Terminal Evaluation of Strengthening the Management Effectiveness of the Protected Area Network in the Daxing'anling Landscape

Project ID: UNDP PIMS 4824/GEF 4868

Project implemented by: National Forestry and Grasslands Administration (NFGA) of China

Collaborating agencies: Inner Mongolia Daxing'anling Forestry Management Authority, Heilongjiang Daxing'anling Forestry Management Authority

Project funded by: Global Environment Facility, UNDP, Government of China

Prepared for: UNDP China

October 23, 2018 Final Report

Executive Summary

Project Title:	**CBPF-MSL: *Strengthening the Management Effectiveness of the Protected Area Network in the Daxing'anling Landscape***		
UNDP Project ID (PIMS #):	4824	**PIF Approval Date:**	13 Apr 2012
GEF Project ID (PMIS #):	4868	**CEO Endorsement Date:**	30 May 2013
Award ID:	70975	**Project Document (ProDoc) Signature Date (project began):**	24 Sep 2013
Country(ies):	China	**Date project manager hired:**	Oct 2013
Region:	Asia and the Pacific	**Inception Workshop date:**	13 Nov 2013
Focal Area:	Biodiversity	**Midterm Review date:**	Jun-Aug 2016
GEF-5 Strategic Programs:	BD-1, Outcome 1.1 BD-1, Outcome 1.2	**Planned closing date:**	24 Sept 2018
Trust Fund:	GEF TF	**If revised, proposed closing date:**	N/A
Executing Agency:	State Forestry Administration of China (SFA, reformed as National Forestry and Grassland Administration of China in March 2018)		
Other execution partners:	Heilongjiang Forestry Management Authority, Inner Mongolia Forestry Management Authority		
Project Financing:	**at CEO endorsement (USD)**	**at Terminal Evaluation (USD)**	
GEF financing:	3,544,679	2,945,645	
UNDP contribution in-kind:	1,000,000	1,000,000	
Government contribution:	23,500,000	28,693,846[1]	
PROJECT TOTAL COSTS	28,044,679	32,639,491 (June 30, 2018)	

The Terminal Evaluation (TE) is an independent review, prepared in accordance with UNDP-GEF guidelines, of the progress made in achieving expected project outcomes; the relevance, effectiveness, efficiency and timeliness of project implementation; the issues requiring decisions and actions; and the lessons learned about project design, implementation and management. The TE mission occurred during July 22-Aug 8, 2018 and involved site visits and interviews and group discussions with 54 government officials and stakeholders (Annex 4).

The project has made a major contribution to expanding the PA network and raising awareness, enhancing the PA management capacity and establishing the initial concept of a landscape approach to biodiversity conservation, including creation of a cross-border coordination body. The project has benefited from high level decisions to ban logging and hunting (except by special permit) and to actively expand nature reserves and parks by over 1 million ha, a 36% increase in the last five years. Major cash co-financing from government ($ 28.7 M) has been provided to complement the GEF/UNDP grants (approx. $ 3.54 M).

[1] In the Self-Evaluation Report (July 2018), this is shown as $28.69 M in Table 1. In Table 8, the co-financing to December 2017 is shown in detail with 89.9 M RMB (IM) + 95.2 M RMB (HJ) for various budget contributions and another 1 M RMB contributed from the National PMO. This total: 186.1 M RMB = $29.078 M.

This project has provided significant, timely progress for biodiversity conservation in Daxing'anling region, the result of strong policy direction from the Central government and the impressive effort and enthusiasm of the project staff and their provincial and PA partners. There have been notable challenges in developing the PA management capacity due to the newness of many of the PAs, the limited baseline data and human and other resources, and the remote locations which present difficulties to recruit qualified staff.

The TE discussions noted several concerns: a) securing programme funding, b) recruitment of and maintaining additional staff needed to manage the expanded PAs, c) access to ongoing technical support to supplement the basic training that has been provided, and d) formally establishing the landscape network of PAs and non-PA habitats for regional biodiversity conservation.

Project design issues included (i) the high dependence on contractors to deliver outputs that were sometimes not well linked (e.g., DXAL BC Action Plan, PA Master Plans and Integrated Management Plans for demonstration PAs), (ii) lack of information on ecosystem subtype representation in the PA system, (iii) capacity development focussed on separate training events and equipment without an overall strategy and reference level for PA management requirements, (iv) under-estimation of the challenges to introducing biodiversity conservation in other sectors and to adopting a landscape conservation strategy beyond PAs, and (v) limited means for local communities and indigenous people to participate in biodiversity conservation.

Despite these challenges, the project achieved most of the expected results related to developing the planning frameworks, strengthening PA management capacity, and demonstrating improved management at Duobuku'er National Nature Reserve and Genheyuan National Wetland Park.

There is a high level of project ownership and commitment by participants and strong interest in ongoing development of the PA system by central and provincial FMAs, even if there is uncertain capacity and finance to implement the many plans produced by the project. The project ratings are presented below.

Rating Criteria (UNDP/GEF TE)	***Rate***	***Reasons for rating***
1. Monitoring and Evaluation		
M&E design at entry	***MS***	The quantitative indices of ecosystem health and management effectiveness provided a generalized measure of PA status during project implementation but did not capture specific capacity

		development and landscape conservation achievements and gaps. A broader set of monitoring parameters is needed for this.
M&E Plan Implementation	***S***	The project adequately implemented the M&E plan as per the project document. Post-training data however were not collected to assess effect of training on capacity development.
Overall quality of M&E	***S***	The M&E reporting provided a reasonable indication of progress in activities and outputs even where measurement of outcome results had limitations as noted above.
2. IA& EA Execution		
Quality of UNDP Implementation	***S***	The UNDP CO duties related to administration and financial and technical oversight and adaptive management were effectively implemented.
Quality of Execution - Executing Agency	***S***	The FMA duties associated with organisation and implementation of work plans, timely completion of activities and reporting were effectively implemented.
Overall quality of Implementation / Execution	***S***	Project management has been active and responsive to issues, and worked hard to promote coordination of government bodies and the introduction of biodiversity monitoring and reserve patrolling.
3. Assessment of Outcomes		
Relevance	***R***	The project has been directly aligned with and supportive of national and provincial policies and government directives on eco-civilisation.
Effectiveness	***S***	Most of the expected results have been achieved to an acceptable level in establishing the basic framework and capacity for PA planning and management and in PA network expansion. Mainstreaming conservation into other sectors and into a new regional economy is less successful.
Efficiency	***MS***	Some outputs have not directly contributed to PA management effectiveness – the main focus of the project, and contractor activities have not been fully owned by or transferred to PA authorities. This limits cost-effectiveness of extensive use of service providers. This efficiency concern is however, offset by large co-financing to match GEF funding.
Overall Project Outcome Rating	***S***	Outcome achievements have been significant given the baseline starting point, especially in the growth of the PA network and the institutional strengthening and coordination mechanisms. Less progress has occurred on landscape connectivity and conservation strategies outside of PAs.
4. Sustainability		
Financial resources:	***L***	Financing commitments linked to government policy have been significant, but there still remains some concern from stakeholders that these are not assured.
Socio-political:	***L***	There is increased awareness of the role of nature reserves and the importance of the biodiversity resources; the socio-political sustainability is linked to the national commitment for eco-civilization. Willingness of development sectors to participate in biodiversity conservation is unknown.
Institutional framework and governance:	***L***	New policies and regulations and institutional arrangements have been established to sustain project results. Effective sustainability of

		regional collaboration between IM and HJ will depend upon high level government support
Environmental:	***L***	The logging and hunting bans and increased area of PAs along with monitoring and patrolling will assist in environmental sustainability. Wildfire is a natural environmental risk.
Overall likelihood of sustainability:	***L***	There is a high likelihood that many of the outputs will be sustained where they have directly contributed to institutional capacity to monitor, patrol and manage the nature reserves, and where financing has been secured.

Rating categories as per the UNDP/GEF Evaluation guidelines:

Outcomes, Effectiveness, Efficiency, M&E,I&E Execution:	***Sustainability ratings:***
Highly Satisfactory (HS): no shortcomings Satisfactory (S): minor shortcomings Moderately Satisfactory (MS): moderate shortcomings Moderately Unsatisfactory (MU): significant shortcomings Unsatisfactory(U): major problems Highly Unsatisfactory (HU): severe problems	Likely (L): negligible risks to sustainability Moderately Likely (ML): moderate risks Moderately Unlikely (MU): significant risks Unlikely(U): severe risks ***Relevance ratings:*** Relevant (R) Not relevant (NR)

The following ten Recommendations are presented. The first two recommendations are proposed as part of the project closure, while the others are aimed at ongoing implementation of the program over the next year.

1. The PMO and service providers should consolidate, update and distribute the 'PA institutional strengthening plan' as a guide for ongoing capacity development.

2. The Daxing'anling Biodiversity Conservation Committee (DBCC) should prepare a multi-year implementation program for the *DXAL Landscape Biodiversity Conservation Action Plan, and* NFGA should support the relevant forestry management bureaus to continue actively participating in implementing the program.

3. NFGA should undertake further classification and mapping of the *Daxing'anling*taiga ecosystems and ensure that representative ecosystem types in the landscape are protected by the PA system in coordination with habitats for key species of concern.

4. The Daxing'anling Biodiversity Conservation Committee (DBCC) should develop a landscape biodiversity conservation strategy as input for land use and redline consultations with other sectors and regional sustainable development initiatives.

5. NFGA should develop a process for follow-up monitoring and reporting on ecosystem restoration project sites by the responsible authorities and formulate lessons learned and guidelines for future rehabilitation, restoration and enhancement projects.

6. DBCC should take steps to broaden the co-management relationships with local communities and Evenki tribes, for example by including representatives as designated members or observers in annual meetings and ongoing work of DBCC.

7. DBCC should develop a long-term reindeer management strategy for *Daxing'anling* landscape in consultation with the local people and technical experts facing similar issues in Russia and elsewhere.

8. DBCC should undertake a consultation program with the over 200 households living in *Daxing'anling* PAs with the aim of engaging local residents as partners in conservation of the biodiversity and proponents of alternative livelihoods, including modified, conservation-friendly agriculture where appropriate.

9. Chinese Academy of Sciences should be invited to assist in research on managing wildfire due to the build-up of fuel in the landscape and the changing climate, and the implications for fire and pest risk management as part of the biodiversity conservation action plan and national climate change adaptation plans.

10. UNDP should facilitate further discussions and sharing of experiences and lessons between the seven projects of the GEF China Wetland Protected Area System Programme, including review of alternative project implementation strategies.

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Acronyms and abbreviations

BC	Biodiversity conservation
CBPF	China Biodiversity Partnership Framework
DBCC	Daxing'anling Biodiversity Conservation Committee
DXAL	Daxing'anling landscape
FMA	Forestry Management Authority
FMB	Forestry Management Bureau
GCF	Green Climate Fund
GEF	Global Environment Facility
HJ	Heilongjiang Province
IM	Inner Mongolia Autonomous Region
M&E	Monitoring and Evaluation
MTR	Mid Term Review
MSL	GEF/UNDP Main Streams of Life Programme
NE	North East
NFGA	National Forestry and Grasslands Administration
NNR	National Nature Reserve
NPMO	National Project Management Office
NWP	National Wetland Park
O&M	Operations and Maintenance
PA	Protected Areas
PES	Payment for Ecosystem Services
PPG	Project Preparation Grant under GEF
PMO	Project Management Office
PSC	Project Steering Committee
RMB	Chinese currency
SFA	State Forestry Administration
UNDP	UN Development Programme
UNFCC	United Nations Framework Convention on Climate Change

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1. Introduction

1.1 Purpose of the evaluation

The Daxing'anling Landscape, located in Heilongjiang and Inner Mongolia provinces (Figure 1), encompasses a vast wilderness of cold temperate forest, un-tamed rivers and extensive wetlands but with extensive logging activities that have significantly degraded biodiversity values. Most of the logging was halted by government order in 2015. The Landscape provides a vital water source for one of NE Asia's major rivers – the Heilongjiang (Amur River) and is also the main water resource for the Hulun Buir region in Inner Mongolia. At the time of project commencement, an impressive network of 43 forest and wetland PAs covering an area of 3.1 million hectares had been established across the Daxing'anling Landscape with 33 PAs (1.8 million ha.) in Heilongjiang and 10 PAs (1.3 million ha.) in Inner Mongolia. The planning and management of the protected areas in the Daxing'anling region are under the responsibilities of the National Forestry and Grasslands Administration (NFGA), the Ministry of Environmental Protection (MEP), the governments of Heilongjiang Province and Inner Mongolia Autonomous Region, Heilongjiang Daxing'anling Region Administrative Office, and Inner Mongolia Daxing'anling Forestry Management Bureau.

The main focus of the project has been to mainstream biodiversity and the PA (protected area) system into provincial socio-economic development priorities and plans, and to demonstrate international best practices in PA management at two demonstration sites, including a target of adding 1.1 million ha of wetland PAs in the landscape. The project sites are listed on Table 1.

This Terminal Evaluation (TE) is an independent review prepared in accordance with UNDP-GEF guidelines. The evaluation serves to:

- Promote accountability and transparency
- Assess the extent of project accomplishments
- Contribute to the overall assessment of results in achieving GEF strategic objectives
- Gauge the extent of project convergence with other UN and UNDP priorities, including harmonization with other UNDAF outcomes.

The objective of the evaluation is to provide a comprehensive and systematic accounting of performance, and assess project design, implementation, likelihood of sustainability and possible impacts. The Terms of Reference specify that the evaluation is to conform to the *Guidance for Conducting Terminal Evaluations of UNDP-Supported GEF-Financed Projects*, (UNDP Evaluation Office, 2012) and to address five main evaluation criteria: Relevance, Effectiveness, Efficiency, Sustainability and Impact. The Terms of Reference are presented in **Annex 1**.

Figure 1: Project Location

Table 1 – Project Sites and Activities

Protected Area	Area Ha	Location	Project activities
Heilongjiang			
Duobuku'er National Nature Reserve*	128,959	Duobuku'er NNR is located in the southern foot of Yilehuli Mountain, a major branch of Daxing'anling. As a key node of the nature reserves network in the transitional zone between temperate and frigid-temperate zones, the NNR lies in the source area of Nenjiang River, consisting of marsh, riverine and lacustrine wetlands, with an area of 128.959 hectares.	As one of the project demonstration PA, activities supported by the project include: 1)Conducted Wetland Eco-services valuation; 2)Developed Integrated Management Plan; 3) Devised Business Plan; 4)Developed an action plan for biodiversity conservation and sustainable use in the Daxing'anling Landscape 5) Established a wetland biodiversity information database 6) Developed Wetland Biodiversity Monitoring system 7) Carried out restoration of wetland/habitats of endangered species 8) Introduced biodiversity friendly alternative livelihoods, e.g. eco-tourism, bee/goats farming 9) Established PA Co-management with local communities 10) Conducted project/environmental /wetland biodiversity publicizing, e.g. infrastructure engineering (corridor for wetland biodiversity publicizing, electronic screen, etc.), signage, public training activities, world birds' day/wetland day celebrations, biodiversity museum, TV promo, leaflets, posters, etc.
Chaona River National Nature Reserve	105,580	Heilongjiang Chaona River NNR is located in Huma County, Heilongjiang Province and eastern edge of Daxing'anling, covering an area of 105,580 hectares. It is the only nature reserve in China targeting pristine forest-wetland ecosystem in the ecotone between frigid-temperate and temperate zones.	The 5 PAs are of the project pipeline PAs. Supports provided by the project are focused on capacity building by means of (1) technical training; and (2) M&E. Details include: 1) Involved in all domestic training activities delivered by the project since 2013 2) Conducted annual M&E since 2016, including EHI in 2016(MTR) and2018(TE) and METT in 2012, 2016(MTR)and 2018 (TE), respectively 3) Circulated the Integrated Management Plans and the Business Plansdeveloped for the 2 demonstration sites
Huzhong National Nature Reserve	167,213	Heilongjiang Huzhong NNR, lying in Huzhong District, the hinterland of Daxing'anling, is the largest nature reserve of pristine bright coniferous forest in frigid-temperate zone, northern China. With an area of 167,213 hectares, it belongs to a nature reserve of forest ecosystem and wildlife, mainly protecting bright coniferous forest ecosystem in frigid-temperate zone and wildlife.	
Lingfeng National Nature Reserve	68,373	Heilongjiang Lingfeng NNR is situated in the Area of Deforestation and Timber Processing for Forest Industry Enterprises under Amuer Forestry Bureau of Mohe County, Daxing'anling Landscape, Heilongjiang Province, covering an area of 68,373 hectares. It mainly protect rare and endangered wild animals (e.g., Sable, Taiga musk deer and Wolverine), as well as coniferous forest ecosystem in frigid-	

		temperate zone that these wild animals depend on.	
Nanweng River National Nature Reserve	229,523	Nanweng River NNR is situated in the southern foot of Yilehuli Mountain, east of Daxing'anling, covering an area of 229,523 hectares. It was listed as a Ramsar site in 2011.	
Shuanghe National Nature Reserve*	88,849	Shuanghe NNR is located in the northeast part of Daxing'anling Forest Area. With a unique geographic location, the NNR faces Russia across the river, covering an area of 88,849 hectares. It is home to pristine forests that are kept intact and large area of marshes, as well as crisscrossed rivers, providing favorable habitats for the breeding and living of wild animals.	
Inner Mongolia			
Genheyuan National Wetland Park National Wetland Park*	59,060	Inner Mongolia Genheyuan NWP is located in the hinterland of Daxing'anling, covering an area of 59,060.48 hectares. It is the first wetland park that has been accepted by State Forestry Administration (SFA) as a pilot wetland park in Daxing'anling forest area in Inner Mongolia.	As one of the project demonstration PA, activities supported by the project include: 1) Conducted Wetland Eco-services valuation; 2) Developed Integrated Management Plan; 3) Devised Business Plan; 4) Developed an action plan for biodiversity conservation and sustainable use in the Daxing'anling Landscape 5) Established a wetland biodiversity information database 6) Developed Wetland Biodiversity Monitoring system 7) Carried out restoration of wetland/habitats of endangered species 8) Introduced biodiversity friendly alternative livelihoods, e.g. eco-tourism, bee/goats farming 9) Established PA Co-management with local communities, including Evenki living inside the PA 10) Conducted project/environmental/wetland biodiversity publicizing, e.g. infrastructure engineering (corridor for wetland biodiversity publicizing, electronic screen, etc.), signage, public training activities, world birds' day/wetland day celebrations, biodiversity museum, TV promo, leaflets, posters, etc.
Hanma National Nature Reserve	107,348	Inner Mongolia Hanma NNR is situated in the northern part of western slope of Daxing'anling Mountains in Inner Mongolia, with a total area of 107,348 hectares. It mainly protects coniferous forest ecosystem in frigid-temperate zone, wild animals and their habitats, rare and endangered wild plants, water source wetland area in the upper reaches of Jiliu River, the major tributary of Heilongjiang River. In October 2016, Hanma NNR was designated by SFA as one of 51 demonstration protected areas in China. In December 2007, Hanma NR was listed as a member of China Biosphere Reserve Network (CBRN).	Supports provided by the project are focused on capacity building by means of (1) technical training; and (2) M&E. Details include: 1) Involved in all domestic training activities delivered by the project since 2013 2) Conducted annual M&E since 2016, including EHI in 2016 (MTR) and 2018 (TE) and METT in 2012, 2016 (MTR) and 2018 (TE), respectively 3) Circulated the Integrated Management Plans and the Business Plans developed for the 2 demonstration sites

		On June 9, 2015, Hanma NNR and its neighboring region was officially designated as a World Biosphere Reserve. In 2018, Hanma NNR was listed as a Ramsar site.	
Erguna National Nature Reserve	124,527	Inner Mongolia Erguna NNR, located in the northwestern slope of Daxing'anling, covers an area of 124,527 hectares. It mainly protects the pristine coniferous forest ecosystem in frigid-temperate zone in northern mountainous area, Daxing'anling; the rare and endangered wildlife species that depend on the ecosystem; and the complex ecosystem of forested wetland and Argun River water source wetland.	
Bila River National Nature Reserve	56,604	Inner Mongolia Bila River NNR, situated in Daerbin Lake Forest Farm and Zhawen River Forest Farm under Inner Mongolia Daxing'anling Bilahe Forestry Bureau, belongs to Nenjiang River basin transitioning from forests and shrubs to grasslands and agricultural and livestock areas in eastern mountain foot, northern section of Daxing'anling. Covering an area of 56,604 hectares, the NNR mainly protects forest bogs, marshes and rare and endangered wildlife.	
Tuli River National Wetland Park*	5,413	Inner Mongolia Tuli River NWP, located in northwestern slope, central section of Daxing'anling Mountains, is affiliated to Inner Mongolia Daxing'anling Key State-owned Forest Management Bureau. It supports 3,195 hectares of wetland, accounting for 59.02% of total area of the NWP (5,413 hectares). In December 2017, it passed the acceptance of SFA.	
Alu Nature Reserve at provincial level	64,386	Inner Mongolia Alu NR lies in the northern edge of Daxing'anling Mountains, with an area of 64,386 hectares, providing sanctuaries for many rare wildlife resources and source area for some key rivers in the forest area.	

***** Sites visited by TE mission

1.2 Background

The Daxing'anling Region straddles Heilongjiang Province and Inner Mongolia Autonomous Region adjacent to Russia. It includes cold temperate forests, wilderness rivers and extensive marshes, peatlands and bogs representing a unique forest and wetland wilderness home to cold temperate and polar species that are found nowhere else in China. The arboreal, shrub, carex meadow and peat bog wetland ecosystems are important due to their geographic location, climatic condition and frozen sub-soils with extensive amounts of peat and organic-rich soils.

The Daxing'anling Region was listed in the 27 forest areas of international importance in China's National Biodiversity Strategy and Action Plan (NBSAP) which was approved in May 1994 and updated in 2010. One wetland site in Daxing'anling was designated among the 173 Wetlands of National Importance in the China National Wetlands Conservation Action Plan issued in 2000. Daxing'anling has been a priority area under the China Natural Forest Protection Programme launched in 1998. The Forestry Department has developed and is implementing a comprehensive Master Plan for Wildlife Conservation and Nature Reserve Development in Daxing'anling for the period 2006-2030. The project contributes to the 13th Five-Year Plan on Socio-Economic Development of Daxing'anling (2016-2020) which has a target of 50% of wetland areas to be protected by 2020.

The Project Identification Form (2012) stated the project is directly supportive of the national wetlands strategy that was proclaimed by the State Council (Council Circular 50) in 2004 in which mainstreaming is of major national concern, and in which the State Forestry Administration and provincial forestry departments are given the overall mandate to coordinate sector involvement in wetlands planning and management. The project is part of the GEF/UNDP Programme *Main Streams of Life - Wetland PA System Strengthening for Biodiversity Conservation*, which is a sub-programme of the CBPF. The project is one of the six provincial level initiatives under this sub-programme of the China National Wetland Conservation Programme.

The project was expected to achieve the objective and outcomes by strengthening the capacities of the authorities in Daxing'anling Landscape to manage the PA system, in particular the sub-system of wetland PAs, and improving the spatial design of the wetland PA system. The project was to bring an additional 400,000 ha of threatened wetlands under protection in the Daxing'anling Mountains and Wetland Landscape (Daxing'anling Landscape). This aimed to "increase the resilience of the sub-system in the face of a fast changing climate by maintaining connectivity between core areas and allowing the gradual redistribution of component species of different wetland ecosystems and ensuring adequate protection of upstream non-wetland habitats such as forests and grasslands that serve as vital catchments for the wetlands themselves".

The project has been implemented through the Heilongjiang Daxing'anling Forestry Management Authority and Inner Mongolia Daxing'anling Forestry Management Authority under the guidance of the national State Forest Authority (SFA). A set of 21 contracts were issued to deliver many of the project outputs, as outlined on Table 2.

Table 2: Service Providers

Contract	Service provider	Outputs
Establishment and operation of an eco-monitoring system and redefining the Project Baseline indicators and carrying out follow-up M&E	College of Wildlife Resource, Northeast Forestry University (lead by Prof. Yu Hongxian)	Baseline indicators redefined, in particular targeting species An Eco-Monitoring System established Project Baseline value (EHI/METT/FSC) set up and Follow-Up M&E at MTR and TE
Valuation of wetland ecosystem services provide by Daxing'anling landscape	Northeast Institute of Geography and Agricultural Ecology; CAS; (Changchun), (Lead by Prof. Lv Xianguo)	Valuation report of wetland ecosystem in Daxing'anling landscape and the 2 demonstration PAs
Development of a restoration plan of degraded habitats and threatened species at the 2 pilot PAs Trial of the restoration plan and guidelines in selected areas at the demonstration PAs	Northeast Institute of Geography and Agricultural Ecology; CAS; (Changchun), (Lead by Prof. Jiang Ming)	Plans for the restoration of degraded habitats and endangered species at the two demonstration PAs developed, the plans trialed at the demonstration PAs. Habitat restored and biodiversity improved at the two demonstration PAs, and the best practices demonstrated and promoted throughout the DXAL landscape
Develop an action plan for biodiversity conservation and sustainable use in DXAL Landscape	College of Nature Conservation, Beijing forestry university, lead by Prof. Gao Junqin	Action plan for biodiversity conservation and wise use in the Daxing'anling landscape developd and accepted
Establishment of a web-based wetland biodiversity and PA information system for the 2 demonstration PAs	Institute of Automation, Chinese Academy, CAS; lead by Prof. Kang Mengzhen	Wetland biodiversity Information Systems developed and well used
Study on DXAL wetlands carbon sequestration	Northeast Institute of Geography and Agricultural Ecology; CAS; lead by Prof. Zhang Zhongsheng	Assessment report of wetland carbon sink capacity in Daxing'anling area
Study on the relationships between permafrost and forest and wetland cover (impacts of permafrost retreat on habitats) in Daxing'anling Landscape	Northeast Institute of Geography and Agricultural Ecology; CAS; lead by Prof. Wu Haitao	Study report on the impacts of permafrost degradation on wetland ecosystem in Daxing'anling
Integrated management plans for each of the 2 demonstration sites (as models for other PAs)	Beijing Forestry University, lead by Prof. Xie Yi	Integrated Management Plan for Duobuku'er NNR and Genheyuan NWP developed respectively
Wetland PA and DXAL landscape business Plan	Beijing Forestry University, lead by Prof. Wen Yali	Business plans of the DXAL landscape and Duobuku'er NNR and Genheyuan NWP developed and well accepted
Demonstration of traditional knowledge acquisition and benefit sharing related to biodiversity in Genheyuan NWP	Minzu University of China, lead by Prof. Xue Dayuan in cooperation with the management of the Genheyuan NWP	Study report of traditional knowledge related to biodiversity and feasibility analysis of ABS at Genheyuan NWP
Development of traveling Overall Plan in Duobuku'er NNR	Beijing Jingshi Tiancheng tourism planning and design consulting co. LTD	An eco-tourism plan of the Duobuku'er NNR developed

TV Promo videos of the two demonstration PAs	Heilongjiang Haina Film and Television Culture Media Co. Hulun Beier Shangzhuo Tourism Culture Media Consulting Co. LTD	Duobuku'er NNR TV promo of the two PAs developed and broadcasted by local TV stations.
Publicity logo design and production for the two PAs	Daxinganling North Pole Wood Industry Co. LTD Zhengzhou Ruigao Brand Design Co. LTD	Publicity board designed and placed at Duobuku'er NNR and Genheyuan NWP
Wetland resources distribution map and vector data production	Daxing 'an ling Forestry Survey Planning & Design Institute, SFA	Wetland resources distribution map and wetland resources distribution vector data for the 10 forestry bureaus and 6 NNRs developed and accepted Location, boundary, natural resources distribution map and vector data of the protected areas in Daxing'anling of Inner Mongolia developed and well accepted
Outdoor signage design and production	Gagda Iron & Steel Art Club Inner Mongolia Genlin Construction Engineering Co. LTD	Outdoor signage developed and placed at Duobuku'er NNR and Genheyuan NWP
EHI（on-the-field survey and training）	5 PAs in Heilongjiang province (namely Nanwenhe Shuanghe , Chuonahe, Huzhong, Lingfeng) 5 PAs in Inner Mongolia province (Tulihe, Alu E'erguna, Bilahe, Hanma)	EHI monitoring results of each of the 10 PAs in Heilongjiang province and Inner Mongolia province respectively
Habitat restoration pilot program	Daxinganling Survey & Design Institute	Erected artificial nests for Oriental stork at Duobuku'er NNR Otters reserve established at Genheyuan NWP
Pilots program to restore degraded habitats	Daxing'anling Jiansheng Construction Engineering Co. LTD Inner Mongolia Genlin Construction Engineering Co. LTD	Restoration of degraded habitats conducted at Duobuku'er NNR The water flow connection engineering constructed at the wetland at the GenSa highway. The water flow connection engineering constructed at the projected wetland
Providing technical support to Hanma NNR for designation of RAMSAR site	Lei Ting, Xing Shaohua, Wang Qingchun of Capital Normal University	The Hanma NNRis listed as an international important wetland (RAMSAR Site)
Formulation of the local laws and regulations for the protection of wetlands in Daxing'anling, Inner Mongolia	North China Electric Power University	Measures for Protection and Management of Wetland Resources in Genheyuan NWP(draft) Measures for Protection and Management of Wetland Resources in DXAL Forestry of Inner Mongolia (draft)
Formulation of management policy of six rivers in Heilongjiang Daxing'anling	Daxing 'anling Forestry Survey Planning & Design Institute, SFA	Policies drafted respectively

Note: excludes contract to Ministry of Environmental Protection of China for overseas and domestic training.

1.3 Methodology

The evaluation methodology was based on (a) review of documents, reports that describe progress on project outputs, outcomes and objectives as per indicators in the project design, (b) compilation of data on project deliverables and status of outputs, (c) discussion of key issues and lines of inquiry with project executive and management team regarding strengths and weaknesses of project design and execution, (d) self-assessment of achievements by project staff and participants, (e) interviews with project participants and stakeholders to verify achievements and to identify issues related to project design and implementation, (f) where feasible, group discussions to review project experiences and lessons learned, (g) site visits to compile evidence of achievements and to consult with beneficiaries and stakeholders, and (h) triangulation and corroboration of comments by participants regarding project results, implementation and lessons.

The TE Inception Report, submitted on July 17, 2018, described the data collection and analyses tasks which included:

- Preparation of a series of tables and request to project staff to compile data for background tables, as presented in Annex 3 of the Inception Report;
- Consolidation of project summary statements of achievements alongside comments by the TE consultants – presented in **Annex 6** of this report
- Analyses of the project design and assumptions, implementation performance and measurable results in comparison to the criteria, questions and indicators as set out in the Evaluation Matrix (**Annex 2**), and any gaps between design and delivery.
- Stakeholder interviews, assisted by an Interview Guide, to corroborate data on results, to identify implementation challenges and lessons learned, and to triangulate responses to interview questions;
- Field review of selected representative project sites and comparative before and after information, as available, to verify reported results on key project interventions.

Interviews were held with 54 participants (**Annex 4**) and site visits were made to Genheyuan National Wetland Park, Tulihe National Wetland Park, Duobuku'er National Nature Reserve and Northeast Institute of Geography and Agroecology, Chinese Academy of Sciences. The evaluation involved an objective and independent review of the *weight of evidence* compiled from reports, interviews/group discussions and site visits. Reasons for conclusions, ratings and recommendations were provided based on the evidence. The evaluation also considered key lessons from the project that have implications for the exit strategy and/or for future

biodiversity conservation projects. In accordance with UNDP/GEF evaluation requirements, ratings have been provided for Relevance, Effectiveness, Efficiency, M&E and Sustainability.

Some revisions have been made to the recommended outline for Terminal Evaluations to respond to the comments on the Draft TE Report. Institutional Capacity Development is discussed under the sections on Outcomes 2 and 3.

2. The Project and Development Context

2.1 Project history

The project design was developed in 2011 and submitted for GEF approval in March 2012 by the State Forestry Administration of China (SFA), Heilongjiang Daxing'anling Forestry Management Authority, and Inner Mongolia Daxing'anling Forestry Management Authority. When the project was being developed, the majority of the population depended on timber production and related products such as mushrooms, wild vegetables and wild berries, animal fur, and traditional medicine products. Other minor economic activities include mining, animal husbandry and farming. The area's economy was very dependent on forestry, with timber production accounting for 60% of the region's income.[2] That has now changed with the 2015 banning of logging on state-managed lands which include most of the region.

When the project commenced there were 38 nature reserves (5 national, 11 provincial, 22 local) designated under the Regulations on Nature Reserves and 7 wetland parks(6 national, 1 local) designated under the National Wetland Park Management Regulations.[3] The main focus of the project has been to mainstream biodiversity and the PA (protected area) system into provincial socio-economic development priorities and plans, and to demonstrate international best practices in PA management at two demonstration sites, including a target of adding 1.1 million ha to the existing 3.19 M ha of wetland PAs in the landscape.

The project is aligned with the GEF BD-1 objective: Improve Sustainability of Protected Area (PA) Systems. More specifically, the project contributes to GEF Outcome 1.1: Improved management effectiveness of existing and new PAs, and Outcome 1.2: Increased revenue for PA systems to meet total expenditures required for management. The project also contributes to the UNDP Country Programme for China 2016 – 2020, Indicator 2.3: Number

[2] 4824 CBPF MSL China_PIF_Daxing'anling Wetland PA_ March 7 2012.docx, p.5

[3] A wetland park is defined in the Government Regulation as "Specific areas aiming to protect wetland ecosystems and wisely use wetland resources, which can be used for conserving and restoring wetlands, promoting public awareness, knowledge and understanding of wetlands, conducting wetland monitoring and scientific research, and providing ecotourism facilities."

of hectares of land covered by protected area measures: Baseline (2014): 142,080,000 Target (2020): 142,364,160.

2.2 Problems that the projects seek to address

The project document and the *Action plan for biodiversity conservation and wise use in the Daxing'anling, China* describe the main threats to biodiversity and ecosystem functions:

> **Loss/degradation of habitat**: As much as a half the wetland area in Daxing'anling region has been lost in recent decades, mainly for agricultural development.
>
> **Overexploitation of natural resources**: Forestry practice in the region has been carried out in an unsustainable fashion, resulting in severe land degradation and overexploitation of timber resources, and illegal trapping of animals has occurred.
>
> **Chaotic development**: The economic development threats to biodiversity have include potential in mining, wood processing industries, forest products (mushrooms, berries, etc.), tourism, and infrastructure development (future oil pipeline from Russia, road bridge to Russia, railways, etc.).
>
> **Forest fire:** Forest fire is a constant threat with occasional large-scale fires such as the one in 1987, and has led to the dominance of immature forests.
>
> **Climate change:** There have been increased incidents of forest diseases due to the increased temperature. Climate change affects seasonality of water flow, water temperature, pH and oxygen content and thawing of the extensive permafrost increases GHG emissions and affects wildlife habitats and migration patterns.

The project aims to address these threats "by strengthening the capacities of the authorities in Daxing'anling Landscape to manage the PA system, in particular the sub-system of wetland PAs, and improving the spatial design of the wetland PA system."

2.3 Immediate and development objectives of the projects

The project seeks to consolidate and strengthen the enabling legal, planning and institutional framework for PAs in Heilongjiang and Inner Mongolia and implement measures to enhance the financial sustainability as well as assist the shift in the regional economy toward more conservation-oriented tourism, small scale agriculture and non-timber forest products harvesting as alternative livelihoods.

2.4 Main stakeholders

The project document lists the key stakeholder as well as their roles and responsibilities as shown on Table 3.

Table 3: Key stakeholders

Stakeholder	Roles and Responsibilities
Ministry of Finance	GEF Operational Focal Point (OFP). Coordination and implementation of GEF projects
State Forestry Administration -SFA (including Wetland Conservation and Management Centre)	Executing Agency for project implementation as the supervisory organisation for the two co-executing agencies (FMAs). The SFA will provide the NPD and host the PMO. SFA will chair the PSC and the DBCC, and will take the lead on implementation of outputs under Outcome 1.
Heilongjiang Daxing'anling Forestry Management Authority (FMA)	The main co-executing (and co-financing) agency for the project in the Heilongjiang section and for the Duobuku'er NNR. Will host the PMU in Jiagedaqi. Responsible their section of the Daxing'anling Region (83,500 km²) including ecological conservation and development as well as associated governance within their jurisdiction as assigned by the State of Council, notably covering managing and conserving forests (and wetlands) and associated wild resources, developing nature reserves, preventing forest fires and conserving natural forests. Reports to the SFA and employs 62,969 staff.
Inner Mongolia Daxing'anling Forestry Management Authority (FMA)	The main co-executing (and co-financing) agency for the project in the Inner Mongolia section and for the Genheyuan NWP. Will host the PMU in Genhe City, with a Local Technical Adviser also based in Yakeshi. Responsible their section of the Daxing'anling Region (106,275 km²) including ecological conservation and development as well as associated governance within their jurisdiction as assigned by the State of Council, notably covering managing and conserving forests (and wetlands) and associated wild resources, developing nature reserves, preventing forest fires and conserving natural forests. Reports to the SFA and employs 58,513 staff.
Local Forestry Management Bureaus (of the FMAs)	Responsible for forests, wetlands and associated wild resources management, forest nursing, managing nature reserves and wetland parks, fire prevention etc. in line with the ultimate mission of Daxing'anling Forestry Management Bureaus.
Site-level Protected Area Management Authorities (of the FMAs) in Daxing'anling Region	The key implementing agencies for site level project activities. Specifically responsible for wildlife conservation and management, environmental promotion, drafting wildlife conservation local regulations, nature reserve's establishment, guiding forest resource-based tourism, wildlife monitoring, and inventory research as well as disease control and utilization.
Provincial Government departments of the Heilongjiang Province[4] and Inner Mongolia Autonomous Region	All these departments have a key role in mainstreaming biodiversity into their planning and activities. Land Resources Management Bureau: Responsible for land management, conservation and planning, in particular regulating land use, mining resources' exploitation in the region. Environment Protection Bureau: Responsible for coordinating and supervising key environmental issues, including controlling environmental pollution, reducing carbon emissions, and guiding, coordinating and overseeing ecological conservation work and environment-related international cooperation. Agriculture Management Association: Responsible for agriculture, fisheries, and husbandry, including land tenure conversion, agricultural land use planning, and agricultural biodiversity conservation, guiding the conservation of ecological environment of fishing waters and aquatic wildlife, and promoting environmentally friendly food production projects. Water Resources Management Bureau: Responsible for sustainable water development and utilization, water resources conservation, hydrological

[4] The situation is different in Inner Mongolia, where the FMA operates independently of the regional government

Stakeholder	Roles and Responsibilities
	construction and guiding the development and governance of rivers, lakes and streams. Fishery Management Bureau: Responsible for fishery-related activities, in particular fishery management. Construction Bureau: Responsible for residential housing management and regulation. Development Reform Commission: Responsible for sustainable development, economic development projects and monitoring implementation of plans and projects
People's Congress of Heilongjiang[5] Province and Inner Mongolia Autonomous Region	Responsible for coordination of legislation and regulation functions in Heilongjiang, including reviewing and approving the regional regulations on the management of PAs.
Local communities (PA neighbours, including forest workers)	As the primary resource users and traditional management of wetland and forest ecosystem in the region, local communities closely interacting with PAs will participate in community-related project activities by contributing their traditional and/or rich resources management and utilization knowledge and culture. Local communities will be the permanent supporters for the effectiveness of protected areas network in the region. Therefore, it is essential for the project to build their interests in PA conservation.
NGOs and other civil society organizations	Representing the community involved in project implementation by providing technical and human support (e.g. volunteers) for conservation activities, monitoring, and environmental awareness and so on.
Media	TV, radio, newspapers, social media can help with raising environmental awareness and promoting project activities.
Private sector	Private Sector is a major resource user and has potentially negative impacts on the integrity of biodiversity and PAs. Active engagement of the existing and emerging private sector companies (tourism, mining, timber and non-timber forest-product processing, infrastructure etc.) will be sought as appropriate for implementation of the project.
Academy of Forest Inventory and Planning (SFA, FMA Daxing'anling, and Inner Mongolia Daxing'anling)	Responsible for wetland and forest survey, monitoring, and planning, including developing standards, GIS-based database and reporting systems.
Chinese Academy of Sciences and its associated institutes, Chinese Academy of Forestry, Heilongjiang Academy of Agricultural Sciences,	Technical pools available for forestry, hydrological, botanical and zoological perspectives. Available for sub-contracted research, specialist training workshops, PA expansion consultancy and etc. Includes Northeast Institute of Geography and Agro-ecology, Chinese Academy of Sciences Harbin's Northeast Forestry University, colleges of the Inner Mongolia University in Huhhot

2.5 Expected results

The project objective is to strengthen the management effectiveness of protected areas to respond to threats to the globally significant biodiversity in the Daxing'anling Landscape of Heilongjiang Province and Inner Mongolia Autonomous Region. The project document states that "biodiversity and ecosystem services of the area (particularly water supply and carbon

[5] The situation is different in Inner Mongolia, where the FMA operates independently of the regional government

storage) have been significantly degraded as a result of extensive and unsustainable logging since the middle of the last century. With the near exhaustion of timber supplies and dramatic negative impacts on downstream areas through flooding and erosion, policies have changed during the last decade towards more sustainable management of the forests and wetlands and the move to a more diverse economy based on the region's rich natural resources. The project will play a key role in supporting this policy shift."[6]

The Daxing'anling project has three expected outcomes:

1. Develop a planning framework for the Daxing'anling Landscape to provide enabling environment for expanding the forest and wetland protected area network and mainstream biodiversity as an asset for sustainable development;
2. Significantly strengthen the management effectiveness of the protected area network across the Daxing'anling landscape;
3. Achieve and demonstrate effective protected area management in the Duobuku'er National Nature Reserve and the Genheyuan National Wetland Park.

3. Evaluation Findings

3.1 Project Formulation

3.1.1 Country ownership

The commitment to the project and the level of integration into national and subnational policies and institutions is very high. There has been extensive involvement of the relevant agencies in Heilongjiang Province and Inner Mongolia Autonomous Region and outreach to community participants. The project is even more relevant to the country now than at the design stage due to the recent reforms in national policies on eco-civilization and wetland conservation and wise use as a basis for sustainable development.[7]

3.1.2 Analysis of the Results Framework

The Results Framework has provided an adequate level of results-chain logic, clarity of expected results (but with indicator issues) and coherence between Objective, Outcomes and

[6] UNDP China, Project Document, *Strengthening the Management Effectiveness of the Protected Area Network of Daxing'anling Landscape,* 2013, P. 8

[7] The reforms address many of the country's major environmental issues. Proposals cover protection of natural resource rights; establishment of a national parks system; better and stricter systems for protection of arable land and water resources management; establishment of a green financing system; and improvement of environmental compensation mechanisms. Twelve departments of both the Central Committee and the State Council contributed to the initiative.

Outputs. Comments on the relevance of some activities are discussed in Section 3.3.1. More emphasis would have been useful on the strategy for biodiversity conservation mainstreaming under Outcome 1. The UNDP/GEF approach in similar landscape conservation projects involves embedding biodiversity conservation measures in the management of wider production landscapes. This typically includes:

a) developing policy and regulatory frameworks that remove perverse subsidies and provide incentives for biodiversity-friendly land and resource use that remains productive but that does not degrade biodiversity;

b) spatial and land-use planning to ensure that land and resource use is appropriately situated to maximize production without undermining or degrading biodiversity;

c) improving and changing production practices to be more biodiversity friendly with a focus on sectors that have significant biodiversity impacts (agriculture, forestry, fisheries, tourism, extractives);

d) piloting an array of financial mechanisms (certification, payment for environmental services, access and benefit sharing agreements, etc.) to provide financial incentives to actors to change current practices that may be degrading biodiversity.[8]

The results framework was operationalized with a series of mostly quantitative rating indicators. The quality and use of these are discussed under M&E in Section 3.2.6 below.

3.1.3 Assumptions and Risks

The project design assumed that: "if (1) biodiversity and protected areas are mainstreamed into the development and sector planning frameworks, and the system of protected areas is expanded; and (2) if the management effectiveness of, and funding for, the PA system across the Daxing'anling Landscape is greatly strengthened; and (3) if effective management is demonstrated at the two demonstration sites for replication across the PA network; then the ability of protected areas to respond to threats to the globally significant biodiversity in the Daxing'anling Landscape will be greatly enhanced."[9]

The key assumptions in the project document have been generally validated with the possible exception of the following two assumptions:

[8] https://www.thegef.org/topics/productive-landscapes-and-seascapes

[9] UNDP China, Project Document, *Strengthening the Management Effectiveness of the Protected Area Network of Daxing'anling Landscape,* 2013, P. 20.

- Development of capacity for wildlife monitoring and whether reliable data on the status of selected indicator species[10] can be compiled within the project time frame. Effects of project interventions on wildlife populations cannot be certain.
- Adequate information and scientific evidence exist to underpin understanding of economic values of key ecosystem services; (see comments under Outcome 1 results).

The key risk that has affected project implementation is:

- Mainstreaming biodiversity and PAs into sectoral development policies will be hindered by poor inter-agency coordination, lack of incentives for other sectors and poor enforcement of agreed priorities and plans. (see comments under Outcome 2 results).

The risks and assumptions about government commitment to conservation have not been a concern. However, the assumption that the economic valuation studies would influence decision makers and underpin a business case for conservation can be questioned.

3.1.4 Management structure and implementation strategy

The project organization is outlined on Figure 2. It shows a complex set of partners and reporting relationships. The capacity building tasks involved 8 selected PAs (of the 72) in DXAL region with different types of reserves and parks in the region. The Project governance elements between PSC, DBCC and Project Coordination Groups played a limited role. The NPMO and PMOs and the Service Providers were the lead players, with a focus on the two demonstration sites. The overall organization appears to have been effective but there were communication issues and the links between the other 6 PAs and the 2 demonstration sites, not apparent in the organization diagram or the interviews, were weak.

Many 'service provider' institutions/consultants were directly engaged in delivery of outputs (see Table 2). There was a high dependency on these implementing partners, making for a relatively complex project structure. Many of the participants - e.g., service provider staff were not aware of the activities of other contractors even when they came from the same institution (a monthly newsletter or briefing session might have assisted).

[10] *Lynx lynx, Ursus arctos, Alces alces, Lepus timidus, Tetrao parvirostris, Bonasia bonasia, Grus vipio, Grus leucogeranus, Aix galericulata, Brachymystax lenok, Astragalus mongholicus, Chosenia arbutifolia*

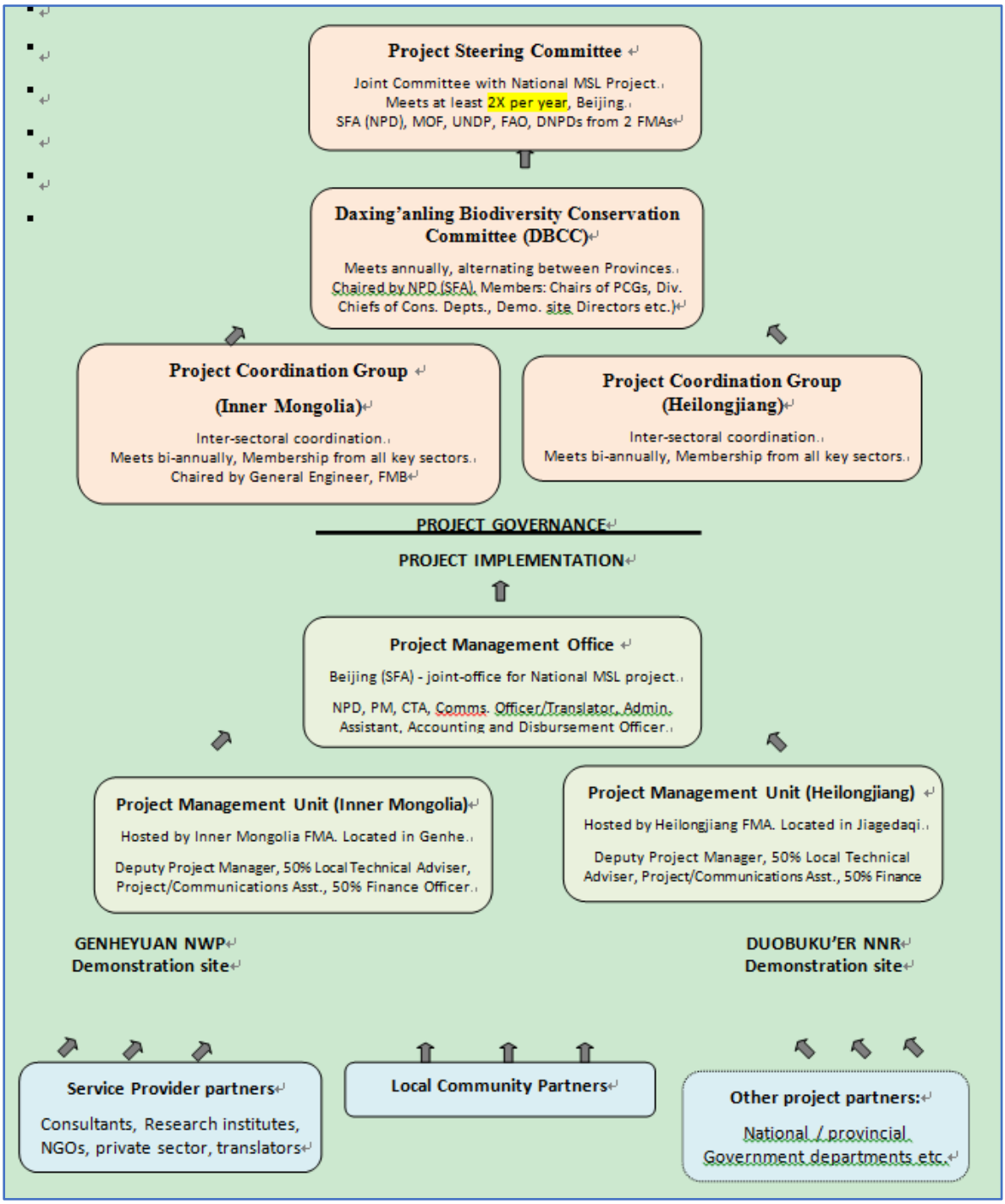


Figure 2 Project Organization

The project strategy was based upon:

- Addressing barriers: disconnect between PA planning and regional development sectoral planning, inadequate capacity and resources for PA network management and biodiversity conservation, and inadequate site level management capacity.
- Rapidly expanding the designation, planning and regulatory frameworks for PA and biodiversity conservation alongside related organizational development.

- Contracting implementation partners (21 service providers - Table 2) to undertake different components of the project along with training of agencies and staff.
- Providing equipment and staff training for ecosystem and water quality monitoring and data collection at two demonstration PAs.
- Formulating management plans and strategies at the landscape and PA scale although with limited availability of natural resource inventory data.
- Mainstreaming biodiversity conservation actions into PA operations including restoring selected sites and providing increased environmental education.
- Promoting landscape connectivity between PAs where possible but with many land use questions still to be resolved outside of the PAs.

The general project strategy may have under-estimated the task of increasing management capacity for a greatly expand PA system and introducing landscape conservation. The low baseline capacity of PA authorities, the relative isolated and independent management of FMAs[11], the multiple delivery agents in the project, and the wide thematic and geographic setting and narrow time frame presented some significant implementation challenges. The concepts of a *landscape approach* to conservation, *mainstreaming of conservation* into development sectors (now restricted or marginal in the region), and *co-management* of the PA system were all new to the traditional practices in State Forestry Administration.

3.1.5 Stakeholder participation

The design strategy for stakeholder participation focussed on two levels of intervention: "(i) working with public sector institutions and agencies (primarily the FMAs and their Bureaus, as well as provincial government) in order to strengthen their capacity to consolidate, expand and effectively manage the PA network and to align project activities with government's strategic priorities; and (ii) working directly with local communities and their representatives, formal and informal resource users (rights holders), and individuals to mitigate impacts and optimise benefits of project activities."[12]Stakeholder participation included:

(a) Project Steering Committee (PSC, established in 2014):
(b) Daxing'anling Biodiversity Conservation Committee (DBCC, at landscape level, established in 2015) and two Project Coordination Groups (PCG at province level, established in 2015)

[11] FMAs of IM and HJ are not provincial level authorities; they are equivalent to the forestry departments in counties. FMAs, either in IM or HLJ, are of prefecture level, not at county level. This presents constraints on mainstreaming biodiversity conservation into other government sectors, and approval processes. Nevertheless, both the FMAs play a dominant role on mainstreaming biodiversity conservation into other government sectors, and on officially approving the plans in IM and HLJ.

[12]UNDP China, Project Document, *Strengthening the Management Effectiveness of the Protected Area Network of Daxing'anling Landscape,* 2013, P. 135.

(c) Project Management Office (based in Beijing) and two Project Management Units (at the provincial level) established and put into operation since the project inception.
(d) Community Fora set up.

The principal basis for stakeholder engagement was participation of government agencies and collaboration across the provincial/region boundaries, and consultations with local community and indigenous tribes on co-management inputs, capacity building for alternative livelihoods and raising of environmental awareness. A broad effort at stakeholder involvement was made by the project.

3.1.6 Replication approach

The project design included: "best practice participatory approaches to conserving biodiversity, managing human activities and PA management will be introduced at two demonstration sites, the Duobuku'er NNR and the Genheyuan NWP for replication throughout the PA network." The project carried out various activities primarily in these 2 demonstration sites, for example, trainings, eco-tourism, alternative livelihood, research. The knowledge and experiences obtained from these activities were summarized and published as technical guidelines and books, which were later distributed to other PAs in the region. As a lot of the PAs in the region were newly established, they were expected to pick up the best practice from these 2 demonstration sites with the help of the publications. There was some involvement of other PA staff in training sessions under Outcome 3, but the TE discussions also noted a general lack of sharing of the experiences from the demonstration projects with many other PA staff who were not aware of any of the activities and results from these demonstration components. An explicit replication approach would have been useful.

3.1.7 Cost-effectiveness

The quality, timeliness and value for money of the project outputs are factors that affect cost-effectiveness. A positive aspect has been the high ratio of co-financing leveraged by GEF and UNDP funding. Completion of activities has generally been consistent with schedules and budgets and disbursement efficiency has been acceptable (Section 3.2.5). Significant results have been generated from the international funding relative to the indicators and targets (See **Annex 6**).

Although there was good coordination of stakeholders, the lack of a lead contractor and overall strategy for the many service providers, and the relatively high costs for the capacity development results (the main purpose of the project), presents some questions about cost-effectiveness. For example, the benefits of the valuation study for awareness-raising benefits,

and the climate change research studies had little effect on the core results of the project. These aspects are further discussed under Relevance in Section 3.3.1.

3.1.8 UNDP comparative advantage

UNDP has had a long history of supporting protected area systems worldwide.[13] UNDP has been operating in China for over 37 years, and engaged in GEF projects since 1991, including assistance with the 1994 Biodiversity Conservation Action Plan and the 2005 China Biodiversity Partnership Framework.[14]

Project participants described the advantages of UNDP and GEF support in terms of leveraging government funding through co-financing approval, increased national profile which gets the attention of government, exposure to international practices and training of staff (many of whom have low skills) which is given limited priority under regular government programs.

Exposure to the international practices introduced PA staff to both governance (e.g., co-management) and technical innovations (e.g. drone surveys). Advice from the CTOs was greatly appreciated by project staff.

3.1.9 Linkages between project and other interventions

There are few other related projects in the region, except for promotion of the "Cold Pole" tourism development in Inner Mongolia. Activities under the three project outcomes are aligned with activities of the other projects of the national CBPF-MSL "Wetland PA System Strengthening for Biodiversity Conservation" Programme. Close linkages and cross-fertilization including participation of the project team in CBPF-MSL national programme training was described.[15]

UNDP collaborated with the Coca-Cola Foundation and WWF China on wetland projects. The UNDP/Coca Cola programme wetland conservation and restoration initiatives in the Haihe River were implemented on behalf of the Chinese Government as part of Government of China's overall work on wetland conservation, in a similar way that the MSL programme supported this work. Where one programme focused on protected areas management, the other focused on restoration of ecological functions and ecosystem services. As part of this, the two initiatives shared lessons learned and best practices where possible – through the UNDP and the Chinese Government participation in workshops and events as well as in the programmes steering committees.

[13] http://www.undp.org/content/dam/undp/library/Environment%20and%20Energy/biodiversity/PA_21Century.pdf
[14] UNDP in China: Years to Remember, 1979-Now, UNDP, 2017.
[15] PMO, Self-Evaluation Report for Terminal Review, July 2018, p11.

3.2 Project Implementation

3.2.1 Executing agencies and implementation modalities

The procurement and administrative processes were effectively managed by the PMOs within the forestry management authorities of Inner Mongolia and Heilongjiang, the National PMO and UNDP China. The NPMO and PMOs are all from State Forestry Authority (SFA, now NFGA), with the two PMOs directly managed by the SFA. This made it easier for vertical information transfer.

These agencies were responsible for contracting and supervising 21 major contracts (Table 2). The project implementation modalities were dominated by outputs and activities delivered by contracted service providers. Major disbursements were made to the various contractors; e.g., about $560,000 was budgeted in 2018 for contracted service companies and consultants. The approach to project execution placed a great deal of responsibility on the contracted partner institutes/companies to deliver outputs. While there was direct collaboration with PA authorities and contractor staff, the approach may have reduced the role of the generally under-staffed and under-qualified local PA authorities to have built internal project management and program development capacity.

The project management team at NPMO and the PMOs provided diligent and timely implementation of the project document within a complex multi-jurisdictional setting. NPMO organized a set of workshops including meeting via we-chat to coordinate the overlaps among all the projects and tried to avoid the unnecessary sources waste. They prepared training materials identified training needs and issued training guidelines. NPMO coordinated annual PSC and many other events for the participants. There were reported efforts to enhance participation of local PA staff.[16] However, the TE discussions also suggested that the direct contacts between NPMO and the 8 project PAs were limited, and many of those interviewed were not aware of a technical assistance role of the NPMO or the project activities within the two demonstration projects. The MTR report also noted that the management had been insufficient in garnering meaningful local involvement.[17]

The quarterly and annual reporting has met the expected requirements. Project staff found the GEF reporting requirement somewhat onerous. A Self-Evaluation Report for Terminal Review was also prepared by project staff to compile conclusions on outputs, results and lessons learned.

[16] 2017 PIR Report, p. 27.
[17] Table in PMO, Self-Evaluation Report for Terminal Review, July 2018, p.64.

Lack of a clear implementation plan for inter-sector mainstreaming (Outcome 1) was a major weakness that affected end results (see Section 3.3.3). Internal communication may have also had some weaknesses as staff from the non-demonstration projects were generally unaware of activities at the demonstration sites and felt slightly neglected.

Some project management costs (e.g., steering committee meetings) were charged to Outcome 1 inter-sectoral coordination activities.

Project implementation was also overseen by the by the Project Steering Committee. The PSC met on five occasions, as summarized in Table 4 below.

Table 4: Project Steering Committee Meetings

	Date	Activities
1st PSC meeting	17/11/2013	The establishment of PSC, the main responsibility of the PSC is "to provide comprehensive guidance, coordinate and solve the major problems for the project". The members include government officials from State Forestry and Grassland Administration and FMS from Heilongjiang and Inner Mongolia.
2nd PSC meeting	21/07/2015	The meeting discussed the achievements of 2014 and the work plan for 2015. The major accomplishment in 2014 were the establishment of DBCC, the launch of 3 studies (valuation study, baseline studies and training), and purchase of equipment for the 2 demonstration sites. The work plan for 2015 includes organization of DBCC meeting, conduct studies on carbon sequestration, permafrost, formulation of management plans and business plans, conduct wetland restoration, carry out training and public education activities.
3rd PSC meeting	15/06/2016	This meeting is the 3rd meeting for PSC as well as the 1st meeting for DBCC. The meeting discussed work done in 2015 and work plan for 2016. Major work done in 2015 includes the establishment of DBCC, provided support for the newly revised "wetland conservation regulation of Heilongjiang Province", organized trainings and public education activities, effectively expanded the PA areas, and promoted the PA management system development. The work plan for 2016 includes prepare for MTR, more financial support for expansion of PA area and promotion of designation, finish application documents for Hanma NNR to be RAMSAR site, purchase monitoring, patrolling, information sharing devices, engage more in project publicity, support Inner Mongolia to revise its provincial wetland conservation regulation, increase disbursement rate.
4th PSC meeting	15/06/2017	This is the 4th PSC meeting as well as the 2nd DBCC meeting. The meeting discussed work done in 2016 and agreed on the work plan for 2017. The things to do in 2017 includes: to continue to expand PA area and promote PA designation with the continued effort to support Hanma NNR to apply for RAMSAR site, enhance project publicity and prepare for TE, enhance project M&E to improve

		outputs quality, conduct key species inventory in the DXAL region with the help of DBCC, improve financial management and increase disbursement rate,
5th PSC meeting	22/03/2018	This is the 5th PSC meeting as well as the 3rd DBCC meeting. The meeting discussed work done in 2017 and agreed on the work plan for 2018. The things to do in 2018 includes: speed up project implementation and prepare for TE, formulate self-assessment report, review project achievements and publish relevant books,

3.2.2 Coordination and operational issues

The low baseline capacity of the different PA and regional authorities across two state jurisdictions, and the large number of delivery partners, presented a relatively complex setting for project implementation. The MTR noted that "the national project has initiated some effective collaborative approaches, including organizing regular Internet-based meetings among the 6 PMOs, rotating the location where the Program Steering Committee meetings are convened, sponsoring exchange visits among the individual projects, etc. The coordination role of the national project should be further strengthened."[18]

Similar to comments in the MTR report, the TE observed that there were some coordination issues that affected the implementation efficiency and that leave uncertainties about leadership for ongoing responsibilities for action plan implementation post-project. (Some of the efficiency issues are noted in Section 3.3.4)

The following observations on operational issues were noted during the TE mission:

- Significant policy change occurred in the time between project design and start-up and some re-focusing at inception should have occurred according to project staff;
- The shift from extractive industries to conservation was and remains difficult because there was little understanding of biodiversity and there was a need for more discussion and orientation to the new regional economy;
- Many of the local PA staff are re-trained forestry workers without much education and it is difficult to keep qualified staff in the region;
- Based on interview responses, many project participants were not aware of activities occurring in other components, even within contractors that were delivering multiple components;
- The studies and assessments for PA and biodiversity conservation were presented by contractors in various venues but not well elaborated in terms of action for PA staff;
- PA staff were trained in collecting data (e.g., water quality) but not in analyzing or interpreting the data with regard to potential management responses;

[18] Xue Dayuan and James Lenoci, Mid Term Review Synthesis Report, UNDP, 2016, p.iv

- The role of the Enterprise Group in SFA within the emerging regional development strategy needs to be addressed in terms of their role in landscape biodiversity conservation;
- It is not clear who has overall responsibility for implementing the Landscape Action Plan (**Annex 8**); funding is also a primary concern in the view of participants.
- The Action Plan and integrated management plans of the two demonstration sites have not been officially approved, and SFA as well as local FMAs are expected to be more active in implementation.

3.2.3 Management by UNDP Country and Regional Offices

The overall management and supervisions by UNDP staff have been consistent with other GEF projects. Quarterly and annual financial and progress reporting were completed according to the requirements. The annual PIR and APR reporting benefited from active inputs from UNDP and the UNDP/GEF RTA.

UNDP was also active in training administrative staff on UNDP/GEF procedures, ensuring reporting systems met the requirements, and introducing changes in response to MTR recommendations and other adaptive management measures such as improving accounting practices in line with audit recommendations.

The scope and complexity of the project design and implementation arrangements including a complex organization (Figure 2) have presented some challenges, especially given the size of the co-financing and the large project area for oversight and technical support. For most of the project period, CTA duties covered six projects within the national program which may have limited the availability of technical support and guidance for the Daxing'anling project. Part-time CTA inputs for such an array of projects is not sufficient.

The following observations on the role of UNDP were drawn from a review of gaps or issues in management support activities:

- The extensive experience of UNDP/GEF in landscape conservation projects could have assisted the mainstreaming components of the project, which struggled to modify development sectors and develop an overall conservation strategy for the landscape;
- The high dependence on numerical rating systems in the project design to track progress on outcomes could have benefitted from external tests of the indicators for measuring project development results rather than accepting them as de facto international standards for PA project monitoring and evaluation (see section 3.2.6);

- External peer review of the valuation studies could have assisted in developing a stronger, long-term business case for conservation coming out of the hypothetical estimates of ecosystem monetary values (see section 3.3.3);
- There are some uncertainties about the $1 M in-kind contribution by UNDP (see section 3.2.5), which may be partially attributed to indirect private sector donations;
- The knowledge-leveraging aspects of the project – extracting key lessons from the demonstration sites for other PAs and the larger programme (cross-project collaboration as noted in the MTR and PIR reports) remains incomplete;
- No response was provided on the draft TE inception report and the report outline, and the suggested outline in the GEF evaluation guidelines has been modified in the comments received, implying a need to update the guidelines;
- It is not fully clear whether incremental $3 M GEF funds alongside the $30 M government funding makes much value-added difference that could not otherwise be achieved with national funds. The specific UNDP/GEF contribution in creating space for critical learning and innovation remains to be further defined.

3.2.4 Adaptive Management

There were changes in circumstances after project approval – major central government commitment to environmental protection that rapidly expanded the PAs and placed increased pressure to manage the new areas, and restrictions on development sectors that changed the dynamics for mainstreaming landscape biodiversity conservation. The MTR report provided opportunities for adaptive changes. For example, it stated, "The chief technical officer (CTA) is supporting all 6 projects, but his work assignments are being organized piecemeal. The terms of reference (TOR) of the CTA should be reassessed and more clearly articulating how technical advisory services will be delivered to the program."[19] Changes were then made to expand the technical support. In response to MTR Recommendation 3, UNDP also introduced a more streamlined format for reporting. Other actions, such as expanding the coordination functions of the NPMO, were taken to address the MTR conclusions and recommendations. The NPMO and UNDP have been generally responsive to the MTR and other needs to adjust the project as needed.

3.2.5 Financing and co-financing

Total project expenditures to June 30, 2018 were $2.945 M, or 83% of the GEF $3.544 M project budget. Remaining balance was $0.599 M as of June 30th (Table 5).

[19] Xue Dayuan and James Lenoci, Mid Term Review Synthesis Report, UNDP, 2016, p.iv

Table 5: Project Budget and Expenditures ($'000) 2013 – 2018

Outcomes	2014-15		%	2015-16		%	2016-17		%	2017-18		%	2018-19
	Budget	Expend		Budget	Expend		Budget	Expend		Budget	Expend		2018 plan
Outcome 1	9.09	9.09	100	163.98	125.56	77	278.65	203.84	73	128.95	242.28	188	119.23
Outcome 2	581.76	581.76	100	255.20	282.07	111	285.24	294.36	103	235.17	119.67	51	3.29
Outcome 3	241.22	241.22	100	230.15	232.75	101	334.02	358.03	107	472.37	387.98	82	730.52
Project Mgt	41.37	41.37	100	34.24	30.45	89	33.60	25.83	77	37.09	36.57	99	42.65
Total	294.06	294.06	100	683.56	673.34	99	931.51	894.65	96	893.58	786.97	88	895.70
% Expend.	**100**			**99**			**96**			**88**			

Source: Project Management Office; 2017-2018 data to March 30, 2018

Table 6: Project Co-financing

Co-financing (type/source)	UNDP own financing (mill. US$)		Government (mill. US$)		Partner Agency (mill. US$)		Total (mill. US$)	
	Planned	Actual	Planned	Actual	Planned	Actual	Planned	Actual
Grants*	-	-	23.5 M	28.69 M	-	-	23.5 M	28.69 M
Loans/Concessions	-	-	-	-	-	-	-	-
• In-kind support*	1 M	1 M reported		-	-	-	1 M	1 M reported
• Other+	-	-	-	-	-	-	--	-
Totals	1	1	23.5 M	28.69 M	0	0	24.5 M	29.69 M

Note: ***** Government grants for the project are listed as: Subsidy grants for NNRs and NWPs, Rewards for forestry bureaus, Subsidies for returning farmlands to wetlands, Funds for construction projects, Funds for education facilities, Wetland protection and restoration activities and National wetland protection subsidies. Also included in co-finance figures are PMU and NPMO salaries, office rents, equipment and travel expenses (which could also be considered in- kind contributions). See Table 8 of the *Self Evaluation Report for Terminal Review*, 2018.

+ Other, parallel contributions were made by Coca Cola Foundation to river management projects in the region but these were not formally integrated into the project.

The annual project expenditures relative to budgets up to March 31, 2018 are shown on Table 5. The disbursement rate ranged from 51 to 188% (2017-18) with disparities mostly occurring in Outcome 1 and project management in 2015-2017. Total annual disbursements, however, were in the range of 88-100%, generally indicating realistic budget and work planning except for Outcome 1 and 2 in the past year (188 and 51%). No significant issues were found in the annual financial audits.

Co-financing was committed at $24.5 M at approval and is estimated to now be $29.69 M including $1 M in-kind from UNDP, as shown on Table 6.[20] There have been substantial in-kind contributions from both the government and UNDP but it has not been possible to verify the exact amounts contributed by UNDP. Project staff consider the grant from Coca-Cola Foundation to the MSL programme as part of a UNDP cash contribution.

Some of the UNDP parallel financing, through a grant from the Coca-Cola Foundation (UNDP-CICETE-Coca Cola Partnership for Water Governance Programme), has not been project-specific but committed to the MSL programme in broader terms. The Coca Cola programme on wetland related activities in the region during 2013-2018 included: *Promotion of Use of Peak Flow of the Hai River for Livelihood and Wetland Rehabilitation* (2013, $100,000), *Demonstration of Guarantee and Management of the Eco-Flow of the Haihe River Basin* (2014, $400,000; 2015, $500,000), *Utilization of Flood for Maintaining the Ecosystems of the Luanhe River in the Haiher River Basin* (2015, $100,000).

3.2.6 M&E plan at entry and in implementation

a) Plan quality and use

The M&E Plan was developed on the basis of the METT tool, Financial Scorecard and Capacity Assessment Scorecard being used as instruments to monitor progress in PA management effectiveness, along with the quarterly and annual reporting systems. This is a standard approach in biodiversity conservation projects and the management team have followed this convention as prescribed in the Project Document.

The main comment on the quality of the plan relates to the sole reliability on the quantitative indicators to capture the results being generated. These are discussed below. In addition, the responsibilities for plan implementation were not specified and designated staff were not

[20] PMO, Self-Evaluation Report for Terminal Review, July 2018, p.4 Numbers are to 30 June 2018.

appointed. Progress reporting issues were identified in the MTR. Other observations on the M&E system include:

- The indicator numbers and statements in the Self-Evaluation Report suggesting unqualified success in project results are not corroborated by hard evidence of institutional capacities or the interviews on the ground with stakeholders.
- The project reported 11 trainings sessions for approximately 1500 trainees, but records are very poor and there are no data on the training results or the post-training follow-up.
- Attempts were made to track job creation (563 at MTR; 900 at TE) but these may not be primarily related to the project's alternative livelihood development activities for local people.

b) Indicators quality and utilization

The indicators in the project document depend heavily on general indices (METT, EHI, Financial Scorecard) to measure progress towards outcomes (end results). Numbers dominate the progress monitoring (see **Annex 6**). The quantitative measures have distinct limitations. Furthermore, effects on selected indicator species are difficult to measure with no background or baseline data and no real reliably to estimate populations with small sample protocols in the short term. Other indicators simply record completion of outputs (e.g., valuation study, management plans, etc.). There is no baseline or performance data on number of trainees meeting competency standards; it's not clear what particular sector plans are expected to incorporate conservation measures. The result of these limitations is a very approximate set of measures to gauge progress on the three outcomes.

There were some changes to indicators at MTR, most notably the dropping of some water quality parameters (the value of measuring a few quality parameters at some unknown reference station without context or baseline data is questionable; moreover, many of the staff stated that they are able to collect samples but not able to analyze or interpret them).

Many of the quantitative indicators provide only course, generalized rating of results; they are adequate for comparing PA management levels but are unable to capture changes in specific capabilities between moderate and high ratings or the particular details of actual scope of capabilities. E.g., high Capacity Scorecard ratings are tempered by the adjoining 'evaluative comments' column in the tables that highlight weaknesses. Secondly, many of the indicators reflect outputs generated by contractors rather than PA staff capacity to use such outputs to achieve the expected outcomes.

Finally, there are limitations of some bio-physical indicators that give only a snap shot of data where longer term sampling is needed for reliable conclusions about effects of project interventions. The small data sets that have been compiled from a few reference sites or transects do not offer sufficient reliable data to make definitive conclusions about the status, distribution or trends in populations. It will take time and more customized surveys to determine the actual status of the priority species of concern.

There has been significant development of the monitoring and patrolling systems, but confidence in some conclusions about improved habitat and species populations is saved by the reasonable presumption that halting virtually all logging, hunting and access is likely enhancing wildlife status and downstream water quality. There are lessons here for M&E plans in future projects.

It is suggested that the METT system can be improved by ensuring that it is supplemented by inclusion of monitoring information on:

- Basic capacity requirements needed to meet an adequate level of management ('service delivery standards') at the particular network and/or site level.
- Baseline conditions that exist at beginning relative to the capacity requirements (see the statements under 'Evaluative Comments in the METT rating table of the ProDoc).
- Progress and gaps in management capacity at the particular network and/or site level; extent to which capacity requirements above have been fulfilled.

3.3 Project Results

3.3.1 Project relevance

The major actions taken to expand and secure area under PAs and to contribute large national and provincial funding to compensate, relocate and retrain people and to develop the management capacity and transform the traditional economy in the region attests to the relevance of the GEF project toward national goals. The original sponsoring agency – SFA has evolved with a stronger focus on environmental responsibility under the NFGA reorganization with new budget reported to the TE team as 2 Billion RMB ($312 M) each for Heilongjiang and Inner Mongolia PA management. The project has played an important role in these developments.

There has been some important research completed with funding from the project, including studies on permafrost thaw and degradation and on carbon sequestration in Daxing'anling.[21] While these provide a basis for further research and inputs for UNFCCC negotiations, relevance to the central focus on PA management effectiveness is tenuous.

Project activities should be selected on the basis that they are "necessary and sufficient to achieve specified Outcomes". Relevance and usability of some of the outputs (e.g., "Assessment and Benefit Sharing of Traditional Knowledge of Minority Nationalities in Inner Mongolia", ecosystem services valuation studies) may be questionable in terms of relevant results. Nevertheless, there were no major administrative or procurement complaints or delivery delays or issues reported to the TE mission.

3.3.2 Effectiveness: Achievement of project objective

The project objective is to strengthen the management effectiveness of protected areas to respond to threats to the globally significant biodiversity in the Daxing'anling Landscape of Heilongjiang Province and Inner Mongolia Autonomous Region. The achievement of this objective is summarized as follows:

- *Much higher focus and commitment on biodiversity conservation*

The project has raised awareness and commitment within government and the public about the state of biodiversity and wetlands in the region, the legacy of logging and mining activity and the need to assist recovery and restoration of ecosystems and to promote alternative livelihoods.

- *Significant expansion of PA network as well as reduction of habitat loss*

With the enforcement of the logging ban, river mining ban, pest control and hunting prohibition as well as wetland restoration, the degradation of local ecosystems has reduced and reversed in some areas. With the implementation of the project, the wetland and forest PA network in the region has expanded by at least 1.119 million ha with increased coverage of wetland PAs by 1.064 million ha (Outcome 1). As reflected in the EHI scores, with the expansion of PAs, the number of selected species such as dragon fly and butterfly "appear to be increasing".

- *Cross-border coordination has been initiated*

[21] Wu Haitao**,** Study on thawing and degradation of permafrost and wetland conservation in Daxing'anling; Zhongsheng Zhang, Estimation of carbon storage and sequestration in wetlands of the Daxingan Mountain, Northeast Institute of Geography and Agroecology, Chinese Academy of Science.

Previously, there was no coordination on landscape biodiversity between Heilongjiang and Inner Mongolia jurisdictions. With the support of the project, Daxing'anling Biodiversity Conservation Committee (DBCC) was established to provide for joint discussion of the issues.

- *Management effectiveness on the PA level has been strengthened*

The project has conducted 11 trainings sessions for approximately 1500 trainees. A variety of topics were covered including biodiversity conservation, wetland PA management, monitoring of wildlife, alternative livelihood, patrolling and law enforcement, PES, and etc. Integrated management plans have also been formulated for the two demonstration sites, which have listed a number of priorities and actions. These plans provide better direction for future conservation and sustainable use of natural resources. In addition, the project also explored the possibilities of eco-tourism, bee keeping and livestock raising as alternative livelihood; indigenous groups such as Evenki people and farmers inside the nature reserves were involved in the activities.

Despite of these improvements, there are still remaining issues, including the following,

- *The overall landscape strategy is still weak.*

The project has made great effort in improving its management effectiveness, but the landscape strategy is still quite weak. Most of the management plans or conservation plans formulated during the project were based on individual jurisdictions. The overall approach for the landscape conservation was mainly reflected in the "Action plan for biodiversity conservation and sustainable use in the Daxing'anling Landscape" (Annex 8), but this plan has not been officially approved by authorities, and its effectiveness is hard to determine at this stage.

- *The coordination across geographical borders and sectors needs to be enhanced.*

Even though the project has established the DBCC, it has not been very active in promoting biodiversity conservation issues. DBCC has held only 3 meetings in total and all the meetings were held concurrently with PSC meetings which may indicate a lack of operational coordination between the two jurisdictions. It was also noted during the TE mission that there was very limited participation from other government sectors. As some of the management issues require the assistance of other sectors such as agriculture, environmental protection, and finance, it is suggested the coordination between FMA and other sectors should be enhanced.

- *How to maximize economic benefits while conserving the ecosystem to achieve sustainable development for the region is a major issue*

With the loss of logging income, the region needs to develop a new and efficient strategy for generating economic benefits. This is crucial for the region as it is facing great challenge to retain

its population and attract professional staff. Currently, the new way for economic growth is uncertain. Multiple pilot projects were carried out such as bee keeping, livestock raising and eco-tourism, but these projects are mostly small scale and it is hard to judge whether they are the basis for a new economy.

3.3.3 Effectiveness: Achievement of project outcomes

a) Outcome 1: Development Planning Frameworks

Annex 6 summarizes the high valuation of ecosystem services in Daxing'anling landscape, the advances in intra-governmental coordination and policy planning documents and the major expansion and upgrading of PAs.

Output 1.1: Valuation of the ecosystem services[22]

A comprehensive study of monetary and non-monetary values of ecosystem services estimated that the Daxing'anling landscape provides annual values of $105 Billion USD in terms of water supply, flood regulation, carbon sequestration, tourism, timber products, natural foods and medicinal plants.[23] Wetland net primary productivity was the main basis for calculating ecosystem values. The study aimed for "a critical evidence base that can be used to persuade policy makers, local communities and the private sector that it is in their economic interest to conserve and use biodiversity in a sustainable manner."[24] Given the already firm conservation directives for the region, the poor inventory of ecosystem functions, the absence of realistic cost recovery or PES mechanisms, and the uncertainties about incomes in the new conservation-based economy, it is not clear how these valuation studies are directly linked to strengthening PA management. The studies have helped to present the case for wetland protection and restoration. But they are hypothetical, high level estimates that may have limited utility unless they can be used to assist investments in management and restoration at a local level.

[22]Ecosystem services listed in the *Self-Evaluation Report for Terminal Review* include: timber products, food (wild berries, mushroom, vegetables and fish), regulation of greenhouse gases, micro-climatic stabilization, water provision and regulation, water purification and nutrient retention. Other ecosystem services provided by the area are firewood, natural medicines, ornamental resources, aquifer recharge, educational services, recreation and tourism and landscape and amenity.

[23] Lyu Xianguo Zou Yuanchun Liu Xiaohui Xue Zhenshan Shen Xiangjin Sun Keji, *Evaluation of wetland Ecological Service in Daxing'anling area*, Northeast Institute of Geography and Agroecology, Chinese Academy of Sciences, July 29, 2018.

[24]PMO, Self-Evaluation Report for Terminal Review (draft), Beijing, July 2018, P. 25

There is a need for more detailed assessment of specific wetland functions (and management options/costs) in order to design cost-effective management strategies that will maximize the ecosystem functions (and resilience under climate change) for flood control, wildfire management, biodiversity conservation, eco-tourism, etc. This information could provide the basis for potential PES and cost recovery financing arrangements for PA management.

Output 1.2: Inter-sectoral coordination and planning mechanisms

The Daxing'anling Biodiversity Conservation Committee is a cross provincial/region coordination body established by the Heilongjiang and Inner Mongolia Forest Management Administrations (FMAs). It is expected to "champion and drive biodiversity conservation and the PA agenda as a key contribution to sustainable development for the whole of the Daxing'anling landscape", and also to "unify methods, tools/instruments of M&E of the project all over the region."[25] The formal letter of agreement between the agencies is said to ensure permanent status of the committee. The creation of DBCC is a significant achievement. It is mandated with mainstreaming conservation into regional development and maintaining the momentum, particularly in follow-up implementation of the Action Plan.

This is an important contribution of the project and significant in China as a potential model for cross-boundary collaboration on biodiversity conservation and PA networks. In order to provide for effective operation, it will need a progress-oriented agenda focused on the Action Plan for Biodiversity Conservation and the necessary back-up support from FMA staff. The expectations are high: "This coordination will ensure that different sectors plan and implement their actions in a biodiversity-friendly (and low carbon) way that does not compromise sustainable development and supports the emerging "green" brand of the region."[26]

Various conservation and development plans and proposals have been prepared to support continued progress.[27] Yet actual integration of biodiversity conservation into the development sectors – notably commercial forestry and agriculture (and any other sectors for which there is no information) appears to be very limited. Farms growing soybean were observed but growing and transport conditions are difficult in this region and operations may be small and marginal. The project has apparently signed co-management agreements with local farmers to reduce the impacts from agriculture, and to gain their assistance with fire-fighting, etc.[28] but details on were not provided to the TE team. There is a lack of information about pre-established, nonconforming

[25] PMO, Self-Evaluation Report for Terminal Review (draft), Beijing, 2018, p. 56/59
[26] PMO, Self-Evaluation Report for Terminal Review (draft), Beijing, July 2018, P. 26
[27] Annual Project Report, 2017.
[28] Annual Project Report 2017.

land uses in the PA[29] and also the types of sectors outside of PAs that are expected to be involved in biodiversity conservation mainstreaming.

Output 1.3: Action plan for biodiversity conservation and sustainable use in the Daxing'anling Landscape

The Action Plan lists 29 priority 'projects' for biodiversity conservation (**Annex 8**), although it has not yet been approved. Monitoring and support is expected to occur through the two FMAs under the direction of DBCC. Nine thematic priority areas are identified in terms of 29 proposed actions. In addition, six area 'hotspots' (general areas) of primary concern have also been identified with particular focus on red-listed/Class I/II species (endangered/threatened). The distribution of habitats of selected wildlife mammal species have been mapped along with preliminary climate change scenario impact assessments. (The studies by Beijing Forestry University estimated a 3-9% reduction in suitable habitats under climate change scenarios.)[30]

The Action Plan provides an initial framework of proposed projects but there is also a need to further elaborate and prioritize the annual actions to be undertaken under the Plan along with budget and implementation requirements and responsibilities. The Action Plan readiness for implementation and implementation program under DBCC need to be clarified. The updating of the *Duobuku'er and Genheyuan Master Plans* and additional management plans (see Outcome 3 below) have also been completed by the project. These will need to be considered in the annual NFGA biodiversity conservation program.

Biodiversity research activities are also ad hoc and it would be useful to have a coordinated, pro-active approach to a set of research priorities, inviting national and international scholars to take up these priorities.

The overall approach to biodiversity conservation in Daxing'anling landscape can be described as major expansion of the area covered by PAs, initial efforts at promoting connectivity between these PAs, conceptual outline of six landscape biodiversity 'hotspots' (areas), and annual meetings of the DBCC to discuss landscape-wide biodiversity conservation issues. Although the landscape approach is in evolution, to date there is no distinct and operational landscape

[29] The report "UNDP-GEF Strengthening the Management Effectiveness of the Protected Area Network in Daxing'anling Landscape" states that there are 248 farming households in Duobuku'er NNR (p.34) while the recent "Self-Evaluation Report for Terminal Review" states that there are no permanent local residents within PA boundaries other than PA staff (p.50). During TE mission, some farms were occupied and still active.

[30] Presentation notes by Dr. GaoJunqin. This work has been completed with co-financing from Govt of China. Further similar assessment is commencing on key bird species.

conservation strategy beyond the logging ban, the creation and upgrading of PAs and an action plan with 29 priority actions. There are major challenges to integrating conservation into other sectors and across institutional boundaries between government departments. Despite the landscape strategy limitations, the major support for PA expansion by Government of China and the establishment of a cross-province/region coordination mechanism is significant and will provide a strong foundation for further progress.

Output 1.4: Wetland and forest PA network in the Daxing'anling Landscape expanded

Table 7 summarizes the major expansion and upgrading of PAs. A "systematic review of PA coverage" was reported as the basis for providing more effective and representative conservation threatened habitats and species".[31]It has been concluded that "a majority of habitat and ecosystem types that are of ecological representativeness are in the Region's protected area network"[32] but the basic data to substantiate this are weak. Mapping of the representative ecosystem sub-types would further help to ensure effective landscape conservation.

Table 7：PA expansion targets and results in the Daxing'anling Landscape (June 2018)

Code	PA Category	PA in Heilongjiang Section (million ha)	PA in Inner Mongolia Section (million ha)	Expanded PA in whole Daxing'anling (million ha)		
		Baseline Coverage	Baseline Coverage	Baseline Coverage	Target Coverage	Coverage at EOP
1	Forest Type Nature Reserves	0.795	1.038	1.833	2.154	1.888
2	Wetland Type Nature Reserves	0.943	0.193	1.136	1.666	2.137
3	Wetland Park	0.067	0.064	0.131	0.381	0.194
Total		**1.805**	**1.295**	**3.100**	**4.201**	**4.219**

Source: PMO, Self-Evaluation Report for Terminal Review (draft), Beijing, July 2018.

During the TE mission, ecosystem types were described as mainly forest wetlands, riverine wetlands and sphagnum bog. Little recognition of the range of terrestrial and aquatic ecosystems was apparent. Without more detailed inventory, it is difficult to know if the existing PAs protect all ecosystem types in Daxing'anling. The implications of "genetic corridors to allow for gradual species range shifts in response to changing climate" also need to be further elaborated.

[31]PMO, Self-Evaluation Report for Terminal Review (draft), Beijing, July 2018, P. 29.
[32]Daxing'anling Project-Heilongjiang Forestry Management Authority (HFMA), Capacity Scorecard, 2018, p. 2

Information and awareness about ecosystem types is lacking. In Inner Mongolia, landscape features were described as 'forest ecosystems' and wetland ecosystems' although the management zones may reflect more distinct ecological features. In Heilongjiang, the focus is on forest and riverine wetlands and marshes. More detailed mapping of ecosystems in conjunction with species habitat mapping (See **Annex 8** proposals) would also help to resolve 'redline' issues over land use restrictions outside of the PAs.

The network of biodiversity-related habitats has also not been well-defined to date. Further assessment and mapping of representative ecosystem types and habitats for selected species will be needed for a more comprehensive approach to landscape biodiversity conservation in conjunction with trade-offs over priorities in the development sectors outside of PAs.

It was suggested by technical advisors during the TE mission that further work on biodiversity conservation strategies should seek to:

- improve biodiversity in isolated wetlands and outside of nature reserves;
- build ecological corridors for endangered and valuable species to adapt to global change;
- develop biodiversity monitoring and assessment, especially for project study sites; and
- strengthen the capacity of NR staff and raise the public awareness for biodiversity conservation.

b) Outcome 2: Landscape Biodiversity Conservation Effectiveness

Annex 6 summarizes generally modest improvements in management capacities at the PA system level and the significant increase in trained PA staff along with reductions in environment crimes that have been generated by the project.

Output 2.1: PA institutional strengthening plan adopted and operationalised

An institutional strengthening plan was developed, drawing upon gaps and weaknesses identified from the METT and Capacity scorecards. This broad approach to capacity assessment (enabling policy/regulations, organisational development, and human resources development) should be congratulated. It reportedly included reviews of competency standards for PA jobs in discussion with the National PMO[33] although action results from the review were not apparent to the TE team. This capacity development plan has been integrated into the overall Action Plan but details on necessary action are not provided.

[33]PMO, Self-Evaluation Report for Terminal Review (draft), Beijing, July 2018, P. 33.

The TE mission discussions highlighted gaps in monitoring capabilities, water quality analyses, and public awareness, managing ecotourism, and securing funding. It was noted that few of the nature reserve staff have the necessary education or skills to effectively implement the management tasks, so basic training on various aspects management, monitoring and education has provided introductory capacity development. The remaining weaknesses in capacity were a dominant theme from the TE discussions with PA staff. In particular, the following comments were highlighted during the field mission:

- Baseline inventory of ecosystem and biodiversity attributes is lacking in most of the PAs (e.g., a survey by Beijing University in 2016 indicated that only 4% of the PAs have had a natural resources survey);
- PA staff are often able to collect monitoring data as per instructions and training, but unable to analyze or interpret the data;
- There are insufficient PA staff and basic education of staff are low; it was estimated that only 10% have a university degree and many are re-trained forestry workers;
- It is difficult to attract and retain qualified staff especially in the remote areas;
- The various training activities by subcontractors, assisted by a capacity needs assessment have not been coordinated in an overall Training Plan and there are only anecdotal reports on post-training use of the new skills;
- Competency standards for PA management personnel (as discussed in the MTR) have not been resolved;
- The issue of institutional capacity and organizational development needed to ensure effective use of trained staff needs to be further addressed.[34]

The Capacity Scorecard Report also noted some specific weakness that need attention. Here is a sample of comments in the report[35]:

> - the Master Plan for Daxing'anling Forestry Nature Reserve Network Development has not been fully implemented due to insufficient budget, staff, equipment, and communication as well as transportation facilities;
>
> - PA network suffers from professional staff shortage. There is no specific budget for training managers and scientific research personnel. Most training programmes were financially sponsored by external organizations, e.g., SFA.

- The protected area management authority, either an authorized PA management agency or a local forestry agency, has legal power over protected areas within their

[34]It was noted under Action 26 of the Biodiversity Conservation Action Plan that review of institutional systems need to be part of the follow-up program of action.

[35]Daxing'anling Project-Heilongjiang Forestry Management Authority (HFMA), Capacity Scorecard, 2018

jurisdiction. Insufficient funding and limited capacities of staff have constrained their better performance;

- The region's protected areas still face stress in law enforcement due to shortage of equipment for communication and transportation, of funds and of staff;
- Institutional missions are reasonably internalized, but the qualification of staff needs to be improved to fully implement the objectives and desires.

Output 2.2: Systemic capacity strengthened for effective PA system management through regionally specific regulations and guidelines

The project has made a major contribution to developing the regulatory structure and technical advice for PA management. PA Management Regulations, circulars and wildlife and wetland resources management and other legal and advisory documents have been produced. Various activities have been implemented related to strengthening enforcement processes and development of new regulations. The project staff have also identified needs for further relations related to management and restoration of important habitats and threatened species, addressing Invasive Alien Species, pests and diseases, biodiversity monitoring and reporting regime, climate change adaptation, human uses in PAs, community participation and co-management, sustainable financing mechanisms and EIA/SEA processes.[36]

Output 2.3: Improved business planning and resource allocation for PAs to directly address threats

Financing PA management has been a key issue that the project has attempted to address through business plans and review of financing options. The main deliverables included: a) a 5-year Business Plan for the PA systems in each province section; b) model business plans for individual PAs developed for the Duobuku'er NNR and Genheyuan NWP; c) a report recommending options for strengthening both traditional and novel sources of PA financing, including in particular eco-compensation funds; d) demonstration of the implementation of recommended options for the two demonstration sites.[37] A wide range of options are still under consideration but progress will depend upon active pursuit of these options within the business plans for the two demonstration sites.

Output 2.4: PA staff skills enhanced with over 300 trainees meeting occupational competency standards

[36]PMO, Self-Evaluation Report for Terminal Review (draft), Beijing, July 2018, P. 33
[37]Ibid., 2018, p.38

Annex 7 summarizes the training sessions involving more than 122 days of training. The total number of trainees has been estimated by the project at 1500, exceeding the 300 targeted. The main PMO-organized training sessions involved 224 persons according to records.[38] Project partners greatly appreciated the training, equipment and technical support provided by the project. The weaknesses in capacity have been thoughtfully recognized, which provides a basis for ongoing institutional and human resources development.[39]

In May 2017, a training programme entitled "Come into wetlands" was launched by the Genheyuan NWP supported by the Capital Normal University by interacting with pupils from local primary and secondary schools enabling the pupils to learn knowledge of wetland biodiversity. The training was characterized by localization, thanks to the technical support of the University. In November 2017, the Hanma NNR was designated as one the three training bases of Chinese Biosphere Reserves Network (CBRN) by the National Committee for UNESCO' s Man and the Biosphere Programme, Peoples' Republic of China.

The project self-assessment report notes the current lack of qualified staff and lack of formalized training programs. Activities delivered under this output include domestic training and workshops abroad, e.g. USA, Canada, UK, The Netherlands, Maipo in Hongkong and domestic locations including the two demonstration sites. A *Biodiversity Conservation and PA Management Training Programme* has been proposed for each FMA but these remain to be formally established and funded under the Action Plan.

Output 2.5: PA and biodiversity information management system significantly improved

The datasets for PAs and landscape biodiversity features have been greatly expanded and consolidated into a project database with the assistance of the Institute for Automation (CAS). It consolidated biodiversity and PA data in a geo-referenced system that will be available online. The database complements the monitoring app used in the ranger patrols. This app was mentioned as an important tool for the project staff. The use of the new database and possible GIS applications were not evident in the TE discussions with PA staff but it may be too early to assess expected functions for the database. There is a danger that operation and maintenance

[38] Ibid, 2018, Table 5, p. 40.

[39] For example: "The national nature reserves in the Region have their independent, authorized management agencies, and the sub-national ones are in the custody of local forestry agencies. The administrative institutions are unsound, short of employees and limited in capacities. Lack of necessary capacities and skills has caused poor implementation of sound, existing management mechanisms.", Daxing'anling Project-Heilongjiang Forestry Management Authority (HFMA), Capacity Scorecard, 2018

of the database may be heavily reliant on the contractor although the project report states that the database is operating well at the PA level.

c) Outcome 3: PA Management Effectiveness and Capacity

Annex 6 summarizes the substantial achievements in capacity at the two demonstration PAs according to METT and EHI ratings, and the completion of model management plans and information systems. The project design expectation was that the outputs generated in the two demonstration PA would be replicated in other PAs, although this result is less certain.

Output 3.1: Integrated management plans prepared in a participatory way, adopted and implemented

Updated Duobukuer and Genheyuan Master Plans were completed including objectives and actions related to administration and regulations/law enforcement, land use, visitor management, zoning, ecosystem protection and restoration, etc. These were supplemented by 'integrated management plans' that dealt with biodiversity and human management and co-management aspects. The rationale for separate plans is not completely clear, although the former is mandated by law. The project has developed integrated management plans and financing plans for Duobukuer NNR and Genheyuan NWP.[40] These plans identify limitations and constraints related to development awareness, capacity, infrastructure, administrative-type mechanisms related to supervision, incentives and coordination. The Dubuku'er plan lays out 21 proposed projects and 39 actions while the Genheyuen plan proposes 16 projects and 26 actions. The estimated budgets for these five year plans are 67.55 M RMB and 29.2 M RMB. These are ambiguous plans. TE discussions indicated that PA managers and staff have concerns about both the capacity and funding to implement the proposed projects over the next five years. If the Master Plans have not been adequately implemented (see Capacity Scorecard report), can we expect better implementation of the management plans?

Output 3.2: Biodiversity and ecological health monitoring systems in place

Six national nature reserves, including Huzhong, Nanwenghe, Shuanghe, Duobuku'er, Cuonahe and Lingfeng conducted biodiversity monitoring with the GEF funds. Monitoring guidelines for wetland ecosystems have been produced. It was reported that the project "developed and deployed a model ecological monitoring system for the two PAs that can be replicated for the

[40]Beijing Forestry University, Integrated Management Plan for Duobuku'er NNR, 2017; Genheyuan National Wetland Park Management Plan (2016 ~ 2020), 2017

entire Daxing'anling PA network through the training activities described under Outcome 2", including selection of indicator and flagship species (and taxonomic groups), standardised monitoring methodologies and standardised recording and reporting procedures. "This monitoring system has been designed in a participatory way with the end-users by a task force consisting of a biodiversity monitoring specialist and ecologists from the Northeast Forestry University, a specialized institution contracted under this Output."[41]The monitoring systems and equipment provided by the project are a key benefit that many of the staff have acknowledged and are striving to master. Dissemination of these skills to other PAs through training and exposure were reported but not verified.

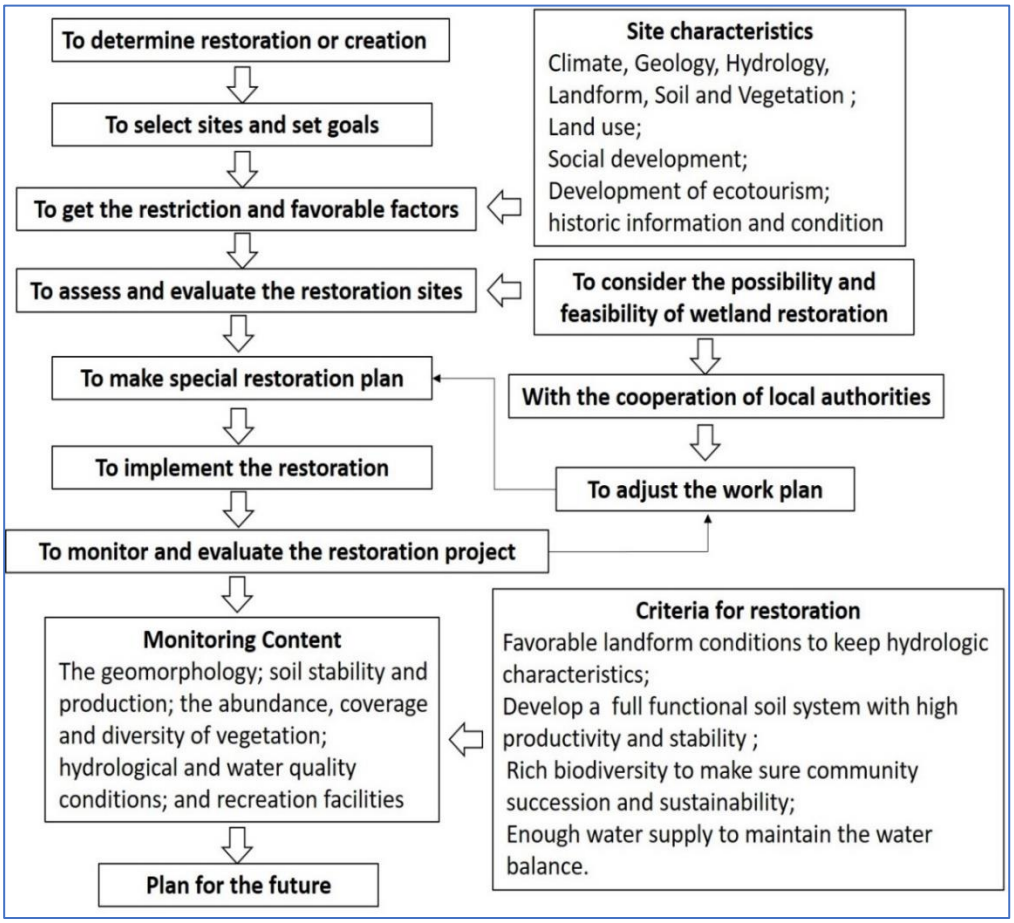
Output 3.3: Effective and adaptive conservation of biodiversity is demonstrated through restoration of degraded habitats and recovery measures for threatened species

The project contracted the Northeast Institute of Geography and Agroecology in an assessment of restoration opportunities, preparation of *Technical Guidelines for Wetland Restoration in Daxing'anling Landscape* and Guidelines of degraded habitats (wetlands) and threatened species in the two demonstration sites of the project. Figure 3 below shows the steps involved in restoration designs.

This approach warrants further national discussion in conjunction with the *Scheme of Wetland Conservation and Restoration System (GBF 2016/89)* issued by the State Council. The steps involved in identifying the ecosystem reference attributes, the options available including natural recovery and the feasibility/costs are particularly important. Restoration demonstrations completed by the project included culverts under roads so as to connect uphill and downhill drainage, stabilizing slopes and reseeding some abandoned quarries, and allowing natural succession of artificial forests toward previous wetland conditions. Targeted site restoration/enhancement measures for selected species have also been undertaken. The project has introduced restoration methods. Further support is needed to build upon these experiences and to fully establish an ecosystem-focussed approach.

[41]PMO, Self-Evaluation Report for Terminal Review (draft), Beijing, July 2018, P. 43

Figure 3 - Recovery plan steps – Northeast Institute of Geography and Agroecology



Brief site visits led to two observations. Firstly, the 'ecosystem restoration' process contains elements of rehabilitation (mitigating adverse impacts), recovery (natural regeneration of ecosystem attributes), restoration (returning ecosystem conditions to some earlier status), and enhancement (improving ecosystem and habitat conditions for certain purposes). In the Daxing'aling landscape, redevelopment also appears under the concept of restoration. Some clarification of objectives would be useful; e.g., restoring natural drainage patterns for the purpose of recovery of certain habitats or to minimize road flooding damage. The ecosystem restoration stories should form part of the PA's nature interpretation program.

Secondly, the industrial legacy includes reforestation and immature forest without biodiversity consideration and entire watersheds degraded by poor logging practices (see project document). There may be landscape-scale opportunities in addition to site treatments that could be considered in conjunction with climate change adaptation and wildfire management strategies. The landscape approach could include for example:

- Natural recovery of vegetation in logged and abandoned farmlands, linked to selected habitat enhancement and wildlife viewing opportunities;
- Conversion of selected former large farmlands and mining sites to wetlands;
- Restore natural drainage patterns with a focus on connectivity between rivers and associated off-channel wetlands;
- Habitat rehabilitation or enhancement where opportunities exist for improving habitats for species of concern, including winter ranges for reindeer populations;
- Monitoring recovery processes and occurrence of pests and invasive species in logged out and burned out areas and preparation of contingency plans;
- Establish requirements for site clean-up, land recontouring, replanting and follow-up inspection and reporting at active/inactive mining and other development sites outside of PAs as part of the landscape biodiversity mainstreaming strategy.

The project also converted 20 mu (1.3 ha) of cropland to natural wetlands and pollinating plants (*Trollius chinensis* and *Stachys baicalensis*) assisting apiculture and presented the case for cropland conversion as an economically sustainable alternative.[42]

Output 3.4: Sustainable use of biodiversity demonstrated through high quality planning, enhanced co-management arrangements and better law enforcement

In the past it has been difficult to provide basic PA management because no budgets were provided for PA authorities until 2005 when the Central government provided $4.94 million which supported salaries and operational costs to meet the basic management of these protected areas.[43] There are large gaps in financial resources that need to catch up with the expansion in PA areas and development of minimum management standards.

The project has tried to promote ecotourism, sustainable agriculture (Duobuku'er NNR– beekeeping; sheep raising outside the PAs), and non-timber forest products harvesting as alternative livelihoods to support the transition of the local economy from the forestry dependent economy. A working framework is envisioned with "new co-management mechanisms and potential socio-economic contributions or compensations that may be gained from collaboration amongst the parties".[44]The economic strategy was described as "removing the farmers and traditional agricultural practices and converting the rural economy to other

[42]Ming Jiang, Restoration Plans for Degradation Habitats (wetlands) and Threatened Species in the Demonstration Sites, 7-29-2018. Recommendations included a project in Xingan Mountain, establishing long-term monitoring for the restored sites, and developing the demonstration role for other wetland nature reserves and parks.
[43]Daxing'anling Project-Heilongjiang Forestry Management Authority (HFMA), Capacity Scorecard, 2018
[44]PMO, Self-Evaluation Report for Terminal Review (draft), Beijing, July 2018, P. 47.

biodiversity-friendly activities – eco-tourism, honey products, NTFPs, etc." Modified, wildlife-friendly agriculture has not been part of this strategy.

This economic adjustment is an effort in the right direction but, based on the limited TE mission, progress on community engagement and livelihoods development has been very modest and so far, there is no reliable evidence of major support or involvement of local people in PA management except for employment of former forest workers as PA rangers. The project reports highlighted three persons who have been involved in alternative livelihoods (generating 10,000-20,000 RMB more income each year), although it was suggested that more than 60% farming households were encouraged to practice alternative livelihoods. No survey data available as evidence of a large shift to alternative livelihoods.

Ecological and cultural tourism is identified as a high priority for development in the *Master Plan of Ecological Conservation and Economic Transition in Daxing'anling and Xiaoxing'anling Forested Region*, and there is a strong interest in developing low-impact ecotourism within the PAs. The TE discussions reflected different views about what type and level of ecotourism are appropriate and how private sector operators might be involved. Ecotourism assistance for Genheyuan NWP included a tourist education center and wooden boardwalks, river drifting services[45], an eco-tourism guide app; an electronic display screen; interpretative signs and development of a training programme on field survival. The focus of tourism is Genhe Visitor Centre, which receives about 60,000 annually with self-drive tourists from many parts of China.

The project provided training on law enforcement and coordination between PA rangers and Forest Police on biodiversity conservation and wildlife protection. The joint patrols caught 176 people illegally entering the reserves, confiscated 3340 sets of hunting tools and 1843 wild animals and their products. Criminal cases decreased from 19 in 2013 to 4 in 2017.[46]

Output 3.5: PA management effectiveness at the demonstration sites improved through local community participation and raised public awareness

The project reports that communication between the PAs and local communities has been supported in each demonstration PAs to strengthen community engagement and to enhance the overall governance of the PAs, including annual meetings. No proceedings of the meetings were available but discussions focussed on a Communications, Education, participation and Awareness

[45] River drifting on the Duobuku'er River has been jointly operated by the NNR and the local forestry bureau receiving a total of 33000 visitors/tourists since the project inception in 2013 including 11,000 visitors in 2016

[46] PMO, Self-Evaluation Report for Terminal Review (draft), Beijing, July 2018, P. 34.

Plan and local people are invited to become involved in park activities. According to stakeholder discussions, local awareness and appreciation of biodiversity and RA purposes remains a challenge. Special arrangements have been made with the *Aulugoya Ewenki* tribe to facilitate cultural tourism in Genheyuan NWP. Community participation has been introduced but still lacks strong linkages with local people.

3.3.4 Project Efficiency

Efficiencies related to project delivery and timeliness of implementation were affected in a minor way by slow recruitment processes in the early stages of the project, overheads in managing and supervising a large number of service providers, and the geographic spread of the project activities. Improvements were made to financial management and reporting systems to improve efficiencies. The lack of an overall capacity development plan might have also increased costs in the array of separate capacity development activities. 'Value for money' cost-effectiveness is discussed in Section 3.1.7.

3.3.5 Programme mainstreaming and gender equity

The UNDP's poverty reduction, good governance and sustainable development priorities have been integrated into the project design and implementation to a limited extent as part of the PA and landscape conservation focus of the project. Livelihoods development has played a very minor role, although there have been job creation efforts. Governance reform has been addressed by new cross-border committees and efforts at community engagement. Sustainable development has been introduced through a conservation landscape approach.

The project has no specific gender equality strategy but the 2017 annual APR report noted that many women were trained (accounting for at least 25% of the total numbers of the trainees) and recruited by PAs or by the project, women play a big role in alternative livelihoods supported by the project, e.g. bee farming, reindeer raising, Chinese herb plantation, tour guiding in PAs, etc. The PMO paid deliberate attention to the gender issue, and priority was given to female candidates with equal professional credentials.

3.3.7 Sustainability of project results

Financial risks:

The National Natural Forest Protection Programme (NFPP) and the proposed scheme for co-financing wetlands may provide the main sources of supplementing funding if the PA Action Plan programs are well organized, effectively presented and ready for implementation. However, TE

discussions indicated that PA managers and staff have concerns about both the capacity and funding to implement the proposed projects over the next five years.

Socio-economic risks:
There are no apparent socio-economic risks to ongoing development of the PA network. The socio-economic trade-offs that might be required for mainstreaming of biodiversity conservation into development sectors could present some issues but these are not considered risks. Willingness of existing land users to participate in biodiversity conservation is not known.

Institutional framework and governance risks:
The national commitment to wetland protection as a core feature of regional eco-development is likely to provide support for sustainability. The institutional framework along with the policy and financial support of government provide a strong basis for sustaining project results. The primary focus for ongoing work is the Action Plan and the agenda of DBCC which have established some momentum for further progress. A well-designed implementation program for the Action Plan and DBCC, clear outcome visions and realistic budgets along with a strong advocacy campaign for funding would assist in maintaining progress after project completion. The prospects for sustainability are subject to whether the systems and plans (mostly produced by contractors) and the capacity development and coordination mechanisms are sufficient to keep the momentum and commitment going through implementation of the action plan and management plans.

Environmental risks:
The environmental risks may be principally related to fire and flooding events and permafrost melting that alter the habitats and the ecosystem restoration efforts. Large scale fires, assisted by climate change, will have a direct affect on the landscape conservation strategy for the region.

3.3.8 Catalytic effect and impacts

The logging ban and PA expansion associated with the GEF project have stimulated a search for a new conservation-oriented regional economy. The future of landscape conservation in the region and impact of the project are tied to this transition. Elements of this include "(i) developing new livelihoods to reduce dependence on forestry, (ii) supporting economic transition, and (iii) providing income to retired foresters."[47] The changes in the shift to regional sustainable development have been directly related to the project.

[47]PMO, Self-Evaluation Report for Terminal Review (draft), Beijing, July 2018, P. 38.

The many studies, regulations, awareness-raising and capacity development have set the foundation for more professional PA management and biodiversity conservation that is having an impact on the future eco-development status of the region. The project has played an important role in catalyzing change compared to five years ago and in accelerating progress on conservation at a critical time in China's sustainable development trajectory.

4. Rating of Project Performance

The criteria for rating GEF projects are provided in the UNDP/GEF evaluation guidelines. Table 8 provides a summary explanation of the reasons for the ratings.

Table 8: Daxing'anling Project Rating

Rating Criteria (UNDP/GEF TE)	***Rate***	***Reasons for rating***
1. Monitoring and Evaluation		
M&E design at entry	***MS***	The quantitative indices of ecosystem health and management effectiveness provided generalized measures of PA status and selected ecosystem conditions during project implementation but did not capture specific capacity development and landscape conservation achievements and gaps. A broader set of monitoring parameters is needed for this. No monitoring officer was appointed at the start of the project.
M&E Plan Implementation	***S***	The project adequately implemented the M&E plan as per the project document. Post-training data however were not collected to assess effect of training on capacity development.
Overall quality of M&E	***S***	The M&E reporting and quarterly and annual reports provided a reasonable indication of progress in activities and outputs even where measurement of outcome results had limitations as noted above.
2. IA& EA Execution		
Quality of UNDP Implementation	***S***	The UNDP CO duties related to administration and financial and technical oversight and adaptive management were effectively implemented.
Quality of Execution - Executing Agency	***S***	The FMA duties associated with organisation and implementation of workplans, timely completion of activities and reporting were effectively implemented.
Overall quality of Implementation / Execution	***S***	Project management has been active and responsive to issues, and worked hard to promote coordination of government bodies and the introduction of biodiversity monitoring and reserve patrolling.
3. Assessment of Outcomes		
Relevance	***R***	The project has been directly aligned with and supportive of national and provincial policies and government directives on eco-civilisation.
Effectiveness	***S***	Most of the expected results have been achieved to an acceptable level in establishing the basic framework and capacity for PA planning and

		management and in PA network expansion. Mainstreaming conservation into other sectors and into a new regional economy is less successful.
Efficiency	***MS***	Some outputs have not directly contributed to management effectiveness – the main focus of the project, and contractor activities have not been fully owned by or transferred to PA authorities. This limits cost-effectiveness of extensive use of service providers. This efficiency concern is however, offset by large co-financing to match GEF funding.
Overall Project Outcome Rating	***S***	Outcome achievements have been significant given the baseline starting point, especially in the growth of the PA network and the institutional strengthening and coordination mechanisms. Less progress has occurred on landscape connectivity and conservation strategies outside of PAs.
4. Sustainability		
Financial resources:	***L***	Financing commitments linked to government policy have been significant, but there still remains some concern from stakeholders that these are not assured.
Socio-political:	***L***	There is increased awareness of the role of nature reserves and the importance of the biodiversity resources; the socio-political sustainability is linked to the national commitment for eco-civilization. Willingness of development sectors to participate in biodiversity conservation is unknown.
Institutional framework and governance:	***L***	New policies and regulations and institutional arrangements have been established to sustain project results. Effective sustainability of regional collaboration between IM and HJ will depend upon high level government support
Environmental:	***L***	The logging and hunting bans and increased area of PAs along with monitoring and patrolling will assist in environmental sustainability. Wildfire is a natural environmental risk.
Overall likelihood of sustainability:	***L***	There is a high likelihood that many of the outputs will be sustained where they have directly contributed to institutional capacity to monitor, patrol and manage the nature reserves, and where financing has been secured.

Rating categories as per the UNDP/GEF Evaluation guidelines:

Outcomes, Effectiveness, Efficiency, M&E,I&E Execution:	***Sustainability ratings:***
Highly Satisfactory (HS): no shortcomings Satisfactory (S): minor shortcomings Moderately Satisfactory (MS): moderate shortcomings Moderately Unsatisfactory (MU): significant shortcomings Unsatisfactory(U): major problems Highly Unsatisfactory (HU): severe problems	Likely (L): negligible risks to sustainability Moderately Likely (ML): moderate risks Moderately Unlikely (MU): significant risks Unlikely(U): severe risks ***Relevance ratings:*** Relevant (R) Not relevant (NR)

5. Lessons Learned

5.1 GEF Project Design and Implementation

- UNDP-supported GEF-financed projects in China provide not just funding, but more importantly, leveraging effects that generated increased awareness and financial contributions from government and a greater profile and recognition than would normally occur with national projects. The Chinese co-financing tends to focus on staff and infrastructure costs rather than joint funding of GEF capacity development activities. Given the context for GEF in China, a particular focus in the future could be placed on international, value-added technical collaboration, with capacity development placed at the center of the project design.

- Projects that have many components, sites, geographic spread and delivery agents need a well-defined Communication Strategy to assist coordination, discussions, synergies and mutual understanding of the project progress and issues by all the partners. The manner in which individual components/contracts work jointly toward some common results needs to be emphasized. A quarterly or monthly newsletter would have been a useful addition for better understanding of the project by participants and surrounding communities.

- Projects aimed at integrating biodiversity into development plans and practices need to have clear profile of those targeted sectors and the mechanisms for 'mainstreaming' environment into sustainable regional development

- Technical assistance by consultants/institutes (i.e. service providers) should include on-the-job training and joint work with counterpart government staff rather than as standalone outputs with unsure probability of utilization by PA staff. Capacity development requires the beneficiary agency to be placed at the center of project activities.

- Enhancing the staff skills is not enough for effective capacity development. Institutional systems need to be modernized – organizational structure, mandates and functions, job positions, technical standards, quality assurance and the physical resources and support to fully utilize new staff skills. This is often more difficult than simply training people.

- Wetland valuation studies provided useful classification of wetland functions and services. However, they would have more utility if they can be carefully focused on opportunities for

eco-compensation and PES schemes, particularly given the concerns of PA staff about financing PA management.[48]

- Future international projects need longer discussions and orientation of participants and senior government officials at the early stages.

5.2 Daxing'anling Biodiversity Conservation Programs

- The remoteness and cold climate of the PAs and difficulties recruiting qualified staff impose special constraints for advancing PA management effectiveness in the region. They also present opportunities for managed wilderness eco-tourism.

- There are deficiencies in natural resource and biodiversity information in the region that affect the ability to develop reliable management strategies and plans at the landscape and PA level. Prioritizing information gaps under Area 2 of the Action Plan (Annex 8) requires a strategic approach linked to primary PA management and biodiversity concerns/issues.

- The biodiversity landscape approach is primarily focused on expanding the area of PAs. It requires a better elaboration of four elements: i) ecosystem and hydrological linkages between the PAs, ii) the conservation activities in priority areas identified by the project, (iii) habitat and migratory routes of key wide-ranging species, and (iv) various means of adopting conservation and restoration measures in the forest, agricultural and other sectors within and outside of the PAs. The "critical connectivity points where genetic corridors are needed" have apparently been identified.[49]This needs to be placed in an overall landscape conservation strategy. (Core elements are noted in Section 3.2.3)

- Training activities should focus on professional standards and management priorities, and combined with organizational development in order to enhance PA management effectiveness. In addition, not all staff need to have advanced skills for monitoring data analyses, and some rationalization of monitoring functions in line with organizational structure may be the most efficient use of human resources.

[48] The project documented stated (p.13): "The forest soils and wetlands of the Daxing'anling landscape store vast quantities of water which provide crucial water resources for agriculture, urban and industrial use for tens of millions of people living in the downstream river basins and particularly the important Sanjiang plain, one of China's top eight grain production regions." There may be a case for developing a payment for watershed conservation scheme based on these downstream ecosystem services. Overseas training on PES was provided.

[49] PMO, Self-Evaluation Report for Terminal Review (draft), Beijing, July 2018, P. 30.

- Co-management has been primarily viewed as inter-agency coordination with formal exchanges between Heilongjiang and Inner Mongolia FMAs and some minor discussions with communities and indigenous people. The concept of co-management has been introduced in basic form but it is still evolving in theory and practice.

- Ecosystem 'restoration' activities have had a good start with the help of Northeast Institute of Geography and Agroecology. This effort needs to be pushed further by a bigger concept of returning some landscapes to pre-logging types (see the scale of fragmentation noted in the project document), converting former farmlands to diverse wetland habitats for certain species, ecosystem 'restoration' beyond quarry site revegetation and installation of road culverts toward a more ambitious spectrum of rehabilitation, restoration and enhancement opportunities, recognizing modern threats from wildfire and climate change.

- Major investments are required to implement the *Action Plan on Biodiversity Conservation and Sustainable Use in Daxing'anling Landscape* (Annex 8). Allocations of 2 Billion RMB ($312 M) have been reported as available for each province/region to address these needs but there is some uncertainty by project stakeholders over how much funding will be actually available for direct operational support of PA authorities. Additional funding from international sources is viewed by stakeholders as a key element for progress despite the promises of large central government financial support.

6. Conclusions and Recommendations

6.1 Conclusions

1. The project has made a major contribution to expanding the PA network and raising awareness, enhancing the PA management capacity and establishing the initial concept of a landscape approach to biodiversity conservation, including creation of a cross-border coordination body. This is significant, timely progress for biodiversity conservation in Daxing'anling region, the result of strong policy direction from the Central government and the impressive effort and enthusiasm of the project staff and their provincial and PA partners.

2. The project has benefited from high level decisions of the Government of China on a ban on logging by state enterprises (since 2015), to actively expand nature reserves and parks by over 1 million ha in the last five years. There are now 72 PAs, up from 42 PAs at project design.

Major cash co-financing from government ($28.7 M) has been provided to complement the GEF grant (approx. $ 3.54 M; $2.945 M spent to 30 June 2018.).

3. There have been notable challenges in developing the PA management capacity due to the newness of many of the PAs, the limited baseline data and human and other resources, and the remote locations which present difficulties to recruit qualified staff. At the outset of the project, most of the PAs had little capacity for monitoring and management of ecosystem and biodiversity values and PA visitors. The improved biodiversity and law enforcement monitoring capacity development is especially appreciated. But there are also concerns that some of the many project outputs produced may go under-utilized due to remaining capacity constraints. The TE discussions noted four primary concerns: a) securing ongoing programme funding to continue progress, b) recruitment of and maintaining additional staff needed to manage the expanded PAs, c) access to ongoing technical support to supplement the basic training that has been provided, and d) formally establishing the landscape network of PA and non-PA habitats for regional biodiversity conservation.

4. The expectations for *mainstreaming* – integrating biodiversity into development sectors and practices and the adoption of PA *co-management* processes with local communities and indigenous tribes may be constrained by institutional and political barriers to collaboration (including sharing information). Integrating conservation into other sectors awaits further decisions on land use outside of the PAs and related strategies for a new conservation-oriented regional economy. Co-management between governments and with communities is a work in progress that has benefited from the preliminary efforts made by the project.

5. Project design issues that emerged during implementation included (i) the high dependence on contractors to deliver outputs that were sometimes not well linked (e.g., DXAL BC Action Plan, PA Master Plans and demonstration Integrated Management Plans), (ii) lack of information on ecosystem subtype representation in the PA system [50], (iii) capacity development focussed on separate training events and equipment without an overall strategy and reference level for PA management requirements, (iv) under-estimation of the challenges to introducing biodiversity conservation in other sectors and to adopting a landscape conservation strategy beyond PAs, and (v) limited means so far for local communities and indigenous people to participate in biodiversity conservation.

[50]Some of these types are noted in the project document: the question is - does the PA system protect all representative ecosystem types?

6. The objective of the project – strengthening PA management effectiveness, has been met as per the reported data on financial sustainability, METT scores (up by 20% overall) and environmental health indices (up 20% in 12 selected PAs). Job creation (reported as close to 900 jobs but data not verified). Capacity issues were elaborated during TE interviews and the Capacity Scorecard Report to provide elaboration of the gaps that currently remain in the management capacity and the need for further progress.

7. Outcome 1 involved *developing the planning frameworks* including increased area of PAs, upgraded legal status of some of the PAs, improved laws and regulations, establishment of the Biodiversity Conservation Coordinating Committee and preparation of an Action Plan for the DXAL landscape. A wetland valuation study was completed, with very high hypothetical conservation values (estimated at $107 billion/yr). The expectation of increased conservation activity in various development sectors, with the exception of FMA responsibilities, may have been overly ambitious.

8. Outcome 2 involved *PA management effectiveness capacity development* including increased government funding and financial planning, a variety of training activities (1500 participants) and expanded patrolling and other management activities by PA staff. TE interviewees recognized the progress as well as the gaps in capacity (institutional and human resources) for implementation of PA management functions. The issue of competency standards for certified PA staff also remains unfinished.

9. Outcome 3 involved *demonstration of enhanced management effectiveness in Duobuku'er National Nature Reserve and Genheyuan National Wetland Park* including upgraded Master Plans, new Integrated Management Plans and financing plans (neither officially approved), development of ecological and biophysical monitoring protocols, installation of information boards, education program initiatives, ecosystem site rehabilitation demonstrations and a new information management system, as well as several households demonstrating alternative livelihoods (ecotourism, bee keeping, livestock raising).

10. The structures and capacity for improved PA management have been developed to provide the initial framework but operationalizing this framework will depend upon follow-up support. The prospects for sustainability are moderate and subject to whether the systems and plans (mostly produced by contractors) and the capacity development and coordination mechanisms are sufficient to keep the momentum and commitment going through implementation of the action plan and management plans.

11. While there have been some inefficiencies in linking project components within an overall capacity development and landscape conservation strategy, the delivery and oversight of the many contracts has been generally effective with no major issues reported. PSC meetings have occurred as planned and reasonable effort was made to respond to the MTR recommendations for items that were clearly actionable by the project (notwithstanding further work on staff 'competency standards' and certification).

12. The management strategies for reindeer populations are directly linked to the cultural status and livelihoods of the local Ewenki tribe who need to have a more formal part in the co-management arrangements and the forest and wildlife protection programs. Captive breeding and rearing of reindeer is not a long-term solution for isolated herds and restrictions on Ewenki people travelling with migrating reindeer may need reconsideration within the landscape conservation strategy.[51]

13. There is a high level of project ownership and commitment by participants and strong interest in ongoing development of the PA system by central and provincial FMAs, even if there is uncertain capacity to implement the many plans from the project. The project has been effectively implemented with diligence and enthusiasm by project and government staff and contractors, although with a few incomplete outputs noted above.

6.2 Recommendations

1. The PMO and service providers should consolidate, update and distribute the 'PA institutional strengthening plan' as a guide for ongoing capacity development.

Rationale: Ongoing capacity development is a key issue for project closure and sustainability. The institutional plan needs to be formally documented and made transparent as a guide for organisational and human resources development. It should address (i) organisational structure, management coordination, and technical procedures for PA management (infrastructure, environment, education and compliance), (ii) financial planning, (iii) staff training and mentoring, (iv) database applications and management, and (v) certification requirements for PA staff positions. This could include rationalisation of the ecosystem and

[51] "In China, the reindeer population is only distributed around the Genhe river city of Inner Mongolia at the northwest foot of DXAL. The total number is about 800. At present, reindeer extant populations belong to 12 separate populations. As each population lives on an "isolated island", with a very high degree of inbreeding, the population degradation become serious, the size, the quality and symmetry of the deer are declining year by year, with an increasing death rate and decreasing birth rate year by year. In the meantime, the culture of the Aulugoya tribe faces severe loss. To strengthen the number of reindeer population and improve the quality of the deer, 145 deer was introduced from the Finland via the Northlands by the park in 2017 and 2018 respectively. High grade deer will be provided to the Aulugoya when the population become enriched.", Project Document, 2014.

water quality monitoring functions given the isolated location of some reserves and the need for technical backstopping of PA staff. Stakeholders are not fully aware of the plan.

2. **The Daxing'anling Biodiversity Conservation Committee should prepare a multi-year implementation program for the *DXAL Landscape Biodiversity Conservation Action Plan, and* NFGA should support the relevant forestry management bureaus to continue actively participating in implementing the program.**

Rationale: The 29 priority areas in the Action Plan need a well-defined implementation and funding program to guide further progress, including a system for monitoring and reporting on results. This would be useful wrap-up output for the project, setting the stage for ongoing coordination of targeted activities and advocacy for financing the Plan. Responsibilities for implementing the priorities in the Action Plan are currently unclear.

3. **NFGA should undertake further classification and mapping of the *Daxing'anling*taiga ecosystems and ensure that representative ecosystem types in the landscape are protected by the PA system in coordination with habitats for key species of concern.**

Rationale: Ecosystem mapping is needed to determine the extent to which existing and future PAs serve to protect representative ecosystem types. This classification and mapping of ecosystem types would also help to customize landscape management objectives and habitat protection measures. This mapping could build upon the work of the Northeast Institute of Geography and Agroecology ecosystem services group.

4. **The Daxing'anling Biodiversity Conservation Committee should develop a landscape biodiversity conservation strategy as input for land use and redline consultations with other sectors and regional sustainable development initiatives.**

Rationale: A landscape strategy for conservation should identify opportunities for (i) functional linkages between PAs, (ii) conservation measures in the six identified priority areas (Beijing Forestry University), (iii) conservation measures on non-PA agricultural and forest lands and (iv) habitat and migration route protective measures for specified large-range species such reindeer and other species. This overall strategy is needed to define the regional requirements for conservation.

5. **NFGA should develop a process for follow-up monitoring and reporting on ecosystem restoration project sites by the responsible authorities and formulate lessons learned and guidelines for future rehabilitation, restoration and enhancement projects.**

Rationale: The results of the project's restoration activities in terms of enhancing ecosystem attributes and services need to be documented to assist future programs based on the lessons learned.

6. **DBCC should take steps to broaden the co-management relationships with local communities and Evenki tribes, for example by including representatives as designated members or observers in annual meetings and ongoing work of DBCC.**

Rationale: DBCC is mostly a government coordination body. Greater participation of local and indigenous people (Evenki Aulugoya tribe) could facilitate local support and cooperation and expand the opportunities for local advice and consensus on conservation issues.

7. **DBCC should develop a long-term reindeer management strategy for *Daxing'anling* landscape in consultation with the local people and technical experts facing similar issues in Russia and elsewhere.**

Rationale: The decline in reindeer populations may have been associated with logging activities leading to isolated herds and related resettlement of reindeer-herding people. The 12 herds located around Genhe have become fragmented and there may now be opportunities to enhance migration and habitat conditions given the absence of human activities and slow maturing of the forests. Ewenki people are not permitted to follow the herds during forest closure and there are uncertainties about habitat availability and animal health that need to be addressed in a long-term plan that includes cultural considerations.

8. **DBCC should undertake a consultation program with the over 200 households living in *Daxing'anling* PAs with the aim of further engaging local residents as partners in conservation of the biodiversity and proponents of alternative livelihoods, including modified, conservation-friendly agriculture where appropriate.**

Rationale: The biodiversity conservation program will need to eventually address the options for rural residents and farmers inside and outside the PAs. The development of alternative livelihoods had been limited despite project efforts. There are potential benefits from broadening the dialogue with local communities on PA land use and management.

9. **China Academy of Sciences should be invited to assist in research on managing wildfire due to the build-up of fuel in the landscape and the changing climate, and the implications for fire and pest risk management as part of the biodiversity conservation action plan and national climate change adaptation plans.**

Rationale: Fire ecology will be increasingly important to PA management authorities due to climate change and elimination of logging. Knowledge is needed, with the help of national and international experts, on the historical fire events that shaped ecosystems, the likely increase in wildfire vulnerability under climate change, and the implications for fire management strategies.

10. **UNDP should facilitate further discussions and sharing of experiences and lessons between the seven projects of the GEF China Wetland Protected Area System Programme, including review of alternative project implementation strategies.**

Rationale: In Daxing'anling landscape, capacity development faces special circumstances because of the location and size of the reserves. Lessons from other project could help to refine the future capacity development program. GEF project implementation strategies have focused on contracting many external service providers in completing the required outputs. With so many contractors – institutes, universities, private consultants, the uptake and ownership of the outputs by the host PA authorities becomes less certain; transfer of knowledge and experience and skills that can be used to implement the advice and outputs from the service providers is indirect and not always sustainable. The completion of the current GEF program provides an opportunity to compare experiences and extract important lessons – success and failure, strengths and weaknesses.

Annexes

Annex 1: Terms of Reference

INTRODUCTION

In accordance with UNDP and GEF M&E policies and procedures, all full and medium-sized UNDP support GEF financed projects are required to undergo a terminal evaluation upon completion of implementation. These terms of reference (TOR) set out the expectations for a *Terminal Evaluation (TE) of the two sister projects under the same CBPF-MSL (China Biodiversity Partnership Framework-Mainstream of Life) programme, they are:* ***Project 1 (DXAL Project, PIMS 4824****), Strengthening the management effectiveness of the protected area network in the Daxing'anling Landscape;* ***Project 2 (Hubei Project, PIMS 4823****), Strengthening the management effectiveness of the wetland protected area system in Hubei Province.*

The essentials of the project to be evaluated are as follows:

Project Summary Table

Please find the detailed summary tables for 2 project in attachment

Objective and Scope

The project was designed to:

Project 1: The project **goal** is ***to conserve the globally significant biodiversity of the Daxing'anling Landscape, as a key asset for sustainable development.*** The project **objective** is ***to strengthen the management effectiveness of protected areas to respond to threats to the globally significant biodiversity in the Daxing'anling Landscape of Heilongjiang Province and Inner Mongolia Autonomous Region*****.**

Three outcomes including:

Outcome 1: Development planning frameworks for the Daxing'anling Landscape provide the enabling environment for expanding the forest and wetland PA network and mainstreaming biodiversity as an asset for sustainable development

Outcome 2: The management effectiveness of the PA network across the Daxing'anling landscape is greatly strengthened

Outcome 3: Effective PA management is demonstrated in the Duobuku'er NNR and the Genheyuan NWP

Hubei Project 2: The **project objective** is to strengthen the management effectiveness of the wetland protected area system of Hubei province in response to existing and emerging threats to the globally significant biodiversity and essential ecosystem services.

The objective will be achieved through three outcomes:

Outcome 1: Establishment of Provincial level capacity to identify and alleviate wetlands conservation threats;

Outcome 2: Establishment of water-basin level capacity to identify and alleviate wetlands conservation threats;

Outcome 3: Establishment of protected area administration capacity to identify and alleviate wetlands conservation threats.

The sum of these three outcomes will be an institutional and policy safety net for WPA's that incorporates and coordinates conservation across all three management tiers: basin, province, and protected area.

The TE will be conducted according to the guidance, rules and procedures established by UNDP and GEF as reflected in the UNDP Evaluation Guidance for GEF Financed Projects.

The objectives of the evaluation are to assess the achievement of project results, and to draw lessons that can both improve the sustainability of benefits from this project, and aid in the overall enhancement of UNDP programming.

Evaluation approach and method

An overall approach and method for conducting project terminal evaluations of UNDP supported GEF financed projects has developed over time. The evaluator is expected to frame the evaluation effort using the criteria of **relevance, effectiveness, efficiency, sustainability, and impact,** as defined and explained in the UNDP Guidance for Conducting Terminal Evaluations of UNDP-supported, GEF-financed Projects. A set of questions covering each of these criteria have been drafted and are included with this TOR (*fill in Annex C*) The evaluator is expected to amend, complete and submit this matrix as part of an evaluation inception report, and shall include it as an annex to the final report.

The evaluation must provide evidence-based information that is credible, reliable and useful. The evaluator is expected to follow a participatory and consultative approach ensuring close engagement with government counterparts, in particular the GEF operational focal point, UNDP Country Office, project team, UNDP GEF Technical Adviser based in the region and key stakeholders. The evaluator is expected to conduct a field mission to *China*, including the following project sites *including Hubei, Inner Mongolia and Heilongjiang Provinces.* Interviews will be held with the following organizations and individuals at a minimum: (*UNDP, SFA, and Forestry Authorities in Hubei, Inner Mongolia and Heilongjiang Provinces*).

The evaluator will review all relevant sources of information, such as the project document, project reports – including Annual APR/PIR, project budget revisions, midterm review, progress reports, GEF focal area tracking tools, project files, national strategic and legal documents, and any other materials that the evaluator considers useful for this evidence-based assessment. A list of documents that the project team will provide to the evaluator for review is included in Annex B of this Terms of Reference.

Evaluation Criteria & Ratings

An assessment of project performance will be carried out, based against expectations set out in the Project Logical Framework/Results Framework (see Annex A), which provides performance and impact indicators for project implementation along with their corresponding means of verification. The evaluation will at a minimum cover the criteria of: **relevance, effectiveness, efficiency, sustainability and impact.** Ratings must be provided on the following performance criteria (find the Evaluation Ratings Table in attachment). The completed table must be included in the evaluation executive summary. The obligatory rating scales are included in Annex D.

Project finance / cofinance

The Evaluation will assess the key financial aspects of the project, including the extent of co-financing planned and realized. Project cost and funding data will be required, including annual expenditures. Variances between planned and actual expenditures will need to be assessed and explained. Results from recent financial audits, as available, should be taken into consideration. The evaluator(s) will receive assistance from the Country Office (CO) and Project Team to obtain financial data in order to complete the co-financing table (find in attachment), which will be included in the terminal evaluation report.

Mainstreaming

UNDP supported GEF financed projects are key components in UNDP country programming, as well as regional and global programmes. The evaluation will assess the extent to which the project was successfully mainstreamed with other UNDP priorities, including poverty alleviation, improved governance, the prevention and recovery from natural disasters, and gender.

Impact

The evaluators will assess the extent to which the project is achieving impacts or progressing towards the achievement of impacts. Key findings that should be brought out in the evaluations include whether the project has demonstrated: a) verifiable improvements in ecological status, b) verifiable reductions in stress on ecological systems, and/or c) demonstrated progress towards these impact achievements.[2]

Conclusions, recommendations & lessons

The evaluation report must include a chapter providing a set of **conclusions**, **recommendations** and **lessons**.

Implementation arrangements

The principal responsibility for managing this evaluation resides with the UNDP CO in *(include Country name)*. The UNDP CO will contract the evaluators and ensure the timely provision of per diems and travel arrangements within the country for the evaluation team. The Project Team will be responsible for liaising with the Evaluators team to set up stakeholder interviews, arrange field visits, coordinate with the Government etc.

Evaluation timeframe

The total duration of the evaluation will be 55 days according to the following plan:

Activity-Timing-Completion Date

Preparation-6 days-July 15, 2018

Evaluation Mssion-22 days-August 10, 2018

Draft Evaluation Report-22 days-Sep 5, 2018

Final Report-6 days- Sep 20, 2018

Evaluation deliverables

The evaluation team is expected to deliver the following, please find in the attachment.

*When submitting the final evaluation report, the evaluator is required also to provide an 'audit trail', detailing how all received comments have (and have not) been addressed in the final evaluation report.

Team Composition

The evaluation team will be composed of *1 international and 1 national evaluator*. The consultants shall have prior experience in evaluating similar projects. Experience with GEF financed projects is an advantage. The *international evaluator will be designated as the team leader and will be responsible for finalizing the report.* The evaluators selected should not have participated in the project preparation and/or implementation and should not have conflict of interest with project related activities.

The Team members must present the following qualifications:

[1] For additional information on methods, see the Handbook on Planning, Monitoring and Evaluating for Development Results, Chapter 7, pg. 163

[2] A useful tool for gauging progress to impact is the Review of Outcomes to Impacts (ROtI) method developed by the GEF Evaluation Office: ROTI Handbook 2009

Annex 2: Evaluation Criteria

Criteria	Evaluation Questions	Indicators	Data Sources
Relevance The acceptance, suitability and practicality of the project concept and implementation strategy and the extent of alignment with national policies frameworks, local needs and UNDP country programming.	To what extent were the projects aligned with local, provincial and national development priorities and policies? Given the experience, is the project concept and approach still accepted as relevant and achievable and in-line with country priorities? To what extent is the project integrated with country/partner institutions and programmes ('mainstreaming')? Was the Project Strategy the most effective route towards planned results? To what extent do the underlying assumptions remain valid?	Stakeholder views of the project concept and approach Changes in priorities that may have affect relevance of the project Extent of partners involvement and ownership including integration into ongoing programmes Evidence of validity of key assumptions associated with project results	Review of alignment with government programmes and institutions Interview data on relevance of the project Interview data on the quality of the project design
Effectiveness The achievement and timeliness of the targeted outcomes and outputs per the Project Document and Annual Workplans, including cross-cutting results related to development, gender and environmental sustainability.	What quantitative and qualitative achievements have occurred in terms of output/outcome targets? To what extent has biodiversity conservation been integrated into national/local development systems? How has PA and conservation management capacity changed as a result of the project? Examples? Have ecosystem service studies and PA business plans led to improved PA management? Examples? What contributions to cross cutting gender and environmental sustainability objectives can be observed? What specific gaps, if any, remain to be addressed in Outcomes 1, 2 and 3?	Reported progress per the ProDoc Indicators Evidence of commitments to integration into future development Capacity scorecard ratings, organizational changes and post-training assessments Studies and business plans completed and adopted Disaggregated gender data on project activities and beneficiaries Unfinished activities in annual workplans	Compilation of data on reported results of project interventions including PIRs Review of development plans and PA changes Interviews with project participants Field observation on quality of measures implemented
Efficiency The clarity and effectiveness of work planning and implementation duties and reporting relationships, coordination and communication between	Implementing arrangements: How effective are the working relationships and coordination and communication between partners and contractors? Work planning: Is the annual work plan preparation participatory? Finance/cofinancing: Has project financing and budgeting occurred as planned?	Understanding of roles/responsibilities Participant satisfaction Stakeholder participation in AWP preparation Expenditures in relation to annual budgets	Analysis of implementation modalities Assessment of AWP processes Review of expenditures and co-financing contributions

implementing organisations and levels, project management structure effectiveness and responsiveness ('adaptive management'), efficiency of the administration and quality/timeliness of the monitoring and reporting systems.	Project efficiency/cost effectiveness: Has the project been generally efficient and cost effective in relation to results? Project management: Have the project management bodies and partners been effectively engaged in guiding the project and adapting to project implementation issues? Monitoring and reporting: The reliability and usability of the project Indicators for monitoring and reporting against baseline conditions, the quality of the monitoring plan/reports, and the effectiveness of the monitoring system and data quality.	Co-financing and in-kind contributions provided Efficiency of disbursements and financial management Outputs achieved relative to costs; value for money Proportion of costs for project management Pro-active meetings/actions of management bodies Use of project indicators in progress reports Monitoring of cross-cutting issues in progress reports	and financial audit reports Analysis of any delays Analysis of project events and milestones and working relationships between stakeholders Progress reports
Sustainability The conditions necessary for project-related benefits and results being sustained after the project is completed and any risks affecting project implementation and replication potential.	Sustainability planning: To what extent does the project explicitly consider sustainability expectations and a project exit strategy? Institutional sustainability: What institutional development measures have enhanced sustainability? Policy sustainability: What policy development measures have enhanced sustainability? Financial sustainability: What financial commitment or business case developments will enhance sustainability? Risk identification: Have the critical risks been sufficiently addressed? Replication potential: Are the necessary conditions in place to support learning and adoption of project stategies?	Sustainability strategies in the project design and delivery Extent of capacity development within targeted organisations Changes in policy to sustain project results Financial means to sustain and replicate project results Validity and importance of the risks identified in the ProDoc/ ATLAS Risk Management Module Observed replication activity that supports sustainability	Assessment of institutional capacity development and stakeholder commitment Sustainability analysis from interview data Risk analysis using ProDoc and ATLAS Scan of replication activity in project jurisdictions
Impact The effects of the project on long termbiodiversity conservation and the capacity of government and local communities to facilitate conservation and PA management.	Are there indications that the project has contributed to, or enabled widespread progress towardlong term improvements in biodiversity conservation? Is there specific evidence of changes in development processes and trends toward systemic changes in institutions and approaches to protected areas?	Number and area of Pas Trends in selected species of concern Increased institutional capacity to address conservation and PA management Transfer of knowledge and experience to other areas and provinces.	Data on PAs and species at risk Data on capacity rating of relevant organisations Interviews with project stakeholders

Annex 3: Interview Guide

Project Formulation

1. Did you observe any problems or gaps in the project design or approach that affected project implementation?

2. Was there adequate participation of stakeholders and beneficiaries in the project formulation? (How were you involved?)

3. Has the project strategy – to provide technical support, capacity development and advocacy for protected areas, been effective? What were the strengths and weaknesses of this approach?

Project Implementation

4. How effective and efficient was the Project Structure in facilitating project coordination, communications and implementation at national, provincial and local levels? Would you have changed anything in hindsight?

5. Has annual work planning and budgeting been effective? Have actual disbursements been in line with annual budgets, work plans and schedules (discuss Fin. Tables)? Were there any delays in administrative processes?

6. Have the project management bodies been sufficiently active in guiding and responding to issues? (Examples?) Are any MTR responses incomplete?

7. Have the project monitoring indicators been effective and feasible for reporting on progress?Do METT, EH, CAP indices provide reliable measures of change?

8. What have been the major challenges or issues in implementing the project? Are there lessons for design of future projects?

9. What are the project expenditures by outcome/output components? How has the large cash co-financing been used?

Project Results

10. What aspects of the project have been most successful, and which least successful? Which specific measures have proven the potential for replication?

11. Can you explain *the key factors* that have contributed toward the project results – either positive or negative?

12. What has been the most apparent change in PA management capacity that you have seen from the project? What gaps remain in capacity development?

13. What is the most important learning or skill, if any, that you have acquired from the project trainings or demonstrations? Post-training data?

14. From your experience, what are the best practices and key lessons that can be highlighted at the project sites?

15. Are there any expected results that have not been completely achieved or are not fully satisfactory?

Sustainability

16. Do you think that the similar activities and support for expanding and improving PAs will be continued after the project closes? Why? Why not?

17. Are there any exit strategies for the project? What actions could be considered to enhance sustainability?

Impact

18. Should any further changes in government policy or regulations be considered to assist the expansion of protected areas and landscape biodiversity conservation?

19. Are there any examples of alternative livelihoods that have succeeded in conjunction with conservation that could provide models for replication? What jobs and revenues have developed?

If the project was undertaken again, what if anything, should be done differently?

Annex 4: TE Mission Itinerary and interviews

Date 日期	Time 时间	Theme 内容	Venue 地点	Participants 参加人员
2018/7/23 Monday 周一	PM/ 下午 14:00- 15:30	Meeting with staffs of NPMO, NPMO will present the progress by PPT 与项目办公室同事座谈，项目办通过 PPT 介绍大兴安岭项目情况	Meeting room, 6 floor, Baonneg Center, Futong East street, Chaoyang District, Beijing 宝能大厦 A 座 6 层会议室，北京朝阳区阜通东大街	NPMO staffs 项目办人员
	PM/ 下午 15:30- 17:00	meeting with Mr. BaoDaming, the chief engineer of OWCM/NFGA 与国家林业与草原局湿地保护管理中心鲍达明总工座谈	Meeting room, 6 floor, Baonneg Center, Futong East street, Chaoyang District, Beijing 宝能大厦 A 座 6 层会议室，北京朝阳区阜通东大街	Mr. BaoDaming, NPMO staff and OWCM staff 鲍总，湿地办其他同事以及项目办人员
	PM/ 下午 17:40-	Dinner 晚餐		
2018/7/24 Tuesday 周二	AM/ 上午 06:05- 08:25	Departure for field trip to Inner Mongolia Daxing'anling 出发前往内蒙古大兴安岭实地考察	Beijing- Hailaer 北京-海拉尔，CA1131，06:05-08:25	TE consultantsand NPMO staff 评估专家、项目办随行人员
	AM/ 上午 08:40- 12:30	Travel to Genheyuan NWP 乘车前往根河源国家湿地公园	Genheyuan NWP 内蒙古根河源国家湿地公园	TE consultants，NPMO staff, Provincial PMO staff 评估专家、项目办随行人员、当地随行人员
	PM/ 下午 12:30- 12:40	Hotel Check in, Genheyuan NWP 酒店入住	Genheyuan NWP 内蒙古根河源国家湿地公园	
	PM/ 下午 12:40- 14:00	Lunch 午饭		T
	PM/ 下午 14:30- 17:30	Meetings with staffs of Forestry Administration of Inner Mongolia Daxing'anling, Genheyuan NWP and representatives of selected 5 project sites respectively 分别与内蒙古大兴安岭林	Meeting room of Genhuyuan NWP 根河源国家湿地公园会议室	TE consultants，NPMO staff, Provincial PMO staff, representatives from 5 PAs 评估专家、项目办随行人员、当地随行人员,5 个保护地代表

		管局、根河源国家湿地公园相关人员以及 5 个监测保护地代表座谈		
	PM/ 下午 18:00	Dinner 晚餐		
2018/7/25 Wednesday 周三	AM/ 上午 08:00-15:00	Field visit in Genheyuan NWP 实地考察根河源国家湿地公园	Genheyuan NWP functional zone 根河源国家湿地公园功能区	TE consultants，NPMO staff, Provincial PMO staff 评估专家、项目办随行人员、当地随行人员
	AM/ 下午 15:00-18:00	Visit ecological education museum of Hanma NNR 参观位于根河市的汗马国家级自然保护区生态宣教馆	Genhe 根河	TE consultants，NPMO staff, Provincial PMO staff 评估专家、项目办随行人员、当地随行人员
	AM/ 下午 18:00-	Dinner and stay overnight 晚餐及住宿	Genheyuan NWP 内蒙古根河源国家湿地公园	TE consultants， PMO staffs, Mr. LvLiankuan, Mr. Song Baizhong, Mr. Li Jixiang and colleagues of Genheyuan NWP 评估专家、项目办随行人员、当地随行人员
2018/7/26 Thursday 周四	AM/ 上午 08:00-12:00	Travel and field visit in Tulihe NWP 乘车前往并实地考察图里河国家湿地公园	Tulihe NWP 内蒙古图里河湿地公园	TE consultants， PMO staffs, Mr. LvLiankuan, Mr. Song Baizhong, Mr. Li Jixiang and colleagues of Tulihe NWP 评估专家、项目办随行人员、当地随行人员
	AM/ 上午 12:00-13:30	Lunch 午餐	Tulihe NWP 内蒙古图里河国家湿地公园	TE consultants， PMO staffs, Mr. LvLiankuan, Mr. Song Baizhong, Mr. Li Jixiang and colleagues of Hanma NNR 评估专家、项目办随行人员、当地随行人员
	PM/ 下午 13:30-15:00	Meeting with working staff of Tulihe NWP 与图里河国家湿地公园工作人员座谈	Tulihe NWP 内蒙古图里河国家湿地公园	TE consultants， PMO staffs, Mr. LvLiankuan, Mr. Li Jixiang and colleagues of Tulihe NWP 评估专家、项目办随行人员、当地随行人员
	PM/ 下午 15:00-19:30	Travel to Jiagedaqi，Heilongjiang Daxing'anling 乘车前往加格达奇	Jiagedaqi 加格达奇	TE consultants，NPMO staff, Provincial PMO staff, representative from Hanma NNR 评估专家、项目办随行人员、当地随行人员

	PM/ 下午 19:30-	Check in and dinner 入住及晚餐	Jiagedaqi 加格达奇	TE consultants，NPMO staffs, Provincial PMO staff, Duobukuˈer NNR staff 评估专家、项目办随行人员、当地随行人员、多布库尔国家级自然保护区相关人员
2018/7/27 周五 Friday	AM/ 上午 08:30-11:30	Meetings with staffs of Heilongjiang Daxing'anling Forestry Administration, Duobukuer NNR and representatives of selected 5 project sites respectively 分别与黑龙江大兴安岭林管局、多布库尔国家级自然保护区相关人员以及 5 个监测保护地代表座谈	Duobukuer NNR 多布库尔国家级自然保护区	TE consultants，NPMO staff, Provincial PMO staff and representatives of 5 PA 评估专家、翻译、项目办随行人员、当地随行人员、多布库尔国家级自然保护区及 5 个监测保护地代表
	AM/ 上午 11:30-13:00	Lunch 午餐	Jiagedaqi 加格达奇	
	PM/ 下午 13:30-18:00	Field visit in Duobukuer NNR 实地考察多布库尔国家级自然保护区	Duobukuer NNR 多布库尔国家级自然保护区	TE consultants，NPMO staffs, Provincial PMO staff, Duobuku'er NNR staff 评估专家、项目办随行人员、当地随行人员、多布库尔国家级自然保护区相关人员
	PM/ 下午 18:00-	Dinner and go back to hotel 晚餐并返回酒店	Jiagedaqi 加格达奇	TE consultants，interpreter , PMO staffs, Mr. Sun Kesi, Mr. Han Fengquan, Mr. HouPeng and Mr. Ren Tao，other colleagues of Duobukuer NNR 评估专家、翻译、项目办随行人员、当地随行人员、多布库尔国家级自然保护区相关人员
2018/7/28 周六 Saturday	AM/ 上午 08:30-11:30	materials collection and report preparation 终期评估资料收集和报告准备	Jiagedaqi 加格达奇	
	AM/ 上午 11:30-12:30	Lunch 午餐	Jiagedaqi 加格达奇	TE consultants, NPMO staff, Provincial PMO staff,Duobuku'er NNR staff and representatives of 5 project sites 评估专家、项目办随行人员、当地随行人员、多布库尔国家级自然保护区相关人员

	AM/ 上午 12:30- 13:00	Travel to the airport of Jiagedaqi 乘车前往加格达奇机场	Jiagedaqi 加格达奇	
	PM/ 下午 13:35- 15:00	Flight MU2468, from Jiagedaqi to Haerbin 乘坐东航 MU2468 加格达奇飞往哈尔滨	Harbin 哈尔滨 MU2468 13:35-15:00 Jiagedaqi to Harbin	
	PM/ 下午 15:00- 18:00	Travel from Harbin to Changchun 从哈尔滨乘车赶往长春	Changchun 长春	
	PM/ 下午 18:00-	Hotel check in and dinner 酒店入住及晚餐	Changchun 长春	
2018/7/29 周日 Sunday	AM/ 上午 09:00- 12:00	Meeting with subcontractors 与合同分包团队讨论	northeast institute of geography and agriculture, Chinese academy of sciences 中科院东北地理与农业生态研究	TE consultants， NPMO staff and Northeast institute of geography and agriculture, Chinese academy of sciences staff 评估专家、项目办随行人员以及中科院东北地理与农业生态研究所同事
	AM/ 上午 12:00- 13:30	Lunch 午餐		
	PM/ 下午 13:30- 14:30	Travel to Changchun airport 乘车前往机场	Changchun airport 长春机场	
	PM/ 下午 15:45- 17:45	Flight from Changchun to Beijing 乘机从长春返回北京	Beijing 北京 CA1650 1545:1745 Changchun-Beijing	
	PM/ 下午 18:00	Taxi from airport and hotel check in 出租车从机场返回酒店并重新入住酒店	Beijing 北京	
2018/7/30 周一 Monday	AM/ 上午 09:00- 11:30	Meeting with subcontracts, two subcontracts team will be arranged 分包合同团队见面，安排两个分包团队	AFIP/ NSGA 国家林业局调查规划设计院会议室	subcontracts team representatives 分包团队代表

	AM/ 上午 11:30- 12:00	Meeting with PMOs for supplementing necessary materials and answer questions from TE group; and say goodbye 与项目办简短会议，项目办补充必要材料并回答评估组问题；告别	Longshaoheng Tower 和平里南街龙绍衡大厦	NPMO staffs 项目办人员
	AM/ 上午 12:00- 13:30	Lunch 午餐		

List of persons interviewed

姓名 **Name**	**性别** **Gender**	**单位** **Organization**	**职务** **Position**
Lisa Farroway	F	UNDP reginal office	Technical advisor
鲍达明 BaoDaming	男 M	国家林草局湿地保护管理中心 Office of Wetlands Conservation and Management (OWCM/ NFGA)	总工程师 chief engineer
李琰 Li Yan	女 F	国家林草局湿地保护管理中心 OWCM/ NFGA	副主任 Deputy director general
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Annex 5: List of Documents Reviewed

Document	**Language Eng/Chi**
Project Identification Form (PIF)	Eng/Chi
Request for CEO Endorsement/Approval	Eng
Project Document, signed version	Eng/Chi
Project TE Inception Report	Eng
Midterm Review Synthesis Report, 2016, CBPF – Main Streams of Life (MSL): Wetland PA System Strengthening for Biodiversity Conservation	Eng
Financial Expenditures broken down by outcome	Eng
Financial Audits Reports	Eng/Chi
Transfer agreement between AFIP and FMA of HLJ and DXAL	Eng/Chi
Co-Financing realized (amount, source)	Chi
CDRs	Eng
A brochure with general information of Daxing'anling Project	Chi/Eng
Project Implementation Report (PIR)	Eng
Two-Year Work-Plan (TYWP)	Eng
Quarterly and Annual Report (QR)	Eng
List of service providers for Daxing'anling project	Eng
List of trainings participated and organized	Eng
Supplementary materials of National project (two reports, one for training and another for the Occupational Competency Standards for PA Jobs)	Chi
PSC minutes	Chi
Contact lists of PMO， PMU and NPD	Chi
Materials for public awareness raising (including film, folding, books, single page, etc.)	Chi/Eng
Outputs related evidence materials contributed to 3 outcomes (detail see doc.-9SC-output)	Chi/Eng
Project Self-Assessment Report with annex	Eng/Chi
Tracking Tools (baseline， MTR and TE)	
Terminal evaluation report on METT of Daxing'anling GEF Project Sites	Eng
Terminal evaluation report on EHI of Project Sites	Eng
Financial Sustainability Scorecard	Eng
Capacity Development Scorecard	Eng

ANNEX 6
Summary of Project Achievements

Project Results and Indicators	Baseline Level	Target level at end of project	Summary of reported achievements to July 2018	Terminal Evaluation Comments
Objective: To strengthen the management effectiveness of protected areas to respond to threats to the globally significant biodiversity in the Daxing'anling Landscape of Heilongjiang Province and Inner Mongolia Autonomous Region.				
Financial sustainability score (%) for provincial systems of protected areas: - Component 1 – Legal, regulatory and institutional frameworks - Component 2 – Business planning and tools for cost-effective management - Component 3 – Tools for revenue generation - TOTAL	25%(HJ),23%(IM) 14%(HJ),14%(IM) 7%(HJ),8%(IM) 16.4%(HJ),16.0%(IM)	50% (for both HJ and IM) 25% 15% 30%	51 % (HJ), 60% (IM) 42% (HJ), 44% (IM) 30% (HJ), 46% (IM) 41.8 % (HJ), 52% (IM) (from 16.4, 166%) The MTR values are shown below, 28% (HJ) 29% (IM) 15%(HJ) 29% (IM) 7% (HJ) 24%(IM)	*1. The central government directive and commitment to PA expansion and management strengthening has served to drive the high level of co-financing and the expectation of ongoing support. The business plans and revenue generation ideas are still in the developmental stage.* *2. These scores reflect the high level of output completion.* *3. For HJ, the MTR scores were not so much different from the baseline value, but significant increase was observed from MTR to TE. Similar observation was made for IM, although the increase from baseline value to MTR, and from MTR to TE are clearer*
Average METT score of sample of 11 PAs in the Daxing'anling landscape as recorded in the BD-1 Tracking Tool; Base: 44	44	55	64	*The METT scores reflect the interview responses about increased management capacity as a result of project assistance. But the tracking tool also has*

				limitations in capturing reported capacity weaknesses.
Status of selected indicator species that are rare and threatened (including inter alia: Lynx lynx, Ursusarctosarctos, Alcesalces, Lepustimidus, Tetraoparvirostris, Bonasiabonasia, Grusvipio, Grusleucogeranus, Aix galericulata, Brachymystaxlenok, Astragalusmongholicus, Choseniaarbutifolia)	Baseline survey to be done in Year 1	Key wildlife populations maintained or increasing	The increase of EHI indicates the health of ecosystems where key species (including inter alia: Lynx lynx, Ursusarctosarctos, Alcesalces, Lepustimidus, Tetraoparvirostris, Bonasiabonasia, Grusvipio, Grusleucogeranus, Aix galericulata, Brachymystaxlenok, Astragalusmongholicus, Choseniaarbutifolia) distributed is increasing. For the purpose of strengthening monitoring capacity, the project provided $350,000 worth of equipment (cameras, patrolling tools, office supplies) to demonstration sites. The monitoring and patrolling capacity of all demonstration sites have been significantly improved.	*Inventory and monitoring activities have focussed on key species. The available data suggest that expanded area without logging and other human disturbances is improving wildlife habitat and populations.* *However, this conclusion needs to be cautious; baseline data are limited and increased survey effort inherently results in higher numbers. Wildlife population trends require many years of consistent data collection especially for wide ranging species.*
Number of new jobs created for local people from sustainable use of the PAs	0	900 (HJ 600, IM 300) of which 115 women and indigenous people	According to the statistics of June 2018 the objective of 900 new jobs in two sections of Daxinganling were created, including 600 in HLJ and 300 in IM, and the percentage of female is about 15%. (PIR 2018)	*The evidence to corroborate 900 jobs is not available nor reflected in field mission discussions. It was noted that alternative livelihoods were created for 3 households, 1 for ecotourism, 1 for bee keeping and 1 for livestock raising.* *In addition, as the implementation of the complete logging ban, some loggers took new jobs as rangers, which could have contributed to the new jobs created.*

Outcome 1: Development planning frameworks for the Daxing'anling Landscape provide the enabling environment for expanding the forest and wetland PA network and mainstreaming biodiversity as an asset for sustainable development Outputs: 1.1 Valuation of the ecosystem services provided by the Daxing'anling Landscape provides a strong business case for conserving biodiversity and expanding and strengthening the PA network 1.2 Inter-sectoral coordination and planning mechanism strengthened to integrate biodiversity and PA systems values and objectives into development and sectoral planning process 1.3 An action plan for biodiversity conservation and sustainable use in the Daxing'anling Landscape is developed and implemented 1.4 Wetland and forest PA network in Daxing'anling Landscape expanded based on a systematic review of PA coverage				
Biodiversity conservation strengthened through monetary and non-monetary valuation of ecosystem services	No comprehensive (evidence-based) valuation of the ecosystem services exists	Investment in biodiversity, PAs and a regional green development strategy is being supported through widely communicated assessment of the value of the Daxing'anling's ecosystem services	The value of ecosystem services was calculated through service contract. The research conclusion is thatthe value of DXAL wetlands is obviously very high, there are ought to be well protected.	*1. The valuation study highlights the scale and importance of the Daxing'anling ecosystems. But the enormous hypothetical figures of annual value ($105-125 Billion) are difficult to comprehend in relation to lack of survey data on actual user, Chinese conservation option values and beneficiary willingness to pay for ecosystem services. Any effects on strengthening support for conservation* *may be overwhelmed by concerns about high poverty levels in the region, the elimination of local benefits from traditional resource uses and uncertain alternative livelihoods.* *2. How this valuation study strengthened the investment in biodiversity, PAs and regional green development strategy is not clear. It is*

				unclear whether this report was submitted to decision makers or had any policy influence. *3. Difficult to draw conclusions on "Biodiversity conservation strengthened through the valuation study"*
Threats reduced by mainstreaming biodiversity conservation and the PA system within the sectoral and development planning frameworks, indicated by effective intersectoral coordination and plans incorporating biodiversity conservation measures	No inter-sectoral coordination mechanism for biodiversity conservation and PAs exist at Landscape level Sectoral plans do not include adequate measures for biodiversity conservation 12th 5 year plan includes chapter for biodiversity conservation but needs mainstreaming throughout	Inter-sectoral Group(s) for coordinating biodiversity conservation functioning and steering the process at landscape level At least 2 sectoral plans (among forestry, tourism, agriculture, water, mining) integrate biodiversity conservation measures, including clear safeguard measures in sector practices. 13th 5 year-Plan recognizes clear linkage between biodiversity and PAs and sectoral development, and includes PA and biodiversity-related targets	1. The restructuring of Chinese government system will result in a more coordinated and integrated management on wetlands. 2. The project established a Daxing'anling Biodiversity Coordination Committee.. 3. Several DXAL plans were produced by the project, including "Plan of Building Eco-civilization in DXAL (2013-2020)"; "Plan of Building Eco-civilization Demonstration Areas in DXAL (2014-2018)"; "Programme of Building Forest Ecological Conservation and Building National Demonstration PAs in DXAL, HLJ"; "Implementation Plan of Ecological Conservation and Restoration for DXAL Landscape". These documents are preliminary outcomes of their joint work, given the changes in PA governance, there will be potentially more concrete cooperation and coordination between two sections in the near future.	*1.The recognition of priority for conservation at the PA and landscape level and the establishment of a cross-border coordination mechanism is a major achievement. Biodiversity conservation is a key objective within the expanded PAs and the remaining lands where timber harvesting has been eliminated.* *2. The unresolved issues affecting land uses in the non-PA areas and in other sector development plans may have limited the ability to produce revised sectoral plans as originally envisioned in the project design.* *3. The 'mainstreaming' into other sectors is primarily through future sector conformance to the higher level DXAL Eco-civilization plans and the Implementation Plan of Ecological Conservation and Restoration for DXAL Landscape*

				4. DBCC was established as a coordination mechanism with little authority, and it did not have its own legal status (no official stamps, no authority to issue any official documents or enforce any measures…). In addition, DBCC only held 3 meetings simultaneously with PSC meetings throughout the project course. The effectiveness and sustainability of this arrangement may be questionable. *5.Several plans were produced officially to support biodiversity conservation, including "the 13th five-year plan on ecological environmental protection in Heilongjiang Province", "The 13th five –year plan of socio-economic development of DXAL region in Heilongjiang Province", "The 13th five-year plan of the DXAL region in Inner Mongolia", " The 13th five-year plan on forest industry development in Inner Mongolia". These plans have integrated the idea of eco-conservation and support biodiversity conservation. However, these plans were usually produced by the two jurisdictions independently, an integrated and landscape approach is not in place.*

				6. No evidence was found that biodiversity conservation has been integrated into sectoral plans other than forestry department.
Expanded and more representative PA system approved Area of PAs upgraded to National status Area of PAs upgraded to Provincial status	3.10 million ha (including 1.27 million ha of natural wetlands) 1.00 million ha 1.32 million ha	4.20 million ha (including 2.05 million ha of natural wetlands) 1.57 million ha 1.44 million ha	From 3.10 million ha to 4.219 million ha, with 1.185 million hectares of protected areas added, of which,1.064 million ha are the PAs of wetlands. 1.91 million ha of PAs upgraded to national and 1.51 million ha of PAs to provincial status also met the target.	*1. The large expansion of PAs has been a major achievement, exceeding the project targets.* *2.It would be useful to have a more detailed assessment of the extent to which representative ecosystem types have been protected within the Daxing'anling Mountains and Wetland Landscape (DXAL) as per other international PA plans.*
Capacity development scorecard (%) for the protected area system	49% (Heilongjiang) 41% (Inner Mongolia)	60% (Heilongjiang) 55% (Inner Mongolia)	61% (HLJ) 67% (IM)	*These scores need to be considered with the evaluative comments in the Capacity Scorecard report which elaborate capacity gaps and needs. See Section 3.3.3*
Landscape level PA financing (for salaries and operational costs) increased to close by 50% the existing annual financing gap for basic expenditure scenario (planned through business plans and tracked with PA financial sustainability scorecard)	US$ 2.980 million / year (HJ) US$ 4.083 million / year (IM)	US$ 12.322 million / year (HJ) US$ 5.614million / year (IM)	US $13.390 million /year (HLJ); US $9.40 million /year (HJ excl infra) US $7.62 million/year (IM) (excl infra)	*All of the salaries + operational budgets are from central government. Three-fold increase in HJ and double in IM.*
Increase in annual operational budgets for PAs	US$ 480,000	US$ 960,000	US$ 1,027,000	*1. Evidence to be provided* ***Please see METT report***
Number of trained staff with certified competency standards	0	300 PA trainees to competency standards	The management team has organized a variety of training sessions, aimed	*Number of trainees well exceeds the target (see Annex) although*

		in at least 5 subject modules	at improving work ethic, building practical skills of local people, for them to find suitable jobs, and improve their lives. The training supported 1500 people/times participants, and about 20% were women.	*the issue of 'certified competency standards' remains incomplete.*
Reduction in illegal incidents within the PAs – poaching, illegal harvesting, etc., despite improved activity of rangers	Inner Mongolia section: average of 2908 administrative cases and 79 criminal cases (2009 & 10) Heilongjiang section: average of 95 administrative cases and 20 criminal cases (2010 & 11)	10% decrease from the baseline for each province section despite improved rangering	IM: 90% decrease HLJ: 85% decrease	*1. Baseline data may not be comparable. There is no doubt much less poaching based on anecdotal information and the new regulations to control illegal activities.* *2. More than 240 farmers are still living in Duobuku'er NNR.*
Management effectiveness increased in both demonstration sites (based on METT scores) Duobuku'er NNR base: 35 Genheyuan NWP Base: 46	35 46	55 66	Duobuku'er NNR :65 Genheyuan NWP: 74	*Interviews with OA staff indicated a significant increase in management functions. The regulatory developments, wildlife inventory, environmental monitoring, increased skills, education and expanded patrolling activity have provided for increased effectiveness. But there are significant capacity and co-management issues that remain (including roles of local community and Evenki Aulugoya tribe).*
Ecosystem Health improved (based on EHI Score) Duobuku'er NNR base:0.51 Genheyuan NWP Base: 0.62	EHI system has been introduced during the PPG	Biodiversity monitoring system being implemented and EHI score improved	Duobuku'er NNR: 0.62, Genheyuan NWP: 0.88	*This reflects the increased level of ecosystem protection from development. Such a broad and generalized index can mask*

	Duobuku'er NNR 0.51 Genheyuan NWP 0.62			*ecosystem degradation at the site and species level.*
Integrated management plan developed and approved for Duobuku'er NNR and Genheyuan NWP		Integrated management plans approved by Forestry Management Authorities and endorsed by DXAL Biodiversity Conservation Committee (DBCC), with implementation cost included in the annual operating budget of the two demonstration sites	Integrated management plans for Duobuku'er NNR and Genheyuan NWP have been prepared by Beijing Forestry University.	*1. The management plans provide general goals and objectives and issues to be managed, along with projects that need to be initiated.* *2. They have not yet been formally approved.* *3. Their relationship to Master Plans and key species management strategies may also need to be better linked.*
Information on the management of the Duobuku'er NNR and Genheyuan NWP is managed systematically and readily accessible to PA managers and staff		Database for the two demonstration sites approved by Forestry Management Authorities and endorsed by the DBCC, with running costs included in the annual operating budgets of the two PAs	The subcontractor and local colleagues have finished uploading data to the database, and the database is in trial use	*PA staff report that this database and app, principally used for compiling information on patrolling and reporting, has been a significant tool for improved understanding and tracking management issues.*

Annex 7: Trainings conducted by DXAL project

No.	Name of Trainings	Subject of Training course	Duration	Dates held	Locations held
1	National park construction by SFA	National park	3 days	Apr. 2014	Kunming
2	Project Management Training	Project Management, Finance Management, etc.	2 days	June 23-24, 2014	Beijing
3	annual construction and standardized management of NNRs by SFA	construction and management of NNRs	3 days	Dec. 2014	Sichuan
4	Database data filling for NNRs	Database data filling for NNRs; database maintenance	2 days	May,2015	Beijing
5	annual construction and standardized management of NNRs by SFA	construction and management of NNRs	2 days	Jun-16	Hainan
6	Management training for the PAs of Heilongjiang Daxinganling	Project Management, Outreach activities, EHI, METT tool, etc.	4 days	July 16-19, 2015	Jiagedaqi
7	Training Workshop for UNDP-GEF Project Management	Enhance the synergy strategically, preparation for the MTR, finance management, etc.	2 days	Sep. 22-23, 2015	Chizhou, Anhui
8	Enforcement training of wildlife protection	Study the laws and regulations related to wildlife conservation and management of nature reserves	6 days	Ocr. 26-31.2015	Beijing
9	PA management technology training	Exchange and study experience from Yancheng NNR (Biodiversity monitoring, bird monitoring, wetland ecological tourism)	3 days	Nov.10-12.2015	Yancheng, Jiangsu
10	Project Management Training	Exchange and study in conservation, education and monitoring of nature reserves	4 days	Nov.17-20,2015	Maipu, Hongkong
11	Wetland management and skills training	skills in related with wetland management	2 days	Dec.2015	Genhe, Inner Mongolia
12	Preparation course on NWP acceptance inspection	information, experience and lessons learned for NWP acceptance inspection	2 days	Apr.2106	Genhe, Inner Mongolia

13	Set up and run ecological monitoring and investigation training in the demonstration area of Daxinganling	Monitoring and investigation	7 days	May 4-10,2016	Jiagedaqi
14	Training on wetland protection and management	Direction for monitoring equipment	3 days	June 17-19,2016	Genhe, Inner Mongolia
15	Project Management Training	Protection, education, monitoring and other aspects of the exchange of learning	4 days	Ocr. 31-Nov.4.2016	Hongkong
16	Wildlife identification in winter time	identification skills	3 days	Nov.2016	Genhe, Inner Mongolia
17	Yangzi River Network annual training	wetland conservation and management	2 days	Nov.2016	Dali,Yunnan
18	Wildlife conservation and relevant laws training	Study the wildlife conservation and relevant laws	4 days	Dec.1-3.2016	Jiagedaqi, Daxiang'anling
19	wildlife conservation and relevant laws training of Heilongjiang Prov.	Study the wildlife conservation and relevant laws	4 days	Dec.5-8.2016	Songling, Amuer, Xilinji, etc
20	abroad training to USA	wetland conservation and management	5 days	Dec.2016	USA
21	abroad training to Canada	PAs experiences exchanges	5 days	Dec.2016	Canada
22	alternative livelihood training	alternative livelihood	2 days	Jan.2017	Genhe, Inner Mongolia
23	Project Management Training	Reporting, M&E, Finance, Communication, etc.	1 day	Mar. 14, 2017	Beijing
24	Community co-management and alternative livelihood training	Community co-management practice case and experience summary, community co-management theory practice, etc.	3 days	Mar.15-16.2017	Xianju, Zhejiang
25	experiences exchange and PA management training	wetland restoration, experiences exchange and plants monitoring	3 days	Apr.2017	Yakeshi, Inner Mongolia
26	eco-tourism	eco-tourism	2 days	May.2017	Genhe, Inner Mongolia
27	wild life conservation	wild life conservation by John MacKinnon	2 days	Jun.2017	Genhe, Inner Mongolia
28	Eco-system and PA system establishment	eco-system management and PA system establishment	4 days	Aug.2017	Beidaihe
29	Training Workshop for UNDP-GEF Project Management	Updated finance management rules, communication, preparation for TE, field visit, etc.	5 days	Aug. 21-25, 2017	Ku'ele, Xinjiang

30	Wetland Environment Education	Wetland Environment Education course by Capital Normal University	3 days	Sep.2017	Genhe, Inner Mongolia
31	abroad training to Japan on wetland restoration	wetland restoration	5 days	Aug.2017	Japan
32	abroad training to Russia on Cross boundary protection	Cross boundary protection	5 days	Sep.2017	Russia
33	Patrol, law enforcement procedures and skills training	Application of UAV in monitoring and scientific research in nature reserve, wetland property rights policy and technical model, wetland monitoring and patrolling methods, etc.	3 days	Sep.13-14,2017	Yangguan, Gansu
34	Protection management training (RAMSAR)	Learn the experience and practice of international cooperation projects	3 days	Oct.10-11.2017	Beijing
35	Protected areas promote education and community co-management training	Traditional culture, local knowledge and ecological protection, community participatory management of nature reserve, public education function of nature reserve, eco-tourism and community co-management case sharing, etc	5 days	Oct.16-20,2017	Diqing, Yunnan
36	International workshop on PA system	PA system involved subjects	3 days	Dec.2017	Haikou
37	Wetland management Training	Wetland monitoring management and service, wetland ecosystem value evaluation, wetland park construction and management	3 days	Apr.9-11.2018	Mohe, Heilongjiang
38	2018 PIR Training for Asia-Pacific Region Country Offices and Projects Teams TOTAL	PIR training	0.5 day 122.5 days	Jun. 14, 2018	Online

Source: Project Management Office

Annex 8: Priorities for Biodiversity Conservation in DXAL region

Priority Areas	Priority Actions
Strengthen the standardization and strengthen the capacity building of PA	(1) Optimize the PA network system (2) Strengthen infrastructura1 development of the PAs (3) Enhance the management capacity building of the PAs (4) Conduct demonstration of PAs
Restore wildlife population, habitats and degraded ecosystems	(5) Conduct biodiversity baseline survey and establish information base on threatened species (6) Implement monitoring, assessment and protection of wildlife habitats (7) Restore degraded forests and vegetation (8) Demonstrate the restoration of degraded wetland ecosystems (9) Restore abandoned mine lands and industrial and mining sites (10) Reduce the negative impacts of environmental pollution on wetland ecosystems
Conduct ex-situ conservation of rare species in a scientific way	(11) Deve1op ex-situ conservation system for species in a scientific manner (12) Develop and improve the system of preserving biodiversity and biological genetic resources
Control the invasive alien species and enhance management of pests and GMOs' safety	(13) Conduct early-warning, prevention and control of pests and invasive alien species (14) Establish and improve the technical system and platform to evaluate, test and monitor the safety of GMOs
Conduct eco-tourism in a scientific and standard manner	(15) Conduct scientific survey, assessment and development of eco-tourism resources (16) Develop cultural tourism resources in a systematic manner (17) Enhance community co-management and public education (18) Develop a database on non-timber forest products to promote sustainable development
Strengthen scientific research and monitoring on biodiversity conservation and use	(19) Develop a comprehensive monitoring system for Daxing'anling Landscape (20) Strengthen scientific research on biodiversity conservation and use in Daxlng'anling Landscape (21) Conduct biodiversity monitoring and early-warning under climate change (22) Assess the impacts of frozen soil' s melting on forest and wetland biodiversity
Develop environment-friendly agriculture and forestry	(23) Build brands of environment-friendly products in Daxing'anling
Make more investment on PAs Expand the financing channels for PAS	(24) Make more investment on PAs (25) Expand the financing channels for PAs
Strengthen development of biodiversity conservation management system and legal system	(26) Improve the system of managing by level (27) Develop regulations or measures for the protection and management of PAs (28) Improve the system on resources management and use (29) Improve actions to ensure the biodiversity and ecosystem health

ANNEX 9: EVALUATION CONSULTANT CODE OF CONDUCT AGREEMENT FORM

Evaluators:

1. Must present information that is complete and fair in its assessment of strengths and weaknesses so that decisions or actions taken are well founded.

2. Must disclose the full set of evaluation findings along with information on their limitations and have this accessible to all affected by the evaluation with expressed legal rights to receive results.

3. Should protect the anonymity and confidentiality of individual informants. They should provide maximum notice, minimize demands on time, and respect people's right not to engage. Evaluators must respect people's right to provide information in confidence, and must ensure that sensitive information cannot be traced to its source. Evaluators are not expected to evaluate individuals, and must balance an evaluation of management functions with this general principle.

4. Sometimes uncover evidence of wrongdoing while conducting evaluations. Such cases must be reported discreetly to the appropriate investigative body. Evaluators should consult with other relevant oversight entities when there is any doubt about if and how issues should be reported.

5. Should be sensitive to beliefs, manners and customs and act with integrity and honesty in their relations with all stakeholders. In line with the UN Universal Declaration of Human Rights, evaluators must be sensitive to and address issues of discrimination and gender equality. They should avoid offending the dignity and self-respect of those persons with whom they come in contact in the course of the evaluation. Knowing that evaluation might negatively affect the interests of some stakeholders, evaluators should conduct the evaluation and communicate its purpose and results in a way that clearly respects the stakeholders' dignity and self-worth.

6. Are responsible for their performance and their product(s). They are responsible for the clear, accurate and fair written and/or oral presentation of study imitations, findings and recommendations.

7. Should reflect sound accounting procedures and be prudent in using the resources of the evaluation.

Evaluation Consultant Agreement Form[30]
Agreement to abide by the Code of Conduct for Evaluation in the UN System

Name of Consultant: Alan Ferguson (International Consultant) Sun Chenxi (National Consultant)

Name of Consultancy Organization (where relevant): Regional Consulting Limited

I confirm that I have received and understood and will abide by the United Nations Code of Conduct for Evaluation.

Signed at *(place) Vancouver* on July 10, 2018 Jinan on 08 Nov. 2018

Signature:  

ANNEX 10: Terminal Evaluation Clearance Form

(to be completed by the Commissioning Unit and UNDP-GEF RTA and included in the final document)

Terminal Evaluation Reviewed and Cleared By: Commissioning Unit

Name: Ma Chaode

Signature:  Date:

UNDP-GEF Regional Technical Advisor

Name: Lisa Farroway

Signature: 

Date: