moderately Unsatisfactory		

D. Sector and Theme Codes

	Original	Actual
Sector Code (as % of total Bank financing)		
Other social services	5	2
Sanitation	27	24
Sub-national government administration	5	4
Water supply	63	70
Theme Code (as % of total Bank financing)		
Other human development	33	33
Participation and civic engagement	17	17
Pollution management and environmental health	17	17
Rural services and infrastructure	33	33

E. Bank Staff

Positions	At ICR	At Approval
Vice President:	Axel van Trotsenburg	James W. Adams
Country Director:	Klaus Rohland	David R. Dollar
Sector Manager:	Mark R. Lundell	Keshav Varma
Project Team Leader:	Sing Cho	Thomas L. Zearley
ICR Team Leader:	Sing Cho	
ICR Primary Author:	Geoffrey Spencer	

F. Results Framework Analysis

Project Development Objectives (from Project Appraisal Document)

The project development objective is to increase access of poor participating communities to sustainable and equitable water supply, sanitation and hygiene promotion services by adopting an integrated and participatory approach which could be replicated in other provinces.

Revised Project Development Objectives (as approved by original approving authority)

There was no change to the PDO during project implementation.

(a) PDO Indicator(s)

Indicator	Baseline Value	Original Target Values (from approval documents)	Formally Revised Target Values	Actual Value Achieved at Completion or Target Years
Indicator 1 :	Increase in number of people with access to safe water supply			
Value quantitative or Qualitative)	0	Sha 326,716 Sic 444,393 ----- Total 771,109	Sha 326,716 Sic 258,000 ----- Total: 584,716	Sha 326,726 Sic 262,737 ----- Total 598,453
Date achieved	12/20/2007	12/20/2007	05/12/2012	03/29/2013
Comments (incl. % achievement)	Substantially Achieved. As part of restructuring, Shaanxi maintained the target beneficiaries and achieved 100% of the PAD target. Sichuan achieved slightly more than the revised target (102%), but only 59% of the PAD target.			
Indicator 2 :	Increase in percentage of people in project communities and schools who have adopted safe hygiene and sanitation behaviors			
Value quantitative or Qualitative)	0	0%	Sha 70% Sic 60%	Sha 4.4%/0%/84% Sic 7.8%/14%/93%
Date achieved	12/20/2007	12/20/2007	05/12/2012	03/29/2013
Comments (incl. % achievement)	Not Achieved. Because of inadequately available data and attribution issues, the related indicators was replaced with two behavior based indicators, that measured HWWS in communities & schools, and safe disposal of young children's faeces.			
Indicator 3 :	Increase in number of schools with access to safe water supply			
Value quantitative or Qualitative)	0	Sha 297 Sic 151 ----- Total 448	Sha 41 Sic 56 ----- Total 97	Sha 32 Sic 33 ----- Total 65
Date achieved	12/20/2007	12/20/2007	05/12/2012	03/29/2013
Comments (incl. % achievement)	Not Achieved. The output targets were significantly reduced at restructuring (-78%) and achievement was only 15% of the original target and only 67% of the revised target.			
Indicator 4 :	Increase in number of people with access to improved sanitation services			
Value quantitative or Qualitative)	0	Sha 326,716 Sic 337,289 -----	Sha 78,705 Sic 121,800 -----	Sha 79,220 Sic 145,400 -----

		Total 664,005	Total 200,505	Total 224,620
Date achieved	12/20/2007	12/20/2007	05/12/2012	03/29/2013
Comments (incl. % achievement)	Partially Achieved. Both provinces slightly exceeded the revised targets with an overall achievement of 112%. However, relative to the PAD target, the achievement was only 34%.			
Indicator 5 :	Increase in number of schools with access to improved sanitation services			
Value quantitative or Qualitative)	0	Sha 297 Sic 195 ----- Total 492	Sha 41 Sic 57 ----- Total 98	Sha 32 Sic 56 ----- Total 88
Date achieved	12/20/2007	12/20/2007	05/12/2012	03/29/2013
Comments (incl. % achievement)	Not Achieved. The outputs here are very low, but particularly in Sichuan. Overall achievement was only 33% of revised target and only 6.5% of PAD target.			
Indicator 6 :	Percentage of water supply schemes operating sustainably after one year			
Value quantitative or Qualitative)	0	Sha 100% Sic 100%	Sha 100% Sic 100%	Sha 90% Sic 73%
Date achieved	12/20/2007	12/20/2007	05/12/2012	03/29/2013
Comments (incl. % achievement)	Not Achieved. Some water supply schemes were finished late and at project closure were not been operating for a full year, so the data presented in the borrower's ICRs are unreliable. Actual water consumption is much lower than the design capacity.			
Indicator 7 :	Evidence of the adoption of the 3-in-1 model and replication in domestic programs.			
Value quantitative or Qualitative)	0		Indicator dropped at restructuring and no data was collected. Too difficult to measure during project implementation.	
Date achieved	12/20/2007		05/12/2012	
Comments (incl. % achievement)	Partially Achieved. Specific indicators were dropped at restructuring because of lack of attribution capability. Both provinces adopted the 3 in1 model in their sectoral plans. KASH outcome resulted in the adoption of policies/planning at national level.			

(b) Intermediate Outcome Indicator(s)

Indicator	Baseline Value	Original Target Values (from approval documents)	Formally Revised Target Values	Actual Value Achieved at Completion or Target Years
Indicator 1 :	Increase in percentage of households using safe water supply in participating			

	communities			
Value (quantitative or Qualitative)	0	100%	100%	Shan 100% Sic 100%
Date achieved	12/20/2007	12/20/2007	05/12/2012	03/29/2013
Comments (incl. % achievement)	Partially Achieved. Data provided by provinces is unreliable. Bank assessment of the CDC water quality testing shows problems with on-going water testing.			
Indicator 2 :	Average time saved by households in obtaining safe drinking water			
Value (quantitative or Qualitative)	no data	no data	no data	Shan: 35 mins. Sic: No data
Date achieved	12/20/2007	12/20/2007	05/12/2012	03/29/2013
Comments (incl. % achievement)	Partially Achieved. No data from Sichuan, however, as confirmed during the ICR mission, a lot of time as been saved.			
Indicator 3 :	Percentage of water supply systems meeting the tariff covenant after the first year of operations			
Value (quantitative or Qualitative)	0	100%	100%	Sha 90% Sic 77%
Date achieved	12/20/2007	12/20/2007	05/12/2012	03/29/2013
Comments (incl. % achievement)	Partially Achieved. Because of the late construction of some schemes, the end of the first year of operation will occur beyond the closing date. Data independently compiled (annex 3) on sample of schemes confirms achievements.			
Indicator 4 :	Percentage of water supply systems meeting its full design supply capacity two years after construction completion.			
Value (quantitative or Qualitative)	0	45%	45%	45%
Date achieved	12/20/2007	12/20/2007	05/12/2012	03/29/2013
Comments (incl. % achievement)	Partially Achieved. Large number of schemes not operation for two years. Data (annex 3) shows schemes operating at 60% of capacity. Design was based on registered population. Urbanization means a lot of people are living and working elsewhere.			
Indicator 5 :	Percentage of Water Quality Certification of water supply scheme done on time.			
Value (quantitative or Qualitative)	0	100%	100%	Sha 100% Sic 100%
Date achieved	12/20/2007	12/20/2007	05/12/2012	03/29/2013
Comments (incl. % achievement)	Achieved. Water testing is a mandatory requirement of the final assessment and testing (FAT) for schemes before handover. However, there were some problems identified with on-going water testing for schemes handed over. (See section 2.4 and 3.2).			
Indicator 6 :	Increase in percentage of households with improved latrines			
Value (quantitative	0	Sha 100% Sic 70%	Sha 21% Sic 50%	Sha 21% Sic 23%

or Qualitative)				
Date achieved	12/20/2007	12/20/2007	05/12/2012	03/29/2013
Comments (incl. % achievement)	Partially Achieved. At the restructuring there was a significant reduction in the targets for HH latrines in both provinces and this resulted in proportionate reduction in coverage.			
Indicator 7 :	Increase in percentage of schools in project areas with improved (i) latrines, hand washing facilities, soak-away systems and (ii) garbage drop-off points.			
Value (quantitative or Qualitative)	0	No Data in PAD	Sha 33% Sic 50%	Sha 26%latrines & 26% garbage drop off points Sic 30 % latrines & 13% garbage drop off points
Date achieved	12/20/2007	12/20/2007	05/12/2012	03/29/2013
Comments (incl. % achievement)	Partially Achieved. The outputs targets were reduced significantly at restructuring, but the actual achievement was even lower than the revised targets (see annex 2).			
Indicator 8 :	Number of community garbage drop-off points and public latrines sustainably managed by communities			
Value (quantitative or Qualitative)	0	Drop off pts Sha 719 Sic 452 ----- Total 1171 Public Latrines Sha 126 Sic 36 ----- Total 162	Drop off pts Sha 671 Sic 330 ----- Total 1001 Public Latrines Sha 178 Sic 8 ----- Total 186	Drop off pts Sha 654 Sic 179 ----- Total 833 Public Latrines Sha 193 Sic 8 ----- Total 201
Date achieved	12/20/2007	12/20/2007	05/12/2012	03/29/2013
Comments (incl. % achievement)	Partially Achieved. (i) Garbage points 83% of revised/40% of original; (ii) Public latrines, 113% of revised/ 130% of original. Public latrines in Shaanxi increased because of increased demand by poorer villages as a cheaper alternative.			
Indicator 9 :	Increase in percentage of primary and secondary target groups demonstrating key hygiene behaviors			
Value (quantitative or Qualitative)	0	Sha 80% Sic 80%	Dropped at restructuring	0
Date achieved	12/20/2007	12/20/2007	05/12/2012	03/29/2013
Comments (incl. % achievement)	Dropped. Too difficult measure the primary and secondary target groups. This indicator was replaced with II 24 that was a lot simpler because it just measured a sample of village households.			
Indicator 10 :	Annual reduction in cases of diarrhea in children under 5 years old over project period			
Value	0	0	Dropped at	0

(quantitative or Qualitative)			Restructuring	
Date achieved	12/20/2007	12/20/2007	05/12/2012	03/29/2013
Comments (incl. % achievement)	Dropped. Too many other variables to get a good measure of project specific impacts.			
Indicator 11 :	Percentage of participating communities that have received all three hygiene interventions (government channel, mass media and person-to –person contact.			
Value (quantitative or Qualitative)	0	0	0	0
Date achieved	12/20/2007	12/20/2007	05/12/2012	03/29/2013
Comments (incl. % achievement)	Dropped. Change of scope of the HP component. Up until the restructuring no data had been collected.			
Indicator 12 :	Percentage of participating school students meeting hygiene knowledge			
Value (quantitative or Qualitative)	0	0	0	0
Date achieved	12/20/2007	12/20/2007	05/12/2012	03/29/2013
Comments (incl. % achievement)	Dropped. Reduction in scope of HP component. For school students the focus was limited to measuring l students HWWS and indicator 25 was added.			
Indicator 13 :	Increase in percentage of household disposal of the Faeces of young child in a safe manner			
Value (quantitative or Qualitative)	0	Added at 1st restructuring	Sha 70% Sic 80%	Sha 84% Sic 93%
Date achieved	05/12/2012	05/12/2012	05/12/2012	03/29/2013
Comments (incl. % achievement)	Substantially Achieved. The achievement was very good and exceeded the restructured targets in both provinces. The results clearly show that the HP messages reached mothers who did change their behavior with respect in the safe disposal of infant faeces.			
Indicator 14 :	Increase in percentages of schools HWWS groups			
Value (quantitative or Qualitative)	0	Added at 1st restructuring	Sha 30% Sic 45%	Sha 0% Sic 14%
Date achieved	05/12/2012	05/12/2012	05/12/2012	03/29/2013
Comments (incl. % achievement)	Not Achieved. Results relative to control groups show HP effort had little or no effect on changing behavior of students HWWS.			
Indicator 15 :	Proportion of vulnerable households receiving and using safe water supply service			
Value (quantitative or Qualitative)	0	100% Both Provinces	100%	100%
Date achieved	12/20/2007	12/20/2007	05/12/2012	03/29/2013
Comments	Achieved. Targeting of vulnerable/poor HHs was strength of project and despite			

(incl. % achievement)	reductions in scale, the proportion of vulnerable HHs benefiting remained the same. A total of 17,108 poor HHs (75,116 poor people) benefited.			
Indicator 16 :	Proportion of vulnerable households receiving and using improved sanitation services			
Value (quantitative or Qualitative)	0	100% both Provinces	Sha 100% Sic 100%	Sha 100% Sic 100%
Date achieved	12/20/2007	12/20/2007	05/12/2012	03/29/2013
Comments (incl. % achievement)	Achieved. Identifying and targeting of vulnerable and poor households was strength of the project and despite the reductions in scale, the proportion of vulnerable HH benefiting remained the same.			
Indicator 17 :	Number of WASH Committees established by following principles and requirements set out by the project			
Value (quantitative or Qualitative)	0	100%	100%	Sha 282 (100)% Sic 336 (100%)
Date achieved	12/20/2007	12/20/2007	05/12/2012	03/29/2013
Comments (incl. % achievement)	Achieved. Real strength and commitment of the project. Resulted in and a formation and fostering of WASH committees at every participating village. Participatory principles developed under the project will be replicated in other domestic programs.			
Indicator 18 :	Percentage of vulnerable households and women representatives in executive committee of WASH Committee			
Value (quantitative or Qualitative)	0	20%	20%	Sha 50% vul, HH 20% women Sic 50 % vul, HH 20% women
Date achieved	12/20/2007	12/20/2007	05/12/2012	03/29/2013
Comments (incl. % achievement)	Achieved. Involvement and inclusion of vulnerable people and women was very good and a direct result of good community mobilization and targeted training.			
Indicator 19 :	Number of WASH Committee members and percentage of women participating in training for capacity building			
Value (quantitative or Qualitative)	0	All Members /percentage of Women Members participating 100%	Sha 1540/100% Sic 824/100%	Sha 1,540/100% Sic 824/100%
Date achieved	12/20/2007	12/20/2007	05/12/2012	03/29/2013
Comments (incl. % achievement)	Achieved. Both provinces achieved 100% of the restructured targets.			
Indicator 20 :	Number of WASH Committee managed Single Village and Cluster household Water Supply Schemes working sustainably			
Value (quantitative)	0	0	Sha 140 Sic 539	Sha 128 Sic 492

or Qualitative)			----- Total 679	----- Total 620
Date achieved	12/20/2007	12/20/2007	05/12/2012	03/29/2013
Comments (incl. % achievement)	Partially Achieved. 91% of revised target but some lingering problems with on-going water quality testing to ensure a safe supply and the lack of longer term arrangements to finance future major repairs and replacement are risks to sustainability.			
Indicator 21 :	Number of meetings of WASH Committees			
Value (quantitative or Qualitative)	0	0	Sha 468 Sic 618	Sha 468 Sic 618
Date achieved	12/20/2007	12/20/2007	05/12/2012	03/29/2013
Comments (incl. % achievement)	100% achievement relative to the restructured targets.			
Indicator 22 :	Percent of spot-checks of schemes in which community needs have been satisfactorily reflected in project planning.			
Value (quantitative or Qualitative)	0	0	Sha 90% Sic 80%	No data
Date achieved	12/20/2007	12/20/2007	05/12/2012	03/29/2013
Comments (incl. % achievement)	Achieved. Spot checks were carried at as part of the responsibilities of rotating teams at provincial and county levels. Community needs were also looked after because of early establishment and active participation of WASH committees.			
Indicator 23 :	Number of other government agencies / program in project provinces adopting project approach			
Value (quantitative or Qualitative)	0	No data	Dropped at Restructuring	0
Date achieved	12/20/2007	12/20/2007	05/12/2012	03/29/2013
Comments (incl. % achievement)	Dropped. ICR mission confirmed that provinces have adopted 3 in 1 approach as the basis for Sectoral plans accompanying their 12th FYP. Close relationship between project and KASH program did significantly influence national planning/programs.			
Indicator 24 :	Number of other provinces adopting project approach.			
Value (quantitative or Qualitative)	0	0	Dropped at Restructuring	0
Date achieved	12/20/2007	12/20/2007	05/12/2012	03/29/2013
Comments (incl. % achievement)	Too difficult to measure by project provinces who did not have access to data from other provinces.			
Indicator 25 :	Project approach adopted by national planning processes.			
Value (quantitative or Qualitative)	0	0	Dropped at Restructuring	0
Date achieved	12/20/2007	12/20/2007	05/12/2012	03/29/2013
Comments	Dropped. Indicator unrealistic. Provinces do not have access to national data.			

(incl. % achievement)	However, UNICEF EXSUM End of KASH Program report (see annex 7), the KASH TA outcomes did result in changes to national planning processes/ project design.			
Indicator 26 :	Increases in percentage of community HWWS at 5 key occasions			
Value (quantitative or Qualitative)	0	0	Sha 22% Sic 26%	Sha 4.4% Sic 7.8%
Date achieved	12/20/2007	12/20/2007	05/12/2012	03/29/2013
Comments (incl. % achievement)	Not Achieved. Poor results contributed to the lack of follow-up effort to reinforce HP behavior change messages because of severe financial cut-backs at restructuring. Relative to the control groups, the outcomes are very low.			

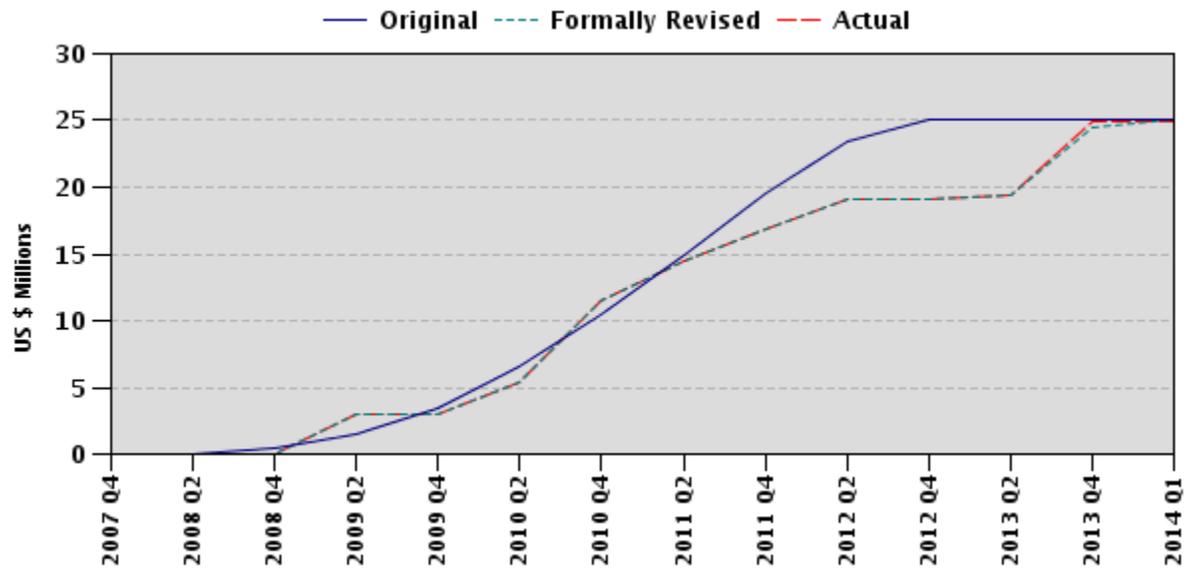
G. Ratings of Project Performance in ISRs

No.	Date ISR Archived	DO	IP	Actual Disbursements (USD millions)
1	06/29/2008	Satisfactory	Satisfactory	0.00
2	06/30/2009	Satisfactory	Moderately Satisfactory	3.00
3	02/12/2010	Satisfactory	Satisfactory	8.38
4	10/22/2010	Satisfactory	Satisfactory	14.45
5	12/26/2011	Unsatisfactory	Unsatisfactory	19.14
6	06/12/2012	Unsatisfactory	Unsatisfactory	19.14
7	12/23/2012	Moderately Unsatisfactory	Moderately Satisfactory	19.40
8	03/31/2013	Moderately Unsatisfactory	Moderately Satisfactory	24.24

H. Restructuring (if any)

Restructuring Date(s)	Board Approved PDO Change	ISR Ratings at Restructuring		Amount Disbursed at Restructuring in USD millions	Reason for Restructuring & Key Changes Made
		DO	IP		
05/12/2012		U	U	19.14	A reduction of project activities, reallocation of loan proceeds, and an increase in the disbursement percentage for selected categories of both provinces. For Shaanxi Province only, minor changes to the reallocation of loan proceeds.
09/27/2012		U	U	19.14	Extension of closing date only

I. Disbursement Profile



1. Project Context, Development Objectives and Design

1.1 Context at Appraisal

1.1.1 By the end of 2005, there were about 312 million rural people in China reported to be without access to safe water supply and 790 million rural residents without improved sanitation, many of whom were living in China's western provinces. The Government of China (GoC) had assigned high priority to the development of western China, but because of the region's relative under-development, dispersed and remote poverty distribution and limited experience in adopting community participation approaches, it was a challenge to develop equitable and sustainable rural water supply and sanitation programs, which could address the scale of the problem. Poor integration of water supply, sanitation and hygiene promotion activities and limited cooperation between the relevant sector agencies were key barriers to achieving sustainable investments and maximizing the impact on health, productivity and rural livelihoods.

1.1.2 Many parts of western China were still plagued by water source contamination as a result of agricultural and industrial pollution, untreated domestic wastewater and/or high natural arsenic, fluoride or salinity levels. Water resources were scarce in parts of the region and scarcity was increasing because of increased demand from industry and urban centers, combined with inefficient use of water for irrigated agriculture and industry. For rural village households, the identification of safe sources and collection of adequate water supply were difficult, time-consuming tasks. GoC had begun to address water quality problems and to support moves towards more efficient and sustainable water use. However, the lack of access to safe water supply and adequate sanitation, together with poor hygiene practices, presented a real risk to poverty alleviation because incidents of poor health could force those just above the poverty line back below it.

1.1.3 GoC's Eleventh Five Year Plan (FYP) for Rural Safe Drinking Water Supply (2006-2010) set a target of providing safe drinking water to 160 million people and aimed to invest Y40 billion (US\$5.14 billion). This FYP emphasized that the poorer western regions, with serious problems of water scarcity and quality, poverty areas and rural schools, would be the focus for funding and other assistance. GoC also intended to introduce a new approach that in principle addressed the whole life cycle of safe drinking water programs, by integrating sanitation and hygiene promotion activities together with water supply, known as the three-in-one approach. GoC was also committed to improving outcomes through the introduction of an innovative approach for scheme selection, institutional arrangements, community participation and monitoring and evaluation (M&E) systems.

1.1.4 To help address the above issues, GoC requested the Bank, in partnership with the UK Department for International Development (DfID) and the United Nation Children's Fund (UNICEF), to design a project to demonstrate many of the innovations set out in the Eleventh FYP in two poorer western provinces: Shaanxi Province and Sichuan Province. The overall goal of the project was to develop a replicable model to increase access by poor participating villages to sustainable safe drinking water, sanitation and hygiene promotion services using the three-in-one approach.

Rationale for Bank Involvement

1.1.5 The project supported three of the five core themes of the Bank's Country Partnership Strategy (CPS) of 2006-2010¹, namely: (a) Theme 2 - Reducing poverty and social exclusion, through sustaining rural livelihoods and expanding access to basic social and infrastructure services, particularly in rural areas; (b) Theme 3 – Managing resources scarcity and environmental challenges, including the conservation of water resources; and (c) Theme 5 – Improving public institutions by reforming public sector units. By addressing the rural water supply, sanitation and hygiene promotion (RWSSHP) sector issues in Shaanxi and Sichuan, the Bank had a unique opportunity to partner, not only with the provincial governments, but because of the demonstrative nature of the project, to influence national policy in the sector.

1.2 Original Project Development Objectives (PDO) and Key Indicators

1.2.1 The PDO in the PAD was: “to increase access of poor participating communities to sustainable and equitable water supply, sanitation and hygiene promotion services by adopting an integrated and participatory approach, which can be replicated in other provinces.” The PDO in the Loan Agreement was basically the same, but did not mention replication: “to assist Shaanxi Province and Sichuan Province in increasing access of poor communities to sustainable and equitable water supply, sanitation and hygiene promotion services using an integrated and a participatory approach.”

1.2.2 Key outcome indicators included: (a) Increased number of people and schools with access to safe water supply; (b) Increased number of people and schools with access to improved sanitation; (c) Increased percentage of people and students in schools adopting safe hygiene and sanitary behaviors; (d) Percentage of water supply schemes operating in an equitable and sustainable way; and (e) Evidence of the adoption and sustainability of the integrated three-in-one approach and replication in domestic programs.

1.3 Revised PDO (as approved by original approving authority) and Key Indicators, and reasons/justification

1.3.1 The PDO was not revised; however as part of the Mid-Term Review (MTR) carried out in June/July 2010, the Bank, DfID, UNICEF and the Provincial Project Management Offices (PPMOs) agreed on changes to the KPIs following a reduction in available financing. The proposed changes included: (a) reducing project outputs; (b) dropping the indicators related to the three-in-one approach; and (c) replacing all Hygiene Promotion (HP) related intermediate outcome indicators with two behavioral based indicators: (i) hand washing with soap (HWWS) in village communities and schools; and (ii) safe disposal of young children's faeces. The restructuring was only submitted and approved in May 2012. (See Sections 2.2, 2.3 and Annex 2 for further details.)

1.4 Main Beneficiaries

1.4.1 The primary target beneficiaries at appraisal were: (a) a total of 771,109 people (Shaanxi 326,716 and Sichuan 444,393) to be provided with access to safe drinking water; (b) a total of 664,005 people (Shaanxi 326,716 and Sichuan 337,289) would benefit from improved sanitation services; and (c) a total of 448 schools (Shaanxi 297 and Sichuan 151) were to be provided with access to improved sanitation services. All the main beneficiaries were in poor and vulnerable villages. Beneficiary institutions directly involved in project implementation and management included the Provincial and County Development

¹ Country Partnership Strategy of the World Bank Group for the People's Republic of China dated May 26, 2006, Report No. 34613.

and Reform Commissions (PDRC, CDRC), and line agencies at provincial and township levels responsible for water supply, sanitation and health and hygiene service provision.

1.4.2 The first restructuring in May 2012 was initiated by the two provinces due to the withdrawal of DFID's grant and depreciation of the US dollar and the pound sterling which result in shortfall of available funding to support the project activities in its full extent, and reduced the primary beneficiaries such that: (i) people gaining access to safe drinking water was reduced to 584,716 (-24%); and (ii) people gaining access to improved sanitation services was reduced to 200,505 (-70%).

1.5 Original Components

1.5.1 The project had four main components as detailed below:

- a. **Component 1: Safe Drinking Water Supply (Total Cost US\$44.45 million; 62.4% of total project cost; IBRD US\$14.55 million; Dfid US\$14.55 million eq.).** This component was to finance improvements in access to safe drinking water, for 61 multi-village and 335 single village systems, 75 rainwater collection systems, 1816 clustered and 23,247 single household (HH) schemes. All schools within the project area of Shaanxi Province and selected schools in Sichuan Province were to be provided with a safe water supply.
- b. **Component 2: Environmental Sanitation – (Total Cost US\$19.00 million; 26.7% of total project cost; IBRD US\$6.725 million; Dfid US\$6.725 million eq.).** This component was to finance the construction of 159,554 household latrines and 51 soak-away systems, 162 village level public/shared latrines; and 1171 village level garbage drop-off points; 448 school latrines, including hand washing and drainage facilities and 222 school garbage drop-off points.
- c. **Component 3: Hygiene Promotion – (Total Cost US\$3.79 million; 5.3% of total project cost; IBRD US\$1.895 million; Dfid US\$1.895 million eq.).** The hygiene promotion (HP) component was to finance formative research, technical assistance, capacity building and training, mass media programs, print and electronic media, person-to-person contact (demonstrations, role playing and direct training), community and school participatory hygiene promotion campaigns, and behavioral change M&E.
- d. **Component 4: Institutional Strengthening and Development – (Total Cost US\$3.93 million; 5.5% of total project cost; IBRD US\$ 1.825 million; Dfid US\$1.825 million eq.).** This component was to finance a comprehensive training program to increase capacity building at all levels; technical training for line agencies, contractors, and etc; community training for WASH (Water, Sanitation and Hygiene Promotion) committees, selected community leaders and members; and social activities to mobilize communities and enhance participation. It also included the development of a result-based M&E System, Community-based M&E System (CBMES) and a Management Information System (MIS).

1.6 Revised Components

1.6.1 The May 2012 restructuring was necessary because of the withdrawal of DFID's grant and the depreciation of dollars and pound sterling, which resulted in a shortfall of funds to support the project. The scope and scale of a number of activities were reduced and both provinces tailored the restructuring toward their own priorities. Because Shaanxi suffered acutely from water scarcity, it chose to safeguard financing for village water supply schemes under Component 1 at the expense of environmental sanitation works under Component 2. Sichuan on the other hand, cut Components 1 and 2 across the board,

reducing outputs considerably. For Component 3, both provinces reduced activities to those necessary to complete final HP behavioral surveys and carry out local workshops to share experiences amongst CPMOs. For Component 4, Shaanxi reduced the number of proposed domestic studies tours to a minimum, while both provinces made provision to hire suitable consultants to complete their borrower's ICR. (See Section 3.2 and Annex 2 for details of component revisions and project wide cost revisions.)

1.6.2 Another significant change was DfID withdrawal from the project in 2010 due to changes in aid priorities by the UK Government. As a result, the original DfID contribution of GBP 13,542,429 (equivalent to US\$25 million or 33% of the total project costs) was reduced GBP9,751,536 (equivalent to US\$15.34 million at completion or 72% of the planned amount).² This cancellation resulted in a reduction in scale and scope of the project. In addition, the depreciation of the US dollar by around 20% during implementation also impacted the availability of resources for the project. As a result, the borrower's contribution increased from the planned US\$25.36 million equivalent at appraisal to a final of US\$31.65 million equivalent. The final project cost was US\$72.59 million (or RMB450.06 million) compared to US\$75.36 (RMB582.53 million) at appraisal, more details are provided in Annex 1. The final project cost was 4% less than the original project cost estimate at appraisal, but the 20% US\$ depreciation, the increase in labor/material cost, and the insufficient contingency allowance meant that the available funding in local terms was not enough to support the project activities to the fullest extent intended.

1.6.3 **Reallocation and Extension of Closing Date.** As part of the first restructuring, the Loan proceeds were reallocated among the disbursement categories and the financing percentages among categories of expenditure were increased in order to alleviate funding shortages following the withdrawal of DfID and to enable full disbursement of the Loan. In the second restructuring of September 27, 2012, the closing date was extended from September 30, 2012 to March 29, 2013 so that the two provinces could complete ongoing works necessary to increase access to safe water supply and sanitation, carry out beneficiary surveys and complete the borrower's ICR.

2. Key Factors Affecting Implementation and Outcomes

2.1 Project Preparation, Design and Quality at Entry

2.1.1 Soundness of Background Analysis. At a strategic level, the Bank's rationale for involvement in the project was sound because it strongly supported the objectives of the CPS of 2006 -2010. Both the project concept and design were technically sound, but very complex from an implementation point of view. The design drew on China's experience in RWSSH, and the Bank's own considerable experience and lessons learned from more than 20 years of supporting the RWSSH sector in China. Lessons learned and incorporated into this project were many, but included: (a) careful attention to water scheme design to avoid excess capacity; (b) the need to enhance the sustainability of RWS investment by including mechanisms to ensure greater community participation in scheme selection, and management arrangements; and (c) offering individual households a choice of affordable sanitation option.

2.1.2 The project by design, very closely supported the GoC's strategic direction in the sector, as articulated in the 11th FYP. The project was co-financed by the World Bank and the United Kingdom

² **DfID Cancellation.** In 2009, DfID informed GoC and the Bank that it was considering closing its China program, and that any undisbursed portion of its grant would be cancelled. However, at that time, DfID was not able to give a definitive answer and this indecision caused a host of problems, particularly the inability of the provinces to formulate AWP. Despite extensive negotiations between the GoC, the Bank and the British Government, DfID formally withdrew from the project in December 21, 2010 as part of the decision to close its China program.

Department for International Development (DfID) and the GoC, with United Nations Fund for Children (UNICEF) as a development partner. This strategic partnership provided a rich input to transfer international and national experiences for implementing an integrated, sustainable approach for the provision of water supply and sanitation services and health promotion. DfID in particular had previously supported a number of integrated community-managed programs in China and had developed strengths in participatory approaches and community management models that were incorporated into project design. The UNICEF brought its strong advocacy for raising the profile of sanitation, hygiene promotion and water quality monitoring, as well as its extensive experience of sanitation and hygiene promotion approaches. The design of the project therefore set out to harness the expertise of the three international agencies and by working together, provide substantial added value to the design and delivery of new approaches for RWSSH in China.

2.1.3 Assessment of Project Design. The project was correctly designed as a demonstration project to “prove” the new three-in-one approach, with one of the key development objectives focused on strengthening national policy and replication in other provinces in China. The project was complex in that it involved multiple financing sources: an IBRD loan, a DfID grant and counterpart funding from provincial and county governments, each contributing one-third. It also had a wide geographic spread in two contiguous provinces, covering 25 counties, and a total of 661 villages. Added to the complexity was the need to effectively address the challenge of the fragmented and uncoordinated approach to provision of RWSSH services at provincial and county levels involving the coordination and integration of the three key line agencies, the Water Resource Bureau, Health Bureau, and the Patriotic Health Campaign Committee Office (PHCCO), as well as the Health Education Institutes and other relevant departments.

2.1.4 In addition to being an equal financing partner, DFID, as part of its overall support to the RWSSH sector, provided a separate grant of US\$1.7 million equivalent to UNICEF, who also committed US\$1.1 million for a parallel technical assistance (TA) program known as the Knowledge and Advocacy for Sanitation & Hygiene (KASH) program, aimed at strengthening central government policy and management in the sector.

2.1.5 This KASH initiative was very strongly supported by the World Bank and NDRC and was very firmly linked to this project. KASH was established early, with preparation and appraisal of both running in parallel with the project. This allowed the Bank, DfID and UNICEF, as well as national and provincial governments, to provide joint input consistent with the objective of close collaboration. The activities of the KASH were developed in cooperation with the Social Development Department of NDRC, the Ministry of Health (MoH), the Ministry of Water Resources (MWR) and PHCCO. The KASH project was designed to provide a range of opportunities to study and disseminate experiences that were to be gained from the WPRWSSH project. Given the direct link with the central government, the KASH project was designed to provide significant opportunities to scale up approaches developed under this project.

2.1.6 The WPRWSSH project was designed incorporating a programmatic approach to implementation, in which the first phase (tranche), covering 20% of schemes, was fully prepared and appraised. The subsequent tranches (remaining 80%) were to be prepared using the technical and safeguards frameworks specified in the PAD and submitted to the Bank for approval in the form of annual works plans (AWPs). This programmatic approach was efficient in that it sped up project preparation and appraisal given the large number of villages (661) and allowed some flexibility in final selection of villages and allowed lessons learned to be progressively incorporated in detailed designs and estimated costs of project activities to more current and realistic. This approach also spread the cost normally associated with full preparation over the project implementation stage.

2.1.7 The design, included a strategy for directly supporting poor and vulnerable groups, was based on a thorough Social Assessment done as part of project preparation. The key-elements included: (a) Upfront Identification of Poor and Vulnerable Households by WASH Committees with the help of the Civil Affairs Office and the Poverty Alleviation Office. The selection criteria reflected government policy on vulnerable groups, as well as those with low-income levels. These households were then directly targeted for subsidies for: (i) water supply connection fees; (ii) flexible arrangements for the payment of Water tariffs; and (iii) Sanitation Subsidies.

2.1.8 **PDO/KPIs.** The PDO was clearly stated, but by current standards it was long and complex in that for the project to be successful, the access to the three services (water supply, sanitation and hygiene promotion) had to be “sustainable” and “equitable” and had to be delivered or adopted using an “integrated and participatory approach” and be replicable. Some indicators were useful for monitoring project progress and guiding implementation towards achievement of the PDO. However, KPI (e) relating to “Evidence of the adoption and sustainability of the integrated three-in-one approach and replication in domestic problems” was not quantified or easily measurable at provincial level and was dropped at the first restructuring. In addition, there were too many indicators in the PAD, where no or very little data was collected. As a result, a number of indicators (duplication of three-in-one approach) were dropped or replaced with others during the project restructuring as requested by both provinces.

2.1.9 **Safeguards.** This project was designated Category B, safeguard screening category S2, and triggered three safeguards: (i) Environmental Assessment (OP/BP 4.01); Involuntary Resettlement (OP 4.12); and (iii) Dam Safety (OP/BP 4.37). Environmental Assessments (EAs) were completed in each province and Environmental Management Plans (EMPs) were prepared at appraisal. A detailed Resettlement Plan (RP), based on a socio-economic survey of the appraised 20% of schemes, was prepared by local expert institutions experienced in the resettlement and monitoring requirements of the World Bank. The project did not finance the construction of any new dams. However, at appraisal, certain reservoirs in both provinces were identified as the water source for some of the first tranche of water supply schemes. These dams underwent a review by dam safety experts in each province, and detailed remediation plans were reviewed and approved by the Bank. The remaining 80% of project schemes, which were very similar in scale and scope to the first 20%, were prepared using an Environmental Framework and check list, a Resettlement Policy Framework (RPF), and Dam Safety Framework. The project-wide EA was sent to the Bank’s InfoShop on December 1, 2006, the final RP was disclosed on December 25, 2006, and the final Integrated Safeguard Data Sheet (ISDS) was disclosed in the InfoShop on February 16, 2007.

2.1.10 **Adequacy of Government Commitment.** At appraisal and during early implementation the provincial governments’ commitment to the project was strong. Consistent with the three-in-one approach and the primary need to overcome the problems of lack of coordination between sectors, each province established the PDRC as the lead project agency. The provincial governments also established effective, strong and powerful project leading groups (PLGs) that included wide representation from the concerned provincial level project departments (Finance, Water, Sanitation and Health, Environment, Land Use) and from the China Women’s Federation (CWF), the key NGO involved with village communities. Each province also set up the same project oversight and management arrangements at county level with the County Development and Reform Bureaus (CDRB) in the lead. Each province and all project-nominated counties participated extensively in the design of the project and demonstrated a high level of ownership.

2.1.11 **Risk Assessment.** The appraisal team realistically assessed the project’s overall risk assessment as “Substantial”. Four of the seven risks identified were rated “substantial” and three were “moderate”. One of the substantial risks was that of limited demand amongst communities for sanitation investments resulting in latrines not being built or used, which did materialize. Latrines were built as planned, with

HHs given a choice of the particular latrine that best suited them, but in many cases, new latrines remained unused due to lack of follow-up instructions on O&M and adequate training. Another risk identified at appraisal as moderate, related to the hygiene promotion program not being carried out using modern and cost effective approaches. The mitigation measures included the need for close supervision of HP activities through the engagement of international expertise. However, the TA was never mobilized and this may have contributed to the poor outcome of this component. (See section 3.2).

2.1.12 Significant risks not identified at appraisal that affected project implementation were: (a) the risk of natural disaster, especially of an earthquake despite Sichuan Province being regularly hit by major earthquake events. The likely occurrence of future earthquakes is high and poses a very real threat to development outcomes (see Section 4); (b) the risk associated with cost and price variations was significant and the contingencies applied at appraisal were inadequate; and (c) the risk associated with implementation delays at the early stage of the project and the mismatch of expenditures with the forecast availability of donor contributions was underestimated. These variations, combined with DfID's withdrawal, put the project in a situation of always having to accelerate implementation or suffer the loss of grant funds (see Section 2.2). A risk not identified was the lack of central coordination of the two provinces. This caused long delays that resulted in a significant slowdown in implementation. A way to mitigate this problem could have been to enhance NDRC's role in project coordination.

2.1.13 **Quality at Entry (QAE).** The QAE was not assessed by the Bank's Quality Assurance Group (QAG). However, preparation was thorough as evidenced by the quality and detail of the PAD. The programmatic approach, involving the detailed preparation and appraisal of 20% of the schemes, allowed the provinces to concentrate their preparation resources better and produce higher quality results at appraisal in less preparation time. Proper social and safeguards work was carried out and the results incorporated into the design. The risk assessment was correct at "substantial" but omitted a couple of key risks, especially the risk of natural disasters affecting implementation and outcomes and the risk regarding adoption of proper hygiene behaviors. The Bank should have insisted on a central government project coordination mechanism because the project included two provinces. This lack of coordination was a key problem that caused a long delay (22 months) in getting the restructuring of the project approved, with significant impact on implementation process and outcomes. Also, the Bank should have built more flexibility into the project design to allow one province to move faster than the other in making adjustments to project implementation specifics. If such flexibility had been in place, it would have been possible to have two restructurings to allow Shaanxi province to restructure its own part of the project, and move ahead a year earlier. At appraisal, broad cost estimates for public latrines and garbage drop off points were based on very basic and outmoded standards for generic structures, typical in rural China, and the cost of above ground structures to be financed by users, requiring additional funding from local government to cover the gap. However, once detailed designs were completed, it was found that the actual requirements varied greatly from those at appraisal, consistent with the actual situation on the ground. An example of this was the need for increased privacy at public latrines, as well as the provision of larger public facilities, consistent with current government standards. Also, a lower EIRR at ICR was mostly due to the lower actual consumption of water than estimated at project appraisal (details refer to section 3.3). Quality at Entry had a number of shortcomings.

2.2 Implementation

2.2.1 In the first year of the project, implementation fell significantly behind schedule, initially because of the need to build capacity at PPMO and CPMO levels. But then, on May 12, 2008, six months after effectiveness, both Sichuan and Shaanxi Provinces were severely impacted by the major Wenchuan Earthquake (8.0 on the Richter scale) that killed at least 69,195 people and left some 4.8 million homeless, with some estimates as high as 11 million. The earthquake event impacted implementation progress in two key ways: (a) the emergency recovery and rebuilding response by the provincial governments completely diverted the attention of all government agencies away from the project; and (b)

the emergency response absorbed much of the provinces' financial resources, greatly limiting counterpart funding availability for the first AWP. After two years of sluggish implementation progress (IP), the Bank downgraded the IP rating to moderately satisfactory, until sufficient progress was made by February 2010 to upgrade it again to satisfactory.

2.2.2 However, implementation soon came under significant financial pressure for several reasons. First, as a consequence of the Wenchuan earthquake, demand for construction materials and labor greatly increased, and the prices of these items rose significantly thus increasing project costs, particularly civil works. Second, the value of the Chinese RMB rose substantially compared to the US Dollar and the British Pound Sterling (GBP), thus increasing the cost of project activities in RMB terms. Thirdly, at appraisal, broad cost estimates for public latrines and garbage drop-off points were based on very basic, out-of-date standards for generic structures typical in rural China. However, once detailed designs were done, actual requirements, incorporating revised standards for size and privacy, varied greatly and costs increased considerably. Financial pressure continued to mount in 2009 and 2010 when DfID eventually closed its China program. However, at that time, DfID was not able to give a definitive answer and this indecision caused a host of problems, particularly the inability of the provinces to formulate AWP. The slow start of implementation, was mostly caused by the Wenchuan earthquake, and resulted in lagging disbursements of the DfID Grant, which later completely withdraw from the project, resulting in the cancellation of GBP 3.79 million (about 28 %) of the original grant amount of GBP 13.54 million.

2.2.3 In anticipation of the withdrawal of DfID, the Bank, at the MTR in June/July 2010, advised the provinces to submit a restructuring plan that reduced the project's scale and scope consistent with the likely reality of reduced available funding. However, because DfID did not make a final decision until December 2010, the provinces had no firm financing figures upon which to base their restructuring, nor did they attempt to do contingency planning based on various financing scenarios. Much to the frustration of many project stakeholders, including the Bank, an agreed restructuring plan was not formally submitted to the Bank by MoF until March, 2012. In the period between the withdrawal of DfID and the actual restructuring, contracts could not be awarded, and implementation slowed to a virtual standstill in 2011. Accordingly, both the DO the IP ratings were downgraded to unsatisfactory from December 2011 through June 2012.

2.2.4 **Restructuring of the Project (Level 2).** This first restructuring involved a reduction in scope and outcomes of the project to fit the reduced funding availability. Specifically, the restructuring: (a) reduced project activities consistent with the reduced funds available; (b) revised project costs consistent with significantly greater than forecast inflation and currency variations; (c) reallocated Loan proceeds among components and increased disbursement percentages; (d) updated the results framework to reflect the reduced scale and scope of the project (per section 1.3). Unfortunately the restructuring was approved with the Loan already 77% disbursed and with elapsed time at 90%, which left little time to complete the scaled down project, and led to the need for the second restructuring to extend the Loan closing date, by six months.

2.2.5 **Three-in-One Approach Reduced.** Unfortunately, the reduction in financing fundamentally limited the impact of the three-in-one approach. As mentioned in Section 1.6, Shaanxi elected to safeguard its objective of increasing access to safe water supply, but did so at the expense of the environmental sanitation works (see reduced targets in Annex 2). Sichuan reduced outputs for both the water and sanitation components. Neither province implemented the hygiene promotion activities to the extent desired. Due to the reduction of effort on the three-in-one approach and the fact that the restructuring was carried out so late, the PDO could not be fully achieved and remained at MU through closing.

2.2.6 Project management performance: Before the restructuring was approved in May 2012 there were a number of shortcomings with project management, particularly with respect to M&E, procurement management and the provision of counterpart funding, as detailed in the ISRs. After the MTR, Shaanxi province was very quick to develop its restructuring plan. However, Sichuan province was very slow in developing a viable restructuring plan which resulted in the 22 month delay. In addition: (a) Sichuan exhibited poor M&E performance, particularly for components two and three; (b) both provinces were late submitting their AWP for 2010 and 2011 and other required periodic project reports; (c) there was also repeated procurement irregularity issues uncovered in both provinces that remained unresolved at project end; and (d) there was a lack of safeguard compliance with respect to water quality and latrine testing.

2.3 Monitoring and Evaluation (M&E) Design, Implementation and Utilization³

2.3.1 Design. The PDO had five key aspects relating to the provision of the three integrated services of water supply, sanitation and HP, including- accessibility, safety (of water supplied), sustainability and equity. The fifth aspect of the PDO was as objective of replicating the project approach in other provinces. To measure the achievement of the PDO, seven indicators (PDOIs) were established, but five related to accessibility, one for sustainability and one for replicability. The intermediate indicators (IIs) covering all the five key aspects of the PDO. However, the M&E design had too many indicators (7 PDOIs and 23 IIs) as set out in PAD Annex 3. The design included many indicators that required new collection methods and effort, and proved to be problematic. A more efficient and simpler approach to the design would have been to build the M&E system around and enhance and efficiency of the existing large amount of data already collected at county and provincial levels. The result was that for many indicators no data was collected and so some were dropped at the first restructuring. Particularly affected was the HP component where the designed indicators were replaced with only two to measure behavioral change relating to HWWS and safe disposal of infant faeces.

2.3.2 Implementation. M&E training and capacity building was provided in the early stages of the project. However, due to the delays in the project, only the MIS software package was completed. This included a procurement package/contract management function that tracked each contract along the entire implementation process, including disbursements. The MIS software was to be enhanced to include a module that allowed the tracking of the handover and testing of each completed water supply scheme, but no data was provided to support the important sustainability aspects of the PDO. The collection of output data was done manually at the local level and uploaded and consolidated at provincial level using excels spreadsheets. This proved adequate to measure outputs under components 1 and 2, given the huge number and geographic spread of activities that had to be tracked, but fell well short of the fully integrated MIS/MES computer-based system that was envisaged at appraisal. While the excel based system worked well for output data, the quality, accuracy and availability of outcome data varied considerably between provinces. Shaanxi was able to produce some meaningful output data while Sichuan had a number of key data gaps. Both provinces dropped or changed significantly key outcome indicators for components 2 and 3 and abandoned all the indicators to measure the “Replicable approach adopted to service delivery” at the first restructuring.

2.3.3 Utilization. Both the government and the project management levels utilized the monitoring information to make management decisions affecting the project. Output data was used by both provinces

³ The PAD Annex 3 and the datasheet at the front of this ICR lists the indicators differently. The datasheet includes all the original and added indicators and lists them numerically. The datasheet format is used throughout this document.

to assist with the formulation of AWP to in an effort to overcome delays in the early part of the project and adjust implementation plans to try and keep the project on schedule. Existing data on implementation progress was used in formulating the respective restructuring plans after the MTR to fit the limited time and financing available to complete the project. The monitoring information and results were summarized and formed the basis of semi-annual reports which were then submitted to the Bank, the respective government leaders, departments and offices and the provincial and county PMOs.

2.4 Safeguard and Fiduciary Compliance

2.4.1 Environmental Safeguards. As established through supervision missions and regular progress reports on EMP implementation, the EMPs in both provinces were generally well implemented. Both PPMOs had dedicated staff for environmental management, and the appropriate environmental mitigation and management measures were incorporated and carried out during project implementation. In addition, each province engaged consultants to independently monitor and supervise EMP implementation. However, implementation was severely disrupted in Sichuan and to a lesser extent in Shaanxi, firstly by the Wenchuan Earthquake and then by delays in restructuring the project. In order to accelerate implementation, the requirements for the preparation of the environmental framework, as part of the approval process for the new schemes added after appraisal (80%), were not fully followed, especially in Sichuan. Eventually, the Bank agreed to a more efficient approach to address environmental issues using Environmental Guidelines and/or Codes of Good Practice that identified the mitigation measures in site selection, design and implementation for the different types of activities. The rationale for agreeing to this change was threefold: (i) the EMPs were implemented and monitored well after the disruptions; (ii) the well-established requirements of the EMPs were progressively included and applied to the new schemes appropriately; and (iii) the project activities in subsequent AWPs were similar in nature, geographical spread and scale as those in the first tranche project activities. In addition to the water supply and sanitation activities, the EIA/EMPs provided guidance to communities on the siting, construction and use of garbage drop-off points of garbage, which was a small and unique activity under the project.

2.4.2 Testing of drinking water quality and latrines. The requirements for environmental monitoring also included the testing of drinking water quality in both provinces and sanitation testing of new latrines in Sichuan. This testing was entrusted to existing specialists from the County Water Resource Bureau (CWRB) and County level offices of the Communicable Disease Control (CDC) Bureau. These Bureaus had the responsibility, competency and capacity to undertake the testing specified. However, many CWRBs did not regularly carry out tests to assess water quality in accordance with Chinese national standards (GB/T5749-2006) for the project-built schemes, claiming that there was insufficient counterpart budget cover in the project. Clearly, this lack of funding hindered the comprehensive testing and periodic monitoring of drinking water quality, as specified as part of the Bank's safeguard requirement. The sample testing of new latrines was also required to be carried out by the CDC as a project specific requirement. The level of testing specified was not a compulsory requirement domestically. Because no counterpart funds were set aside by the borrower, only a limited amount of latrine testing was carried out. Overall, the project did comply with OP 4.01, but because of the testing shortfalls detailed above, implementation of EA safeguards is rated moderately satisfactory.

2.4.3 Social Safeguards - Resettlement. Both Sichuan and Shanxi provinces generally implemented the RAPs well and the RPF was followed according to the findings shown in the Bank supervision mission aide memoire, project internal progress and external monitoring and evaluation reports regarding resettlement and social aspects of the project. The PPMOs designated focal point staff to take charge of social development and safeguards management. A range of mitigation measures for social risks and adverse impacts were deployed, including the active promotion of wide participation, as well as proper

compensation and process for land acquisition. The project's gender dimension ensured that women participated in and benefiting from the project.

2.4.4 An experienced social development team from Shaanxi Academy of Social Sciences was hired in 2008 as the external independent monitoring agent of social safeguards implementation in both project provinces. The first monitoring and evaluation report on resettlement and land acquisition was submitted in 2009. The M & E consulting team carried out regular reviews and monitoring of the implementation of the RAPs through documents review, site visits, and interviews with project owners, resettlement implementing agencies, and project affected people (PAPs), among others. The items monitored included the implementing progress and quality of resettlement, implementation of policies for resettlement and restoration, compensation policies, grievance redress, public participation, and consultation. The consulting team produced nine reports altogether for the two project provinces during the project implementation period detailing the results of site surveys reviews and investigations, including a baseline survey and a completion M&E report, the external monitoring reports were prepared based on the findings of the survey and investigation and submitted to the PPMOs and the World Bank for information and review.

2.4.5 **Land acquisition and compensation.** During implementation, the acquisition of land was minimized to avoid house demolition. The total population affected by permanent land acquisition was 2422 people (1237 in Sichuan and 1185 in Shaanxi), in a total 612 households. To support the project investment, a total of only 12.61 hectare (ha) or 189.174 mu of land was permanently acquired. A further 132.6 ha (1980.83 mu) of land was temporarily acquired during construction. The total cost on land acquisition was about US\$ 0.354 million (RMB2.2 million) for Shaanxi and US\$0.161 million (RMB1 million) for Sichuan. The changes to the scale and scope of project as part of the first restructuring resulted in a substantial decrease in the amount of acquired land and in the number of affected people compared with original plan and appraisal estimation as shown in the RAPs. The land acquisition and compensation were dealt with generally in accordance with the Bank approved RAPs and RPFs. Assessment reports showed that implementation was completed successfully and that the standards of living of the Project Affected People (PAPs) improved. Therefore, the implementation of this safeguard is rated satisfactory.

2.4.6 **Safety of Dams.** Safety of Dams (OP 4.37) was triggered because three dams in Shaanxi Province and eight in Sichuan Province were identified as the source of raw water supply to the first tranche of water supply schemes. The PPMOs recruited third party independent dam safety experts satisfactory to the Bank. They provided dam safety assessments, and reviewed reports and remedial plans in accordance with OP4.37 and domestic regulations, methods and processes (State Council 1999 and MWR 1995). These reports were reviewed, evaluated and cleared by the Bank as part of its due diligence at appraisal. The same expert review processes put in place at appraisal were used to review the additional dams supplying raw water to the other 80% of water supply schemes added during project implementation. At project completion, and as a result of the project restructuring, the number of dams declined to seven in Sichuan; no additional dams were identified in Shaanxi. Immediately after the Wenchuan earthquake, the PWRBs in both Sichuan and Shaanxi carried out special inspections of all project-related and other dams to confirm their safety. Therefore, compliance with the dam safety policy was satisfactory.

2.4.7 **Financial Management (FM).** The formal FM assessment was conducted in 2006 in line with Bank's requirements of OP/BP10.02. No significant changes were made during project implementation.

⁴ The Chinese unit of area is the mu. 15mu =1 hectare or 666 m²

However, due to the weak capacity (lack of knowledge/experience and high staff turnover) of PMOs in managing the complex project, the project FM is rated moderately satisfactory. The project FMS provided moderate assurance that Bank Loan and DFID Grant proceeds were used for the intended purpose. The PPMOs were able to generate basic financial records and reports to reflect project implementation status, and generally there was compliance with legal covenants relating to annual audit reports and interim financial reports. Through training and capacity building, key project FM staff progressively accumulated the required skills, knowledge and experience that resulted in enhanced financial management capacity. However, Shaanxi PPMO performed better in some areas. For instance, the financial statements reflected adequate information of the source and use of project funds, and the MIS was used as intended for the generation of disbursement applications.

2.4.8 Procurement Management. Procurement was generally carried out in accordance with the Bank's procurement procedures and the agreed procurement plans. However, during post reviews carried out over the period 2010 to 2013, indications of possible collusive practice were identified three times with the procurement of small NCB contracts for village water supply managed by CPMOs in both provinces. These collusion indicators were pervasive, and the Bank, after each post procurement review, (PPR) presented its findings and recommendations to the PPMOs and CPMOs with the expectation that the necessary corrective actions would be taken, including identifying red flags of collusion during bid evaluation; and investigating and reporting these cases to the relevant authorities for possible sanctioning. However the PPMOs, the CPMOs and the Procurement Agent failed repeatedly to take timely actions to address these issues. For this reason, the Bank established, as a condition of approval of extending the closing date in September 2012, a requirement that the PPMOs develop and adopt specific provincial level Governance and Anti-Corruption Action Plans (GAAPs). For a number of contracts where the indicators of collusion were serious, the provinces agreed that they would not seek reimbursement from the Bank for these expenditures. Unfortunately, the final PPR conducted in 2013, gave no indication that the agreed GAAPs were being fully implemented in either province. The findings of each PPR were referred to the Regional Procurement Manager and, on July 28, 2010 to the office of the Integrity Vice-Presidency (INT)⁵ of the Bank, for action in accordance with Bank policy. As of Loan closing, INT's investigation remained open and it had not communicated any findings or recommendations. Compliance with Bank procurement policy is rated unsatisfactory.

2.5 Post-completion Operation/Next Phase

2.5.1 Water supply scheme management options were identified according to the type of scheme built and included: (i) multi-villages piped water supply schemes; (ii) smaller/single village piped water supply schemes (both gravity and pumped); (iii) low-cost water supply options to serve communities in the more remote and sparsely populated areas, and single household supply. In accordance with domestic procedures, each scheme was subjected to final acceptance and testing (FAT) before being handed over to the entity responsible for management, operations and maintenance (MOM). In both provinces, all the single village and clustered HH piped water supply schemes were handed over for operation to village WASH committees. WASH committees then set and began collection of water charges consistent with annual MOM costs of the particular water supply scheme under their control. Village level operators were required to undertake training in day to day operational requirements. Provision for back-up support for short term MOM tasks beyond the capability of the WASH committees is provided by established

⁵ INT references: I-2011-3099 & I-2010-3036.

town water supply stations, which belong to the county water supply stations. However, because the WASH committee management arrangement is new, there are no clear financial arrangements in place to cover major repairs, rehabilitation and replacement of assets like pump sets and electrical switch gear installations. This could affect the longer term viability of smaller cluster and village schemes. Most multiple-village schemes have been handed over for management by town or county water supply stations. A few schemes have been handover for management by existing utility style companies.

2.5.2 The MOM responsibility of the various types of sanitation systems investment completed has been assigned as follows. Single HH systems (biogas, three compartments, double urn) remain the responsibility of each HH. All school sanitation investment, latrines, and soak-away systems, including garbage drop-off points have been handled over to schools administration and village level sanitation investment in public latrines and garbage drop-off points, have been have been handed over to the village committees or in bigger villages/townships, the existing Township bureaus responsible. There was a problem with the issuing of clear, simple O&M instructions for the more technically advanced biogas latrines to households and there was a problem with the initial and on-going testing of this type of latrine. Biogas latrines are common a type of household latrine provided widely in rural China and some follow-up training the care and use these latrines has occurred through local WASH committees. However, there is no evidence to suggest that the testing of the latrines has improved.

3. Assessment of Outcomes

3.1 Relevance of Objectives, Design and Implementation

3.1.1 **Rating: Substantial.** The PDO was highly relevant at appraisal and remained relevant through to project completion. The PDO was directly linked to the overarching theme of the Bank's CPS for 2006-2010 of "*Reducing Poverty, Inequality and Social Exclusion*". The PDO was also linked to the DfID Country Assistance Plan (CAP) which focused on assisting China in the achievement of the Millennium Development Goals. To support a key part of the PDO -- to demonstrate the new three-in-one approach, strengthen the national policy framework and ultimately replicate the proven approaches tested under the project in other provinces -- the higher level KASH TA program, aimed directly at supporting the RWSSH sector at national policy level was implemented through UNICEF. The KASH was closely linked to the project. UNICEF was a project partner and at the beginning of the KASH program, its priorities in China were directed towards: (i) work on early childhood care and development, including safe drinking water, (ii) a healthy environment; and (iii) good hygiene practices. These are still the same priorities in 2013.

3.1.2 In fact, at completion, this project also supported two themes in the current CPS for FY2013-2016⁶: (i) supporting greener growth; and (ii) promoting more inclusive development. Also as a result of the strong linkages between the project and the highly successful outcome of KASH (Annex 7), national policy was strongly influenced to incorporate a more integrated and participatory approach for the provision RWSSHP services. Given the above, the rating for relevance of objectives, design and implementation is substantial.

3.2 Achievement of Project Development Objective

⁶ Country Partnership Strategy of the World Bank Group for the People's Republic of China dated November 6, 2012. Report No. 67566-CN.

3.2.1 Rating: Moderately Unsatisfactory. The PDO encompassed an integrated approach (three-in-one) for the provision of water supply, sanitation and hygiene promotion services, in order to maximize the health benefits. However, as noted above, in May 2012 this project underwent a substantial Level 2 restructuring, which reduced the project's outputs in line with available financing and resulted in the breakdown of the integrated approach from that point forward. Since the restructuring came quite late into implementation, the project's outcome is weighed more heavily against the achievements before the restructuring. Based on this assessment, the project achievement of the PDO was rated moderately unsatisfactory. More details are provided in Annex 2 and the Data Sheet.

Increased number of people and schools with access to safe water supply.
(Partially achieved)

3.2.2 Water supply investments were intended to improve access to safe drinking water through different typologies: multi-village and single village piped water supply schemes and water supply to clustered households and single households. Rainwater collection systems and wells with hand or electric pumps were also financed. In addition, the project was to provide all schools within the project areas of Shaanxi and selected schools within the project areas of Sichuan with safe water supply. The PDO indicators 1 and 3 tracked people and schools access respectively. Shaanxi met the original PAD target for population with access to drinking water with 326,716 people gaining access (100% achievement), while Sichuan supplied water to only 262,737, which was 59% of the original target of 444,393, but 102% of the restructured target of 258,000. For schools, Shaanxi supplied only 32 schools (11%) of the original target of 297 and only 78% of the restructured target of 41. Sichuan supplied 33 schools, which was 59% of the restructured target of 51, but only 22% of the original target of 151 (see Annex 2 for more details).

3.2.3 A safe supply of drinking water was to be measured by intermediate indicator 5 - percentage of Water Quality Certification of water supply scheme done on time, as measured by the appropriate provincial/national standard water quality tests. There was full achievement of this requirement because at the initial stage of commissioning of schemes water testing is a mandatory requirement of the final assessment and testing (FAT) before handover. However, there were some problems identified with on-going water testing of schemes once handed over. During the ICR mission (June 2013) based on a very small sample of 2 villages in each province, the continuing persistent problems with water testing were confirmed. All the villages visited as part of the ICR mission (May/June 2013) were small HH cluster water supply schemes with no functioning and effective water treatment. In each case, the WASH committee had issued instructions to all HHs that water must be boiled before drinking to ensure its safety. Therefore, the conclusion, based on the facts is that water testing as part of the FAT process was at best ad-hoc given the water treatment equipment shortcomings identified; ineffective operator training and knowledge and no evidence of a systemic and regular on-going raw and treated water regime is that the performance of schemes to provide a safe drinking water supply is in doubt.

Increase in the number of people and schools with access to improved sanitation
(Partially achieved)

3.2.4 Access to improved sanitation services was provided to a total of 224,620 people. However, this was only 34% of the original PAD target, but 112% of the restructured target. Sichuan's achievement of 43% of the PAD target (145,400 people) was better than Shaanxi's at only 24% (79,220) of the original target. Both provinces did however meet or exceed their respective restructured targets. At completion, the major project outputs were: (i) 43,857 HH and 65 school latrines; (ii) 66 school hand washing facilities; (iii) 211 village public latrines; (iv) 833 village and 73 school solid waste collection points. At the first restructuring, the scale of this component was significantly curtailed because of the reduced

funding available. As a result, most outputs were significantly less than the PAD targets. Household latrine outputs were only average only 27% of the original targets; schools latrines and hand washing facilities built were a very disappointing 15% of the PAD targets. This reduction in school latrines can also be attributed to the impact of national education policy that required that some smaller village level schools included in the project at appraisal were closed and consolidated with larger schools.

3.2.5 On a more positive note, the 193 public latrines built in Shaanxi exceeded by a large margin the original target of 126 and also bettered the increased restructured target of 178. More public latrines were built because there was a demand for them by some village communities and households who preferred public latrines as an alternative to more expensive individual HH options (Annex 2 Table 2).

Increase in percentage of people in participating communities and students in schools who have adopt safe hygiene and sanitary behaviors
(Not achieved)

3.2.6 The objective was to provide a broad range of good hygiene and sanitary practices and bring about behavioral change in order to prevent disease. The final independent hygiene surveys carried out in both provinces were able to measure the net impact of the project because control groups, consisting of communities and HHs were established early in the project. (Both provinces did a base line survey). The results unfortunately showed that the actual project impact for both the HWWS activities (communities and schools) was very low, even though the targets were established in May 2012. Shaanxi had the worst results with a net impact of 4.4% for communities and zero for schools. The results in Sichuan were only marginally better at 7.8% and 14% respectively. The only positive outcome was the full achievement of the safe disposal of infant faeces with 84% in Shaanxi against a target of 70% and 93% in Sichuan against a target of 80%.

Percentage of implemented water supply schemes operating in an equitable and sustainable way.
(Not achieved)

3.2.7 The project measured the extent that the poor, the vulnerable and women participated in and benefited from the provision of water supply services. This aspect was fully achieved through the direct participation of village communities individual and collectively through the formation and fostering of the WASH committees. Adherence to equitable membership make-up allowed the voice of the poor, vulnerable and women to be heard not only during project implementation, but beyond the project because the WASH committees are well functioning and have real responsibilities and ownership of the village water supply schemes. The project also took other measures to enable poor and vulnerable households to participate and benefit, such as waiving the payment for connection fees connecting to house to the water main in the street. Payments waived for poor HHs were typically about RMB 200/HH (US\$32).

3.2.8 The mandated WASH committee membership make up including women members, is ensuring equity of representation and influence. Water tariffs are set at levels that were affordable and sufficient to meet recurrent funding requirements.

3.2.9 Several key specific indicators were included to measure the sustainability of water supply schemes by capturing data on the percentage of water supply schemes: (i) meeting the tariff covenant after the first year of operations; (ii) meeting full design supply capacity 2 years after construction completion; and (iii) operating sustainably after one year. (Sustainability as defined in the results framework (PAD page 27 footnote 3).

3.2.10 The September, 2012 technical mission also looked in-depth at sustainability and found a number of critical issues that affected sustainability of both surface and groundwater schemes as follows: (i) no monitoring data to support the assessment of original design; (ii) no MOM manuals and/or equipment trouble shooting guidelines; (iii) the technical standards of surface water supplied schemes were generally adequate, there were a number of problems identified that may affect schemes reaching their full design capacity. Because a lot of schemes were completed late in the project, assessment of the extent of operation 2 years after construction could not be made. Also, the original design capacity was based on the number of registered people in the villages. With urbanization a lot of people live and work for long periods away from the village and this will ultimately have an effect on scheme capacity.

Evidence of the adoption and sustainability of the integrated three in one approach and replications in domestic programs.

(Partially achieved)

3.2.11 The objective was to measure the number of other government agencies/programs in the two project provinces adopting the project approach. No specific data was collected. However, both provinces implemented the project up to the MTR (June 2010) more or less as designed, including a very strong commitment to the integration of services and particularly the participation aspects at community level. At the restructuring in May 2012, the changes to the scale and scope resulted in a balanced project at appraisal become unbalance and the integration objectives were abandoned for the rest of the project. However, the application of the three-in-one model beyond the project was an important and key issue that was discussed, probed and observed at provincial and county government/bureaucracy levels as part of the ICR mission. Clearly, what was observed and confirmed was that the project has been instrumental in changing the way RWSSHP services are delivered. The other key observation was the strength and commitment to the participation of communities in the selection and management of services and the equitable inclusion of the poor and vulnerable and the increased role for women in the ongoing provision of services.

3.2.12 A demonstration project with a very important key part of the PDO focused on the development of an effective process for the application of the new three-in-one approach for the provision of RWSSHP services that could be replicated in other provinces by influencing national policy development and programs. The strategic partnership established between the Bank, DfID, UNICEF, Shaanxi and Sichuan Provinces, and Chinese Government was pivotal for replication. The strong linkages between the KASH Program and the project did influence the highly successful outcome of the Program through 2010, when the KASH program ended. The reduction in scale of the three-in-one approach did not occur until the restructuring in May 2012. Shaanxi and Sichuan provincial governments have adopted the principles of the three-in-one approach in their sectoral plans accompanying their 12th FYP. They have modified the relative importance of the three components sectors to match their circumstances of their respective provinces but preserved the coordination role of PDRCs, what was established as part of the project.

3.2.13 The objective of the KASH was to increase GoC's awareness, capacity and commitment to implement sanitation and hygiene promotion programs, in particular to scaling-up the coordinated/integrated WASH approach in rural areas in poor western provinces. The objective was achieved through the successful implementation of a variety of activities in four output areas as planned including: (i) Evidence-based development on WASH; (ii) Building strategic partnerships; (iii) National Policies and Guidelines, and (iv) Advocacy for investment in rural sanitation.

3.2.14 The KASH Program assisted the GoC to design and implement two new national programs: (i) the "*Health Sector Reform Program (HSRP, 2009-2011)*", which included rural sanitation and water supply improvement in rural communities and in local health facilities; and (ii) the redesign of the

national sanitation improvement program entitled the “*National Urban-Rural Integrated Sanitation Improvement Action Plan (NURISIAP)*” which was launched in 2010.

3.2.15 While there is no specific quantitative data on the number of other provinces adopting the project approach, there is clear evidence that the project, through its strong links to KASH, did influence national policy and national planning processes and is already influencing provincial policy. An example of this was seen in the project provinces, where the PRDCs are using the project experience and changes to local policy and “modified” approaches as the basis for preparation of integrated RWSSHP sector master plans, as part of the overall planning for provincial 13th FYs. These sector master plans are using the principles of the “modified” three-in-one approach and particularly the participatory approaches developed under the project.

3.3 Efficiency

3.3.1 Economic analysis. A cost benefit analysis was conducted following the assumptions adopted at project appraisal. The combined EIRR across the two provinces calculated at project appraisal was 27.7%. At ICR following the same models, the combined EIRR of the project was 16.7%. The major reason for this lower EIRR was that the actual consumption of water after the completion of the schemes is lower than estimated at project appraisal. In other words, the demand of water was overestimated at project appraisal and as a consequence, the realized capacity of the schemes analyzed is only 60% of design capacity made at project appraisal. (See a detailed analysis in annex 3.) In addition, the economic benefits used to calculate EIRR does not include the public health benefits, which are difficult to quantify, such as reducing diarrhea, skin disease, typhoid, eye disease, etc. Another widely accepted benefit is the improved sanitation which is more important in epidemiological terms. If these benefits could be quantified, the EIRR for all schemes would be greater. Whilst the EIRR at ICR (16.7%) is less than that at appraisal (27.7%), the ICR figure is well above the discount rate of 10%. Therefore, the rating for efficiency is deemed to be satisfactory.

3.3.2 Financial analysis. The key objective of the project was to provide an affordable, but sustainable water supply. To achieve this objective, tariffs needed to be set at a level sufficient to at least cover the operation and maintenance cost of providing water supply services. The appraisal assessment was that tariffs needed to be set between RMB1.5 and RMB4/m³ in Sichuan (avg. RMB/2.9/m³) to achieve financial sustainability, and RMB1.5 and RMB6.45/m³ in Shaanxi (avg. of RMB2.7/m³).

3.3.3 After the operation of the schemes, the tariffs in Sichuan ranged from RMB1.80 to 3.90 /m³ and in Shaanxi RMB2.50 to RMB4.00/ m³. These tariffs generally fell in the ranges of tariffs projected at project appraisal. However, these tariff levels did not necessarily ensure all schemes covered their O&M costs by tariffs. Some of the schemes needed other revenues, such as connection fees and sales of materials to cover O&M costs. Detailed analysis is at Annex 3.

3.4 Justification of Overall Outcome Rating

(Combining relevance, achievement of PDOs, and efficiency)

Rating: Moderately Unsatisfactory

3.4.1 The overall rating for the project is assessed as moderately unsatisfactory, based on the following six considerations: (i) the project PDO was highly relevant at appraisal and throughout the project; (ii) a large amount of time (22 months) was lost between the MTR (June 2010) and the restructuring plan was approved (May 2012) just 6 months before the original closing date; (iii) most output targets established

at appraisal were not met, with the exception being that of water supply services in Shaanxi; (iv) the strategic partnership between the Bank, DfID, UNICEF and the provincial and national governments and the strong linkage to the project did influence the highly successful outcome of the KASH TA program; (v) despite the turmoil and problems with the project itself, there is clear evidence that the integrated and participative three-in-one approach demonstrated under the project has been adopted by the participating provinces for future domestically funded RWSSHP projects; and (iv) the project efficiency was satisfactory.

3.5 Overarching Themes, Other Outcomes and Impacts

3.5.1 Promotion of public participation and gender equality. The project did specifically focus on promoting participation of vulnerable and poor individuals and groups and gender equality. Poor people's lives were improved by given them priority for receiving water supply and sanitation services and targeted subsidies. To strongly support the gender aspects, the NGO, China Women's Federation, was engaged to train and empower women and ensure that women and women's issues such as access to training and participation were front and center during project implementation. Women's representation was also enhanced at all levels from PLGs to individual WASH committees at villages. The representation of vulnerable people and from women on all WASH committees increased to a minimum requirement of 20%. The project had a professional gender advisor to participate in regular project missions and ensure gender elements incorporated in the project design and implementation. To guide project implementation agencies at all levels, a "Gender elements" checklist was provided and used as the basis for to monitoring of actual achievement. Further, the project provided awareness-raising training on daily-life health care and hygiene for households in the project communities. In total this training amounted to 189,490 person days, (104,600 in Shaanxi and 84,890 in Sichuan) with women being a major portion of the trainees.

3.5.2 Moreover, there were a total 17,108 HHs (75,116 poor people) benefited from the project. The project also took other measures to enable poor and vulnerable households to participate in and benefit from the project, such as waiving the payment which was originally planned to be borne by each project households in connecting to water supply facilities and subsidies for HH latrines. One of such payments waived for poor households was about RMB200/household for connecting water supply from their houses to project main pipe networks.

3.5.3 Institutional Change/Strengthening. Institutional strengthening was provided primarily at five levels: (i) Provincial government agencies; (ii) the PPMOs; (iii) the CPMOs; (iv) village level WASH Committees; and (v) the provincial and county levels entities providing technical support, such as design institutes, supervision companies/consultants, and contractors. One of the fundamental objectives of institutional strengthening under the project was to build an institutional framework based on the cooperation and coordination of the many government agencies involved in the RWSSHP sector. This was achieved under the project, and from discussions and observations made during the ICR mission, the PDRCs are committed to continue this new era of cooperation beyond the project. As both provinces prepare their provincial level 13th FYPs, the PDRCs are taking the lead to effectively coordinate the inputs from the various departments to ensure the integrated and coordinated approached to RWSSHP investment that was developed under the project. In addition, the knowledge and best practices surrounding the institutional framework developed under the WPRWSSHP have been disseminated to the GoC and other provinces as part of the KASH TA program.

3.5.4 Strengthened Institutional Capacity and Development. (Partially achieved). The project management skills and capacities of the PPMOs, CPMOs, township staff and technical skills of implementing line agencies were improved through training activities involving a total of 2,130 staff. Community-based training total of 189,490 people was also completed and comprised 99% of the training

provided under the project. The strong commitment to this component was evident when it remained mostly intact through the restructuring. The only activities trimmed were overseas and domestic study tours. However, this component was only partially achieved. The institutional strengthening included operational and technical support to WASH committees at village level, particularly for the new cluster household water supply schemes under the management of WASH committees. There was a strong commitment by both provincial governments to build on the success of WASH committees and enhance participation through the establishment of “water supply management and service institutions” based on the principles governing the establishment of WASH committees established under the project.

3.5.5 Other Unintended Outcomes and Impacts. Field inspections of beneficiary villages in both provinces were carried out during the ICR mission (May 2013). These visits showed that while the provision of safe drinking water to households was the primary goal, the piped water supply service was a catalyst for other life style improvements such as extensions to houses to include a new modern bathroom with shower and basin facilities, solar hot water services, washing machines, vegetable gardens and landscaping. It was also observed that there was a preference to locate the newly provided latrine within an extension to the house or very near to the house, thus improving security and privacy, particularly for women.

3.5.6 In a few instances where HHs chose the bio-gas latrine option, it was observed that where the HH had low occupancy (generally only the housewife because other family members were working as migrant workers remote from the village), and had no pigs or other farm animals to generate enough waste to generate biogas, the latrine was not being used. Latrines, if used, had to eventually be cleaned out, a task beyond the sole occupant. On the positive side, it was observed that bio-gas provided many benefits to the housewife, such as convenience of operation and considerable time-savings and/or cost in gathering fire wood. The other positive aspect was that bio-gas was used instead of wood for cooking which contributed in a reduction in greenhouse gas emissions.

3.6 Summary of Findings of Beneficiary Survey and/or Stakeholder Workshops

(Optional for Core ICR, required for ILI, details in annexes)

Not Applicable.

4. Assessment of Risk to Development Outcome

Rating: Substantial - based on the predominance of substantive ratings for the more important risks identified.

4.1 Risk to the proper management of water supply and sanitation services. This risk is considered negligible because the basic rural services of water supply and sanitation are in high demand, particularly in poor and disadvantaged rural villages where these services have been provided for the first time and village communities have a high level of ownership. Cluster HH water supply schemes and garbage drop-off points have been handed over to the WASH committees. There was effective community participation in the design of an appropriate level of water supply service to each community and a willingness to pay the annual costs of the level of service determined. For the multi and single village water supply schemes, arrangements for the day to day MOM of all water schemes have been made and schemes handed over to existing water management entities at county or township level.

4.2 Risk to the sustainability of hygiene promotion and behavioral changes. There is a substantial risk of students not retaining proper hand-washing with soap in schools because: (i) The long

delay before and then lack of funds for component 3 after the first restructuring meant that the initial behavioral change campaign in schools was not followed-up to reinforce the HP messages; and (ii) schools have generally not provided and maintained soap supplies.

4.3 Risk of service disruption in the longer term for smaller water supply schemes and household latrines. For the smaller cluster HH water supply schemes, there is a substantial risk that if/when there are major equipment breakdowns (e.g. pumps and electrics) the schemes will fall into disrepair for long periods of time. WASH committees have a responsibility to recover the recurrent MOM costs only and there is no written agreement with governments (county or provincial) as to who will be responsible for financing major repairs and replacements over time. There is also a risk that the more technically advanced biogas latrines will not be properly maintained by HHs because of the lack of clear instructions about need for desilting and cleaning of solids from this type of latrine.

4.4 Risk of repeat Natural Disasters. Sichuan and Shaanxi provinces are both in very seismically active areas of China. In addition to the Wenchuan Earthquake, there have been other smaller quakes such as one in April 2013. Natural disasters such as flooding (seen in Sichuan in July 2013) related to climate change and improper land management could also threaten to destroy or render dysfunctional the water supply assets created under the project or could jeopardize the dams related to those water schemes. Risk: Substantial.

5. Assessment of Bank and Borrower Performance

5.1 Bank Performance

5.1.1 Bank Performance in Ensuring Quality at Entry Rating: Moderately Unsatisfactory

5.1.1.1 The Bank preparation team was led by a lead operations officer with expert assistance from a very senior rural water supply specialist and several other water/environment engineers. The task team also included two social safeguards specialists, fiduciary experts and an M&E specialist and a professional gender advisor to ensure the proper implementation of the gender elements of the project. The core team, including the task team leader, was based in Beijing, which allowed for frequent consultations with GoC and provincial officials and facilitated mission travel to the rural counties. Project preparation began with the concept review in August 2005 and concluded 22 months later with Board presentation in June 2007. Total Bank cost of preparation was US\$478,200 (66.7 staff weeks).

5.1.1.2 The project concept and PDO were highly relevant and well aligned with national policy priorities and the Bank's CPS (Section 2.1). The preparation quality of the project, as set out in the PAD, was of a high standard and involved the close cooperation with and drew on the expertise of DfID and UNICEF, both of whom had long and successful experiences in the RWSSHP sector. With their input, and that of GoC, the project design was based on a thorough analysis of sector issues. Applicable safeguards policies were identified and the Bank carefully reviewed the EAs, EMPs, RP, dam safety reports, as well as the social (including willingness-to-pay) and hygiene behavioral assessments. Findings of the latter were fed into project design and detailed engineering designs. Therefore, the final design was appropriate and was very well focused on demonstrating a new, integrated solution to a significant national and provincial challenge, involving the effective delivery of basic services to help China meet the MDGs in the water and sanitation sectors. Although the restructuring reduced the scale and scope of the project, the PDO and component design were sound and remained unchanged. A few shortcomings are cited in Section 2.1 above. Notably the PDO was somewhat complex compared to current standards and the number of indicators was rather high. A few risks were not included or were under-assessed. The institutional arrangements should have included some central government coordination. Costs for the sanitation works were based on generic structure costs (excluding the cost of above ground structures) and were out of date, causing price variations. Insufficient contingency was allowed in the cost estimate at appraisal, which in turn contribute to insufficient funding to support the project activities to the full

extent desired. Added to this was the impact of the reduction in DfID funding and depreciation of US dollar and pound sterling. The risk of over-designed and relatively costly water supply schemes was not properly addressed and resulted in lower EIRR at completion as compared to the EIRR at appraisal. For these reasons, Quality at Entry is rated Moderately Unsatisfactory. This rating consideration takes into account the comments received from Shaanxi and Sichuan provinces on the earlier draft ICR.

5.1.2 **Quality of Supervision Rating: Moderately Satisfactory**

5.1.2.1 Throughout implementation, the Bank's task team was pro-active, flexible, and decisive in interpreting and applying Bank policies and the covenants in the Loan and Project Agreements, and in providing ample resources to address project issues as they arose, with a total of US\$661,800 (134.6 staff weeks) on supervision (see Annex 5 for details). Supervision was carried out through formal bi-annual supervision missions, and included joint supervision missions with DfID and UNICEF, and was carried out in a professional manner. The joint supervision ensured that the implementation of the project and the KASH T.A. program were solidly linked. The Bank followed up formal supervision with day-to-day contact with the client. The Bank maintained a focus on attaining the PDO despite the turmoil and delays caused by the Wenchuan earthquake and the withdrawal of DfID. The task team identified the need to restructure the project at the MTR (July 2010), but did not receive the formal application from MoF to restructure the project until March 2012. The task team then processed the restructuring in a timely manner.

5.1.2.2 Supervision of Safeguards and Fiduciary Aspects. The supervision of the social, environment and dam safety safeguards was satisfactory. The supervision of FM was carried out frequently as part of supervision missions and special visits. To address the capacity weaknesses, additional training was provided, but the constant turnover of staff made this training less effective. Procurement supervision was challenging at times because of the persistent collusion issues in both provinces. At least two PPRs were done and the Bank insisted and gave guidance on the development and implementation of a GAAP as a condition for the second extension. (See section 2.4 above). Despite the best efforts of the procurement staff and the involvement of the RPM and INT, the issues could not be satisfactorily resolved. Specialists in FM, procurement, environmental management, dam safety, and social sciences participated consistently in supervision missions and in the day-to-day follow up and interaction with the client. A good example of this ability to react quickly and with flexibility was the changes adopted by the Bank to improve the efficiency of environmental assessment work for the small scale works.

5.1.2.3 **Supervision Reporting and Follow-up Action.** Supervision mission reporting (aide-memoires, management letters, and Implementation Status Reports) was sufficiently detailed and clear, and the ratings were realistic and candid. The task team engaged Bank senior management to try and resolve the serious DfID commitment and funding issues. However, after the MTR, the task team could have been more proactive in trying to get coordinated action between the provinces and GoC to more quickly restructure the project. Also, the Bank team could have done more to follow up on M&E and covenant compliance issues.

5.1.2.4 There were a total of seven Bank task team leaders between appraisal and completion, and this had an effect on project progress and day to day communication with the Client to some extent. There were continuity issues with the makeup of the core task team, with only one key member remaining on the team from appraisal to completion. Owing to this factor and given the ratings noted in sections 5.1.2.3 above, the quality of supervision is assessed as *moderately satisfactory*.

5.1.3 **Justification of Rating for Overall Bank Performance Rating: Moderately Unsatisfactory.**

5.1.3.1 Given the moderately unsatisfactory rating of Quality at Entry and the moderately satisfactory rating of supervision, the overall rating for Bank Performance is *moderately unsatisfactory*.

5.2 Borrower Performance

5.2.1 Governments Performance Rating: Moderately Unsatisfactory

5.2.1.1 Governments in this case are the Shaanxi and Sichuan provincial governments. Each Province established and maintained strong, high level PLGs at the political interface and PPMOs were formed within the PDRCs to provide the necessary interagency coordination arrangements, consistent with the PDO. The provincial governments maintained this strong commitment to the project up until the MTR. Shaanxi province moved quickly and produced a restructuring plan that included the immediate increase in counterpart funds to cover funding shortfalls, which it then submitted to MoF for approval. However, because it was a multi provincial project, MoF had to wait until Sichuan submitted its restructuring plan, which took some time. There was no central government agency assigned to coordinate the provinces. The result was a 22 month delay in implementation and a restructuring with a much reduced scale and scope, eventually approved by the Bank just five months before the original closing date. Given the restructuring was done so late; there was very little chance of achieving a satisfactory outcome. The Bank offered both provinces the alternative of additional IBRD financing to bridge the gap left by DfID, but this was declined because of concerns that the poor counties included in the project could not service additional debt.

5.2.2 Implementing Agency or Agencies Performance Rating: Moderately Unsatisfactory

5.2.2.1 The implementing agencies who had responsibility to management project implementation in each province were the PPMOs established under each PDRC. Throughout the project implementation, the Shaanxi PPMO was more stable and performed better because it was an experienced, permanently constituted unit as an integral part of in the PDRC Foreign Funding Development Department. This department is responsible for overseeing many foreign-funded projects in the province. This fact contributed to the decisive response by the Shaanxi government to restructure the project immediately after the MTR.

5.2.2.2 In contrast, the Sichuan PPMO became dysfunctional during the long delay period, because it was established as a project-specific entity made up of mostly staff seconded from line departments. When project activity virtually stopped after the MTR, many key staff from the Sichuan PPMO, drifted back to their line departments to resume their permanent jobs. However, once the first restructuring was approved, both PPMOs quickly focused on achieving the revised targets in the very limited time left. This renewed commitment by the PPMOs contributed to the Bank's decision to extend the loan closing date under the second restructuring.

5.2.2.3 Throughout project implementation, both provinces demonstrated strong commitment to enhanced community participation and the need to build on the success of the enhanced community participation through WASH committees. From discussions and interviews with higher level officials at provincial level during the ICR mission, it was clear that the principles governing the formation and fostering of WASH committees will be incorporated into the design of future domestically funded RWSSHP projects.

5.2.2.4 Despite the scaled back scope of the main investments under components 1, 2, and 3, the commitment to component 4, Institutional Strengthening and Development remained fairly strong. The component remained mostly intact through the restructuring with the only activities trimmed being overseas and domestic study tours, but there was a lot of training achieved, particularly at the community level. The MIS developed was satisfactory for measuring the project outputs, but the PPMOs failed to

develop the integrated computer based M&E system. Outcome measurement was not done particularly well and procurement management was unsatisfactory (section 2.4) because of the inability to deal with the persistent collusion problems. In Sichuan, the project management and reporting arrangements broke down between MTR and restructuring (22 months).

5.2.2.5 Compliance with Covenants. Because of the long delays and virtual standstill of project implementation for the 22 months prior to the May 2012 restructuring, the PPMOs did not deliver project reports, including M&E, in a timely manner and AWP were overdue in both 2010 and 2011. The overall safeguard compliance was also downgraded due to the delayed submission of updated external monitoring and evaluation reports on land acquisition. However, the project complied with audit requirements with no overdue audits and with audits consistently yielding unqualified opinions. Both PPMOs responded well and when the project extension was approved in September 2012, all the required safeguard reports, including dam safety, EMPs and RP were submitted and assessed as satisfactory, resulting in an upgrade of the safeguard compliance. However, as noted in the procurement discussion in Section 2.4, the Bank's procurement guidelines were not closely followed. The other important measure of sustainability in the covenant was that stated that each multi-village and single piped water supply system completed and commissioned shall, before the end of the first fiscal year of operation, establish and begin collection of water charges at a level sufficient to cover the cost of MOM. Data compiled on a sample of schemes in both provinces as part of the economic and financial analysis (annex 3) for the ICR indicates general compliance with this covenant.

5.2.3 Justification of Rating for Overall Borrower Performance Rating: Moderately Unsatisfactory

5.2.3.1 The telling issue was the inability of the two provincial governments to quickly formulate and agreed on a consolidated restructuring plan for the project. This delay of more than one-third of the original implementation period resulted in significantly reduced outputs and outcomes with the restructuring plan approved only 5 months before the scheduled closing date of the project. Therefore, relative to these reduced targets, there was reasonable achievement, but not if measured against appraisal targets. (See Annex 2.) The Hygiene Promotion component was particularly affected.

5.2.3.2 The core intended project outcome was the development of an integrated and participatory, (three-in-one), approach to the provision of RWSSHP services. This was only partially achieved, because of the significant reduction in the scale and scope of all components at the first restructuring, and particularly the HP component.. However on the positive side and what was confirmed during the ICR mission was that both provincial governments saw great value in adopting the integrated and participatory framework approach developed under the project. Each province has strengthened institutional cooperation mechanisms to ensure that all planning, design and implementation of RWSSHP will be carried out using the integrated and participatory (three-in-one), starting with activities planned as part of the 13th FYP.

6. Lessons Learned

6.1 The following project specific and more general lessons were learned during project implementation:

- a. *Significant co-financiers not honoring their funding commitment obligations for the life of a project has profound effects on project implementation and achievement of the PDO. DfID withdrew from the project using a standard and generic clause in the MOU. In order to avoid future problems of this nature, MOUs should be strengthened to ensure that co-financiers honor their commitments for the life of projects and only cancel these commitments in well define, documented and transparent circumstances and with agreement of all parties involved in*

financing.

- b. *For multi provincial projects, a Central government agency should be nominated to coordinate provincial activity.* To avoid delays and prevent one province being held up by the inaction of another, as was the case with the restructuring of this project, a central agency like NDRC should be nominated as the responsible central agency to better coordinate project provinces. Alternatively, project design could be more flexible in the future to allow staged restructuring where one province is moving faster than another.
- c. *Strategic partnerships and targeted TA add tremendous value.* The strategic partnership established between the WB/UNICEF/GoC/DfID added tremendous value and in the end the KASH TA program produced a best practice example of leverage and co-operation applied to help GoC find solutions to a huge national challenge in the RWSSHP sector. The Bank should look for more opportunities to develop similar partnerships to enhance project outcomes.
- d. *Standard physical and price contingency items for Bank lending in China need continual review and updating to better reflect reality.* The underestimation of contingencies at appraisal resulted in significant cost variations.
- e. *Strengthening the support provided by government departments to new community groups.* A stronger and more permanent relationship between the WASH committees and the Town Water Supply Stations and CWRBs needs to be developed to support fledging community committees that have been assigned the MOM responsibilities of water supply schemes, but have little or no experience with the operational and technical aspects of assets assigned.
- f. *Strength of Programmatic approach to project design.* Despite the implementation problems with this project, in future a programmatic approach to project design can be effective in addressing major national policy issues and challenges, particularly combined with a good technical assistance in China.

7. Comments on Issues Raised by Borrower/Implementing Agencies/Partners

7.1 Borrower/implementing agencies

7.1.1 The borrower raised the following issues.

- a. Shaanxi province generally agreed that the World Bank's ICR report was comparatively comprehensive in its overall assessment of the project. It analyzed the difficulties, problems and impacts that occurred during implementation such as Wenchuan earthquake, the withdrawal of DfID as a major co-financier of the project, variations of currency exchange rates, rising prices, poor implementation, and objectively assessed the relevance, achievement of three-in-one approach. It also highlighted the special efforts made by Shaanxi Province.
- b. According to the assessment conclusion, both the overall project and project provinces performance are rated as Moderately Unsatisfactory. However, Shaanxi Province strongly felt that this rating was inappropriate for Shaanxi and did not reflect their better implementation performance.
- c. The major problem that affected project implementation was that cancellation of the DfID grant. The withdrawal of DfID meant that the core objective of the integrated three-in-one approach

involving the provision of water supply, sanitation and health promotion services was seriously affected. If the original PAD target is used as basis for assessment, the result is not fair.

- d. At the MTR (July 2010), Shaanxi Province quickly approved a restructuring plan in order to accelerate implementation. The plan included a commitment to add counterpart funds to replace the DfID grant funding shortfall and retain the original 1:1 proportion. Shaanxi wanted to commence the follow-up bidding immediately, but instead had to wait for Sichuan Province to finalize their restructuring plan, which resulted in the long delay of the project in Shaanxi. Therefore, in Shaanxi's opinion, the conclusion in the report that gives a rating of "moderately unsatisfactory" for both provinces is not proper in Shaanxi's case. As part of the MTR restructuring, Shaanxi Province added an additional RMB15 million of counterpart funds to deal with the financing gap due to withdrawal of grant. In addition, Shaanxi strengthened the coordination of all levels of government to ensure that the mass media of HP promotion material was broadcasted on Provincial TV media, free of charge.
- e. Shaanxi kindly requested the World Bank to consider the actual implementation conditions of project in Shaanxi, in particular the effort made by Shaanxi Provincial Government and general public in the project area, and should therefore revise the Shaanxi performance to "Moderately Satisfactory".
- f. Sichuan explained the delay of 22 months for the submission of the restructuring application as follows. In June 2010, the Bank task team conducted the MTR mission and the objective was to help the project provinces to complete their medium-term adjustment plan. Sichuan prepared the MTR adjustment report which included the use of DfID grant, but the remaining grant amount could not be determined at the MTR stage. As a consequence, the Bank did not agree to the inclusion of the DfID grant as part of the project restructuring. At the MTR stage, there was still unused DfID grant remaining in Sichuan's special account, but the Bank did not agree to pay for the newly procured contracts. Sichuan believes that on this DfID grant issue, the Bank should have adopted a more practical and effective approach. In January 2012, the PPMO tried to resolve the outstanding issues with the Bank's task team, but these efforts were not successful. Considering all the efforts by Sichuan, it is unfair to attribute all the delay in completing the project restructuring to the fault of Sichuan.
- g. With respect to the procurement collusion issues found in some procurement activities, Sichuan pointed out that since the start of procurement activities, the World Bank and the PPMO conducted annual reviews of all the procurement documents in Chengdu and on-site. There were many procurement training activities and preventive measures carried out, but during the June 2010 and June 2011 supervision missions, evidence of collusion was found in contracts SCYT09005, SCYDG9002, SCRSG09002 SCGAG10020 and SCRS10001 / 1. In response to the procurement problems identified, the Sichuan PPMO conducted several checks and took the appropriate anti-corruption measures, and imposed sanctions on the identified contractors, all of which have been filed in the World Bank's records. Therefore, Sichuan does not agree with the procurement management section of the ICR report, which states that there were a large number of contracts with collusion, and no action was taken by Sichuan to satisfactorily resolve the collusion issues.
- h. In summary, Sichuan made the following comments:
 - i. Looking back on the past eight years' experience of project implementation, many lessons have been learned.

- ii. The Sichuan Project Implementing Agencies lacked experience with World Bank project management. However, despite the lack of experience, the project implementing agencies at provincial and county levels worked very hard and took measures to advance the implementation, especially early in the project and after the project restructuring which involved a concentrated effort of effective, high-speed action to advance the construction of the project and to ensure the completion of the project activities. Therefore Sichuan hoped that World Bank project task team in the course of this ICR preparation can take these efforts into consideration and carry out a more objective and impartial analysis.
- iii. A clear lesson learned is that this project suffered from a lack of national-level institutions to coordinate provincial activities. The provincial level implementing agency was too weak and not in a position to speak.
- iv. Sichuan was concerned about the performance rating of MU assigned to the provinces in the ICR. Sichuan was of the view that because the Bank team was an integral part of the project with its responsibilities, the Bank team's performance should realistically also be rated MU. This would ensure that the ICR ratings are not contradictory.

7.2 Co-financiers – DfID

7.2.1 The following comments on lessons learned were received from DFID:

- a. The commitment to a project should not go beyond an organization's overall programming cycle;
- b. If a project involves many organizations as this did, there should be a sound assessment at design stage as to whether the key organizations have reached consensus on the project concepts and approaches. If the issue is not well addressed at design stage, we need to ask the question, 'should we go ahead with the design' and 'to what extent it is doable?'
- c. If a project includes both on the ground implementation and central level dissemination as this project did, it is essential to have a strong central government agency to coordinate local partners and support the nation-wide dissemination. This role cannot be fulfilled by a local authority, or donor agency;
- d. The project was strongly linked to the KASH TA program. The KASH program took the responsibility to support the dissemination of experience drawn from the project, however KASH finished 18 months earlier than the latter. It was therefore impossible for the provincial WASH to have enough lessons to share with the others simply at the middle stage of implementation. The nearly two year delay between WASH project approval in 2007 and implementation beginning in 2009 further exacerbated this problem.
- e. The ICR report highlighted the achievements of KASH, but DfID questioned of whether any independent evaluation had been undertaken to verify the KASH outcomes
- f. Lessons learned: should incorporate those learnt from complicated, time-consuming Bank procedures and the frequent change of Task Team Leader.
- g. An independent evaluation is better positioned to give rating for overall bank performance.

- h. The total DfID financial contribution to the project channelled through World Bank Trust Fund (Parent Trust Fund TF070771) is £10,188,505 out of DfID's original commitment £14,128,346 (Child Trust Fund TF058298 for the World Bank in an amount £303,350 of & TF058297 for two provinces in an amount of £13,542,429), and the total disbursement should be approx 72%.

7.3 Other partners and stakeholders. UNICEF

7.3.1 The comments from UNIFEC are taken from the executive summary of the KASH TA -End of Program Report. The executive summary verbatim is at Annex 7.

7.3.2 Strong partnerships were established during the KASH program (2006-2010) for the promotion of sanitation and hygiene in China and regionally/globally. Within China, the KASH Project itself was implemented by the NDRC, NPHCCO, and MWR with support from their national institutions such as the China Centre for Disease Control and Prevention and sub-national level departments. Through KASH, the implementation of the Western Provinces Rural Water Supply, Sanitation and Hygiene Promotion (WPRWSSHP) Project in Sichuan and Shaanxi provinces, financed by a World Bank (WB) loan and a DfID grant, was also supported by the UNICEF-Government cooperation program; and the best practices from this Sichuan and Shaanxi Project were also disseminated to the related central government departments.

7.3.3 The purpose of the KASH Project was to address the low priority given to sanitation and hygiene; to support policy, guideline and standards development; and to advocate for increased investment through building partnerships, evidence collection and intensive communication. The ultimate goal was for increased and equal access to water supply, sanitation and hygiene promotion services for the rural poor population in western provinces.

7.3.4 The KASH Project contributed to achieving the goals set in China's plans for rural water supply and environmental sanitation, and in helping the government to fulfill its commitment to achieve the MDGs through planning, designing and implementing the Project with the NDRC, NPHCCO/MoH and MWR. The KASH Project was also working closely with DFID and the WB through joint assessment missions to the WPRWSSHP Project, providing capacity building training to the Project Management Offices in Sichuan and Shaanxi. The UNICEF WASH team also coordinated the relevant NGO partners working on WASH in China, including Plan International, Save the Children and the China Red Cross Society, and established a communication platform for 2010 GHD events, ensuring that the campaign was implemented nationwide, achieving a huge impact. The Project also partnered with the Global Water Partnership in China to advocate on water and sanitation issues and organized several high level roundtable meetings.

7.3.5 In general, the KASH Project has contributed greatly to significant improvements in WASH in China. The results clearly indicate that KASH has fulfilled its objectives in evidence collection, partnership building, policy and guideline development and advocacy for investment.

7.3.6 The success of KASH was in many ways determined by the close collaboration with key related government counterparts who are concerned with WASH, and with government stakeholders responsible for policy development and planning. These partnerships enhanced the influence of Project outputs on government initiatives, and partnerships with technical institutions ensured smoothness in the implementation of improvements.

Annex 1. Project Costs and Financing

(a) Project Cost by Component (in USD Million equivalent)

Components	Appraisal Estimate (USD millions)	Revised Estimates At Restructuring	Actual/Latest Estimate (USD millions)	Percentage of Appraisal
Safe Water supply	44.45	51.29	48.15	108
Environmental Sanitation	19.00	16.51	16.15	85
Hygiene Promotion	3.79	1.24	1.16	31
Institutional Strengthening and Development	3.93	3.05	3.00	76
Total Baseline Cost	71.17	72.09	68.46	96.2
Physical Contingencies	0.63		2.11	
Price Contingencies	3.56		00	
Total Project Costs	75.36		70.57	93.6
Front-end fee PPF	0.00	0.00		
Front-end fee IBRD	3.15	0.06	2.02	
Total Financing Required	78.51	72.15	72.59	92.5

(b) Financing by source of funds (in USD Million equivalent)

Source of Funds	Type of Co-financing	Appraisal Estimate (USD millions)	Revised Estimates At Restructure USD/RMB millions	Actual (USD/RMB millions)	% of Appraisal
Borrower		25.36	31.65/196.23	32.31/200.32	127
DfID	TF Grant	25.00	15.34/95.11	15.34/95.11	61
IBRD Loan		25.00	25.00/155.00	24.94/154.63	100
Total		75.36	72.15/447.33	72.59/450.06	96.3

Annex 2. Outputs by Component

Table 2.1. Summary of Output Targets, Actual Achievements and Key Outcome performance for Water Supply Component.

Rural Water Supply Outputs and Outcomes (Shaanxi and Sichuan)					
<u>Output Indicators</u>	PAD Target	Restructuring Target	Actual Achieved	Actual as % of PAD	Actual as % of restructure
Multi-Village					
Shaanxi	34	28	28	82	100
Sichuan	27	19	22	82	116
Total	61	47	50	82	106
Single Village					
Shaanxi	115	128	128	111	100
Sichuan	220	55	62	28	113
Total	335	183	190	57	104
Cluster					
Shaanxi	0	0	0	0	0
Sichuan	1816	484	43	24	89
Total	1816	484	43	24	89
Single Household Wells (Sichuan only)	23,247	16,103	16,385	71	102
<u>Key Outcome Indicators</u>	<u>Measuring access, safe supply, equity and sustainability of water supplies</u>				
PDO Indicator 1. Increase in # of people with access to safe drinking water					
Shaanxi	326,716	326,716	326,716	100	100
Sichuan	444,393	258,000	262,737	59	102
Total	771,109	584,716	589,453	76	101
PDOI 2. Increase in # of schools with access to safe drinking water					
Shaanxi					
Sichuan	297	41	32	11	78
Total	151	56	33	22	59
	448	97	65	15	67
Intermediate Indicator (II) 5. Safe Supply % of water quality certifications done on time					
Shaanxi	100%	100%	100%	100%	100%
Sichuan	100%	100%	100%	100%	100%
II 14. Proportion of vulnerable² HHs receiving & using improved sanitation.					
Shaanxi	100%	100%	100%	100%	
Sichuan	100%	100%	100	100%	
Total					

II 15. No. of WASH¹ Committees established following project principles/req'ments					
Shaanxi	100%	100%	100%	282(100)%	
Sichuan	100%	100%	100%	336 (100%)	
PDOI 6. % of WSS operating sustainably after 1year					
Shaanxi	100%	100%	100%	90%	90%
Sichuan	100%	100%	100%	93%	73%
Total					

1. WASH executive committees membership has a specified number of women and poor and vulnerable group make-up. See datasheet for achievement.
2. Identified by communities at the start of the project through poverty mapping techniques with assistance from Poverty Alleviation offices.

Table2.2 Summary of Output Targets, Actual Achievements and Key Outcome performance for Environmental Sanitation Component.

Environmental Sanitation Outputs and Outcomes (Shaanxi and Sichuan)					
Output Indicators	PAD Target	Restructured Target	Actual Achieved	% of PAD	% of Restructure
Schools-3 compartment latrines					
Shaanxi	297	41	32	11	78
Sichuan	151	56	33	22	59
Total	448	97	65	15	67
Schools- Handwashing/Onsite Soak-away					
Shaanxi	297	41	32	11	78
Sichuan	151	8	34	23	425
Total	448	49	66	15	135
Schools -Solid Waste drop-off					
Shaanxi	71	66	51	72	77
Sichuan	151	86	22	15	26
Total	222	152	73	33	48
HH – Biogas latrine					
Shaanxi	27,164	6,095	5,850	21	96
Sichuan	28,824	12,287	12,130	42	99
Total	55,988	18,382	17,980	32	98
HH-Double Urn Latrine Shaanxi (Only)	45,918	9,646	9646	21	100
HH-3 Compartment					
Shaanxi	460	0	0	0	0
Sichuan	57,648	14,897	16,231	28	109
Total	58,108	14,897	16,231	28	109
Village Waste Drop-off					
Shaanxi	719	671	654	91	97
Sichuan	452	330	179	40	54
Total	1171	1,001	833	71	83
Village – 3 compartment					
Shaanxi	126	178	193	153	108

Sichuan	36	8	8	22	100
Total	162	186	201	130	124
Key Outcome Indicators	Measuring access, equitable and sustainable sanitation services				
PDOI #4 Increase in number of people with <u>access</u> to improved sanitation services					
Shaanxi	326,716	78,705	79,220	24	101
Sichuan	337,289	121,800	145,400	43	119
Total	664,005	200,505	224,620	34	112
PDOI# 5. Increase in number of schools with <u>access</u> to improved sanitation services					
Shaanxi	297	41	32	11	78
Sichuan	151	56	33	22	39
Total	448	97	65	15	67
II#8. <u>Sustainably managed</u> by communities of:					
1. garbage drop-off pts;					
Shaanxi	719	671	654	91	97
Sichuan	452	330	179	40	54
2. Public latrines					
Shaanxi	126	178	193	153	108
Sichuan	36	8	8	31	100
II 24 (Added at 1st restructuring)					
Increases in % of community HWWS at 5 key occasions		Sha 20% Sic 30%	4.4% 7.8%	n.a. n.a.	22% 26%
II 25 (Added at 1st restructuring)					
Increase in percentages of school students HWWS (net relative to the control groups)	n.a.	Sha 30% Sic 45%	Sha 0% Sic 14%	n.a. n.a.	0% 31%
II 26 (Added at 1st restructuring)					
Increase in percentage of household disposal of the Faeces of young child in a safe manner	n.a.	Sha 70% Sic 80%	Sha 84% Sic 93%	n.a. n.a.	22% 26%

Table 2.3. Detailed Project Outputs by Component - Total

Project Component Output Description	Targets At Appraisal (PAD)	Revised targets (Restr. April 2012)	Actually Achieved at Completion (ICR)	PAD (%)	Restr. (%)
Component 1. Water Supply Component					
Multiple Village Piped Water Supply Schemes (No.)	61	47	50	82	106
Single Village Piped Water Supply Schemes (No.)	335	183	190	57	104
Cluster of Household Piped Water Supply Schemes (No.)	1816	484	430	24	89
Single Household Wells	23,247	16,103	16,385	71	102
Rainwater Storage Reservoirs	75	0	0	0	
Sub-total	25,459	16,817	17,055	67	101
Component 2. Environmental Sanitation					
Schools					
Three Compartment Latrines (No.)	448	97	65	15	67
Hand washing and Onsite Soak away Systems (No.)	448	49	66	15	135
Solid Waste Drop-Off	222	152	73	33	48
Sub-total	1118	298	204	18	68
Household (HH) Level					
Biogas Latrines* (No.)	55988	18382	17980	32	98
Double Urn Latrines	45918	9646	9646	21	100
Three Compartment Latrines (No.)	57648	14,897	16231	28	109
Waste Water Soak away Systems (No.)	51	0	0	0	
Sub-total	159,605	42,925	43,857	27	102
Village Level					
Waste Drop-Off Points (No.)	1171	1001	833	71	83
Three Compartment Latrines (No.)	162	186	201	130	113
Sub-total	1333	1,187	1034	77	87
Component 3. Hygiene Promotion Component					
County/Province Government TV Channels	No Target	No Data			
Rotating Teams Province/County and National TA	No Target	No data			
Mass Media and Promotional Materials	No Target	No data			
Village Participatory Hygiene Promotion	No Target	No data			
Behavior Change M&E (1)Baseline, (2) Follow-up at MTR , (3) ICR Evaluation)	3	2	2	67	100
Component 4 Institutional Development and Capacity Building					
Community Mobilization and Participation training. (No. of participating trainees).	No Target	No target	189,490	-	-
Project Management Support and technical training (No. of participating trainees).	No target	No target	2,130	-	-
Sub-total			191,620		

Project Component 1. Water supply. The outputs of this component were 17,055 schemes built against an original target of 25,459 and a restructured target of 16,818. The original outcome target was to give about 771,109 people a new water supply service. Shaanxi in fact maintained and met the original output and outcome targets and delivered a new service to 326,700 people. Sichuan reduced their output targets at restructuring and actually built slightly more than this, however, the outcome achieved, relative to original target of 444,393 people to an actual of 262,737 (-41%).

Project Component 2. Environmental Sanitation. The restructuring saw this component's output targets significantly reduced. The actual output achievements relative to the original targets were very low for all sub-component activities: (i) school latrines and HW facilities, and garbage drop-off points down 82%; the provision of HH latrines down 73%; and village public latrines and garbage drop-off points down 23%. The reduction all activities associated with sanitation in schools in both provinces was particularly disappointing. This poor actual output performance of course had a corresponding affect on actual outcomes with a significant reduction (-66%) in people gaining access to sanitation services in both provinces), compared with the original outcome target (664,005 down to 224,620). The biggest reduction in access was in Shaanxi, (-76% 326,716 down to 79,220) and in Sichuan the figure was -57% (337,289 down to 145,400).

Project Component 3. Hygiene Promotion. The component suffered the most at the restructuring and was reduced significantly because of the lack of funds. The scope was reduced to focus on three outcomes; (Communities HWWS on the 5 key occasions; (ii) school students HWWS; and (iii) the safe disposal of infant faeces. There is no specific output data available for this component. However, each province did carry out a behavioral change study that establish a baseline and control groups. Sichuan did an MTR update of the study and both provinces carried out an end of project update. The report results showed that relative to the control groups, there was not much net benefit attributed by the project for HWWS at either the community or schools levels. What the survey results did show was that the HP messages did result in behavioral change for the safe disposal of infant faeces

Project Component 4 Institutional Development and Capacity Building

One of the important outputs of this component was the training activities and data shows at there was a total of 191,620 training days provided by the project. The data also shows that the vast majority of training days (189,490 days or 99%) of the training was directed at the community level and only 2,130 days (1%) was applied to project management staff and technical training. An equitable share of the community level training was directed to empowering the poor and vulnerable. Also women were the recipients of a lot of the training as well. This investment in capacity building through training is reflected in the good outcome indicators measuring equity. The other outcome influenced by the success of the training program at community level was the building of a strong participatory process under the project.

Table 2.4. Detailed Project Outputs by Component - Shaanxi

Project Component Output Description	Targets At Appraisal (PAD)	Revised targets (Restr. April 2012)	Actually Achieved at Completion (ICR)	PAD (%)	Restr. (%)
Component 1. Water Supply Component					
Multiple Village Piped Water Supply Schemes (No.)	34	28	28	82	100
Single Village Piped Water Supply Schemes (No.)	115	128	128	111	100
Cluster of Household Piped Water Supply Schemes (No.)	75	0	0	0	
Single Household Wells	224	156	156	70	100
Rainwater Storage Reservoirs					
Sub-total					
Component 2. Environmental Sanitation					
	297	41	32	11	78
Schools					
	297	41	32	11	78
Three Compartment Latrines (No.)	71	66	51	72	77
Hand washing and Onsite Soak away Systems (No.)	665	148	115	17	78
Solid Waste Drop-Off					
Sub-total	27,164	6095	5850	21	96
Household (HH) Level					
	45,918	9,646	9,646	21	100
Biogas Latrines* (No.)	73,082	15741	15496	21	98
Double Urn Latrines					
Three Compartment Latrines (No.)	719	671	654	91	97
Waste Water Soak away Systems (No.)	126	178	193	153	108
Sub-total	845	849	847	100	100
Village Level					
Waste Drop-Off Points (No.)	1171	1001	833	71	83
Three Compartment Latrines (No.)	162	186	201	130	113
Sub-total	1333	1,187	1034	77	87
Component 3. Hygiene Promotion Component					
County/Province Government TV Channels	No Target	No data			
Rotating Teams Province/County and National TA	No Target	No data	No data		
Mass Media and Promotional Materials	No Target	No data			
Village Participatory Hygiene Promotion	No Target	No data			
Behavior Change M&E (1)Baseline, (2) Follow-up at MTR , (3) ICR Evaluation)	3	2	2	67%	100
Component 4 Institutional Development and Capacity Building					
Community Mobilization and Participation training. (No. of participating trainees).	No Target	No Target	104,600	-	-
Project Management Support and technical training (No. of participating trainees).	No Target	No Target	1,030	-	-
Sub-total			105,630		

Table 2.5. Detailed Project Outputs by Component - Sichuan

Project Component Output Description	Targets At Appraisal (PAD)	Revised targets (Restr. April 2012)	Actually Achieved at Completion (ICR)	PAD (%)	Restr. (%)
Component 1. Water Supply Component					
Multiple Village Piped Water Supply Schemes (No.)	27	19	22	82	116
Single Village Piped Water Supply Schemes (No.)	220	55	62	28	113
Cluster of Household Piped Water Supply Schemes (No.)	1816	484	43	24	89
Single Household Wells	23,247	16,103	16,385	71	102
Rainwater Storage Reservoirs	25,310	16,661	16,512	65	99
Sub-total					
Component 2. Environmental Sanitation					
Schools					
Three Compartment Latrines (No.)	151	56	33	22	59
Hand washing and Onsite Soak away Systems (No.)	151	86	22	15	26
Solid Waste Drop-Off	363	150	89	25	60
Sub-total					
Household (HH) Level					
Biogas Latrines* (No.)	28,824	12,287	12,130	42	99
Double Urn Latrines	57,648	14,897	16,231	28	109
Three Compartment Latrines (No.)	51	0	0		
Waste Water Soak away Systems (No.)	86,523	27,184	28,361	33	104
Sub-total					
Village Level					
Waste Drop-Off Points (No.)	452	330	179	40	54
Three Compartment Latrines (No.)	36	8	8	22	100
Sub-total					
Component 3. Hygiene Promotion Component					
County/Province Government TV Channels	No Target	No Data			
Rotating Teams Province/County and National TA	No Target	No data			
Mass Media and Promotional Materials	No Target	No data			
Village Participatory Hygiene Promotion	No Target	No data			
Behavior Change M&E (1)Baseline, (2) Follow-up at MTR , (3) ICR Evaluation)	3	2	2	67	100
Component 4 Institutional Development and Capacity Building					
Community Mobilization and Participation training. (No. of participating trainees).	No Target	No data	84,890	-	-
Project Management Support and technical training (No. of participating trainees).	No Target	No data	1100	-	-
Sub-total					
			85,990		

Annex 3. Economic and Financial Analysis

CHINA: Western Provinces Rural Water Supply, Sanitation and Hygiene Promotion Project

1. The cost benefit analysis (CBA) for the water supply component of the project was conducted after the completion of the implementation of the project. The CBA was based on the representative samples of different schemes selected at appraisal across the two project provinces. The results of the CBA were represented by EIRR. The same models used at appraisal to calculate the EIRR were used at ICR, with the following assumptions :

- a. The investment in water supply was made following the principle of least cost;
- b. The actual capital investment made at ICR were used as against estimated cost of investment at appraisal was used to obtain economic value of investment by conversion factor of 93%;
- c. The economic value of O&M costs was 1% of capital investment;
- d. The economic price of water at appraisal was also used to calculate the economic benefit of the schemes at ICR;
- e. Water supply scheme capacity was based on the actual water consumption at ICR compared with the design capacity used at appraisal and an annually 1% increase of water consumption from the commencement of operation was used to calculate the economic benefit of the schemes;
- f. The sensitivity analysis only tested the increase of O&M costs since it closely relates to the efficiency of management during the operation.

2. The results of the CBA were shown in Tables 3.1 and 3.2 below, compared with the results of the CBA at project appraisal. The results show that the overall EIRR for all schemes analyzed in the two provinces is 16.7%, lower than one at project appraisal. Among others, the benefits specifically the consumption of water is lower than one estimated at project appraisal. In another word, the demand of water was overestimated at project appraisal. Table 3.3 and 3.4 below show the water demand estimated at project appraisal and the water consumption at ICR. The realized capacity of the schemes analyzed is only 60% of design capacity made at project appraisal.

3. The economic benefits used to calculate EIRR does not include the public health benefits, which are difficult to quantify, such as reducing diarrhea, skin disease, typhoid, eye disease, etc. Another widely accepted benefit is the improved sanitation which is more important in epidemiological terms. Take into account these benefits, the EIRR for all schemes would be greater.

Table 3.1: Calculation of EIRR and Sensitivity Analysis for Sichuan Province

Sichuan		EIRR Base		O&M +10%	
		At Appraisal	At ICR	At Appraisal	At ICR
Jialing District	Toudongqiao	32.4%	n.a.*	31.9%	
Lezhi County	Chachahe	34.3%	9.9%	33.8%	9.8%
Pingchang County	Wutong	34.4%	28.7%	33.9%	28.6%
	Xinmin	22.8%	n.a.	22.3%	
	Xingguang	30.0%	n.a.	29.4%	
	Xiongfeng	25.5%	n.a.	24.7%	
	Xhuangzi	18.5%	n.a.	18.3%	
Renshou County	Hongfeng	7.3%	No profit	7.0%	No profit
	Baoma	23.0%	n.a.	22.7%	
	Banyan	25.5%	7.7%	25.2%	7.6%
Sichuan Overall		27.1%	10.3%	26.7%	10.2%

* Due to lack of information from these schemes, no CBAs for ICR were conducted.

Table 3.2: Calculation of EIRR and Sensitivity Analysis for Shaanxi Province

Shaanxi		EIRR Base		O&M +10%	
		At Appraisal	At ICR	At Appraisal	At ICR
Binxian County	Mingyuchi	46.2%	26.8%	46.0%	26.7%
	Yahewan	22.1%	17.1%	21.9%	16.9%
	Yaochitou	42.9%	39.3%	42.7%	39.2%
Yaozhou District	Baocun	22.4%	8.0%	22.2%	7.8%
	Mazui	29.4%	11.1%	29.2%	11.0%
Yintai District	Chenlu	28.7%	10.0%	28.3%	9.9%
	Xiyuan	27.2%	12.6%	27.0%	12.5%
Zhidan County	Niuguo	15.9%	17.8%	15.5%	17.7%
	Siwa	16.5%	18.4%	16.2%	18.3%
	Wangzhuzi	19.1%	14.4%	18.8%	14.3%
Shaanxi Overall		27.1%	18.2%	26.7%	18.1%
Shaanxi and Sichuan combined		27.7%	16.7%	27.4%	16.6%

Table 3.3: Comparison of Water Demand at Sichuan Province

Sichuan		Water Demand		Difference
		At Appraisal m ³ /day	At ICR m ³ /day	% of Appraisal
Jialing District	Toudongqiao			
Lezhi County	Chachahe	1100	360	33%
Pingchang County	Wutong	79	60	76%
	Xinmin			
	Xingguang			
	Xiongfeng			
Renshou County	Xhuangzi			
	Hongfeng	160	60	38%
	Baoma			
	Banyan	160	60	38%
Sichuan Overall		1499	1086	72%

Table 3.4: Comparison of Water Demand in Shaanxi Province

Shaanxi		EIRR Base		Difference
		At Appraisal m ³ /day	At ICR m ³ /day	% of Appraisal
Binxian County	Mingyuchi	471	238	51%
	Yahewan	398	296	74%
	Yaochitou	1000	809	81%
Yaozhou District	Baocun	700	299	43%
	Mazui	751	305	41%
Yintai District	Chenlu	1013	281	28%
	Xiyuan	613	326	54%
Zhidan County	Niuguo	273	273	100%

Shaanxi		EIRR Base		Difference
		At Appraisal m ³ /day	At ICR m ³ /day	% of Appraisal
	Siwa	118	118	100%
	Wangzhuzi	705	501	72%
Shaanxi Overall		6042	3446	57%
Shaanxi and Sichuan combined		7541	4532	60%

Financial analysis

4. The setting of the correct water tariff is a key to achieving one of the objectives of the project which is to provide an affordable, but sustainable water supply. To achieve this objective, tariffs should be set at a level sufficient to at least cover the operation and maintenance cost of providing water supply services, but would not be expected to cover the Bank loan repayments. These repayments would be made by the participating county or municipal governments.

5. At project appraisal, it was projected that tariffs would need to be set between RMB1.5 and RMB4 per m³ in Sichuan to achieve financial sustainability, with an average of RMB2.9 per m³. It was also projected that tariffs would need to be set between RMB1.5 and RMB6.45 per m³ in Shaanxi, with an average of RMB2.7 per m³.

6. At ICR, 13 schemes in Sichuan were selected and their tariffs ranged from RMB1.80 to 3.90 per m³. In Shaanxi, 10 schemes were reviewed and their tariffs ranged between RMB2.50 and RMB4.00 per m³. These tariffs fell within the ranges of tariffs projected at appraisal. However, these tariffs did not necessarily ensure all schemes covered their O&M costs from the tariff revenue alone. Some of the schemes needed other revenues such as connection fees and sales of materials to cover O&M costs. Table 3.5 and 3.6 below show the tariffs and O&M costs in the selected schemes in Sichuan and Shaanxi.

Table 3.5: Tariffs and O&M Costs in Selected Schemes in Sichuan

Sichuan		Tariff RMB/m ³	Unit O&M Cost RMB/ m ³
Lezhi County	Chachahe	2.80	2.58
Pingchang County	Yankou	2.50	1.70
	Xinming	3.00	2.07
Renshou County	Xindian	3.00	10.36
	Hongfeng	2.50	2.64
	Banyan	3.00	1.21
Da County	Wangjiaba	2.00	1.15
Mingshan County	Hongcao	1.80	1.40
	Guanyin	1.80	1.62
Yanting County	Xingfu	3.90	2.64
	Juxi	2.20	2.21
Anju District	Huatianba	2.20	1.85
	Bajiaozhai	2.20	36.67

Note: In Xindian, the expense of power is RMB1.32/m³ and the office expense is RMB1.64/m³. The sum of both expenses is less than RMB3.00/m³ (the water tariff in Xindian). However, the expense of salary and welfare is RMB7.40/m³, which should be improved. The tariff in Bajiaozhai is very lower than unit cost of O&M. The tariff is RMB2.20/m³ while the expense of power is RMB5.79/m³, the expense of salary and welfare is RMB4.00/m³, the office expense is RMB24.60/m³. Its total revenue in 2012 was RMB41.79 million including tariff revenue, collection fee, and sales of materials, while its total expense in RMB41.50 million. The total revenue can cover all O&M costs.

Table 3.6: Tariffs and O&M Costs in Selected Schemes in Shaanxi

Shaanxi		Tariff RMB/m³	Unit O&M Cost RMB
Binxian County	Mingyuchi	4.00	2.77
	Yahewan	3.40	2.95
	Yaochitou	3.40	2.95
Yaozhou District	Baocun	4.00	3.00
	Mazui	4.00	3.00
Yintai District	Chenlu	3.85	5.98
	Xiyuan	3.85	3.50
Zhidan County	Niugou	2.50	2.00
	Siwa	2.50	2.00
	Wangzhuzi	2.50	2.00

Note: For the case of Chelu, we were only given two data: tariff and unit cost of O&M.

Annex 4. Resettlement and Land Acquisition

1. The project supported sub-projects with involuntary resettlement (land acquisition) activities, mainly construction of water supply and sanitation facilities in a number of villages of 25 counties, including Shaanxi 15 counties in and Sichuan 10 counties in. The involuntary resettlement activities did not have any house demolition or people replaced according to the resettlement action plans (RAPs) and actual land acquisition in the two project provinces. All work related to involuntary resettlement of the project was fully completed before end of March, 2013.

2. **Details of Land Acquisition.** A total of 12.61 ha/189.17 mu of land was permanently acquired (Sichuan 5.99 ha/89.95 mu and Shaanxi 6.62 ha/99.22 mu). A total area of 132.06 ha/1980.83 mu land was temporarily occupied (Sichuan 65.35 ha/980.23 mu and Shaanxi 66.71 ha/1000.6 mu). In Sichuan province, five project counties (Jianling, Lezhi, Pingchang, Guangan and Yanting) provided land for the project use within project villages and the affected households were compensated on a land-for-land basis, rather than monetary compensation. In Shaanxi, five project counties (Zichang, Zhidan, Yaozhou, Yintai and Suide) only had temporary land occupation. The total costs for land compensation was US\$0.515/RMB3.194 million (Sichuan US\$0.161/RMB 1.00 million Shaanxi /US\$0.354/RMB2.195 million). More details by province are shown in table 1 below:

Table 1. Actual Completed Land Acquisition, compensation and affected people

Project sites provinces	No. Affected		Area of Land Acquisition (ha/mu) ¹		Total re-settlement cost (US\$/RMB millions)
	HHs	PAPs	Permanent	Temporary	
Sichuan	305	1185	5.99/89.95	65.35/980.23	0.161/1.00
Shaanxi	317	1237	6.62/99.22	66.71/1000.60	0.354/2.195
Total	622	2422	12.61/189.17	132.06/1980.83	0.515/3.1945

Note: The Chinese unit of area is the mu. 15mu =1 hectare or 666 m²

3. The project civil works were very small in terms of each individual work scale spread over 15 counties of Shaanxi and 10 counties of Sichuan. The civil works were mainly for village and farm household level water supply and including such works as well and small-scale water pumping stations, and sanitation/latrines facilities for local households, villages and schools and required the acquisition of less than 0.06 hectare (600 m²). In many cases project village communities adopted the land for land compensation method, whereby land required was provided by the respective project villages by reallocating village land. This also led to a small amount of cost for land acquisition in the project.
4. Compared to the appraisal estimate, the actual involuntary resettlement impacts were reduced for project component 1 - safe drinking water supply, and substantially reduced in component two- environmental sanitation, because pipeline layout was optimized in implementation, and a big portion of DFID fund was withdrawn during the project implementation period, thus reducing the scale and scope of this component. For example, at project restructuring, the number of households planned for latrine construction reduced from 162,014 to 42,925 with the actual achievement of 43,925 and the number of latrines for local schools was reduced from 448 to 97, with actual achievement of 65.

Livelihood Restoration of PAPs

5. All PAPs were compensated properly in accordance with the RAPs. Compensation standards for land use were equal to or exceeded those stipulated in the RAPs. All compensation was paid on time and all PAPs were consulted during the entire resettlement process. Overall, the resettlement objective was realized and resettlement results were satisfactory. The monitoring team conducted random investigations on livelihood restoration every year during the project implementation. The project only acquired a very small portion of affected people's land, the adverse impacts on these people's livelihoods were consequently very little. Furthermore, the monitoring reports and analysis concluded that the livelihoods of the PAPs have been fully restored and their average annual income had actually increased year by year. The PAPs living environment, including provision of public facilities and services, such as drinking water and latrine facilities, has improved significantly.

Annex 5. Bank Lending and Implementation Support/Supervision Processes

(a) Task Team members

Names	Title/ Responsibility/ Specialty	Unit
Mr. Tom Zearley	Lead Operations Officer/ Task Team Leader	EASUR
Mr. Margret Png	Lead Consul/Project Lawyer	LEGEA
Mr. Claudio Purificato	Senior Water Supply Engineer	EASUR
Parameswaran Iyer	Sr Water & Sanitation Spec.	RWSSTG
Mr. Mingyuan Fan	Sanitary Engineer	EASUR
Mr. Axel Baeumler	Economist	EASUR
Daniel R. Gibson	Lead Social Development Specialist	EASSD
Chaogang Wang	Senior Social Development Spec	EASSD
Songling Yao	Senior Social Development Spec	EASSD
Mr. Haiyan Wang	Disbursement Specialist	LOAG1
Mr. David I	Financial Management Specialist	EAPCO
Mr. Junxue Chu	Financial Management Specialist	LOAG1
Xiaofeng Li	Operations Analyst	EASUR
Ms. Xin Chen	Program Assistant	EASUR
Ms. Xuemei Guo	Program Assistant	EASUR
Anne K. Harrison	Program Assistant (Temporary)	EASUR
Joanna Mclean Smith	Water and Environmental Specialist	Consultant
Charles Chandler	M&E Specialist	Consultant
Mr. Adam Biran	Social Marketing and Health Promotion Special	Consultant
Supervision/ICR		
Mr. Tom Zearley	TTL	EASUR
Mr. Nathan Belete	TTL	EASRD
Mr. Achim Focke	TTL	EASRD
Mr. Mats Anderson	TTL	EASUR
Mr. Parameswaran Iyer	TTL	EASUR
Mr. Paul Kriss	TTL	EASCS
Mr. Sing (Terry) Cho	TTL	EASCS
Adama Biran	Social Marketing and Health Promotion Special	TWIWA
Xin Chen	Operations Analyst	EACCF
Sing Cho	Urban Specialist	EASCS
Kezhi Dai	Consultant	EASCS
Yi Geng	Sr Financial Management Specialist	EAPFM
David I	Sr. FM Specialist	EAPFM
Songyun Ma	Consultant	EASCS
Yue Ma	Consultant	EASCS

Margaret Png	Lead Counsel	LEGEM
Xin Ren	Environmental Specialist	EASCS
Jinan Shi	Senior Procurement Specialist	EAPPR
Kishor Uprety	Senior Counsel	LEGES
Chaogang Wang	Senior Social Development Spec	SDV
Mara K. Warwick	Operations Manager	ECSSD
Guangming Yan	Urban Specialist	EASCS
Ji You	Urban Specialist	EASCS
Guoping Yu	Procurement Specialist	EAPPR
Hongwei Zhao	Program Assistant	EACCF

(b) Staff Time and Cost

Stage of Project Cycle	Staff Time and Cost (Bank Budget Only)	
	No. of staff weeks	USD Thousands (including travel and consultant costs)
Lending		
FY05	00	7.73
FY06	37.7	264.86
FY07	29	206.69
FY08	0	-1.08
Total:	66.7	478.20
Supervision/ICR		
FY08	18.8	111.7
FY09	26.7	125.5
FY10	38.2	120.7
FY11	23.1	110.7
FY12	15.3	88.8
FY13	11.7	102.8
FY14	1	1.6
Total:	134.6	661.8

Co-financier DFID and major partner UNICEF staff and consultants who worked on the project included:

Name	Title	Unit
Ms. Jane Jamieson	Water and Sanitation Sector Manager (until July 2006)	DFID
Ms. Susanna Smets	Water and Sanitation Sector Manager (from Sept 2006)	DFID
Ms. Lucy Balmer	Deputy Programme Manager	DFID
Dr. Sun Xuebin	Water and Sanitation Sector Deputy Manager	DFID
Mr. Mark George	Economic Advisor	DFID
Mr. Rahul Malhotra	Social Development Advisor	DFID
Mr. Arjan De Haan	Social Development Advisor	DFID
Mr. Zhao Yongjun	Governance Advisor	DFID
Mr. Femi Odediran	Project Officer	UNICEF
Ms. TV Luong	Sanitation and Hygiene Specialist	UNICEF
Mr. Zheng Bo	Project Officer	UNICEF
Mr. Robert Boydell	Project Technical Assistance (PTA) Leader	Consultant
Dr. Kevin Sansom	PTA Institutional Specialist / Team Leader	Consultant
Mr. Gao Xingjun	Institutional and Financial Specialist	Consultant
Ms. Kathy Attawell	PTA Social Assessment Specialist	Consultant
Prof. Li Ou	Social Assessment Specialist	Consultant
Mr. Peter Harvey	Water Resources Specialist	Consultant
Mr. Pei Yuansheng	Water Resource Specialist	Consultant
Mr. Ian Walker	Finance and Economic Specialist	Consultant
Mr. Robert Reed	Sanitation Specialist	Consultant
Mr. Wang Junqi	Sanitation Specialist	Consultant
Dr. Val Curtis	Hygiene Promotion Specialist	Consultant
Dr. Liu Yanli	Hygiene and Training Specialist	Consultant

Annex 6. Summary of Borrower's ICR and/or Comments on Draft ICR

Shaanxi.

Shaanxi prepared a comprehensive ICR report that followed the Bank's recommended format for the preparation of the borrower's ICR and the full report is in the project files. Unlike Sichuan, no summary of the report was prepared. The report was prepared in seven sections, with many subsections providing a lot of detail. Its scope and content included:

- Section 1 Assessment of Dos and design and quality at entry
- Section 2: Achievements of Objectives and Outputs
- Section 3 Project Implementation
- Section 4: Major factors affecting implementation and outcomes
- Section 5: Project Sustainability
- Section 6: Bank and Borrower Performance
- Section 7: Experience and Lessons Learned

The key experiences noted by Shaanxi were: 1) The "three-in-one" approach is worthwhile to scale-up; 2) Community participatory is the foundation for smooth implementation and sustainable operation; 3) The WASH Committees are a key factor for sustainable operation; and 4) Cooperation of line agencies is basis for carrying out "three-in-one" approach

The key lessons learned are: 1) It is crucial to stress community participatory; 2) Experience of monitoring unit affected objectivity of the project outcome; 3) Appropriate estimation of price contingency and fluctuation of exchange rate is crucial for the project implementation; and 4) Better mechanisms for cross-provincial coordination are necessary.

Sichuan

Sichuan prepared a summary at the beginning of their ICR report as below. The main report, was comprehensive, prepared in nine section and followed the Bank's recommended format for borrower's ICRs. The full report is in the project files.

ICR Report Summary

Sichuan rural water supply and environmental health project supported by loan from the World Bank and grants of the British Government (rural water supply and environmental health project in Sichuan province) is a demonstration project of exploratory and innovative pilot coordinating the implement of the 11th Five-year Plan for National Safeguarding Rural Drinking Water Project carried out in China for the cooperation between World Bank and Chinese Government, aiming at explore an effective promoting mechanism and pattern among "drinking water safety, environmental health and health education" in poverty-stricken rural areas. The project is implemented in Sichuan and Shaanxi and shall be extended in other provinces in China. Rural water supply and environmental health project in Sichuan Province covers 117700 peasant households of 10 counties (districts) in Sichuan Province, among which 4 counties are the key

counties of the state for poverty alleviation development. The preparation of the project began in 2005, the project was formally implemented in the end of 2008, the project ended up at the end of the fiscal year of the World Bank in 2013, and the project has lasted for eight years.

In order to get a comprehensive and systematic summary of the experience of rural water supply and environmental health project in Sichuan province, project office in Sichuan province hired experts to form a preparation group of the "completion report" of the project, and the project implementation agencies in 10 project counties were organized to discuss, formulate, revise and improve the outline, data and case collection scheme of the "completion report" of the project in many times, organized and conducted acceptance evaluation work of the project, and collected a large number of project data, related information, cases, etc. in almost half a year, and the acceptance evaluation report of this project was written on this basis.

Nine chapters are used to make an overall review, conclusion and evaluation for the background, process, implementation situation, benefits, influence, etc. of the rural water supply and environmental health project in Sichuan province in this report, and the effectiveness, impact achieved and useful experience explored in the rural water supply and environmental health project in Sichuan province are overall summed up, to provide experience for reference for the work to solve the problems of drinking water safety, environmental health, public health, etc. in rural areas.

Annex 7. Comments of Co financiers and Other Partners/Stakeholders

UNICEF. Executive Summary of the Knowledge and Advocacy for Sanitation and Hygiene (KASH) end of Program Report June 2010.

1. Executive Summary

At the commencement of this project, access to safe water, sanitary means of excreta disposal and good hygiene practices were a major concern in rural China. With respect to water, in 2005 around 300 million people lacked access to safe water, over 50 million people lived in fluoride-affected areas; more than 2 million were at risk of chronic arsenic poisoning from contaminated drinking water and more than 10,000 were suffering from frank arsenicosis; over 37 million people were at risk of dental fluorosis and nearly three million had skeletal fluorosis; even more were drinking from biologically and chemically contaminated water sources. With respect to sanitation, over 670 million people lived without improved sanitation, despite the fact that access to sanitation had increased from 8% in 1993 to 40% in 2003. The use of raw and/or semi-digested human excreta in the field as organic fertilizer was a common practice in rural China, and hence it is not surprising that an estimated 190 million children were infected with round worm and another 70 million with whip worm; over 40 million also had hook worm, at project commencement. These children were thus at risk of anaemia, global malnutrition and slow cognitive development affecting their learning achievement.

United Nations Children's Fund (UNICEF) developed its Water, Sanitation and Hygiene (WASH) programme (2006-2010) based on the above situation and the lessons learnt and experiences gained from its previous programme cycle (2001-2005). The three major components of WASH Programme in the 2006-2010 cycle were: i) Knowledge and Advocacy for Sanitation and Hygiene (KASH) to influence policy change, with a focus on creating an enabling environment for better hygiene practices; ii) WASH in schools (WiS), in conjunction with UNICEF assistance in Education, to demonstrate Children Friendly WiS that would ultimately lead to the development of a policy on promoting sanitation and hygiene in all schools, and iii) Water Quality - Arsenic Mitigation and Management, to facilitate the development of a long-term plan for water quality issues specifically concerning arsenic and fluoride and developing a community-based water quality monitoring system.

In this context, the UNICEF collaborated with the United Kingdom Department for International Development (DFID) and designed the KASH Project with equal amount of funds from both agencies to be managed by UNICEF China Office. Over five years, a variety of activities were conducted in four output areas as planned in the project proposal including: 1) Evidence-based Development on WASH; 2) Building Partnerships; 3) National Policies and Guidelines, and 4) Advocacy for Investment in Rural Sanitation.

During the complete project cycle, good outcomes or impacts were achieved, as described by output in the following paragraphs.

Output 1: Evidence on economic and health benefits of integrated WASH developed, documented and disseminated to various stakeholders in China

Various studies were carried out including, among others, studies on the “burden of disease” due to unsafe water, poor sanitation and hygiene; cost-benefit of improved water supply, sanitation and hygiene; assessment of the implementation of the national sanitation program against the Government’s 11th Five-Year Plan (FYP, 2006-2010) and MDG targets covering identification of constraints and opportunities for further planning and implementation; a compilation of studies/reports on the current situations of rural water supply and sanitation in China and a survey on the use and construction of public latrines in rural China and drinking water safety in rural areas. These reports and major findings were developed and discussed regularly with key government counterparts such as National Development and Reform Commission (NDRC), National Patriotic Health Campaign Committee Office (NPHCCO), Ministry of Water Resources (MWR), and Ministry of Education (MoE); and all said information provided references on improved planning and investments in the WASH sector in China.

The publication of studies and presentation of results at various events publicized the cost effectiveness of investing in sanitation and its contribution to poverty reduction and therefore gained visibility and attention from the “National Natural Science Fund”. Now such studies are made a category to be regularly supported by the National Natural Science Fund of China.

During this period of time, new programs were initiated such as China’s three years “Health Sector Reform Program (HSRP, 2009-2011)”, which includes rural sanitation and water supply improvement in rural communities and in local health facilities. Another three years sanitation improvement program entitled the “National Urban-Rural Integrated Sanitation Improvement Action Plan (NURISIAP)” was also launched in 2010; this program was initiated based on our KASH project experience and drafted with KASH Project support.

Output 2: International partnerships, regional networks and national level inter-agency cooperation and coordination mechanism developed

Strong and wide partnership has been established during the last five years for the promotion of sanitation and hygiene in China and regionally/globally. Within China, the KASH Project itself was implemented by the NDRC, NPHCCO, and MWR with support from their national institutions such as the China Centre for Disease Control and Prevention and sub-national level departments. Through KASH, the implementation of the Western Provinces Rural Water Supply, Sanitation and Hygiene Promotion (WPRWSSHP) Project in Sichuan and Shaanxi provinces, financed by a World Bank (WB) loan and DFID grant, was also supported by the UNICEF-Government cooperation program; and the best practices from this Sichuan and Shaanxi Project were also disseminated to the related government departments.

With support from KASH, China’s participation in regional and global events was enhanced, enabling interaction with other countries and international agencies on sanitation development in China and learning from other nations at the first and second East Asia Ministerial Conferences on Sanitation and Hygiene (EASAN).

Chinese Government counterparts were made aware of the methodologies of the World Health Organization (WHO)/UNICEF Joint Monitoring Programme (JMP) on Millennium Development Goal (MDG) targets on sanitation and water, and the government is a major partner of the global consultation on the post-MDG (post-2015) water and sanitation target setting and monitoring.

Wider partnership was also built via events organized for hygiene behaviour change and for promoting water conservation and use during globally recognized occasions, such as the Global Handwashing Day (GHD) and the World Water Day (WWD).

Partnership was also connected through workshops, forum, ChinaWASH Yahoogroups managed by UNICEF, and the WASH website (<http://www.qgzjxd.com>) created by KASH and now managed by the Chinese Centre for Health Education (CCHE).

Thanks to KASH, government water and sanitation programs are now more reliably designed with several ministries' involvement and implemented with joint effort, with each responsible for a component. For example, the establishment of the 12th FYP for rural water supply has been led by MWR with input from NDRC and NPHCCO and endorsed by all of them. The three years "NURISIAP" was developed by the NPHCCO with support from UNICEF, and commented by the NPHCCO's member ministries and provincial level authorities, and is being implemented by local governments. In early 2011, the NPHCCO organized an inspection and supervision with eight member ministries' participation.

Output 3: Policies, best practices guidelines and manuals for sanitation and hygiene promotion programmes, and especially the integrated WASH approach documented and disseminated

Studies, surveys, evaluations/assessments, workshops/forums and campaigns supported, plus strategic partnerships with NDRC, NPHCCO, MWR and MoE, have led to several policy changes and developments. KASH-supported activities were a major contributor to each of the following major outputs/outcomes. First was the strengthening of sanitation standards in order to ensure that human waste would not impose harm to water sources, soil and directly to people. Three national standards were newly established or revised including "Human Waste Harmless Treatment Standard", "Rural Household Latrine Standard" and "Rural Public Latrine Standard"; and the Child Friendly WASH Standard was also written for use. Second, school water and environmental sanitation was given due attention. The NDRC, MWR and MoE issued a government paper requesting all levels to take school water supply into the water sector's agenda, and corresponding funds have been allocated since 2010. Third, rural waste water management has been brought to the attention of the government, such that MWR has listed it as a component of the sector's 12th FYP. Finally, a comprehensive regulation was developed which laid the foundation for rural water supply construction, operation, maintenance, quality and monitoring and evaluation.

During this period, the government has also favoured sanitation and water development, prioritizing it among the rural and ethnic groups, in child care centres and schools and at health facilities. This momentum is seen to be continued and indicated in the Party's and State Council's Number 1 Paper of 2011.

Output 4: Policy and guidelines for government and private sector investment in rural WASH developed and adopted by Government of China

The Project supported development of approaches, guidelines, strategies, and standards; conducted forum/workshops; undertook studies and conducted analysis to provide evidence and built up partnerships to support the dialogue for government and private sector's investment in sanitation. The major outputs/outcomes established include, first, the systematic and integrated approach in the development and implementation of the "NURISIAP". The development was initiated and coordinated by PHCCO and local government is leading the implementation with related PHCCO's members. This arrangement allows for financial sources for relevant business managed by different departments to be used jointly for this integrated Action Plan. Second, some studies clearly revealed the level of willingness of rural villagers in selected rural communities to pay for sanitation improvement, and analysed the need for funds from both government and other sources to achieve the MDG sanitation target. Third, surveys on the possibility of, exploration of mechanisms and promotion forum for marketing sanitation inspired and fostered the development of private sector participation in pushing sustainable sanitation development.

Investment in rural water supply and sanitation has increased sharply. A sizable increase in central government investments for rural drinking water supply (from 11.4 billion RMB in 2008 to 15.2 billion RMB in 2009) and rural sanitation (from 558 million RMB in 2008 to 1.6 billion RMB in 2009) has materialized. The NDRC and NPHCCO/MoH, our key sanitation counterparts, each played key roles in incorporating rural water supply and sanitation as part of the Government's HSRP, thus resulting in this huge increase in the budget for sanitation during this period.

In general, the KASH Project has contributed greatly to significant improvements in WASH in China. The results clearly indicate that KASH has fulfilled its objectives in evidence collection, partnership building, policy and guideline development and advocacy for investment.

The success of KASH was in many ways determined by the close collaboration with key related government counterparts who are concerned with WASH, and with government stakeholders responsible for policy development and planning. These partnerships enhanced the influence of Project outputs on government initiatives, and partnerships with technical institutions ensured smoothness in the implementation of improvements.

UNICEF is proud of the success of KASH, particularly the momentum in WASH within government and the probability that China will achieve the MDG target in sanitation. However, we hoped that the private sector would be more active in investing in rural sanitation using its marketing skills and research and development capacity; more effort is needed by this sector in the future.

A total of USD 1,655,056.19 was allocated by DFID for the KASH Project, yielding a programmable amount of USD 1,546,815.52 for UNICEF China. Currently, the balance is USD 20.34. Both government counterparts and UNICEF are grateful to DFID for this contribution without which the above mentioned results would not have been achieved. UNICEF and the other domestic and international partners will continue to support the Government of China in rural sanitation and water, also taking climate change and environmental degradation into consideration. And, it is expected that China's success will also benefit the rest of the world.

-----End -----

Annex 8. Selected Photos of Project Achievements and Impact

Hygiene Promotion (HWWS) in schools, young mother know dispose of her baby's faeces safely



Biogas latrine to fire stove, first time tap water supply in household kitchen in village of Sichuan



Annex 9. List of Supporting Documents

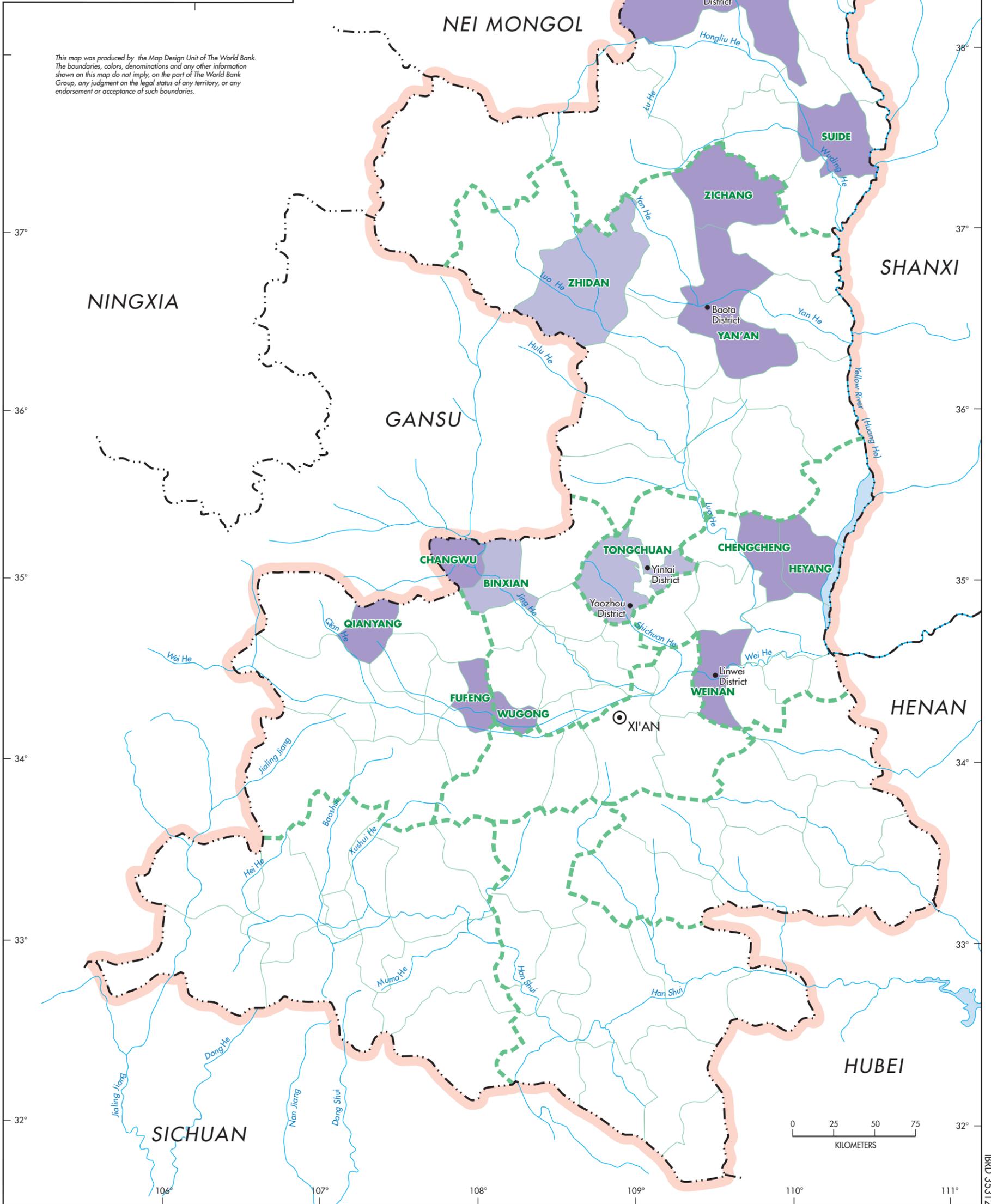
1. Project Appraisal document
2. Loan Agreement
3. Project Agreement
4. DfID MOU for TF070771 dated August 3, 2007.
5. DfID Trust Fund Grant Agreement (TF058298) dated September 29, 2007.
6. Project Restructuring Papers
7. Mission Aide Memoires and Back to Office reports
8. Project Status Reports and Implementation Status Reports
9. Project Annual Works Plans
10. Dam Safety progress and final reports
11. Environmental Monitoring and Evaluation Reports
12. Land Acquisition and Relocation Monitoring progress and final reports
13. Final Sichuan and Shaanxi Provincial Implementation Completion Reports
14. Final Hygiene Promotion Surveys in Shaanxi and Sichuan provinces.
15. UNICEF Knowledge and Advocacy for Sanitation Hygiene (KASH) Program, end of program report No. PBA SC/2007/1023 dated June, 2010.
16. Report on Observations and Findings of a Special Technical Review of a sample of completed Rural Water Supply Schemes in Shaanxi and Sichuan – September 2012.



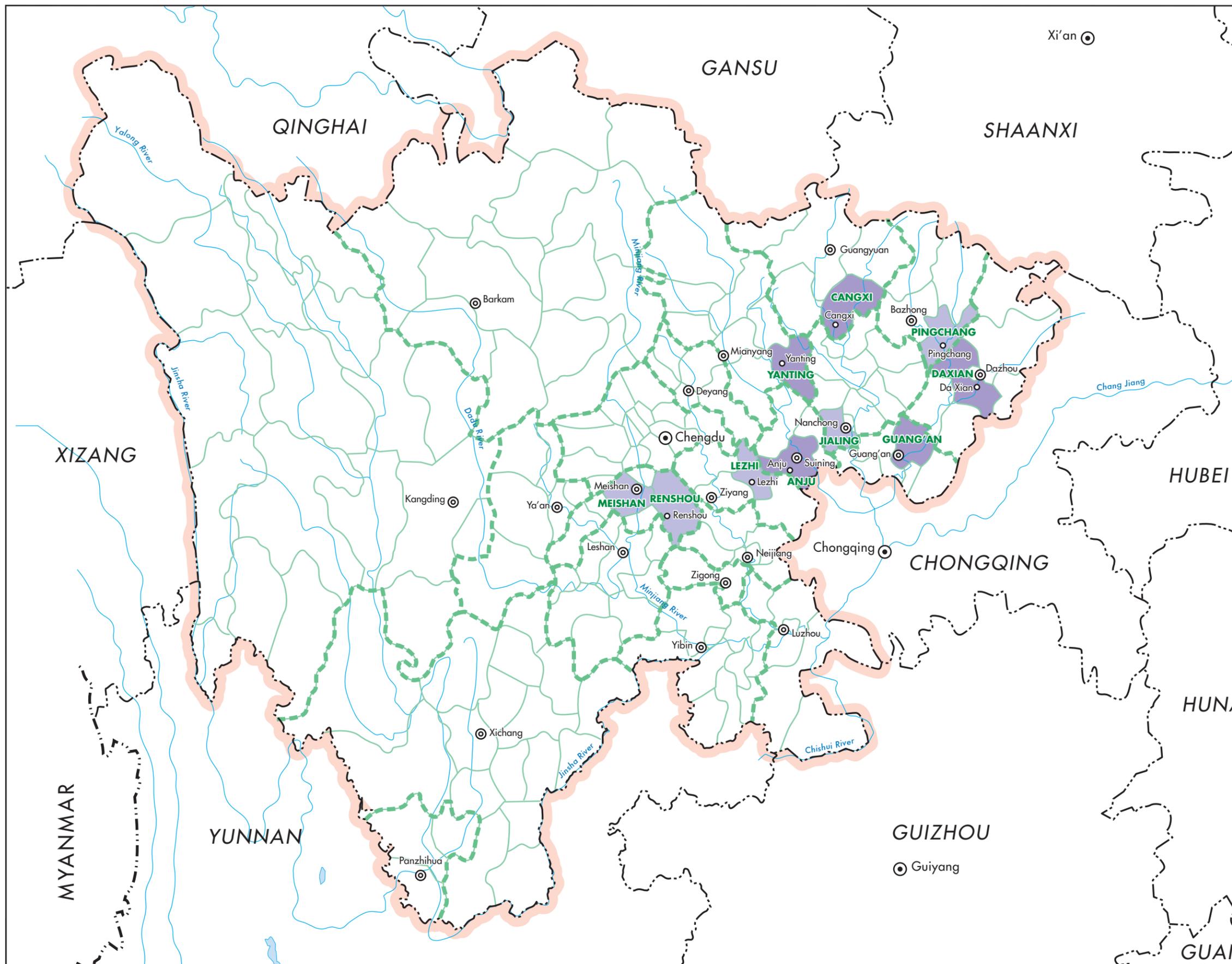
CHINA WESTERN PROVINCE RURAL WATER SUPPLY AND SANITATION PROJECT SHAANXI PROVINCE

RURAL WATER SUPPLY, SANITATION AND HYGIENE PROMOTION SCHEMES TO BE IMPLEMENTED:

- PHASE I
- PHASE II
- PROVINCE CAPITAL
- COUNTY OR DISTRICT BOUNDARIES
- PREFECTURE BOUNDARIES
- PROVINCE BOUNDARIES



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CHINA WESTERN PROVINCE RURAL WATER SUPPLY AND SANITATION PROJECT SICHUAN PROVINCE

RURAL WATER SUPPLY, SANITATION AND HYGIENE PROMOTION SCHEMES TO BE IMPLEMENTED:

- PHASE I
- PHASE II
- COUNTY OR DISTRICT CAPITALS
- PREFECTURE CAPITALS
- PROVINCE CAPITAL
- COUNTY OR DISTRICT BOUNDARIES
- PREFECTURE BOUNDARIES
- PROVINCE BOUNDARIES
- INTERNATIONAL BOUNDARIES

0 50 100
KILOMETERS

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