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The World Bank

Report No: ICR00003661

IMPLEMENTATION COMPLETION AND RESULTS REPORT
(TF-99890)

ON A

GRANT

IN THE AMOUNT OF US$ 2.976 MILLION

TO THE

PEOPLE'S REPUBLIC OF CHINA

FOR A

SUSTAINABLE MANAGEMENT AND BIODIVERSITY CONSERVATION OF THE LAKE AIBI BASIN PROJECT

June 27, 2016

Environment and Natural Resources Global Practice
East Asia and Pacific Region

CURRENCY EQUIVALENTS

(Exchange Rate Effective 01/01/2016)

Currency Unit = Renminbi (RMB)
RMB 1.00 = US$ 0.16
US$ 1.00 = RMB 6.50

FISCAL YEAR
January 1- December 31

ABBREVIATIONS AND ACRONYMS

AM	Aide Memoire
BP	Bank Policy
CAS	Country Assistance Strategy
CPS	Country Partnership Strategy
CM	China Mobile
DA	Designated Account
DSP	Dam Safety Plan
EA	Environmental Assessment
EIA	Environmental Impact Assessment
EIMEA	External independent monitoring and evaluation agency
EMDP	Ethnic Minorities Development Plan
EMP	Environmental Management Plan
EPP	Emergency Preparedness Plan
ERR	External Rate of Return
ET	Evapo-transpiration
FiB	Finance Bureau
FoB	Forestry Bureau
FM	Financial management
FMM	Financial management manual
FRR	Financial Rate of Return
FYP	Five-Year Plan
GEF	Global Environment Facility
GEO	Global Environmental Objective
GoPRC	Government of People's Republic of China
HB	Health Bureau
IBRD	International Bank for Reconstruction and Development
ICA	Incremental cost analysis
ICR	Implementation and Completion Report
IUCN	International Union for Conservation of Nature
LaB	Land Bureau
LiB	Livestock Bureau
MetB	Meteorological Bureau
METT	Management Effectiveness Tracking Tool
M&E	Monitoring and Evaluation
MOF	Ministry of Finance
MTR	Mid-term review

MS	Moderately Satisfactory
NA	Not Available
NO	No objection
NPV	Net Present Value
NR	Nature Reserve
NWR	National Wetland Reserve
OP	Operations Policy
PA	Protected area
PAD	Project appraisal document
PCN	Project Concept Note
PDO	Project development objective
PF	Process framework
PIP	Project implementation plan
PIF	Project Identification Form
PPIU	Prefecture Project Implementing Unit
PMO	Project Management Office
PPMO	Provincial Project Management Office
PMP	Pest Management Plan
PPG	Project Preparation Grant
PPLG	Prefecture Project Leading Group
PPMO	Prefecture Project Management Office
QEA	Quality at Entry
QSA	Quality of Supervision
RAP	Resettlement action plan
RDRC	Regional Development Reform Commission
RMB	Renminbi Yuan
RPLG	Regional Project Leadership Group
RPMO	Regional Project Management Office
RS	Remote sensing
SA	Social assessment
TA	Technical Assistant
TAG	Technical Advisory Group
TOR	Terms of reference
TTL	Task team leader
UNDP	United Nations Development Program
WRB	Water Resources Bureau
WUA	Water user association
XUAR	Xinjiang Uygur Autonomous Region
XUARAO	Audit Office of Xinjiang Uygur Autonomous Region
XUARFB	Xinjiang Uygur Autonomous Region's Finance Bureau

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PEOPLE'S REPUBLIC OF CHINA
SUSTAINABLE MANAGEMENT AND BIODIVERSITY CONSERVATION OF THE LAKE AIBI BASIN PROJECT

CONTENTS

A. Basic Information			
Country:	China	Project Name:	Sustainable Management and Biodiversity Conservation of the Lake Aibi Basin
Project ID:	P110661	L/C/TF Number(s):	TF-99890
ICR Date:	06/23/2016	ICR Type:	Core ICR
Lending Instrument:	SIL	Borrower:	THE PEOPLES REPUBLIC OF CHINA
Original Total Commitment:	USD 2.98M	Disbursed Amount:	USD 2.94M
Revised Amount:	USD 2.94M		
Environmental Category: B		**Global Focal Area: B**	
Implementing Agencies: Forest Bureau and Water Bureau of Bortala Prefecture			
Cofinanciers and Other External Partners:			

B. Key Dates				
Process	**Date**	**Process**	**Original Date**	**Revised / Actual Date(s)**
Concept Review:	03/08/2010	Effectiveness:	11/07/2011	09/09/2011
Appraisal:	01/18/2011	Restructuring(s):		06/24/2015
Approval:	05/31/2011	Mid-term Review:	12/25/2014	12/19/2014
		Closing:	12/31/2015	12/31/2015

C. Ratings Summary	
C.1 Performance Rating by ICR	
Outcomes:	Satisfactory
Risk to Global Environment Outcome	Moderate
Bank Performance:	Moderately Satisfactory
Borrower Performance:	Satisfactory

C.2 Detailed Ratings of Bank and Borrower Performance			
Bank	**Ratings**	**Borrower**	**Ratings**
Quality at Entry:	Moderately Satisfactory	Government:	Satisfactory
Quality of Supervision:	Satisfactory	Implementing Agency/Agencies:	Satisfactory
Overall Bank Performance:	Moderately Satisfactory	**Overall Borrower Performance:**	Satisfactory

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):	No	Quality of Supervision (QSA):	None
GEO rating before Closing/Inactive status	Highly Satisfactory		

D. Sector and Theme Codes

	Original	Actual
Sector Code (as % of total Bank financing)		
Agricultural extension and research	28	28
Forestry	15	15
General agriculture, fishing and forestry sector	20	20
Irrigation and drainage	12	12
Public administration- Agriculture, fishing and forestry	25	25
Theme Code (as % of total Bank financing)		
Biodiversity	43	43
Land administration and management	15	15
Other environment and natural resources management	9	9
Water resource management	33	33

E. Bank Staff

Positions	At ICR	At Approval
Vice President:	Victoria Kwakwa	James W. Adams
Country Director:	Bert Hofman	Klaus Rohland
Practice Manager/Manager:	Iain G. Shuker	Ede Jorge Ijjasz-Vasquez
Project Team Leader:	Liping Jiang	Gayane Minasyan
ICR Team Leader:	Garo J. Batmanian	
ICR Primary Author:	Random Dubois	

F. Results Framework Analysis

Global Environment Objectives (GEO) and Key Indicators(as approved)

To strengthen integrated planning and implementation of natural resource management and mainstreaming of biodiversity values in theLake Aibi
Basin.

Revised Global Environment Objectives (as approved by original approving authority) and Key Indicators and reasons/justifications

(a) GEO 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 :	Preparation and approval of the RS/ET-based Integrated Water and Environment Management Plan for Bortala Prefecture of Lake Aibi Basin, supported by policy recommendations.			
Value (quantitative or Qualitative)	N	Y		Y
Date achieved	08/30/2011	06/30/2015		11/27/2015
Comments (incl. % achievement)	Exceeded. The plan was completed and approved by government in writing, and is already under implementation.			
Indicator 2 :	Preparation and approval of the policy notes on sustainable land management. Baseline			
Value (quantitative or Qualitative)	0	2		2
Date achieved	08/30/2011	06/30/2015		11/27/2015
Comments (incl. % achievement)	Exceeded. 2 policy notes, on natural forest mgt. and sustainable grassland mgt., were approved by the Bortala Prefecture Govt. on 11/305. The recommendations provided in the policy notes have already been reflected in gov regulations & its13th 5YP.			
Indicator 3 :	Age distribution of Populus diversifolia in selected Lake Aibi NWR monitoring sites set out in Reserve Management Plan.			
Value (quantitative or Qualitative)	No seedlings, sapplings or young trees	Cohort of new+young trees		7 new +young trees
Date achieved	08/30/2011	12/31/2015		11/27/2015
Comments (incl. % achievement)	Achieved. This indicator did not include a specific numeric target. The average of 7 saplings/ young trees in the monitoring plots in areas that were fenced to exclude grazing is a good result, in line with expected natural regeneration rates.			
Indicator 4 :	METT Score			
Value (quantitative or Qualitative)	49%	METT score increased by 20%		METT score increased by 25%
Date achieved	08/30/2011	12/31/2015		11/27/2015

Comments (incl. % achievement)	Exceeded. Because the baseline was not determined at appraisal, the target was to increase the score by 20%. METT scored at the end the project was 74%, an increase of 25%. Protect interventions resulted in marked improvements on 18 out of28.

(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 :	Amount of ET in each of 4 pilot program areas used for demonstration of ET consumption balance analysis.			
Value (quantitative or Qualitative)	630 mm	600 mm		594
Date achieved	09/01/2011	12/31/2015		11/27/2015
Comments (incl. % achievement)	Achieved and exceeded the target indicating a 6% lower ET consumption balance than the baseline.			
Indicator 2 :	Number of Government officials trained in ET management concept and use of RS/ET-based monitoring for water management and planning.			
Value (quantitative or Qualitative)	0	20		24
Date achieved	09/01/2011	12/31/2015		11/27/2015
Comments (incl. % achievement)	Achieved and exceeded the target by 20%.			
Indicator 3 :	Farmers' income in pilot program sites where demonstration is carried out.			
Value (quantitative or Qualitative)	3800 RMB	4600 RMB		5200 RMB
Date achieved	09/01/2011	12/31/2015		11/27/2015
Comments (incl. % achievement)	Achieved and exceeded the target by 13%. The increase (RMB 1,400) exceeded the target increase (RMB800) by 75%. The farmers' income was calculated based on the net income earned from their irrigation field within the area of 4 WUAs.			
Indicator 4 :	Area of natural grasslands in Bortala, Jinghe and Wenchuan watersheds under active grazing management.			
Value (quantitative or Qualitative)	0 mu	30000 mu		30000 mu
Date achieved	09/01/2011	12/31/2015		11/27/2015
Comments (incl. % achievement)	Achieved. The managed grasslands (200 ha; 1 ha=15mu) are divided into equal areas of rotational grazing, controlled grazing, and enforcement of a grazing ban to demonstrate their effectiveness in halting and reversing land degradation.			
Indicator 5 :	Area of fodder production in Bortala Prefecture.			
Value	0 mu	8500 mu		8500 mu

(quantitative or Qualitative)				
Date achieved	09/01/2011	12/31/2015		11/27/2015
Comments (incl. % achievement)	Achieved. There were no previous or on-going efforts to support fodder production. Fodder areas were established to demonstrate the effectiveness of fodder production as a source of livestock feed to reduce grazing pressure on natural grasslands.			
Indicator 6 :	Number of bird monitoring samples.			
Value (quantitative or Qualitative)	0	72		82
Date achieved	09/01/2011	12/31/2015		11/27/2015
Comments (incl. % achievement)	Achieved and exceeded the target by 14%. There were 18 monitoring samples per year during implementation, plus an extra set of samples near the end of the project.			
Indicator 7 :	Number of monitoring patrols conducted person time.			
Value (quantitative or Qualitative)	100.00	1140.00		1320.00
Date achieved	09/01/2011	12/31/2015		11/27/2015
Comments (incl. % achievement)	Achieved and exceeded the target by 16%, indicating increase enforcement activities in the area.			
Indicator 8 :	Patrolling Data Management System.			
Value (quantitative or Qualitative)	0	100% forms completed, and data entered, quarterly data analysis reports		100%
Date achieved	09/01/2011	12/31/2015		11/27/2015
Comments (incl. % achievement)	Achieved. 100% of patrol standard form completed, and 100% data entered.			
Indicator 9 :	Total spring vegetation cover in selected Lake Aibi NWR monitoring sites set out in Lake Aibi NWR management plan.			
Value (quantitative or Qualitative)	30%	33%		34%
Date achieved	09/01/2011	12/31/2015		11/27/2015
Comments (incl. % achievement)	Achieved. This consisted of 163 sampling plots measuring 50mx50m and the indicator was % of vegetative cover of plot in spring time as determined by satellite technology.			
Indicator 10 :	Number of government officials trained in nature reserve management, biodiversity monitoring and patrol techniques.			
Value (quantitative or Qualitative)	0	60		66
Date achieved	09/01/2011	12/31/2015		11/27/2015
Comments	Achieved & exceeded target by 10%. The project supported training in			

(incl. % achievement)	ecosystem management, survey techniques, bird monitoring & use remote video monitoring equip. & carrying out study tours to learn ecosystem management from comparable protected areas.			
Indicator 11 :	Number of Kekebasto people provided with vocational and skills training.			
Value (quantitative or Qualitative)	0 person/times	215 person/times		217 person/times
Date achieved	09/01/2011	12/31/2015		11/27/2015
Comments (incl. % achievement)	Achieved. Different training activities were supported including use of forklift trucks, embroidery, &grass-cutting. Participants attended more than 1 course and multiple-times in some courses that repeated justifying use of person-times indicators.			

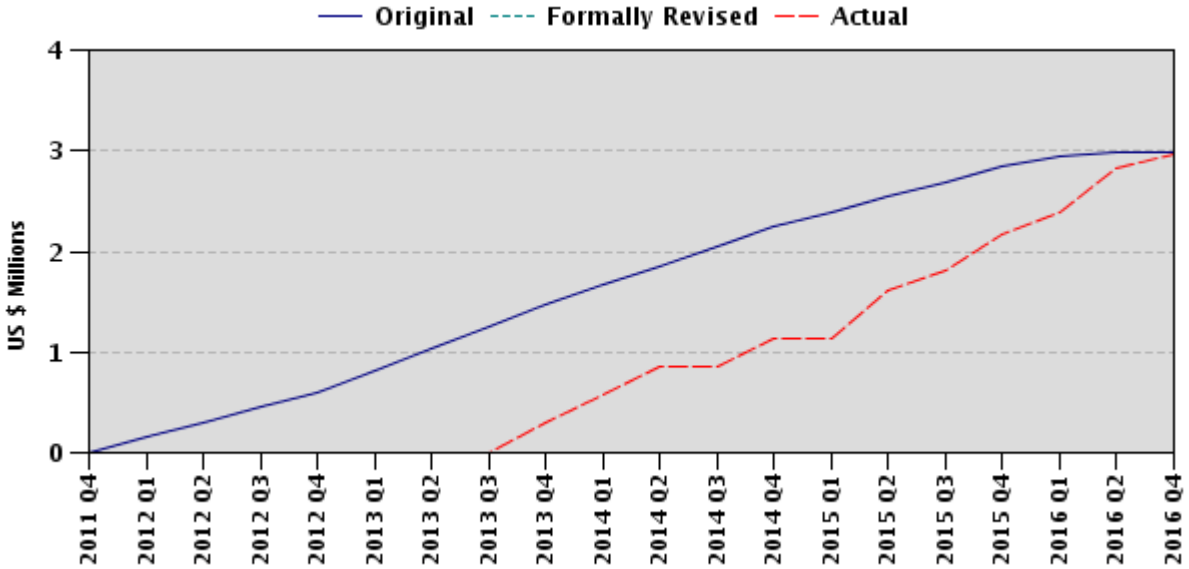
G. Ratings of Project Performance in ISRs

No.	Date ISR Archived	GEO	IP	Actual Disbursements (USD millions)
1	09/22/2011	Satisfactory	Satisfactory	0.00
2	12/23/2012	Satisfactory	Moderately Satisfactory	0.00
3	06/26/2013	Satisfactory	Moderately Satisfactory	0.30
4	12/22/2013	Satisfactory	Moderately Satisfactory	0.85
5	06/24/2014	Satisfactory	Moderately Satisfactory	1.14
6	01/20/2015	Satisfactory	Moderately Satisfactory	1.81
7	06/29/2015	Satisfactory	Satisfactory	2.14
8	12/27/2015	Highly Satisfactory	Satisfactory	2.81

H. Restructuring (if any)

Restructuring Date(s)	Board Approved GEO Change	ISR Ratings at Restructuring		Amount Disbursed at Restructuring in USD millions	Reason for Restructuring & Key Changes Made
		GEO	IP		
06/24/2015		S	MS	2.14	Reallocation of Grant Proceeds.

I. Disbursement Profile



1. Project Context, Global Environment Objectives and Design

1.1 Context at Appraisal

1. **Country and Sector Background**. At the time of appraisal, China had experienced several years of high economic growth that equaled or exceeded 9 percent annually. The rapidly growing economy, compounded by population growth and urban migration, led to environmental degradation. This was caused by the absence of clear environmental policies and sound planning and management. In response and in part, reflecting a growing public awareness and concern over the issue, Chinese policy makers started to give higher priority to the environment as reflected in the 11th Five Year Plan (FYP) for 2006-2010 which, while continuing to promote economic development, aimed at including the environment and natural resource sectors into policy formulation.

2. Water was one of the critical natural resource sectors for the government, particularly in China's northern region with a per capita water availability of less than one-fourth of that found in southern China and one-eleventh of the world average. Growing demand in the absence of sustainable management strategies was resulting in over-exploitation of water resources at a great cost to both the economy and the broader environment.

3. One critical environmental problem was the threat that growing demand for water posed to China's wetlands; that in aggregate, represent the fourth largest area in the world. Upstream water diversion/extraction in support of urban development, irrigation and industry, particularly in the drier northern region, was exacerbating an already grave situation characterized by such traditional threats to wetlands as land reclamation, tourism and agricultural development.

4. The importance of integrated water resources management was well recognized and considered to be a priority issue at the highest levels of the Chinese Government. The 11th FYP set policy goals and priorities for adopting a more unified and better coordinated management system, shifting from supply-side to demand-side management, integrating river basin management with regional management and establishing a water rights training system. Sustainable use of water resources would require China to improve its water-use efficiency and reduce the intensity of water use through pursuing changes in technology, industry composition, resource pricing, and conservation incentives to restrain consumption. This would also involve improve the management of natural resources such as land, grasslands, forests and water sources, including the involvement of affected communities.

5. Lake Aibi is the largest saltwater lake in Xinjiang and covers two bio-geographic regions (the Eurasian Steppe and Desert as well as Steppe Wetland). The lake provides habitat for a number of threatened Asian birds and mammals as well as rare and endangered plant communities. The reeds and shrubs adjacent to the lake also provide important wintering grounds for a number of birds. Furthermore, the area contains communities uniquely adapted to the arid and salt rich conditions, including Saxual trees, Desert Poplars, Aibi Birch and extremely halophilic archaeons.

6. The project area includes a variety of mountain, meadow, riverine and saline-sodic steppe ecosystems forming the Lake Aibi Basin, about 95% of in Bortala Prefecture in western Xinjiang Uygur Autonomous Region (XUAR). Specifically, the Lake Aibi environment includes terminal wetlands of fresh to brackish water, a highly saline lake, an erodible saline-sodic lake bed exposed by reduced water levels and an arid steppe environment that supports *Haloxylon ammodendron* and *Populus diversifolia* communities as well as populations of the goitered gazelle (*Gazella subgutturosa*) and red deer (*Cervus elaphus*). The wetlands support a diverse range of bird life, including 200 identified domestic and migratory birds, nine of which are IUCN Red-listed, and form the crossover point of the Central Asian North/South and East/West migration flyways. Lake Aibi is a stop-over feeding point for wildfowl and waders during the spring and autumn migration periods (1 – 1.2 million birds are estimated to pass through the site every year).

7. The drainage area is composed of a closed system characterized by an internally draining, salt-rich basin with only precipitation and glacier/snowpack melt contributing to flow through its three main rivers. Much of this is retained behind dams and released according to the needs of downstream urban and agricultural areas. At the time of appraisal, irrigated agriculture was the major water user; more than 98% of the total water use in the Bortala Prefecture. Over 95% of crops were field crops including wheat, cotton, maize, grassland and some vegetables. Agricultural water productivity was very low - around 1.0 kg/m^3 for wheat compared with 1.8 kg/m^3 on average in other parts of China. Due to the rapid increase in water consumption for irrigated agriculture the Lake Aibi ecosystem was shrinking rapidly having been reduced to an area around 500 km^2 from more than 800 km^2 in 1950s.

8. The main threat to the lake and associated wetlands was diminishing inflow. The main challenge was to manage the resource, arrest the diminishing inflow and begin to gradually increase flow leading to the expansion of Lake Aibi. In order to restore the lake ecosystem, the prefecture government set water targets - the lake inflow was to increase by 200 million m^3 leading to an expansion of the lake's water surface of 330 km^2 by 2020, close to its 1950's size. In addition, the industrial and domestic water consumption was projected to increase by 60 million m^3 and 20 million m^3, respectively. To meet these targets, the prefecture was now faced with the task of increasing the flow by 280 million m^3 that would require a series of measures including: (i) returning cropland to natural vegetative cover; (ii) cropping pattern adjustment to better water-resistance and higher value crops; and (iii) increasing irrigation water use efficiency under the water consumption cap; all supported by the necessary legal and policy instruments. This seemed a good candidate site to support activities that could pilot many of the aforementioned new policy initiatives set out in the 11^{th} FYP.

9. **Rationale for Bank involvement**. The project directly supported the third pillar of the Bank's Country Partnership Strategy (CPS) for 2006-2010 (Report No. 35435- CN, approved be the Board on May 23, 2006) specifically focusing on managing resource scarcity and environmental challenges to improve the management of natural resources. It did this by aiming to (i) manage water resources sustainably in the Lake Aibi catchment; (ii) reduce land degradation; , and (iii) conserve biodiversity in and around the Lake Aibi

National Wetland Reserve (NWR). Moreover the Bank was well positioned to assist the client given its ability to bring global best practice to address both biodiversity management and sustainable land and water resources management derived from a host of projects, many of them based on experience in China (See Section 2.1)

1.2 Original Global Environmental Objective (GEO) and Key Indicators

10. **Global Environment Objective.** The GEO is to strengthen integrated planning and implementation of natural resource management and mainstreaming of biodiversity values in the Lake Aibi Basin.

11. Although this is the formal GEO and the one used for assessment of outcomes in the ICR, the project appraisal document (PAD) also included one passage alluding to other formulation of the "global environmental objective." However, these actually referred to the broader GEF global objectives toward which the project was intended to contribute rather than direct outcomes of the project itself (see Section 2.1).

12. **Key Indicators.** The four GEO-level indicators of this project are (a) preparation and approval of the remote-sensing (RS) / evapo-transpiration (ET)-based Integrated Water and Environment Management Plan for Bortala Prefecture of Lake Aibi Basin, supported by policy recommendation; (b) preparation and approval of the policy notes on sustainable land management (natural forests management and sustainable grassland management, respectively); (c) age distribution of *Populus diversifolia* (poplar forest) in selected Lake Aibi NWR monitoring sites set out in the Reserve Management Plan; and (d) improved management capacity of the Lake Aibi NWR as measured by its Management Effectiveness Tracking Tool (METT) score.

1.3 Revised GEO and Key Indicators, and reasons/justification

13. Neither the GEO nor its indicators were revised during project implementation.

1.4 Main Beneficiaries

14. The main beneficiaries identified at appraisal as directly benefiting from the project were herders, irrigation farmers and small entrepreneurs. These were indeed the main beneficiaries during project implementation.

15. Herders. Herders were expected to benefit from increased productivity of their livestock as a result of more sustainable management practices demonstrated by the project, which would lead to increased unit productivity and enable herders to have a higher income from fewer animals.

16. Irrigation Farmers. Irrigation farmers were expected to benefit from a sustainable supply of water that reduces the costs of production, sustains productivity and enables them to diversify their production base.

17. Small Entrepreneurs. Small entrepreneurs were expected to benefit from access to ecotourism, irrigation servicing and resource monitoring opportunities that would emerge as a result of project activities.

18. Women. In the herder households, women play a significant role in the economic activities and therefore women were considered to be important beneficiaries of the Project.

19. Nature Reserve Staff. The staff and management of participating nature reserves were identified as beneficiaries through project-supported activities leading to increased capacity and improved working environment achieved through improved information, increased institutional support and new standing in the local community.

1.5 Original Components

20. The project comprised four components:

21. Component 1: Water Resources Assessment and Optimized Allocation. The objective of Component 1 was to understand water resource supply and demand in Bortala Prefecture and use this to optimize water allocation. The component consisted of the following 5 sub-components: (a) Water Consumption Balance for Entire Lake Aibi Basin: assessment of the targeted consumptive use of water for irrigated agriculture and economic afforestation in the Lake Aibi Basin using RS- based ET Techniques to understand: (i) how best to increase water inflow to the Lake Aibi; and (ii) the balance between the actual consumptive use of water and the sustainable consumptive use of water for economic activities within the Basin; (b) Analysis of Real Water Savings in Bortala Prefecture: (i) assessment of the actual amount of real water savings for different crops using RS-based ET techniques and field experimental data; and (ii) analysis of the maximum capacity of water savings in Lake Aibi that could be achieved within Bortala Prefecture; (c) Implementation of Pilot Programs: implementation of four pilot programs aimed to reduce consumptive use of water by Water User Associations (WUA) by, inter alia, monitoring the water consumption using RS-based ET Techniques; (d) Dynamic Monitoring System: development and implementation of an operational ET production system supported by RS-based ET Techniques, with land use maps which would be used to monitor actual consumption of water in the entire Lake Aibi Basin during project implementation; and (e) Training and Capacity Building: (i) carrying out of intensive training to relevant stakeholders on the use of the RS-based dynamic monitoring system referred to above, land use surveys, ET data production, the consumptive use comparison for the selected areas and monitoring system installation and analysis; and (ii) provision of technical advisory services in subjects related to Component 1 of the Project.

22. Component 2: Sustainable Land Management Practices. The objective of Component 2 was to demonstrate sustainable management of watershed systems and to increase the area of sustainable land management practices implemented in Bortala Prefecture. This Component had the following 3 sub-components: (a) Forest Resources Management: (i) protection of natural forests through prevention of vegetation damage by livestock, patrolling and pest control, pilot restoration of natural forests in four forest farms through minor enrichment planting and re-seeding with native species; and (ii) monitoring of changes of existing forest resources during the Project implementation period; (b) Sustainable Grassland Management: (i) demonstration of three options for sustainable grassland management including, inter alia, grazing, controlled grazing and a grazing ban; (ii) demonstration production of legumes, maize and other fodder crops in

support for herder livelihoods; and (iii) monitoring of the grasslands including, inter alia, data collection, tabulation, and analysis, as well as preparation of annual monitoring reports; and (c) Training and Capacity Building: (i) training of patrollers and herders on rotational grazing, fodder production, natural forest management and biodiversity protection and carrying out of a study tour to learn about sustainable forest and grassland management in similar social and ecological environments in other parts of China, including sustainable use and potential ecotourism development in forests and grassland with herders involvement; (ii) development, testing and finalization of a project-wide replication strategy; and (iii) provision of technical advisory services in subjects related to the component.

23. Component 3: Biodiversity Conservation and Local Livelihoods Enhancement. The objectives of Component 3 were to protect habitat and species of Lake Aibi NWR, monitor and research key species to allow for adaptive and well informed management and support nature reserve management through staff capacity building, participatory development of a management plan and building a local and regional constituency of support for the Reserve. It was comprised of the following four sub-components: (a) Habitat Protection: carrying out activities related to the management of the Lake Aibi NWR, including inter alia patrolling, establishment and use of a data management system and dissemination of NWR rules and regulations; (b) Key Species Monitoring and Research: (i) research and monitoring of the gazelle and red deer populations in the NWR; (ii) research and protection of birch trees and the associated alpine plant community; (iii) monitoring of poplar recruitment success with increased patrolling against illegal grazing; (iv) bird monitoring and research; (v) habitat research and habitat restoration in the wetlands of the Reserve; and (vi) assisted breeding and protection of endangered salamanders at the Salamander Reserve; (c) Nature Reserve Management Support and Public Awareness Raising: (i) training in ecosystem management, survey techniques, bird monitoring and use of remote video monitoring equipment and carrying out study tours to learn ecosystem management from comparable protected areas in China; (ii) carrying out an awareness campaign, including a poster for local community display, a television short show, a small guide book and a display for the Project Implementing Unit's Bole Museum in Bortala Prefecture; (iii) development of a management plan for the Lake Aibi NWR; and (iv) provision of technical advisory services in subjects related to this component; (d) Livelihood Enhancement: (i) carrying out of activities aimed to provide alternative livelihoods for the Kekebasto community and to relieve grazing pressure on the NWR, including demarcating an area within the allowed grazing area for grass collection for pen feeding; (ii) training and hiring herders to be NWR staff; (iii) vocational and skills training for Kekebasto herders on subjects as shall be approved by the World Bank; and (iv) provision of a health clinic.

24. Component 4: Project Management, Monitoring and Evaluation. The component objective was to finance consultant services, training, office equipment and incremental operating costs to provide effective technical support and efficient project management. It comprised the following two sub-components: (a) Project Management: (i) establishment and operation of the Project's institutional structure at Regional, Prefecture, County and NWR levels for efficient project management and implementation including, inter alia, awareness raising activities, preparation of picture

album and popular science documentary movie, and publication and dissemination of Project documentation; and (ii) capacity building of the Provincial Project Management Office (PPMO) staff at the Regional, Prefecture, County and NWR levels through training and study tours; and (b) Monitoring and Evaluation: the monitoring and evaluation (M&E) of changes brought about by the Project by establishing and implementing an M&E system including physical progress monitoring, performance and project impact monitoring and fiduciary and safeguards monitoring.

1.6 Revised Components

25. The project components were not revised.

1.7 Other significant changes

26. Reallocation of Funds: During project implementation, most non-consulting service activities (e.g., commercial computer software) were included in the consultant contracts and disbursed under category 2 instead of category 1. This resulted in savings in category 1 but overruns in category 2. The problem was further exacerbated by an increase in labor costs contributing to a total contract amount for consulting services that exceeded the estimated budget. In response, the prefecture PMO requested a reallocation of disbursement categories. The amount of category 2 accounted for 46 percent over the original allocated amount resulting in the need for an amendment to the formal legal document. Following discussions between the PPMO and Ministry of Finance (MOF), the latter sent a request to the Bank for a category reallocation. This restructuring was approved on June 24, 2015.

2. Key Factors Affecting Implementation and Outcomes

2.1 Project Preparation, Design and Quality at Entry

27. Project Design. The design gradually evolved from its initial focus on the nature reserve itself to a more integrated landscape approach focusing on the system with the growing realization that the main threats to biodiversity were beyond the boundaries and control of the NWR and involved the water resources. This shift in focus reflected the lessons learned from international best practices.

28. The project design also benefited from previous Bank experience in over 50 water sector project in China. The Bank's has been playing a unique role in supporting China's approach to water resources management, largely focused on piloting innovative approaches with spillover benefits far greater than the direct benefits of the project itself. Lessons were incorporated from recent Bank-funded projects including the GEF Hai Basin Integrated Water and Environment, Turpan Water Conservation, and the Tarim Basin II projects. The Bank also drew on its experience in conservation management in particular the Nature Reserves Management, Sustainable Forestry Development and the Guangxi Integrated Forestry Development and Conservation Projects; all which supported participatory and locally managed systems for conservation, management and sustainable use of natural resources and their associated biodiversity. Finally, the experiences derived from the Gansu and Xinjiang Pastoral Development Projects were also deemed relevant to project design in particular in the management of rangelands

within the project area.

29. The key decisions taken during the preparation process were to (i) include land degradation interventions in addition to biodiversity activities on GEF funding for the latter (MOF), (ii) maintain a sharp focus on project objectives and interventions in the modestly funded project in particular with respect to the degree to which climate change issues could be addressed in project design (PCN review meeting), and (iii) limit the number of sub-basins (and prefectures) to one (PPMO).

30. Length of preparation. Project preparation took place over a three-year period. Several factors contributed to the long preparation phase: (i) lack of local knowledge and experience working with Bank and GEF project preparation; (ii) the July 5, 2009 disturbances that led to the suspension of internet service for over 18 months in the region; and (iii) a dispute between two prefectures over the responsibility of provision of support to a minority village possibly affected by the project.

31. GEO. On one hand, the formal GEO presented in the grant agreement and PAD datasheet was adequate for the modest size of the project and in line with GEF guidelines and the Bank CPS for China. However, "biodiversity values" is a subjective concept which can even include direct use of biodiversity either as good (e.g. food, medicine) or services (e.g. tourism, pollination). Thus, the project should have provided a definition of what was considered as "biodiversity values." Based on the information provided in the PAD (project design, activities, and indicators) and the work carried out during implementation, it is likely that "biodiversity values" were used in the GEO in lieu of "biodiversity conservation" which is the definition used thereafter in this ICR.

32. On the other hand in the context of the appraisal summary, the PAD (para.42) states that the "global environmental objective of the project is to conserve ecosystems and species of global biodiversity significance and reduce land degradation with regional impacts through involvement of local communities, in partnership with local governments." This might generate unnecessary confusion. This section of the PAD discussed the contribution of the project to the broader GEF global objectives (BD-SP4, SP5 and LD-SP1, SP2 and SP3), and not the specific GEO of the project.

33. Therefore, the formal GEO presented in the grant agreement and PAD datasheet was the one considered for the purpose of the analyses done in this ICR.

34. Indicators and monitoring. Several of the results framework and monitoring indicators were not SMART indicators and could have been improved with additional clarity (e.g. designating whose approval was required (PDO indicators 1 and 2 related to policies) and quantification (PDO indicator 3 regarding cohort of new plants). The METT baseline was not prepared at the time of submission of the project for CEO Endorsement (May 2011) and not completed until October of 2012.

35. **Project Risks**. The overall risk for the project was estimated to be high based primarily on the respective risks associated with: (i) project stakeholders; (ii) capacity and governance of the implementing agency; and (iii) social risks.

36. Project Stakeholder Risks*:* High. The main risk was associated with the large

number of agencies and sub-sectors involved in the Project and the possible difficulty in obtaining their collaboration in combination with their weak capacity in particular at the prefecture and county levels. There was also concern for the potential lack of public support for project activities, in particular, those associated with restriction of access to the resources. To mitigate this risk, the project design: (i) elevated the role of the Water Resources Bureau (as a stakeholder) to take greater ownership on what essentially is a water project; (ii) specified institutional arrangements designed to encourage cooperation and coordination between all the stakeholders; and (iii) relied on a carefully designed Ethnic Minorities Development Plan (EMDP) and Process Framework (PF) coupled with the help of an alternative livelihoods program.

37. Capacity Risks of Implementing Agency: High. At appraisal, it was noted that the project implementing entities at the prefecture and county/nature reserve levels had no previous experience with World Bank projects and would likely find it difficult to effectively adopt the Bank's financial management (FM) and procurement procedures. To overcome this risk, a FM assessment was conducted, followed up by training and provision of TA, to ensure adequate institutional capacity was put in place to support satisfactory implementation. Training commenced for PMO staff in FM and procurement during the early stages of preparation and there were a number of subsequent efforts to provide on the job, hands on training (January and July 2010 and January 2011).

38. Environmental and Social Risks: (Low/High). These risks were assessed separately. While environmental risks were assessed to be low, social risks were thought to be high. The task team did not expect major environmental issues, provided the Environmental Management Plan (EMP) was properly implemented. The high social risks stemmed from the fact that 50 households lived within the nature reserve and an additional 116 households depended on the reserve for seasonal grazing of their livestock; the risk stemming from the restriction of access to the resources for the population within and in proximity to protected areas. To mitigate the risk, qualified organizations were hired to prepare a Process Framework (PF) during project preparation (in combination with the EMDP).

39. **Public Consultation.** Project design and preparation were carried out in a full participatory process consisting of three consultations during the preparatory phase. Wide coverage surveys and various awareness raising campaigns were also organized.

2.2 Implementation

40. Initial delay. The project experienced considerable delays in the first year and well into the second. Performance in 2012 suffered from the effects of overhang from the preparation phase of weak capacity despite the considerable training the PPMO and Prefecture Project Implementing Units (PPIUs) received in Bank policies and procedures. The launch workshop was held in November 2011, two months after effectiveness. However it was not until May 2012 that the PPMO submitted the FM and procurement plans for no objection (NO) followed by TORs for the consultants in July 2012 and the approval of the Project Implementation Plan (PIP) at end 2012. As a result there was no disbursement in 2012.

41. The Bank responded by providing additional training in procurement and safeguards, mobilizing the political support needed to overcome some issues through the support of the Prefecture Project Leading Group (PPLG) chaired by the vice governor (See Table 1 in Section 5.2) supported with enhanced supervision. By end 2013, disbursement had reached 10 percent before beginning to accelerate as the PPMO and PPIUs overcame capacity issues with the growing support of consultants hired under the project guided by assistance provided by the Bank's supervision missions.

42. The Bank assisted on addressing issues on cooperation among the PPIUs. As the result they reached agreement on sharing of data (meteorological), timely compliance with the project's legal covenants (in particular provision of written statements on no use of pesticides in the project area) and defining clear lines of responsibility in certain project-supported field activities.

43. Counterpart funding. The limited counterpart funding affected project performance in the first half of implementation. There was no provision for an advance from the Project and delays in setting up the Designated Account (DA) and misunderstandings between the RPMO and PPMO over the grant agreement delayed advances in the counterpart funds. This in turn forced the PPIUs to seek bridge funding from their internal budgets that initially proved difficult. However, by late 2013 most of the consultant contracts were in place and disbursement was up to 27% (vs. projected 50 %). Disbursement cycles continued to be slow (3 – 5 months) due to poor communication problems between the Xinjiang Uygur Autonomous Region's Finance Bureau, Regional Finance Bureau (XUARFB), and the PPMO into the mid-2014. However, by the end of 2014 most of these issues had been sorted out and disbursement continued to accelerate.

44. An additional issue was related to the depreciation of the RMB (see Section 1.7). In response, the government increased co-financing to offset the depreciation.

45. Mid-Term Review (MTR). The MTR, originally planned for October 2013, was postponed to December 2014 due to delayed disbursement and weak project performance in the first half of the project implementation. There was no change in project development objective nor was restructuring required. No MTR report was prepared as there was only one year remaining to project closure and disbursement had accelerated and judged increasingly likely to be completed by the original closure date.

46. Despite these issues, the overall project implementation was successful with all outcome and output targets achieved or surpassed by the original project closing date. The overall implementation quality remained satisfactory or moderately satisfactory throughout the project implementation.

47. Key milestone was the official statements from Regional Development Reform Commission (RDRC) and Regional Bureau of Finance together with the prefecture vice governor at the recently completed project completion workshop in Bartola Prefecture affirming their recognition of the project's successful outcomes and their relevance and timeliness as inputs into preparing the 13th FYP, which has been confirmed by the Prefecture Government during the first half of 2016

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

48. Design. Project design called for the PPMO monitoring team to design and implement the project's M&E system. The system was composed of four components: (i) physical progress monitoring; (ii) contract-based procurement and financial management monitoring; (iii) environmental and social safeguards monitoring; and (iv) performance and impact monitoring using the results framework. During implementation, the PPMO monitoring team would collate monitoring data collected by the PPIU teams responsible for natural resource monitoring systems established with project support into semi-annual progress reports for the entire project. The PPMO would oversee collection of monitoring data by the PPIU activity teams and periodically verify results in the field according to the overall M&E system design presented in the PIP. Collated monitoring data, analysis and interpretation would be presented in semi-annual progress reports. A results framework was developed that presented indicators and targets for results at the level of the project development objective and for intermediate results for each component of the project. No M&E system was designed under the PPG grant as a result nothing was in place at the time of entry. The PIP provided some general guidance on M&E but no detail on the establishment and design of the system itself.

49. Implementation. The PPMO had little experience in the Bank's and GEF's requirements. The establishment of a project M&E system and data base suffered from many of the same problems the project encountered in the first two years of the project due to weak capacity. There was no M&E team in the PPMO. By mid-2013, there was still no system in place to provide the necessary monitoring reports. The baseline METT was not completed until mid-2013. At the request of the Bank, an M&E group was created and the PPMO hired an expert to assist with the project's M&E responsibilities. By June 2015 reports were being generated routinely but were still in need of improvement in terms of data consistency and relevance.

50. Utilization. Despite initial delays in the establishment of the monitoring system, there is clear evidence that was used to inform and make decisions during project implementation including: (i) to inform on disbursement lags and how and where to accelerate disbursement; (ii) demonstrating the utility of the measures proscribed for the EMDP/PF and this providing the basis for making some adjustments during implementation; and (iii) use of field monitoring data on illegal activities in the NWR to inform leaders resulting in actions to increase enforcement activities in the relevant part of the Reserve.

2.4 Safeguard and Fiduciary Compliance

Safeguard Compliance

51. The design, category, and safeguards triggered were appropriate. The safeguard rating during implementation was never lower than MS. The few minor to moderate compliance issues, identified during implementation, were addressed adequately and did not have a material impact on safeguards compliance, implementation progress, or project objectives.

52. (a) Environmental Safeguards. Though the Project was small in size it was appropriately classified as Category B since several environmental safeguard policies were triggered: namely Environmental Assessment (OP/BP 4.01), Natural Habitats (OP/BP 4.04), Forests (OP/BP 4.36) and Safety of Dams (OP/BP 7.60) because the protection of the NWR involved addressing water resources, agriculture, grassland, forests and biodiversity issues.

53. An Environmental Impact Assessment (EIA) and Environmental Management Plan (EMP) were prepared during project preparation. Key issues assessed included project impacts on forest protection, conservation and management of the ecology and restrictions of local people and herders' access to the use of natural resources. There were also minor civil works that needed appropriate mitigation measures to minimize construction impacts. These impacts and mitigation were well incorporated into the project design, EMP and EMDP/PF.

54. During implementation, the PMO assigned a dedicated environmental officer and engaged an external environmental monitoring consultant to carry out required monitoring programs. Environmental monitoring reports were submitted to the Bank for review regularly. Overall, the project EMP implementation was satisfactory in that: (i) the project technical assistance studies fully incorporated the World Bank safeguard policy considerations, in particular on biodiversity, natural habitats and forests; (ii) potential impacts on local communities and ethnic minority groups' livelihoods were addressed (see social aspect of the report for details); (iii) the project's physical activities and associated impacts on natural habitats and environmental quality were well managed; (iv) project environmental monitoring was conducted properly and well documented; and (v) dam safety monitoring was conducted in a timely manner following policy requirements and reviewed by the Bank team.

55. Natural Habitats (OP/BP4.01). See above.

56. Forests (OP/BP4.36). Prior to any forest activity supported by the Project, a covenant to the legal agreement, required the PPMO to furnish the Bank, for its review and approval, a description of the proposed actions to ascertain if they were in conformity with the Bank's Environmental Guidelines for Forests. The Prefecture PMO confirmed that the Component 2 (sustainable land management practices) did not support planting or re-seeding in the forest farms nor the application of the chemical pesticide as part of pest management programs. The Bank requested the Prefecture PMO to provide a written statement to that effect, subsequent to which, the Bank would clear on OP 4.36 (Forests); an action required prior to the initiation of the implementation of the component. Unfortunately, the letter was delayed in being submitted to the Bank causing delays in the initiation of field activities under this component, but without causing any negative impact to the environment

57. Safety of Dams (OP/BP7.60). It was agreed at the time of appraisal that PMO would employ at least one specialist, acceptable to the Bank, to regularly inspect and evaluate the safety of three dams in the project area, review and evaluate the effectiveness of the Operation and Maintenance Safety Manuals, the Emergency Preparedness Plans (EPP) and prepare a Dam Safety Plan (DSP) no later than 2 months

after effectiveness. Initially, there were difficulties in locating a dam expert, in part due to high consultancy rates. This was subsequently resolved and the expert was in place by December 2013 and furnished the Bank a DSP by June 2014. On reviewing the report, the Bank found it well-prepared and that the relevant recommendations by the dam safety expert have been taken by PPMO.

58. (b) Social Safeguards. A social assessment (SA) was carried out by an independent institute that, following consultation with local project stakeholders, recorded their support for the Project. The Project was determined, however, to likely impact the livelihood of two Kazak herders' communities living or grazing within proximity of the NWR. As a result the Project triggered World Bank Operational Policies OP 4.10 and OP/BP 4.12 on Indigenous Peoples and Involuntary Resettlement, respectively.

59. Indigenous Peoples (OP 4.10). The policy on Indigenous People was triggered to address any restriction of access to resources issue, caused by the Project, within a legally recognized protected area. In response a combined Ethnic Minorities Development Plan and Process Framework (EMDP/PF) were developed because the affected groups under both policies were the same.

60. The EMDP/PF was prepared to handle the issues related to restrictions in access to natural resources. This was done in close consultation with beneficiaries and potentially affected people using an innovative approach. Instead of asking the people to leave the protected area, the consultation focused on identifying the activities that the farmers and herders could still do inside the protected area without impacting the conservation goals. The extensive community consultations the concerns of the affected people were integrated into the EMDP (See Annex 5 for more detail).

Fiduciary Compliance

61. (a) Procurement. The procurement processes were satisfactory. All existing contract goods have been delivered and 100% of the contract amount was paid to supplier in all cases; one non-consulting services contract was signed and completed; 33 consulting services contracts were procured and signed, of which 14 are firm consultants and 19 are individual consultants. All contracts were either prior or post reviewed by the Bank team.

62. (b) Financial Management. Overall project financial management was undertaken in a satisfactory manner. Although disbursement was slow in the first two years of the project, remedial actions were taken by related parties to accelerate project implementation and disbursement. All project activities were completed by the closing date and the GEF grant was fully disbursed. PPMO financial staff played important roles during project implementation, not only in fulfilling the assigned responsibility to ensure project activities could be properly recorded and presented, but also, assisting the director in monitoring project progress and coordinating the works among all PPIUs. All government entities paid due attention to the project and the committed counterpart funds were delivered completely although with some initial delays. The required financial reporting and audits were submitted in a timely manner. The audits were unqualified and

no significant issues were identified by the external auditors.

2.5 Post-completion Operation/Next Phase

63. It is highly likely that project supported activities will continue to be implemented beyond project closure because a number of project recommendations have already been adopted and reflected in recent legislative decrees and notices (See Annex 10). The prefecture government is interested in replicating the approach in the other three prefectures and city that share the Lake Aibi basin with Bortala Prefecture. Discussions are ongoing and will depend on the support of the regional government (likely) and the resources made available through the 13th FYP planning and budgetary process. Individual prefectures in the basin, each overlapping with a sub-catchment could replicate the approach of the Project. Ideally, it would be scaled up to the basin level involving the 5 prefectures and city and the creation of a river basin commission. This would require the active support of the regional government. The project-supported development of a comprehensive management plan for the NWR has served as a basis to contribute inputs into the 13th FYP budget requests and would likely ensure that most, if not all measures, will be adequately supported.

64. The Prefecture Government decided to maintain the existing PPMO led by the PPLG structure for at least one year to ensure project sustainability. The local government governor and vice governor are highly supportive of the project approach and are likely to lend their (not inconsiderable political support) to promoting the continued collaboration between the three bureaus and NWR. Moreover, to meet the targets established in the Strategic Plan supported by the Project for 2020 and 2030 will require the close collaboration of these institutions, if not through the PPLG/PPMO mechanism then something similar to it. Finally, the interest in regional government in scaling up this approach to other catchments over the period of the 13th FYP (2016 – 2020) bodes well for obtaining the needed budget and political support to maintain efforts in the project area.

65. The continued monitoring of the project site is a priority for the government using the RS / ET technology. Equipment used during the project was on loan from the regional office of the Chinese Academy of Sciences and discussions are ongoing to find the means to leave it with the prefecture. The three line bureaus and NWR all confirmed that technical monitoring programs supported under the Project (e.g., forest, pasture and wildlife) would continue after project closure.

66. While institutional capacity was significantly increased in the three participating prefecture bureaus, the NWR was not widely institutionalized in this modestly funded project in the prefecture, and remains a risk in any up scaling of the Project to other prefectures or elsewhere in the Region.

3. Assessment of Outcomes

3.1 Relevance of Objectives, Design and Implementation

Relevance of objectives

Rating: High

67. The project objectives, outcomes, and outputs are even more relevant to China today than at the time of appraisal. China began to shift to a more balanced economic growth model increasingly reflecting the incorporation of environmental quality targets (including sustainable natural resources management) in its 10th FYP. This trend continued through the 11th and 12th FYPs. As reflected in Annex 10, project-supported legal decrees and notices support existing national policies and directly reflect guidance received from the state level in the formulation of local and regional 13th FYPs covering the period 2016 – 2020.

68. The project supports Strategic Theme One of the Bank Group's 2013 – 2016 CPS, (Report No. 67566-CN, approved by the Board on October 11, 2012) Supporting Greener Growth through contributing to the following outcomes: (a) promoting sustainable agriculture practices through improving productivity of water (Outcome 1.4); and (b) demonstrating sustainable natural resource management approaches (Outcome 1.5) through: (i) promoting ways to better manage ecosystems and conserve biodiversity; (ii) implementing approaches of integrated water resources management at the river basin level and addressing multiple uses; and (iii) demonstrating innovative ways to manage wetlands and lakes.

Relevance of Design and Implementation

Rating: Substantial

69. The critical evolution of the project design away from a focus on the nature reserve, one whose ecological integrity is highly dependent on water inflow, confirms the importance of taking a landscape approach (in this case defined by the sub-catchment) that links the quality of habitat with water availability was a highly cost-effective approach to saving a wetland given its decreasing size. The alternative, putting all the resources within the NWR, while useful to address issues within the reserve boundary, are relatively ineffective in addressing external threats. The ideal approach, one adopted by the Project, is a combination of two of sets activities that address both the external and internal threats and the underlying causal factors to the wetland's ecological integrity and biodiversity, which when combined are fully relevant for the achievement of the PDO.

70. The value added by the project was to provide right conceptual approach needed to achieve sustainable economic development and environmental protection. Without the project, there would have not been sound planning with clear targets and management for Aibi Lake Protection, targets on how much existing irrigated land to be returned to natural land, how much land needed for rational grazing, or monitoring of actual water consumed.

3.2 Achievement of Global Environmental Objectives

71. The project fully achieved or exceeded the GEO "to strengthen integrated planning and implementation of natural resource management and mainstreaming of biodiversity values in the Lake Aibi Basin". Detailed lists of outputs by project

components are presented in Annex 2. Achievement of the two sub-objectives of the GEO are discussed below.

a) Strengthening integrated planning and implementation of natural resource management

Rating: High

72. One of the main challenges, identified at appraisal, was to arrest the diminishing water inflow and begin to gradually increase flow leading to the expansion of Lake Aibi. The project delivered on the indicators relevant to this sub-objective: (i) the RS/ET-based Integrated Environment Management Plan for Bortala Prefecture of Lake Aibi Basin was prepared and approved on November 30, 2015; and (ii) policy notes on sustainable land management were prepared and approved (details in Annex 10).

73. More importantly the assessments, plan and policy notes have already generated positive impacts:

i. Land reclamation was banned in 2012, 6,667 ha were returned to nature land with water saving of 150 million m3, and with an additional 20,000 ha planned to be returned by 2020;

ii. Rules for specific rectification of illegal land cultivation were issued in 2015, which resulted in 10,000 ha, where returned to forest or grassland, with an additional 20,000 ha planned to be returned by 2020;

iii. The government increased the control of wells, including closing of 32 wells to reduce unnecessary ET; and a

iv. New water tariff was implemented with a progressive surcharge on over-quota usage which led to irrigated land returning to natural grassland by big water users (commercial businessman) and less water consumption by small water users.

74. Equally important, these changes in policies, combined with activities on the ground supported by the project can improve the livelihoods of the farmers. This was evidenced by the increase of farmers' income[1] from RMB 3,800 to RMB 5,200 far exceeding the target (increase of RMB 800).

b) Mainstreaming of biodiversity values in the Lake Aibi Basin

Rating: Substantial

75. The other main challenge was the threat to the globally significant wetland with its rich biodiversity. The project delivered on the indicators relevant to this sub-objective:

i. The land management interventions have resulted in increased protection of forest habitat. This was evidenced by the change in age distribution of *Populus*

[1] To ensure adequate attribution to the project, the calculation considered only the net income earned from their irrigation field within the area of four WUAs, which was 100% from project contributions.

diversifolia (poplar forest) in comparing monitoring sites, through the presence of seedlings, saplings and/or young trees in well managed areas over the baseline (no seedling/saplings). This indicated that areas for protection were no longer being open for grazing and other activities allow for the establishment of new plants which should lead to natural restoration of the forest habitats.

ii. The sustainability of protected area, a corner stone of any strategy to mainstream biodiversity conservation, has increased significantly, as a result of the project. This was evidenced by an increase in the METT score (an indicator of management effectiveness in a protected area) by 25 percent over the baseline, exceeding the project target of 20 percent increase. The results of the METT assessment at the beginning and at the end of project are summarized in Annex 11. At the beginning of the project, the protected areas only had a high score (3) on 2 of the 30 topics assessed, while this number increased to 9 at the end of the project. Also, project interventions resulted in marked improvements on 18 out of the 28 topics which required attention (scored below 3 at the beginning on the project). The main improvements that indicated an increase suitability of the protected area include: (i) regulations for controlling inappropriate land use and activities in the protected area are now in place (See Annex 10); (ii) protection systems effective in controlling access/ resource use are now in place; (iii) the number of staff is now adequate for the management needs of the protected area; and (iv) there is a secure budget for the protected area and its management needs, assigned by the local government.

76. Biodiversity conservation outside the protected area is also being mainstreamed. The studies and surveys, supported by the project, about wildlife population (e.g. birds, deer, salamander) are being used to inform the periodic revision of the land use and natural resource management plans, as in the case of which specific areas should be returned to forest or grassland (paragraph 72, ii).

3.3 Efficiency

Rating: Substantial

77. The project fully implemented all proposed activities and achieved or exceeded all targets using the original overall allocation of resources during the original project implementation period.

78. No formal, analytical economic analysis (e.g., NPV, ERR or FRR) was made of this GEF-funded project at appraisal. To meet the requirements of GEF, an Incremental Cost Analysis (ICA) was completed. Based on the findings of the ICA, the Baseline Scenario was estimated to be US$9.203 million. The GEF Alternative built on the Baseline Scenario by promoting the integration of environmental flow and biodiversity considerations into water resource planning. Allocation and monitoring also supported government irrigation and animal grazing reform programs at an estimated cost of US$12.179 million. While the actual total cost of the project was US$12.4 million, the increase was caused by the devaluation of the RMB during the project implementation, and was entirely covered with additional government counterpart funds.

3.4 Justification of Overall Outcome Rating

Rating: Satisfactory

79. A case could be made for rating the overall outcome Highly Satisfactory given the challenges of successfully implementing this type of project in a remote area with relatively weak initial local capacity, the project's impressive performance in overcoming early implementation hurdles and achieving all indicator targets, and its outsize influence on a range of local and regional policies, strategies, and regulations that are key to long-term environmental and natural resource goals in the Lake Aibi Basin and beyond. But since there were minor shortcomings in at least some aspects of relevance, efficacy, and efficiency, the overall outcome is rated Satisfactory in accordance with the guidelines of the Bank and the Independent Evaluation Group, which require no shortcomings in both efficacy and at least one of the other rating categories to justify an overall outcome rating of Highly Satisfactory.

80. The project was highly relevant at the time of entry to the Bank's assistance strategy, China and global environmental priorities. Arguably, it is even more relevant at the time of closure. Not only is there considerable evidence that the environment, generally and Lake Aibi ecosystem specifically, continued to be at risk but the resulting concern and efforts to mitigate the situation were given higher visibility in China's 12th (and even more likely 13th) FYP, and in the Bank's current CPS. The project met or exceeded all its targets as measured by outcome and impact indicators, and fully attained its development objectives with only minor shortcomings in the second of the two main objectives. The landscape approach was shown to be highly effective in strengthening planning and implementation capacity and reducing the impact of unsustainable practices that hinder habitat restoration and biodiversity conservation in nature reserves; particularly those exposed to threats beyond the boundaries of the NR.

81. Some of the concrete results of the project have been the reduction of upstream water consumption by farmers, since the project helped farmers better manage water consumption through improved irrigation technology and scheduling. These actions, increased the quality of products, hence improved farmers' incomes beyond the project target.

82. The series of regulations adopted by the local government is already generating a positive impact beyond what was foreseen at the time of appraisal. For example, based on the results of the assessment supported by the project, the actual water consumption was 1,248 million m3/year which is 95 million m3/year higher than the sustainable level of 1,153 million m3. Based on the target, the prefecture government made a long-term plan with measures taken immediately including a ban on expanding irrigated areas, and a reduction of some low-yield irrigated areas to release more water flows to the Lake Aibi Basin. A specific decree was issued to prohibit grazing of natural grasslands and the Bank helped study alternative ways of managing livestock, including rotational grazing and fodder production for livestock raising in pens. Starting in 2014, 93,300 hectares have been under rotational grazing and an area of 544,600 hectares is now protected from grazing. A Legal Notice has been issued to ban further land reclamation for irrigated

agriculture, and existing irrigated land with low yield, is being returned to natural grassland. In addition, these actions have been included in the 13th Five-Year Plan for Bortala Prefecture and will continue to be implemented from 2016 to 2020. Thus, the project resulted in mainstreaming the water consumption management by different stakeholders in the overall planning process.

83. Finally, there is a high likelihood that the approach will be up scaled and likely applied to other prefectures (and sub-catchments) in the Lake Aibi basin as well as elsewhere in similar landscapes in Northwest China.

3.5 Overarching Themes, Other Outcomes and Impacts

(a) Poverty Impacts, Gender Aspects, and Social Development

84. The SA determined the project was likely to impact the livelihood of two Kazak herders' communities living or grazing within proximity to the NWR. One community consists of a Kekebasto village that sits on the border between the NWR's core and buffer zones consisting of 51 herder households (altogether 251 people). A second community is involved with herding livestock through the Aqikesu River and Huashulin (birch forest) portion of the NR during part of the year. The EMDP made 18 specific actions that would lead to an increase in the resident's income. An External Independent Monitoring and Evaluation Agency (EIMEA) was contracted to monitor the EMDP/PF and applied a rating system for each of the measures and calculated a score of 68 (up to standard) in 2014 that rose to 83 in 2015 (excellent). Per capita income increased from 1,036 RMB (2014) to 4,183 RMB in 2014, a figure which far outpaced rate of the inflation over the period 2011-2015 (5.7 percent). They also concluded that the internal monitoring was good. The project also supported vocational training using GEF resources (see Annex 5 for more detail).

85. Women were targeted for selected project interventions and data were segregated to monitor project achievements. These included: (i) six sewing machines provided to the village with training provided to 12 female villagers for their use; and (ii) one woman received training and was employed as a medical doctor in the Management Office of Lake Aibi Reserve management office providing medical services to villages in a clinic.

(b) Institutional Change/Strengthening

86. Capacity concerns identified during preparation and the first years of project implementation have largely been addressed. Technical capacity has increased among staff in the participating PPIUs, through project-supported training specifically in the water, forestry and livestock bureaus and the NNR. Tools, policies and procedures used in project design and/or implementation were adopted by one or more of the PPIUs (e.g., use of results frameworks, procurement procedures and monitoring protocols).

87. The project supported significant institutional change and strengthening. The collaboration of three line bureaus, led by the PPLG, on a landscape approach to water management defined by the physical boundaries of a sub-catchment was precedent setting in Bartola Prefecture. At the level of the PPLG itself the project supported closer linkages among the representatives from the bureaus of finance, forestry, water resources, agriculture and animal husbandry and the NWR. A water user association (WUA)

already existed prior to the Project but was not well organized or very effective. That WUA and the other three associations established under the Project will serve as models in the future.

(c) Other Unintended Outcomes and Impacts

88. The extent to which a number of project policy recommendations stemming from Outcomes 1 (Integrated Environment Management Plan for Bortala Prefecture of Lake Aibi Basin) and 2 (policy notes on natural forest management and sustainable grassland management, respectively) were approved and provided the basis for legal decrees and notices in support of: (i) a cap on overall water use; (ii) water pricing; (iii) management of ground water wells (including some closures); (iv) performance checking on officials; (v) a ban on illegal land reclamation; and (vi) regulations for the environmental protection, and to mitigate adverse impact of land and water use on the environmental.

89. The project contributed positively to the process of upgrading the Salamander Regional Reserve to the status of a national nature reserve (only one phase left) through the mitigation of threats by protecting its habitat and increasing local awareness of its global significance.

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

90. The basic findings from the Beneficiary Survey were: (i) all the 17 tasks listed in the EMDP and PF of the project are completed; (ii) the implementation of the project greatly improved the relationship between the NWR, Kekebasto Village and Wusuertu Town; (iii) awareness was substantially enhanced between the NWR staff and the people living within and near the NWR for the need to enforce the ecological protection regulations; and (iv) the internal and external monitoring teams played positive roles in the monitoring and final survey and there was good cooperation between the two groups (see Annex 5 for more details).

4. Assessment of Risk to Development Outcome

Rating: Moderate

91. As noted above, all project outcomes are directly in line with national programs (e.g., grassland ecological conservation, grain for green and national wetland protection) and support policy guidance received from the State level to prepare the 13th FYP.

92. The main project outcome has was the preparation of a medium and long-term Development Strategy (2015–2030) by the Prefecture Government, whose phased implementation will lead to ecologically sustainable development and biodiversity conservation in the Lake Aibi Basin. Specifically, the Plan will lead to: (i) imposition of water consumption controls on the main river of the Lake basin; (ii) inclusion of an ecological minimum flow leading to the restoration of the Lake Aibi National Wetland Reserve; (iii) promotion of water savings through improved technology with a cap of water consumption; (iv) reconversion of farmland to natural habitat; and (v) protection of existing forests and controlled grazing. The Strategy has been adopted by prefecture government and is already in partial implementation supported through a number of legal decrees and notices approved during the implementation period of the Project (see Annex

10). These actions in the broader context of the Strategy were timely in that they fed into the prefecture preparation process of the 13th FYP whose priority is the environmental protection and ecological conservation for the basin. This is critical to ensure that budgetary resources will become available to support implementation in the next 5-year period.

93. In the NWR the project supported the development of a management plan covering the period of the next 13th FYP. The nature reserve has received increased levels of funding from the State since being declared a national wetland reserve and has been building its staff, infrastructure and capacity in part with support from the project. While additional support for the NWR is expected, along the lines outlined in the management plan, there is less certainty to what degree this will be fully implemented in the next 5 years.

94. While institutional capacity was significantly increased in the three participating prefecture bureaus and the NWR, it has not been widely institutionalized in this modestly funded project in the prefecture and remains a risk for any up-scaling of the project to other prefectures or elsewhere in the Region.

95. Effective cooperation among government line agencies will be a critical element to ensure the appropriate institutional arrangements are retained post-project. Much of the project success is attributable to the strong political support received from the PPLG led by the prefectural vice-governor. As long as the present leadership remains in their present positions there should be little risk to project outcomes.

96. Xinjiang Government has proposed as policy the reduction of agricultural water consumption and improving water use efficiency and stabilizing the desert as a high priority. The success of the project is visible to regional leaders through the RPLG, RPMO and national experts and will likely form the basis for up scaling to other sub-catchments in the Aibi basin and elsewhere in the Xinjiang Region.

5. Assessment of Bank and Borrower Performance

5.1 Bank

(a) Bank Performance in Ensuring Quality at Entry

Rating: Moderately Satisfactory

97. Project preparation was supported under a GEF-funded Project Preparation Grant (PPG). The Bank met all PPG outputs. The Bank ensured that the project design was technically sound, socially and environmentally sustainable and consistent with the Bank's Country Partnership Strategy for China, and in line with the development objectives in the Chinese Government 11th Five-Year Plan. Critical decisions were taken during the three year project preparation process that significantly contributed to the ultimate success of the Project in a cost-effective manner most notably: (i) recognizing early in project preparation that a more integrated ecosystem approach was required to protect the wetland nature reserve and its globally-significant biodiversity; (ii) limiting the scope of the project to reflect the modest amount of funding; and (iii) ensuring that

project objectives reflected local and regional priorities. Project risks were correctly identified in particular the low institutional capacity and likely difficulty to meet Bank FM and procurement policies and procedures. Despite significant Bank support to build capacity in the PPMO and PPIUs in FM and procurement policies, procedures and reporting requirements, weak capacity continued to affect project performance into the 2nd year. However, social and environmental safeguards were correctly identified and treated effectively through the EMDP/PF and EMP. The overly long three-year project preparation period appeared to be due mostly to factors beyond the Bank's control. However, during the project design the Bank should have ensured that all Results Framework indicators had targets and baselines, and that the correct METT scoring tools were selected and applied. Also, the problem of counterpart funding to cover administrative costs was not identified during preparation, which led to delays during the early period of project implementation. The involvement of the prefecture's Meteorological Bureau whose data are necessary for the RS / ET tool during the time of preparation might have reduced delays experienced later during implementation.

(b) Quality of Supervision

Rating: Satisfactory

98. The Bank conducted 7 supervision missions and provided timely and much needed support to the PPMO and PPIUs leading to the successful completion of all activities to achieve project objectives and development outcomes. Fiduciary and safeguards policies were fully met during the course of implementation. Lack of disbursement in the project's first year and the continued weak institutional capacity elicited a request for increased supervision support for the project from management which was satisfactorily responded to by the TTL. The Bank was highly responsive to the client's requests for advice and support as exemplified in: (i) mobilizing necessary political support to assist the PPMO (frequent meetings with the prefecture vice-governor and chair of the PPLG); (ii) assisting with government requests to reallocate funds between procurement categories; and (iii) making a series of useful recommendations for PPMO to consider to address various difficulties encountered during the Project. Of particular note were the numbers of interventions and tools developed by the supervision missions to assist the PPMO in support of project implementation. Examples include: (i) development of a project implementation framework (PIF) to better help the client understand the objectives and approach of the Project (1st supervision mission); (ii) streamlining implementation through modification of project institutional and implementation structure through opening up direct lines of communication between Bortala Prefecture PMO and the WB with copies to the Xinjiang Regional PMO rather than report through the latter and between the PPMO and the Regional Technical Advisory Group resulting in substantial time savings (2nd supervision mission); (iii) development of an action plan to accelerate implementation (2nd supervision mission); (iv) development of a series of tables to assist the PPMO and PPIUs to meet the project's M&E requirements (3rd supervision mission); and (v) development of a detailed implementation plan to accelerate disbursement (4th supervision mission). The satisfactory rating for Bank Quality of Supervision is fully justified.

(c) Justification of Rating for Overall Bank Performance

Rating: Moderately Satisfactory

99. Given the quality of Bank's performance at entry the overall performance is rated moderately satisfactory. During implementation the Bank provided adequate and continuous support, particularly during the project's first two years when problems were quickly identified, assessed and overcome.

5.2 Borrower

(a) Government Performance

Rating: Satisfactory

100. The prefecture government demonstrated a strong commitment to the project and was instrumental in its success. Critical issues faced in project implementation that could have delayed and/or undermined the achievements of one or more of the outcomes/outputs were resolved by the timely and decisive intervention of the PPLG led by the prefecture's vice-governor. Issues resolved included: (i) meeting counterpart funding commitments; (ii) smoothing institutional arrangements; and (iii) facilitating the sharing of data between agencies (see Table 1). Other examples of government commitment to the project included: (i) covering the gap in counterpart funds due to the appreciation of the RMB; (ii) providing support for the mainstreaming of project outcomes into the planning for the next 13th FYP; and (iii) seeking support for up scaling project outcomes. The satisfactory rating for Government performance is fully justified.

Table 1. Major Coordination Meetings Organized by Project Leading Group (PLG) in Bortala Prefecture

Date	Issue	Participating Institutions
12/10-12/12	Coordination with Tacheng Prefecture on grazing area for Kekebasto herders	FoB, LaB, LiB
5/25/13	Project implementation arrangements	PMO, FiB, FoB, WRB, NWR
6/10/13	Counter-part funding	PMO, FiB, FoB, LiB
12/5/13	Data-sharing	PMO, FiB, FoB, LaB, LiB, MetB, PoE
3/20/14	Project forest and grassland areas	PMO, LiB, FoB, MetB, LaB, PoE
6/14/14	Counter-part funding	PMO, FiB, FoB, LiB
12/5/14	Poverty alleviation for Kekebasto herders	PMO, FiB, WRB, LiB, NWR, HB, CM
6/1-6/ 2015	Project outcomes briefing	PMO, FiB, WRB, LiB, NWR

PMO (Project Management Office), FiB (Finance Bureau), FoB (Forestry Bureau, WRB (Water Resources Bureau), NWR (Lake Aibi National Wetlands Reserve), LiB (Livestock Bureau), LaB (Land Bureau), MetB (Meteorological Bureau), PoE (Panel of Experts), HB (Health Bureau), CM (China Mobile)

(b) Implementing Agency or Agencies Performance

Rating: Satisfactory

101. The PPMO and PPIUs were responsible for project implementation. This was the first Bank supported activity in the prefecture and there was little experience and institutional capacity to meet the Bank's or GEF policies, procedures and reporting requirements. Weak project performance in the early years of the 4 year project were largely due to this lack of experience manifested in delays in setting up the Special Account, transfer of funds, slow reimbursement cycles, etc. Moreover, while some collaboration among the PPIUs had exited in the past (in particular the Water and Forestry Bureaus), this had mostly been for information exchange on subjects of mutual interest. Nevertheless, once these challenges had been overcome, performance rapidly

accelerated and the project met or surpassed all the outcome and output targets. Specific actions taken on the behalf of the PPMO and PPIUs that contributed to project success included: (i) advancing bridge funds from their respective budgets to cover project expenses until project counterpart funds were received from the Regional Finance Bureau; and (ii) issuing a number of decrees and notices in support of project objectives before project closure; and iii) making up the shortfall in counterpart financing due to the depreciation of the Yuan.

(c) Justification of Rating for Overall Borrower Performance

Rating: Satisfactory

102. Despite the lack and slow rate of disbursement in the project's first and second years respectively, the strong commitment on the behalf of the prefectural government and PPMO and PPIU's to the project resulted in the complete grant disbursement on time and achieved success measured by meeting existing indicators, unexpected positive outcomes and the high likelihood of sustaining outcomes. The satisfactory rating of overall borrower performance is fully justified.

6. Lessons Learned

103. Many factors contributed to the project's success. The following are among the most important:

104. Realistic Project Scope. Being less ambitious doesn't have to be at the expense of project impact. The project had a total budget of only US$12.4 million. Not only did it achieve or exceed all its outcome and output targets and generated a number of unexpected positive outcomes/outputs, it contributed significantly to legal and policy reform in support of a more rational approach to sustainable water use; one that incorporates ecological criteria to conserve a globally significant wetland. Just as importantly, the project generated considerable interest in adjacent prefectures and the Xinjiang Autonomous Region and the project approach and actions have been included in their respective the 13th FYP preparation process. Factors contributing to such an effective range of outcomes for the limited funding include: (i) consistency with regional and local policies and concerns; (ii) fortunate timing in project outcomes/outputs overlapping with planning requirements for the next FYP; (iii) introducing new technology planning and management tools that had already been proven elsewhere in the China; (iv) effective supervision; and (v) strong political support.

105. Validation of Integrated Landscape Approach to Protected Area Management. Project design began with a focus on strengthening the management effectiveness in the NWR. This was warranted at the time of project identification as it was relatively weak in personnel, infrastructure, and equipment and suffered from poor community relations. Nevertheless, the main threat to the ecological integrity of the wetland came from the upland (i.e., external) diversion and unsustainable use of water for agricultural production of low value crops. Project interventions confined only to the nature reserve would likely fail in achieving any long-term benefits in the absence of an approach that addressed the decline in water flow. The combined approach adopted in project design was the right choice and should be evaluated as an option in the future design of protected area and

biodiversity conservation projects.

106. Closer Collaboration between China's Design Institutes and Executing Agencies. Investment project design in China typically involves the participation of the respective line agency's counterpart design institute responsible for taking the lead in project design. While there is obvious consultation with line agency staff, there is the risk of lack of ownership and "buy-in" into the final project design by the implementing units resulting in delay due to lack of understanding of project concept and approach. Greater efforts need to be made between the Bank staff and their consultants working with their counterparts, often represented by design institute staff (rather than the units responsible for project implementation) in project preparation to ensure that staff from those units responsible for implementation become more engaged in the project preparation process.

107. Hands-on Training. Despite the Bank's support for considerable training in FM and procurement policies, procedures and reporting, weak institutional capacity, a risk identified as high at the time of entry, continued to be a critical factor contributing to the low disbursement in project years 1 and 2. A common refrain from PPMO and PPIU staff was "formal" training while useful is not the same as hands-on training in the "doing" of the task. Procurement and FM tasks could have been met with the contracting of consultants but this depended on a priori preparation of a procurement plan which the PPMO was not equipped to prepare; a "chicken and egg" dilemma. At the time of entry there was no provision for advancing 10 % of grant funds that could have assisted the PPMO in preparing for implementation. A more flexible approach should be taken to build up capacity perhaps through the use of residual PPG resources to hire consultants to support training, design a monitoring program, preparation of a procurement plan and other activities that would "kick-start" project implementation.

108. Direct participation of government officials. There close involvement with project implementation allow for a quick access to the results and knowledge generated by the project. As a results, the Prefecture level PMO staff, especially the Deputy Director of the PMO and leader of water group of the PMO, was responsible for drafting the text of these Decrees and Regulations adopted by the Prefecture based on recommendations from the project.

109. Community participation. The project preparation included intensive consultation with farmers and herders living inside the protected area, and government officials. The objective was to identify activities which could be carried by them inside the park which would not affect the overall conservation goal of the area and reflected in the EMDP/PF. This eliminated the need for involuntary resettlement outside the protected area, and increased the buy-in from the local farmers and herders. The initial actions of the EMDP/PF focused on providing training and follow-up consultations to reserve officials, and farmers and herds. These were key to ensure adequate implementation of ensuing action plan. The farmers and herders were happy to stay, saw increased economic and social (e.g. establishment of the health clinic) benefits from the project and the protected area, and begun to actively helped to monitor, and protect the reserve. This is evidenced by an increase of the approval rating from 64 percent at the consultation carried out during preparation to 88 percent by the end of the project.

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

(a) Borrower/implementing agencies:

110. The Borrower's letter of June 15, 2016 (Annex 7) expressed agreement with the Bank's assessment detailed in this ICR. The Borrower also recognized the support received from the World Bank during preparation, supervision and closing of this project. The Borrower also reiterated that it would like to strengthen the partnership with the World Bank through future projects to support innovative technologies and resources management for the sustainable management and biodiversity conservation of the Lake Aibi Basin.

111. In addition, the recipient's completion report summary and comments on the ICR are included in Annex 7, their assessments are in line with the Bank's ICR, and no issues are raised that require additional comments from the Bank.

(b) Cofinanciers: NA

(c) Other partners and stakeholders: NA

Annex 1. Project Costs and Financing

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

Components	Appraisal Estimate (USD millions)	Actual/Latest Estimate (USD millions)	Percentage of Appraisal
Water Resources assessment and Optimized	1.65	1.81	110%
Sustainable Land Management Practices	4.20	4.60	109%
Biodiversity Conservation and Local Livelihoods Enhancement	5.40	5.41	100%
Project Management, Monitoring and Evaluation	0.93	0.58	62%
Total Project Cost	**12.18**	**12.400**	**102%**

(b) Financing

Source of Funds	Type of Cofinancing	Appraisal Estimate (USD millions)	Actual/Latest Estimate (USD millions)	Percentage of Appraisal
Borrower	Fiscal	9.20	9.46	103%
Global Environment Facility (GEF)	Grant	2.98	2.94	100%
Total		**12.18**	**12.400**	**102%**

Annex 2. Outputs by Component

1. The project's outputs are summarized in the table below. Other outputs such as the management plan for the Lake Aibi National Wetland Reserve, development of public awareness materials (e.g., posters, guide books television programs) and 72 publications were observed at the ICR workshop or reviewed where translated into English (or their respective summaries). A field visit to the project area was also completed during the combined Supervision – ICR mission.

Project Outputs	Plan at Appraisal	Actual Completed
Component 1: Water Resources Assessment and Optimized Allocation		
(a) *Water Consumption Balance for Entire Lake Aibi Basin*:	Assessment of the targeted consumptive use of water for irrigated agriculture and economic afforestation in the Lake Aibi Basin using RS- based ET Techniques to understand: (i) how best to increase water inflow to the Lake Aibi and (ii) the balance between the actual consumptive use of water and the sustainable consumptive use of water for econmic activities within the Basin.	The "Water Resources Assessment and Optimized Allocation in Lake Aibi Basin based on RS/ET Technology" was completed and published in English in October 2015. Based on the results of the assessment, the annual target for water consumption was 1,153 million cubic meters in the studied basin area but the actual water consumption was 1,248 million cubic meters, which means that the current water consumption will have to be reduced by 95 million cubic meters annually. Based on the target, the prefecture government made a long-term plan with measures taken immediately including ban of expanding irrigated areas and even reduce some of the low-yield irrigated areas to release more water flows to the Lake Aibi Basin.

Project Outputs	Plan at Appraisal	Actual Completed
(b). *Analysis of Real Water Savings in Bortala Prefecture*	(i) assessment of the actual amount of real water savings for different crops using RS-based ET techniques and field experimental data; and (ii) analysis of the maximum capacity of water savings in Lake Aibi that could be achieved within Bortala Prefecture;	The assessment of real water savings for different crops and analysis of maximum capacity of water savings for Lake Aibi were completed and reported in the aforementioned Assessment. Based on the result, the real water savings with high tech could only be 11 million cubic meters annually within the Prefecture.
(c) *Implementation of Pilot Programs*:	Implementation of four pilot programs aimed to reduce consumptive use of water by Water User Associations (WUA) by inter alia monitoring the water consumption using RS-based ET Techniques;	Four pilot programs were implemented to assess water savings (through RS-based ET techniques) under different crop patterns (corn, alfalfa + corn and cotton + medlar) facilitated through the strengthening of an existing and the creation of three new WUAs.
(d) Dynamic Monitoring System:	Development and implementation of an operational ET production system supported by RS-based ET Techniques, with land use maps which would be used to monitor actual consumption of water in the entire Lake Aibi Basin during Project implementation;	A Lake Aibi ET remote sensing monitoring system was developed supported by training and provision of technical experts and became operational as demonstrated in the production of monitoring results reports for project year 2014-2015.
(e) *Training and Capacity Building*:	(i) carrying out of intensive training to relevant stakeholders on the use of the RS-based dynamic monitoring system referred to above, land use surveys, ET data production, the consumptive use comparison for the selected areas and monitoring system installation and analysis; and (ii) provision of technical advisory services in subjects related to Component 1 of the Project.	A total of 65 government officials were trained over the LOP in ET management concept and the use of RS/ET based monitoring for water management and planning. A wide range of technical institutions were contracted to support component 1 that included CAS, University of

Project Outputs	Plan at Appraisal	Actual Completed
		Xinjiang, Xinjiang Normal University, CAF (Xinjiang Branch), Livestock Research Institute, Xinjiang Satellite Application Center, and Xinjiang Academy of Social Sciences. Specifically experts were contracted for ET monitoring and water consumption balance assessment, water resource assessment and water saving potential analysis, equipment installation and data processing and consultation of WUAs.
Component 2: Sustainable Land Management Practices.		
a) *Forest Resources Management*:	(i) protection of natural forests through prevention of vegetation damage by livestock, patrolling and pest control, pilot restoration of natural forests in four forest farms through minor enrichment planting and re-seeding with native species; and	Staff training was supported to increase capacity to protect 900,000 mu of natural forest lands at the headwaters of Bortala Prefecture. Demonstrations of natural forest protection and breeding were supported in three (or four) forest farms (San Tai, Hariturege and Haxialin) for the following forest types: mountainous, river valley, desert woodland and sand desert woodland.
	(ii) monitoring of changes of existing forest resources during the Project implementation period;	Forest resource monitoring was based in 163 sampled plots established under the project and consisted of monitoring of forest fires, soil and water conservation parameters, vegetation cover, biological diversity, and the accumulative affects on forest breeding. Monitoring reports were prepared on forest resources, forest fire disaster, and harmful organisms over the period 2013 -

Project Outputs	Plan at Appraisal	Actual Completed
		2015. Project activities supported under this sub-component led to the drafting and approval of a forestry policy note in support of sustainable forestry management.
(b) *Sustainable Grassland Management*:	(i) demonstration of three options for sustainable grassland management including inter alia grazing, controlled grazing and a grazing ban;	Three options for sustainable management of natural desert grassland were demonstrated for: (a) rotational grazing (10,000 mu), (b) grazing controls (10,000 mu) and (c) enforcement of a grazing ban (10,000 mu), respectively.
	(ii) demonstration production of legumes, maize and other fodder crops in support for herder livelihoods;	To help reduce impacts of grazing on natural areas some 8,500 mu of land for fodder production using alfalfa and/or ryegrass were planted by EOP.
	(iii) monitoring of the grasslands including inter alia data collection, tabulation, and analysis, as well preparation of annual monitoring reports	Monitoring of natural grasslands were supported in 18 sampling plots. A report was prepared presenting the results over the period 2013 to 2015.

Project Outputs	Plan at Appraisal	Actual Completed
c) *Training and Capacity Building*:	(i) training of patrollers and herders on rotational grazing, fodder production, natural forest management and biodiversity protection and carrying out of a study tour to learn about sustainable forest and grassland management in similar social and ecological environments in other parts of China, including sustainable use and potential ecotourism development in forests and grassland with herders involvement; (ii) development, testing and finalization of a project-wide replication strategy; and (iii) provision of technical advisory services in subjects related to the component.	Technical training was provided to staff in the three participating PPIUs in various aspects of water, forestry and livestock management. The number of Kekebasto people including patrollers and herders provided with vocational and skills training was estimated as 215. A replication strategy was incorporated as part of the aforementioned Strategic Plan Research and Policy Proposals. Technical consultants were provided in support of forest resource monitoring and policy and sustainable grassland management.
<u>Component 3: Biodiversity Conservation and Local Livelihoods Enhancement.</u>		
a) *Habitat Protection*:	Carrying out activities related to the management of the Lake Aibi NWR, including inter alia patrolling, establishment and use of a data management system and dissemination of NWR rules and regulations;	A patrolling data management system was established under the project capable of producing quarterly data analysis reports supported by 1,320 monitoring patrols (person-times).

Project Outputs	Plan at Appraisal	Actual Completed
(b) *Key Species Monitoring and Research*:	(i) research and monitoring of the gazelle and red deer populations in the NWR;	Monitoring and research programs for the goitered gazelle and red deer were established under the project and two technical reports produced.
	(ii) research and protection of birch trees and the associated alpine plant community;	Sample plots and monitoring of birch forests were completed under the project. Technical reports were produced for existing populations, management regulations, wetland plateau plants and distribution.
	(iii) monitoring of poplar recruitment success with increased patrolling against illegal grazing;	A monitoring program was established under the project for the poplar consisting of 5 monitoring sample plots sampled semi-annually.
	(iv) bird monitoring and research;	A total of 82 bird monitoring samples were collected during LOP. Annual observation reports were submitted for 2013 – 2015.
	(v) habitat research and habitat restoration in the wetlands of the Reserve; and	Vegetation coverage was monitored in selected points in the NWR.
	(vi) assisted breeding and protection of endangered salamanders at the Salamander Reserve;	The project supported research for the endangered salamander including an analysis and mitigation of threatening factors and contributed to the on-going process of its upgrading of the existing nature reserve to a national reserve.

Project Outputs	Plan at Appraisal	Actual Completed
c) *Nature Reserve Management Support and Public Awareness Raising*:	i) training in ecosystem management, survey techniques, bird monitoring and use of remote video monitoring equipment and carrying out study tours to learn ecosystem management from comparable protected areas in China; (ii) carrying out an awareness campaign, including a poster for local community display, a television short show, a small guide book and a display for the Project Implementing Unit's Bole Museum in Bortala Prefecture; (iii) development of a management plan for the Lake Aibi NWR; and (iv) provision of technical advisory services in subjects related to this component;	A total of 60 government officials were trained in nature reserve management, biodiversity monitoring and patrol techniques. The project supported development and distribution of of public awareness materials (e.g., exhibitions, publicity manuals and TV spots. A management plan was prepared for the Lake Aibi NWR under the project. Technical assistance was provided for the monitoring study of key species in Lake Aibi.
(d) *Livelihood Enhancement*:	(i) carrying out of activities aimed to provide alternative livelihoods for the Kekebasto community and to relieve grazing pressure on the NWR, including demarcating an area within the allowed grazing area for grass collection for pen feeding; (ii) training and hiring herders to be NWR staff; (iii) vocational and skills training for Kekebasto herders on subjects as shall be approved by the World Bank; and	The project's EMDP supported 17 specific actions that contributed to an increase in per capita income from 1,590 RMB to 4,183 RMB at end of project. Two thousand mu of grassland were allocated by the NWR in 2012 for herders and managed under a cut-and-carry system. The Protected Area Management Bureau did not provide for hiring of temporary contractors for perennial patrol work and this mitigation measure was deleted from the EMDP. Project activities supported vocational and skills training 215 person-times in Kekebasto people including in animal husbandry and in the operation of modern

Project Outputs	Plan at Appraisal	Actual Completed
		machinery.
	(iv) provision of a health clinic.	A medical physician was hired and room outfitted in the doctor's house to function as a clinic and supported with financial assistance for medicine.
Component 4: Project Management, Monitoring and Evaluation.		
(a) Project Management	i) establishment and operation of the Project's institutional structure at Regional, Prefecture, County and NWR levels for efficient project management and implementation including inter alia awareness raising activities, preparation of picture album and popular science documentary movie, and publication and dissemination of Project documentation; and	The PMO and three PPIUs were responsible for project implementation. With little to no experience of Bank and GEF requirements and procedures the project suffered weak performance in the early years of implementation. With strong political support provided by local government most of these issues were overcome by the end of the project's 2nd year and a functioning multi-layered institutional structure was in place by EOP. Project demonstration materials produced under the project were publicity sheets, publicity manual, picture album and publicity slogans and a short video film in Chinese and Engish.
	(ii) capacity building of the Provincial Project Management Office (PPMO) staff at the Regional, Prefecture, County and NWR levels through training and study tours;	The PMO and PPIUs received training in procurement, FM and safeguard policy requirements. A procurement and FM expert were employed under the project.
(b) *Monitoring and Evaluation*:	the monitoring and evaluation (M&E) of changes brought about by the Project by establishing and implementing an M&E system including physical progress monitoring, performance and project	Despite provision for the establishment of an M&E system under the PPG grant no system was put in place until end of 2013 and routine reporting not reached

Project Outputs	Plan at Appraisal	Actual Completed
	impact monitoring and fiduciary and safeguards monitoring.	until 2015. Nevertheless, financial reporting was found to be submitted in a timely manner and raised no problems from the auditors. Social impact, dam safety and environmental M&E reports were prepared and submitted for the period 2013 – 2015.

Annex 3. Economic and Financial Analysis:

1. No formal, analytical economic analysis (e.g., NPV, ERR or FRR) was made of this GEF funded project. Rather to meet the requirements of GEF an incremental cost analysis (ICA) was prepared. In this analysis completed at the time of appraisal the Baseline Scenario consisted of: (i) promotion of water-saving irrigation management; (ii) sustainable natural grassland and grazing management; (iii) on-site management of priority protected areas; and (iv) project management and M&E at an estimated cost of US$9.203 million. This scenario was based on a realistic assessment of available resources and is consistent with the existing institutional capacity and development goals in Bortala Prefecture and XUAR.

2. The biodiversity and land degradation management outcomes of the Baseline Scenario were identified to be: (i) improved conditions of community pastures and mountain meadows, protected watershed functions and improved quality of life for rural communities, but the biodiversity benefits will be limited; (ii) demonstrated policy and practice for allocating water to agriculture using water supply and consumption analyses that contribute to protection of watershed functions and environmental flows to Lake Aibi and demonstrated water-saving irrigation application methods to increase irrigation efficiency; (iii) more sustainable irrigation and grazing industries, reduced environmental impacts, more diversity of irrigation and grazing management types and scales, and more involvement of local communities in related management decisions. Biodiversity impacts would be positive but delayed and limited and not fully integrated into water and natural grassland management policy development and natural resource planning and management; and (iv) protected areas would remain poorly promoted and managed resulting in a gradual erosion of boundary integrity, increasing pressures on the buffer zones.

3. Of particular note was the assessment that existing government resources and international financing under the Baseline Scenario efforts were not sufficient to ensure the protection of Lake Aibi biodiversity or reduction in land degradation from the dry lake-bed and upper watershed areas.

4. The GEF Alternative built on the Baseline Scenario by integrating environmental flow and biodiversity considerations into water resource planning, allocation and monitoring. It also supported government irrigation and animal grazing reform programs to increase their rate of implementation and enhance their objectives to fully integrate biodiversity conservation and regional land degradation concerns. Global benefits to which this project contributed included: (i) recovery of the saline-sodic ecosystems surrounding Lake Aibi and the freshwater fringe wetlands in the reserve; and (ii) the re-wetting of Lake Aibi areas that currently produce salt dust from land degradation by wind erosion with an estimated incremental cost of US$2.976 million.

Annex 4. Bank Lending and Implementation Support/Supervision Processes

(a) Task Team members

Project Preparation		
Gayane Minasyan	Task Team Leader, Sr. Environmental	EASER
Liping Jiang	Co-Task Team Leader, Sr. Water Resources	EASCS
Marta Molares-Halberg	Lead Counsel	LEGES
Renae Nicole Stenhouse	Biodiversity and Environment Specialist	EASTS
Yi Dong	Financial Management Specialist	EAPFM
Yuan Wang	Procurement Analyst	EAPPR
Ning Yang	Environmental Specialist	EASCS
Zhefu Liu	Social Development Specialist	EASCS
Peter Leonard	Social Development Specialist	EAPCO
John Fargher	Agro-Biodiversity Specialist, Consultant	
Anis Wan	Rural Development Specialist	EASSD
Weiguo Zhou	Project Management Specialist, Consultant	
Lourdes Anducta	Program Assistant	EASER
Chunxiang Zhang	Program Assistant	EASCS
Project Supervision /ICR		
Liping Jiang	Task Team Leader, Sr. Water Resources	GWA02
Charlotte Hicks	Biodiversity Specialist	-
Ning Yang	Environment Specialist	GEN02
Wang Yongli	Environment Specialist	-
Zhefu Liu	Social Development Specialist	GSU02
Bo Li	Resettlement Specialist	-
Yi Dong	Financial Management Specialist	GGO20
Hong Chen	Operations Specialist	GTI02
Yuan Wang	Procurement Specialist	GGO08
Bingfang Wu	Remote Sensing Specialist	-
Zhimin Wang	Institutional Development Specialist	-
Yongfei Bai	Biodiversity Specialist	-
Dan Xie	Program Assistant	EACCF
Random DuBois	Environment Specialist and ICR Consultant	-
Garo Batmanian	ICR Team Leader	GEN02

(b) Staff Time and Cost

Stage of Project Cycle	No. of Staff Weeks	US$, thousands (including travel and consultant costs)
Lending		
FY2008	0	0.53
FY2009	17.19	82.01

FY2010	9.15	53.37
FY2011	32.89	233.39
FY2012	0	-0.57
Total:	**59.23**	**368.73**
Supervision/ICR		
FY2012	7.35	44.94
FY2013	4.50	67.31
FY2014	5.65	37.29
FY2015	7.91	69.19
FY2016	10.35	104.17
Total:	**36.06**	**322.9**

Annex 5. Beneficiary Survey Results

External Monitoring & Evaluation Summary Report

(2011-2015)

on

Ethnic Minorities Development Plan (EMDP) and Process Framework (PF) of Sustainable Management and Biodiversity Conservation of the Lake Aibi Basin Project

Summary

1. The report first presents the principles and method followed in preparation of EMDP and PF of the project, on top of that, the external M&E group has classified the monitoring indicators listed in the EMDP and PF into 5 items and 17 task points as necessitated by the M&E work.

Item 1 Use and Return of Traditional Grassland

(1) Launch of grassland compensation system.

(2) Restore Kekebasto herders tradition of cut-and-carry grass.

Item 2 Surplus Labor Rearrangement and Job Creation

(3) Encourage Kekebasto herders to participate in capture of artemia.

(4) The NWR recruits 10 herders from Kekebasto village as permanent guards.

(5) The NWR shall possibly take in more casual labors from Kekebasto village.

(6) Organize the kekebasto herders to work outside.

Item 3 Establishment of New Type of Service and Production Organizations

(7) Set up NWR-Community Coordination Organization.

(8)Push forward special cooperative organization development.

Item 4 Social Welfare and Service

(9) Facilitate Kekebasto village to be basically covered with minimum subsistence allowance.

(10) Help with solar power generation in Kekebasto village.

(11) Resolve endangered housing rehabilitation issue in Kekebasto village.

(12) NWR provides with hand-on for road and water supply facility construction in Kekebasto village.

(13) Telecommunication company shall set up telecommunication station in Kekebasto village.

(14) Set up clinic shared by NWR and Kekebasto village.

(15) Organize vocational training and strengthen normal education to enhance capacity-building for people in the poverty-stricken area.

Item 5 Poverty Alleviation with Science/Technology and Fund-raising

(16) Intensify scientific poverty alleviation inputs.

(17) Diversify fund-raising channels.

2. The external M&E group first trained the internal M&E group, guided the internal M&E group to carry out the annual internal M&E work based on the various M&E indicators of the EMDP and PF so as to cooperate with the external M&E team to carry out the annual field survey and M&E, then the internal and external M&E groups agreed

on the scoring system on the annual implementation, which ensured that the various M&E indicators can be followed as scheduled.

3. The arrangement of internal and external M&E teams have ensured the implementation of the EMDP, which has led to the substantial changes in infrastructures and basic economic status. In 2009 before the project implementation, 54% of the Kekebasto herders families were without solar power energy for lighting, by 2014, not only each family had solar power generators, and some families had 2 sets of it. In 2009, only the village chief and another rich family had satellite phones, by 2011, each family had mobile phones. In the past, the 40 km between the village and the national way was inaccessible Gobi Desert, by 2012, simple gravel pavement road (around 40km) was built, connecting the village access with Boertala and Alashankou. In 2011, after the establishment of the NWR, the original 1000 mu grassland for cut-and-carry was banned. In 2012, in line with the EMDP, the NWR re-arranged 2000mu grassland to meet the demand of winter fodder, which was well received by the herders. In the past, there was only the gravity flow well shared by people and livestock, later on, water house was built to separate water supply for people and animals, with substantial enhancement of hygiene. The village doctor used to receive government subsidy of 3000 Yuan annually, later the NWR provided another 3000-Yuan subsidy annually, and gave free medicines to the village clinic with the value around 2000yuan. With the joint efforts of the internal and external M&E teams, Touli county scaled up the minimum subsistence allowance coverage, increased the numbers from 17 persons of 5 families to 165 persons of 43 families, basically covered all the herders in the village. The internal and external M&E teams each organized one training for forklift, and 4 villagers obtained the driving license. One training for rational animal husbandry was organized with several dozens of villagers participated. Another training was organized for embroidery with 12 villagers participated. The number of big animals such as horse, camel, cattle, sheep and goat has gone up tremendously. The net income per capita of the Kekebasto villagers has increased as shown below: 1590 Yuan in 2009, 2821 Yuan in 2011, 3316 Yuan in 2012, 3827 Yuan in 2013 and 4183 Yuan in 2014 respectively. For details, please see the following table.

Table 1. Infrastructure and Economic Conditions in Kekebasto Village before and after the Project

Item		Before Project	After Project
Infrastructure	1.Household-based solar power generator	54% herders didn't have power generators for lighting.	In 2014, each family had solar power generators; several families even had 2 sets.
	2.Telephone	2 satellite phones	In 2011, each family had mobile phones.
	3. Road	None	40 km simple road in village connecting the national way leading to Alashankou and Boertala.
	4.Grassland	The village had 1000 mu grassland for cut-and-carry in Autumn, which was banned in 2007 when the	In 2012, the NWR allocated another 2000mu grassland for the herders in the village to cut-and-carry grass.

		NWR was set up.	
	5.Subsidies for Village Doctor	Government subsidy of 3000 Yuan per year	NWR provided another subsidy of 3000yuan and free medicine of 2000 Yuan.
	6. Water Supply	Gravity flow well shared by people and animal	Separated water supply for people and animals.
Basic Economic Conditions	1.Social welfare	Only 17 persons of 5 families had minimum subsistence allowances	Starting from 2011, 165 persons of 43 households had minimum subsistence allowance
	2. Horse (head)	8	34
	3.Camel (head)	81	118
	4.Cattle (head)	37	95
	5.Sheep and goat (head)	717	1030
	6. License for modern machinery	Non	4 persons with driving license for forklift
	7. Net income per capita	1590 Yuan	4183 Yuan

Main conclusions and experiences of the project:

4. There are four major conclusions as below:

(1) The 17 tasks listed in the EMDP and PF of the project is basically completed.

(2) The implementation of the project has greatly improved the relationship between the NWR, Kekebasto Village and Wusuertu Town.

(3) Resulted from project implementation, the awareness raising is substantially enhanced for the reinforcement of related ecological protection regulations on the part of the NWR staff, people living within and near the NWR.

(4) The internal and external monitoring teams have played positive roles with very good cooperation.

(5) There are 4 major experiences from implementation of EMDP and PF of the project as below:

(1) When the project area involves certain number of minority people, it is quite necessary to prepare EMDP and PF.

(2) The preparation of EMDP and PF shall be based on detailed social and economic survey.

(3) The establishment of internal and external monitoring M&E mechanism with serious M&E implementation is the key to implement EMDP and PF.

4) The specification of practical working system and arrangement for the internal and external M&E with certain incentive mechanism is the guarantee for implementation of the plan.

Annex 6. Stakeholder Workshop Report and Results

Not applicable.

Annex 7. Summary of Borrower's ICR and/or Comments on Draft ICR

A: Letter from the borrower with comments on the ICR

June 15, 2016

Mr. Iain G. Shuker
Practice Manager
Practice Manager
Environment and Natural Resources
East Asia and Pacific Region
World Bank

Subject: China: Sustainable Management and Biodiversity Conservation of the Lake Aibi Basin Project

Dear Mr. Shuker,

We were pleased to have the opportunity to review and draft ICR from the World Bank. We considered that the Bank's draft ICR well reflects the outputs and outcomes that the project achieved, and we fully agreed with the Bank's assessment with the ratings of the overall achievement of the project objectives and performance for project management and implementation.

We concurred particularly with the conclusion that the project was highly relevant at the time of entry to the Bank's Country Partnership Strategy (CPS), China and global environmental priorities. Arguably it is even more relevant at the time of closure. Not only is there considerable evidence that environment generally and Lake Aibi ecosystem specifically continue at risk but the resulting concern and efforts to mitigate the situation was given higher visibility in China's 12th and even more 13th five-year plans and in the Bank's current CPS. The project met or exceeded all its targets as measured by outcome and impact indicators and so fully attained all development objectives. The landscape approach was shown to be highly effective in the protection of biodiversity conservation in nature reserves; particularly those exposed to threats beyond the boundaries of the natural reserve.

Some of the concrete results of the project have been the reduction of upstream water consumption by farmers to release more water to Lake Aibi for its biodiversity conservation, since the project helped farmers better manage water consumption through improved irrigation technology and scheduling. These actions, increased the quality of products hence improved farmers' incomes beyond the project target.

The series of regulations prepared and adopted by the local government with the impacts of the project is already generating a positive impact beyond what was foreseen at the time of appraisal. For example, based on the results of the assessment supported by the project, the actual water consumption was higher than the target on the sustainable level, based on which the prefecture government made a long-term plan with measures taken

immediately including ban of expanding irrigated areas and even reduce some of the low-yield irrigated areas to release more water flows to the Lake Aibi Basin. A specific decree was issued to prohibit grazing of natural grasslands and the Bank helped study alternative ways of managing livestock, including rotation grazing and fodder production for livestock raising in pens. A Legal Notice has been issued to ban on further land reclamation for irrigated agriculture and existing irrigated land with low yield are being returned to natural grassland. Thus, the project resulted on mainstreaming the water consumption management by different stakeholders has been in the overall planning process. In addition the actions on the ban on further land reclamation and returning existing irrigated land to natural grassland have been included in the 13th Five-Year Plan for Bortala Prefecture.

Finally, we believe that the project's innovative concept and approach will be up scaled and applied to other prefectures (and sub-catchments) in the Lake Aibi Basin as well as elsewhere in similar landscapes in Northwest China.

We would like to thank the Bank ICR mission for interacting closely with all the implementing agencies while preparing the draft ICR and all the Bank officials, specialists, consultants, and in particular, the Task Team Leaders Ms. Gayane Minasyan for her diligent work for preparation of the project and Mr. Liping Jiang for his spirit of cooperation and partnership to facilitate the successful implementation of the project during the past years.

We look forward to working with the Bank in future projects like this one with innovative technologies and resources management skills to resolve the real issues for the sustainable management and biodiversity conservation of the Lake Aibi Basin.

Yours Sincerely

Jiaqing Wu

B: Completion and Acceptance Report

China: GEF Sustainable Management and Biodiversity Conservation of Lake Aibi Basin Project

Completion and Acceptance Report

（Brief）

The Xinjiang Regional Project Implementation Office of China: GEF Sustainable Management and Biodiversity Conservation of Lake Aibi Basin Project

&

The Boertala Prefecture Implementation Office of China: GEF Sustainable Management and Biodiversity Conservation of Lake Aibi Basin Project

Nov. 2015

General Situation of the Project

Project Background

1. Guidelines of the eleventh five-year (2006-2010) plan and the twelfth five-year (2011-2015) plan of national economic and social development proposed the idea of constructing resource economical and environment friendly society and promoting economy development coordination with population, resources and environment.

2. ”The national partnership strategic framework”(2006-2010) between the World Bank and China supported this proposal.

3. China: GEF Sustainable Management and Biodiversity Conservation of Lake Aibi Basin Project (project number: P110661) was a sustainable management and biodiversity conservation project with 4 years project implementation periods that was funded by GEF.

The project aimed to solve the serious problems of land degradation, the quick reducing of biodiversity, the over consumption of water resource in Lake Aibi Basin, and the rapid lake surface dwindling of Lake Aibi.

Project Objectives

4. Through sustainable management and biodiversity conservation in Lake Aibi Basin, the project will promote the policy supports and management capacities of carrying out integrated land degradation prevention and control as well as optimum water resource allocation in Lake Aibi Basin, and reduce ecological impacts to local, western China and neighboring countries and areas caused by land degradation, and bring integrated biodiversity conservation into natural resource managements. And through implementation project activities in the key ecological areas, the project will realize the preservation of the global important species and the conservation of threatened ecosystems and biodiversity in western China.

Main Beneficiaries

- Beneficiaries of farm households. Through demonstrating sustainable water resource management, the irrigating farmers realized water saving and efficiency increasing.
- Beneficiaries of herders. Through sustainable grassland management, the national grassland policy compensations were promoted to make herders increasing their incomes.
- Beneficiaries of women. Women participated into project practical activities to ensure the cultural promotion of all project activities and to meet the desires of ethnic minority beneficiaries.
- Working staff and managers of the NR benefited from the project. Working capacities of the Natural Reserve's working staff and managers were enhanced and their working conditions were improved by obtaining more information, strengthening institute supports, and getting new positions in local communities.

Project Components

5. The project was composed by the following 4 components: (1) optimum water resource allocation; (2) sustainable land management; (3) the national NR biodiversity conservation and management of Lake Aibi Basin and local livelihood promotion; (4) project management and M&E.

Project MTR Adjustment

6. There was no middle term adjustment within the whole project period.

Other Major Changes

7. As per suggestions from the World Bank supervision missions, consultant service contracts of <strategic planning study and policy suggestions of sustainable management

and biodiversity conservation of Laki Aibi Basin in Xinjiang>, <developing the final report of Biodiversity sub-component> and <developing the project completion and acceptance report> were signed, expenses (US$ 652 thousand) of which have adjusted from the categories of goods and non-consultation services.

The Main Factors of Impacting Project Implementation

At National Level （Positive factors）

8. The twelfth five-year development plan of Xinjiang emphasized that making agriculture water saving as the key point, carrying out new technologies of modern water-saving irrigation, strengthening underground water conservation and management, and strictly controlling of over mining and wasteful mining underground water. That is in accordance with the project objectives. As of the present, the completion of counterpart funds was RMB 62.4347 million Yuan accounting for 104.15% of the plan.

Factors Within Control of Project Management Institutions

9. The main reasons for the slow implementation of the project in the first year: (1) Project implementation units were unaware of the World Bank procedures and lack experiences of project procurement and financial management; (2) the project did not employ major experts timely; (3) The trust funds grant funds did not deliver to the regional special account in time.

The Safeguard Measures

10. In order to ensure the successful implementation of Lake Aibi Project, documents of <feasibility study report>, <environment impact assessment report>, <social impact assessment report>, <ethnic minority development plan>, <water consumption balance analysis implementation plan>, <the project implementation plan>, <procurement management regulations> and <financial management regulations> were developed.
11. During project implementation, safeguard policy, financial management procedures, procurement procedures, payment procedures, stipulates of over-costing funds raising and using regulations of cost savings were strictly executed.

12. Environment impact M&E. From 2013, M&E was carried out by the project in continuous 3 years in the period of project construction and operation. The environment measures were strengthened to minimize the impacts from construction on environment.

13. Social safety and relevant problems. As per the ethnic minority development plan, 17 detailed measures in 5 aspects were developed to increase residents' incomes. The project formed perfect inner and external monitoring mechanism and carried out working examine methods and grading methods. That makes the very effective system guiding function on realizing development plan and process framework.

14. Dam safety. Dam safety expert was employed to inspect and assess the 5 dam's safeties per year and provide suggestions and comments.

Operation After Project Completion

15. Sustainability: After the completion of Lake Aibi project, the sustainability of the following 4 aspects, i.e. sustainable development and integrated ecosystem management ideas, project water resource management idea based on ET, cross-departments and multi-levels cooperation mechanism, and project management and capacity construction, will be ensured.

16. Technology: sub-system software of water resource consumption framework was developed by water resource management project and patrol monitoring system was developed by forest resource monitoring project. Monitoring platform was built up by grassland resource management project. Under the existing policy system, cooperation and supports among relevant projects can be ensured.

17. Risks: if it meets the condition of lack of funds, monitoring would not be ensured and would be ceased by the impact of lacking of funds supports.

Project Outputs and Achievements Impact Assessment

Assessment of Project Objectives and Designs

18. To realize designed project objectives, the optimum water resource allocation plan (the first component) will be developed by project water resource assessment, and sustainable management of the Lake Aibi basin system (the second components) will be demonstrated to ensure the increase of environment flow of Lake Aibi. The above 2 components will solve the main threatens to sustainable biodiversity conservation of Lake Aibi. The project will also promote management capacity of Lake Aibi wetland NR, especially conserve aquatic and terricolous habitats, forbid livestock grazing and promote the natural reproduction of local plant species (the third component) in order to finally reduce the wind erosion to dry bed of Lake Aibi and conserve the global important biodiversity and ecosystem supported by the biodiversity. The project will be managed and supported by Boertala prefecture. That shows the high attentions paid by the regional and prefectural high level leaders (the fourth component).

19. Through strengthening the sustainable management of the Lake Aibi basin, the balance between water resource supply and consumption will be better ensured and the inflow of Lake Aibi will be increased, which will benefit the recovery of ecosystem.

20. The project will help to reduce the wind erosion to dry bed of Lake Aibi.

21. The project will promote management capacity of Lake Aibi wetland NR, especially conserve aquatic and terricolous habitats in order to protect the global important biodiversity and ecosystem.

22. The project contents accord with the objectives of the development strategies of developing the region in an ecological way and priority of environment protection of Xinjiang and the twelfth five year plan of Boertala prefecture, and also accord with

present national ecosystem construction objective. The project will be managed by Boertala prefecture project management office. The regional and prefectural high level leaders all give supporting promises.

Completion of Project Objectives

23. Consultation works: contract numbers of GEF funds were 33, contract numbers of counterpart funds were 4. Project outputs: 63 project outputs were from GEF funds and 11 project outputs were from local government counterpart funds. Contrasting to 15 indicator tasks stipulated in PAD and PIP, all the tasks were completed and reached the designed project objectives.

24. Optimum Water Resource Allocation. The core of this component was optimum water resource allocation. Through balance analysis of water resource consumption, water resource management and management plan and policy suggestions of allocating ecological water consumption were strengthened and adopted by the government.

25. Boertala prefecture government made the strict policies and normative documents of water resource management, water price adjusting, return arable land to water etc. For example, Boertala prefecture water conservancy bureau issued <the notification of further standard the administrative licensing items of mining underwater resource>. Recently, Boertala prefecture began to carry out differentiation water price policy that distinguished commonweal and commodity water resources and carried out over-quota progressive surcharges system to agriculture, industry and service industries.

26. Sustainable Land Management. 1,760 thousand mu natural forest were protected. 52.6 thousand mu demonstration area of closing hillsides or sand land to facilitate afforestation were built up. 30 thousand mu demonstration areas of rotation grazing, resting grazing and forbidden grazing were redrawn. Monitoring of forest resources and forest fire disaster were carried out. And dynamic monitoring of natural grassland was carried out.

27. On the basis of forest resource conservation of Boertala prefecture, plant species that consuming less water resource and possessing some economical benefits were selected to carry out returning arable land to forest and developing sand industry. A special forest resource monitoring management institution was set up. County level forest resource monitoring station was set up and improved with monitoring equipments installed. Forest resource monitoring data base was built up to continuously increase quality of forest stand which helps to conserve biodiversity.

28. Trainings on promoting farmers/herders' environment conservation consciousness and planting techniques were provided. Kinds of monitoring and management measures were stipulated. Grassland monitoring was carried out continuously. The practical grassland recovery plan was analyzed and developed. Study on natural grassland and artificial grassland integrated allocation were launched to solve the conflict of seasonal forage supply unbalance of grassland.

29. Biodiversity Conservation and Management. Activities related to management of Lake aibi wetland NR were carried out including special patrol, setting up and using data management system. Monitoring and study of birds and key species such as red deer, goitred gazelle, Lake Aibi birch and Ranodon sibiricus were implemented to protect endangered species. Short TV film, guidelines and relevant laws and regulations of the Natural Reserve were developed to promote public consciousness.

30. Lake Aibi NR Management Plan were worked out to strengthen management capacity of the NR, which made planning to conservation engineering, scientific research and monitoring, publication and education, infrastructure and ecological tourism of the nature reserve.

31. Monitoring of birch age-class was carried out in Lake Aibi NR. The situations of birch seedling natural reproduce were observed and recorded. The objectives of setting up sample plots and carrying out monitoring were achieved.

32. Project Management and M&E. Environment impact monitoring assessment. On the basis of project design and environment assessment, the implementation situation of environment conservation measures (water, air, sound and ecology) of all project components from the stage of construction to operation was monitored and inspected. The potential environment impacts and alleviating measures of the project implementation were analyzed. It was demanded that project groups should strengthen environment conservation measures during the project implementation to reduce the impact on environment from construction to the minimum degree. Monitoring data of 5 times showed that there were no solid waste and noise produced during project implementation. Thus there was no pollution produced to air and water resource.

33. Ethnic minority development and local livelihood promoting. There was a herder settlement, where 38 Kazak herder households lived, in the intermixed zone between experiment area and buffer area of Lake Aibi national wetland NR. <The ethnic minority development plan and process framework> including 17 detailed measures in 5 aspects was developed by the project to increase residents' incomes. During project implementation, trainings on livelihood promotion were provided as per trainees' desires. The residents' livelihood problems were solved and their living environment was improved through kinds of ways. 15 measures in the planning were successfully completed, which product positive impacts on project implementation.

34, The perfect inner and external monitoring mechanism was set up by the project. The 5 years' monitoring data showed that the score grade of 2011 was basic qualified, and beginning of 2012, the score grades were all good or excellent in which the score grade of 2013 was excellent. Based on the investigation to 28 sample households, the net incomes of herders in this village were enhanced from 12%-13% of Boertala prefecture and Jinghe county farmers/herders' net incomes in 2011 to 34%-37% in 2014.

Risks of Impacting Achievement of Project Objectives

35. In the stage of project preparation, relevant factors that would impact the project were advanced conceived and complete project documents were developed. During project implementation, the relevant monitoring was carried out. The project was implemented strictly according to policies and procedures. All of that avoided risks.

Performances of the World Bank and Borrower

Assessment of World Bank Performances

36. The World Bank participated into all the progress of project integrate design, preparation and implementation as the international implementation institution of Lake Aibi project, strictly obeyed relevant regulations of <Grant Agreement> and <Project Agreement>, cooperated with grant funds receiver, and promoted project normalization and institutionalization management.

37. Advanced ideas and technologies were introduced to the project by the World Bank including integrated water resource and water environment management, water resource management ideas base on controlling of water resource consumption, and safeguard measures of social and environment etc.

38. During project implementation, the World Bank supervision mission teams that consisted of relevant experts and consultants and were organized by the World Bank project manager carried out strict inspection and supervision to the project on funds utilization and management, annual project plan development and implementation, progress of demonstration and study projects, realization of M&E activities etc. The World Bank experts possessed serious working attitude and efficient working style, and their working methods were practical and flexible.

39. The grant receiver was very satisfied with the World Bank's performances. The expected project outcomes were achieved and the expected project objectives were reached.

Table 1. **Assessment** of World Bank Performances

Serial	Contents of assessment	Summary of assessment	Grade of assessment
1	Project design	The project design idea is advanced, scientific and strategic. The project components are comprehensive.	Highly Satisfactory
2	Development of project objectives	The project objectives are accurate and reasonable and accord with the distinguishing features of project area. The project possesses sustainability.	Highly Satisfactory
3	Plan and adjustment	The Plan is arranged appropriately	Satisfactory
4	Technical supports	Experts have abundant experiences and possess good personal cultivation and professional ethics that give detailed directions to the project.	Highly Satisfactory
5	Financial	The financial management is planed reasonably at the beginning	Satisfactory

Serial	Contents of assessment	Summary of assessment	Grade of assessment
	management	stage of the project implementation and is implemented successfully at the following stages.	
6	Project inspection	Through project inspections, problems existing in project implementation are found in time and the appropriate suggestions are provided. The members of world Bank supervision teams have standard and serious working methods. Their dedicated working and responsible attitude make the major functions to solve relevant problems.	Highly Satisfactory
7	Project supervision and management	The World Bank supervision missions fulfill their responsibilities completely and make decisive functions to project completion as well as bring advanced methods and measures to project management.	Highly Satisfactory
8	Communication with China party	In general, the communication during the whole project implementation is smooth. At the beginning of the project, most communications are completed by translators from the third party. So the accuracy of the translations could not be assured. During the project implementation period, the World Bank project manage have strong communication capacity. So the obstacle of language is eliminated. The timely, flexible, smooth and frank communication ensures the project plan achieved.	Satisfactory
9	Effects assessment	Under the strongly supports and participations of the World Bank, project designed activities are completed or over fulfilled. The project achieves prospective objectives.	Highly Satisfactory
	The whole assessment	During project preparation and implementation, the serious working attitudes, high efficient working styles and flexible and practical working methods of the World Bank are the key factors to project success. In the meantime, the World Bank brings many management experiences to project management units. That provides better references for future international cooperation projects.	Highly Satisfactory

Assessment of Grant Receiver's Performances

40. The grant receiver is the government of Xinjiang Uygur Autonomous Region of China. The project management frameworks include project leading groups and PMOs at regional, prefectural and county/natural reserve levels, technical assistance export groups and project implementation units.

41. Through project implementation, integrated cross-departments and multi-levels cooperation mechanism of ecological management was set up. Working groups closely cooperated with relevant government departments to realize counterpart funds, provide policy suggestions, strengthen guidance to project implementation, and actively undertake environment conservation and construction within their jurisdiction. The successful project implementation was ensured by performance management and put environment conservation and construction duties into effect layer upon layer.

42. During project implementation, project participants were familiar with and grasped the World Bank project management experiences, regulations of project financial and

procurement, project implementation contents and routine practices of international projects, and their technical capacities were promoted rapidly.

43. The self-assessment was very satisfied. The project progressed successfully. Project activities were completed with quality and quantity guaranteed and over quota.

Table 2. Assessment of Grant Receiver's Performances

Serial	Contents of assessment	Summary of assessment	Grade of assessment
1	Project design	The project design idea is advanced, scientific and strategic. The project components are comprehensive.	Very satisfied
2	Development of project objectives	The project objectives are accurate and reasonable and accord with the distinguishing features of project area. The project possesses sustainability.	Very satisfied
3	Plan and adjustment	The Plan is arranged appropriately.	Very satisfied
4	Technical supports	Experts have abundant experiences and possess good personal cultivation and professional ethics. They do their works seriously and responsibly.	Very satisfied
5	Financial management	At the beginning of the project, the project implementation units are unaware of the world bank withdrawal procedures and lack of relevant project experiences that impacts the project financial progress. Along with the project progress and after training, the financial management becomes smooth.	Satisfied
6	Project inspection	The project is inspected as per the project plan and problems are found and solved timely that promotes the successful implementation of the project.	Very satisfied
7	Project supervision and management	Management institutions at all levels give strong supports to the project and try their best to do works of coordination, supervision and management.	Very satisfied
8	Effects assessment	Many outcomes are achieved. Institution and capacity construction are strengthened. The prospective project objectives are reached.	Very satisfied
	The whole assessment	Project cross-departments and multi-levels cooperation mechanism gains great achievements, which makes the supporting function to the development of project area and the whole Lake Aibi Basin. The project management experiences have been extended to areas out of the project area.	very satisfied

Experiences and Lessons Learned

Experiences

（1）It was the organization guarantees of the project implementation that setting up working mechanism of cross-departments and multi-levels cooperation and stakeholders' participation.

（2）It was the basic assurance of project implementation that adopting participatory working method.

（3）It was the technology basis of the project implementation that mixing together advanced technologies at home and abroad and making innovations continuously.

（4）It was the unblocked road of the project implementation that realizing relevant data sharing of water resource and water environment.

（5）It was human resource assurance of the project implementation that carrying out trainings.

（6）It was efficient supervision power of the project implementation that carrying out monitoring assessment of "quality monitoring and controlling, and effects tracing back".

（7）It was the important ways of the project ideas' transmission and outcomes extension that carrying out various publication activities.

（8）It was the law assurance of the project sustainability that bringing the project outcomes into the government planning.

Lessons

44. The project management mechanism should be further strengthened in order to facility the smooth project implementation.

45. The project area was located in the remote area of western China, where there was less international projects implemented and lacking of project management experiences. That caused the slow project progress at the beginning stage of project implementation. Therefore, before the implementation of new projects, it was not only to do technical preparations but also to strengthen the capacity construction of project organization and management. As for the cooperation with government departments, it should select the institutions and working staff that possess government management functions to undertake concrete project managements. It was only the sustainability of the project ensured that could assure relevant working staff engaging in this work for a long term, accumulating their working experiences continuously and increasing their working efficiency. The World Bank officers who were engaged in projects in China project areas should learn some Chinese and know some china cultures that would benefit for the successful implementation of projects.

46. Based on the Lake Aibi Basin, the optimum allocation study of water yield balance should be done making the Lake Aibi basin as a whole unit.
Because of the limited amount of GEF grant funds and counterpart funds provided by Boertala prefecture, the project area is only in areas of Boertala prefecture administrative boundaries within Lake Aibi Basin. Thus the study on this project is incomplete.

47. Study on glacier should be included into the project studies. The melting water of glacier is the major source of water in Boertala prefecture. With the temperature increasing, more glacier melting water is produced. That will be good for developing and increasing the possibility of environmental flow into the lake in a short period. But according to the suggestion in the World Bank AM (aide memoire), some project activities including glacier investigation were deleted as per experts' recommending grade.

C: Government of Bortala Official Document Approving Project Outputs

(English version)

Boertala Mongolian Autonomous Prefecture Government Office

Bozhouzhengbanhan (2015) No. 25

Subject: **Letter on Affirmation of Study Results of GEF and the World Bank Sustainable Management and Biodiversity Conservation of the Lake Aibi Basin Project**

Attention: The World Bank Implementation and Completion Report (ICR) Mission of the Lake Aibi Basin Project

CC: Boertala Mongolian Autonomous Prefecture Party Committee Office

China/Global Environmental Facility (GEF) and the World Bank Sustainable Management and Biodiversity Conservation of the Lake Aibi Basin Project has a total investment of 12.18 million US$, including GEF grant of 2.98 million US$, and counter-part funding of 9.2 million US$. Up to now, the project is approaching the end, with achievement of 73 subject study results and important demonstration results from the pilot area and experimental area. The project completion is scheduled on December 31, 2015.

As required in the Project Agreement between Xinjiang Uygur Autonomous Region Government and the World Bank for approval of the project achieved results, Boertala Mongolian Autonomous Prefecture Government hereby deems as below: Resulted from GEF and the World Bank Sustainable Management and Biodiversity Conservation of the Lake Aibi Basin Project, the recommendations for decision-making and technical suggestions proposed in the main study reports are very important. During project implementation, these recommendations and suggestions have already been adopted in the policies and regulations issued by the government, playing a very important role thereof. In the future, these recommendations and suggestions will also serve as key reference basis in formulating the 13th Five-Year Plan for Economic and Social Development in Boertala Prefecture as well as sustainable management and biodiversity conservation in Aibi lake basin.

Seal

Date: November 28, 2015

Annex 8. Comments of Cofinanciers and Other Partners/Stakeholders
Not applicable.

Annex 9. List of Supporting Documents

By the Borrower:

1. Social Assessment
2. Environmental Impact Assessment Report
3. Environmental Management Plan
4. Ethnic Minorities Development Plan and Process Framework
5. Project Operational Manual
6. Lake Aibi Basin: Strategic Plan Research and Policy Proposals
7. Lake Aibi Basin: Project Impact Monitoring & Assessment Report
8. Evaluation on the External Monitoring Summary Report
9. Summary Report on Biological Diversity Protection Management and Restoration in the Ebinur Lake Wetland
10. Lake Aibi Basin Project Outcomes List
11. Sustainable Forest Resources Management Policy Suggestion Report
12. Water Resources Assessment and Optimized Allocation in Lake Aibi Basin based on Evapotranspiration Remote Sensing Technology: General Report
13. Management Plan of National Aibi Lake Wetland Nature Reserve
14. ICR Report by Project PMO
15. Semi-annual Progress Reports

By the Bank:

1. Project Concept Note
2. PCN Decision Note
3. Mission Aide Memoires
4. ISRs
5.GEF Grant Agreement August 1, 2011
6.Agreed Minutes of Negotiations April 14, 2011
7. Project Agreement, August 1, 2011
8. Financial Management Assessment Report
9. Detailed Cost Tables
10. TTL Handover Letter
11. Memo on PPG Final Completion Report
12. Project Appraisal Document April 25, 2011
13. GEF Request for Project Preparation Grant (PPG), October 14, 2008
14. GEF Project Identification Form (PIF), January 21, 2008
15. IEG CPSCPR Review October 26, 2012
16. Memo to MOF

Annex 10. Matrix of Government Decrees and Notices Issued Supporting Project Recommendations

Name	Date	Project Ideas/Suggestions Adopted
Notice on Issuing Management Rules of Water Tariff Pricing and Use for Engineering Water Supply in Boertala Prefecture (Bozhouzhengfa [2013] No.22	1/3/13	As shown by project study results, returning farmland to save water is critical for biodiversity restoration, hence the new water tariff implemented as below: Integrated water supply cost is increased from 0.053 Yuan to 0.154 Yuan. The over-quota use is subject to progressive surcharge. For rural contracted land, over-quota use by less 50% is charged 1.5 times of base tariff, and that over by 50% to one times is charged 2 times of base tariff, over by more than one times is charged 2.5 times of base tariff; for non-contracted farmland, the surface water is charged 3-4 times of the base tariff, which leads to land returning by big households and less water consumption by small households.
Implementation Opinions of Prefecture Party Committee and Government on Speeding up Water Resources Reform and Development (Bozhoudangfa [2013] No.5)	23/4/13	The Implementation Opinions are based on the project suggestions for water consumption control. The project data is reference for control indicators in drafting the "Three Red Lines". In 2015 in Bozhou, the total water consumption control target is 1.433 billion m3, that for 2020 is 1.429 billion m3, and that for 2030 is 1.428 billion m3.
Notice on Issuing Control Indicators of "Three Redlines" of Counties and Cities (Bozhouzhengfa [2014] No.49)	29/7/14	
Notice on Issuing Implementing Management Rules on Well-Power Double Control of Underground Water Use (Provisional) (Bozhouzhengfa [2015] No.13)	2/3/15	The project study indicates the over-exploitation of groundwater in Bozhou reaches 140 million m3 annually, the said government notice is meant to have double control of wells and power with 32 wells closed to reduce unnecessary ET.

Name	Date	Project Ideas/Suggestions Adopted
Boertala River Basin Water Ecological Environment Protection Regulations in Boertala Mongolian Autonomous Prefecture (Draft for Opionions)	31/8/15	The project study shows the need to have integrated Boertala river basin management to protect Aibi Lake ecosystem and biodiversity based on water consumption quota control target ET for unified surface and groundwater management, with *Boertala River and Jinghe River Basin Water Resources Development Utilization Plan* and *Bozhou Underground Water Resources Development Utilization and Protection Plan* prepared.
Emergent Notice on Stopping Approval of Land Development Procedures and Ban on Illegal Land Reclamation (Bozhoudangbanfadian [2012] No.16)	10/4/12	Starting from 2012, stop land reclamation. 6,667 ha is returned to nature land with water saving of 150 million m3, and 20,000 ha is planned to be returned by 2020.
Notice on Handling Rules for Specific Rectification of Illegal Land Cultivation on State-own Land、Forest Land、Grassland and Illegal Water Use (Provisional) (Bozhouzhengbanfa [2015] No.39)	13/4/15	10,000 ha are returned to forest or grass, 20,000 ha are to be returned by 2020.
Implementation Rules of Grassland Ecological Protection Subsidy Reward Mechanism in Bozhou (Official document in 2014 of Bozhou Livestock Bureau)	2014	Starting in 2014,rotational grazing area reaches 93,333ha (22.5yuan/ha) for 17.85 million RMB Yuan, grazing ban area reaches 546,667 ha (82.5yuan/ha) for 41.50 million RMB Yuan, totaling 62.95 million RMB Yuan up to now.
Coverage of Bozhou in National Natural Forest Protection Program Phase II	2012	Enhance natural forest protection. Protected area increases to 184,000 ha.
Bozhou Forestry Development Report for 13th “Five-Year” Plan	5/11/15	Upgrade the Salamander Reserve to National Level Reserve. Above 90% key wildlife and plants of national protection are under effective protection.
13th Five-Year Plan on Water Resources Development in Bozhou (Draft)	2/11/15	The project study shows urgency to change water consumption mode, optimize water resources allocation and exercise water consumption quota control in Bozhou. During the 13th “Five-Year” Plan period, the above-mentioned 2nd and 5th official documents will sustain to return land for water, enhance water use efficiency and benefits for a water-saving society.

Annex 11. Summary of GEF METT Assessment Form.

Objective 1: Catalyzing Sustainability of Protected Area Systems

GEF METT Indicator	Baseline (rating and definition)	At project end (rating and definition) **Cells in bold indicate increase from baseline**
1. Legal status: Does the protected area have legal status (or in the case of private reserves is covered by a covenant or similar)?	3: The protected area has been formally gazetted/covenanted	3: The protected area has been formally gazetted/covenanted
2. Protected area regulations: Are appropriate regulations in place to control land use and activities (e.g. hunting)?	1: Some regulations for controlling land use and activities in the protected area exist but these are major weaknesses	**3: Regulations for controlling inappropriate land use and activities in the protected area exist and provide an excellent basis for management**
3. Law Enforcement: Can staff (i.e. those with responsibility for managing the site) enforce protected area rules well enough?	2: The staff have acceptable capacity/resources to enforce protected area legislation and regulations but some deficiencies remain	2: The staff have acceptable capacity/resources to enforce protected area legislation and regulations but some deficiencies remain
4. Protected area objectives: Is management undertaken according to agreed objectives?	1: The protected area has agreed objectives, but is not managed according to these objectives	**3: The protected area has agreed objectives and is managed to meet these objectives**
5. Protected area design: Is the protected area the right size and shape to protect species, habitats, ecological processes and water catchments of key conservation concern?	2: Protected area design is not significantly constraining achievement of objectives, but could be improved (e.g. with respect to larger scale ecological processes)	**3: Protected area design helps achievement of objectives; it is appropriate for species and habitat conservation; and maintains ecological processes such as surface and groundwater flows at a catchment scale, natural disturbance patterns etc**
6. Protected area boundary demarcation: Is the boundary known and demarcated?	3: The boundary of the protected area is known by the management authority and local residents/neighbouring land users and is appropriately demarcated	3: The boundary of the protected area is known by the management authority and local residents/neighbouring land users and is appropriately demarcated

GEF METT Indicator	Baseline (rating and definition)	At project end (rating and definition) **Cells in bold indicate increase from baseline**
7. Management plan: Is there a management plan and is it being implemented?	0	**2: A management plan exists but it is only being partially implemented because of funding constraints or other problems**
8. Regular work plan: Is there a regular work plan and is it being implemented	2: A regular work plan exists and many activities are implemented	2: A regular work plan exists and many activities are implemented
9. Resource inventory: Do you have enough information to manage the area?	1: Information on the critical habitats, species, ecological processes and cultural values of the protected area is not sufficient to support planning and decision making	**2: Information on the critical habitats, species, ecological processes and cultural values of the protected area is sufficient for most key areas of planning and decision making**
10. Protection systems: Are systems in place to control access/resource use in the protected area?	2: Protection systems are moderately effective in controlling access/resource use	**3: Protection systems are largely or wholly effective in controlling access/ resource use**
11. Research: Is there a programme of management-orientated survey and research work?	1: There is a small amount of survey and research work but it is not directed towards the needs of protected area management	**2: There is considerable survey and research work but it is not directed towards the needs of protected area management**
12. Resource management: Is active resource management being undertaken?	1: Very few of the requirements for active management of critical habitats, species, ecological processes and cultural values are being implemented	**2: Many of the requirements for active management of critical habitats, species, ecological processes and, cultural values are being implemented but some key issues are not being addressed**
13. Staff numbers: Are there enough people employed to manage the protected area?	1: Staff numbers are inadequate for critical management activities	**3: Staff numbers are adequate for the management needs of the protected area**
14. Staff training: Are staff adequately trained to fulfill management objectives?	1: Staff training and skills are low relative to the needs of the protected area	**2: Staff training and skills are adequate, but could be further improved to fully achieve the objectives of management**

GEF METT Indicator	Baseline (rating and definition)	At project end (rating and definition) **Cells in bold indicate increase from baseline**
15. Current budget: Is the current budget sufficient?	1: The available budget is inadequate for basic management needs and presents a serious constraint to the capacity to manage	**2: The available budget is acceptable but could be further improved to fully achieve effective management**
16. Security of budget: Is the budget secure?	2: There is a reasonably secure core budget for regular operation of the protected area but many innovations and initiatives are reliant on outside funding	**3: There is a secure budget for the protected area and its management needs**
17. Management of budget: Is the budget managed to meet critical management needs?	2: Budget management is adequate but could be improved	2: Budget management is adequate but could be improved
18. Equipment: Is equipment sufficient for management needs?	1: There are some equipment and facilities but these are inadequate for most management needs	2: There are equipment and facilities, but still some gaps that constrain management
19. Maintenance of equipment: Is equipment adequately maintained?	2: There is basic maintenance of equipment and facilities	2: There is basic maintenance of equipment and facilities
20. Education and awareness: Is there a planned education programme linked to the objectives and needs?	1: There is a limited and ad hoc education and awareness programme	1: There is a limited and ad hoc education and awareness programme
21. Planning for land and water use: Does land and water use planning recognise the protected area and aid the achievement of objectives?	1: Adjacent land and water use planning does not takes into account the long term needs of the protected area, but activities are not detrimental the area	1: Adjacent land and water use planning does not takes into account the long term needs of the protected area, but activities are not detrimental the area
22. State and commercial neighbours:Is there co-operation with adjacent land and water users?	1: There is contact between managers and neighbouring official or corporate land and water users but little or no cooperation	**2: There is contact between managers and neighbouring official or corporate land and water users, but only some co-operation**

GEF METT Indicator	Baseline (rating and definition)	At project end (rating and definition) **Cells in bold indicate increase from baseline**
23. Indigenous people: Do indigenous and traditional peoples resident or regularly using the protected area have input to management decisions?	2: Indigenous and traditional peoples directly contribute to some relevant decisions relating to management but their involvement could be improved	2: Indigenous and traditional peoples directly contribute to some relevant decisions relating to management but their involvement could be improved
24. Local communities: Do local communities resident or near the protected area have input to management decisions?	2: Local communities directly contribute to some relevant decisions relating to management but their involvement could be improved	2: Local communities directly contribute to some relevant decisions relating to management but their involvement could be improved
25. Economic benefit: Is the protected area providing economic benefits to local communities, e.g. income, employment, payment for environmental services?	1: Potential economic benefits are recognised and plans to realise these are being developed	**2: There is some flow of economic benefits to local communities**
26. Monitoring and evaluation: Are management activities monitored against performance?	1: There is some ad hoc monitoring and evaluation, but no overall strategy and/or no regular collection of results	**2: There is an agreed and implemented monitoring and evaluation system but results do not feed back into management**
27. Visitor facilities: Are visitor facilities adequate?	1: Visitor facilities and services are inappropriate for current levels of visitation	**2: Visitor facilities and services are adequate for current levels of visitation but could be improved**
28. Commercial tourism operators: Do commercial tour operators contribute to protected area management?	1: There is contact between managers and tourism operators but this is largely confined to administrative or regulatory matters	**2: There is limited co-operation between managers and tourism operators to enhance visitor experiences and maintain protected area values**
29. Fees: If fees (i.e. entry fees or fines) are applied, do they help protected area management?	1: Fees are collected, but make no contribution to the protected area or its environs	1: Fees are collected, but make no contribution to the protected area or its environs
30. Condition of values: What is the condition of the important values of the protected area as compared to when it was first designated?	1: Some biodiversity, ecological or cultural values are being severely degraded	**3: Biodiversity, ecological and cultural values are predominantly intact**

Annex 12. ICR Map