PRGRAM FRAMEWORK DOCUMENT (PFD)

TYPE OF TRUST FUND: GEF TRUST FUND
TYPE OF AGENCY: PROGRAM COORDINATION AGENCY

PART I: PROGRAM IDENTIFICATION

Program Title:	CBPF-Main Streams of Life (MSL) – Wetland PA System Strengthening for Biodiversity Conservation		
Country(ies):	China	**GEF Program ID:**	4646
Lead GEF Agency:	UNDP	**GEF Agency Program ID:**	4857
Other GEF Agenc(ies)	FAO	**Submission Date:**	Sept 19, 2011
Other Executing Partner(s):	State Forestry Administration, Anhui Province, Hainan Province, Heilongjiang province, Hubei Province, Inner Mongolia Autonomous Region , Jiangxi Province, Xinjiang Autonomous Region	**Program Duration (months):**	84
GEF Focal Area (s):	Biodiversity	**Agency Fee ($):**	2,070,982[1]

A. FOCAL AREA STRATEGY FRAMEWORK:

Focal Area Objectives	Expected FA Outcomes	Expected FA Outputs	Type of Trust Fund	Indicative financing ($)	Indicative co-financing ($)
BD-1	Outcome 1.1: Improved management effectiveness of existing and new protected areas.	Output 1.1. New protected areas (9) and coverage (1,700,000) of unprotected ecosystems. Output 1.2. New protected areas (9) and coverage (1,700,000) of unprotected threatened species (50).	GEFTF	6,135,000 8,530,000	49,424,000 69,600,000
	Outcome 1.2: Increased revenue for protected area systems to meet total expenditures required for management.	Output 1.3. Sustainable financing plans (5).	GEFTF	7,195,915	17,600,000
Sub-total				21,860,915	136,624,000
Program management cost			GEFTF	1,150,000	5,976,000
Total program cost				**23,010,915**[2]	**142,600,000**

B. PROGRAM RESULT FRAMEWORK [This programme framework forms a sub-set of the CBPF results framework, in particular under theme 3 - Investing and Managing Effectively in Reducing Biodiversity loss in Protected Areas]

Program Goal: Catalysing the Sustainability of the National Protected Area System for Conservation of Globally Significant Wetland Biodiversity

Program Component	Grant type	Expected Outcomes	Expected Outputs	Type of Trust Fund	Indicative Financing ($)	Indicative co-financing ($)
1. Enhancing management effectiveness of wetland	TA/ INV	▪ Effective governance and legal framework for the national wetland PA sub-system delivers *improved protection* to	▪ PA wetlands regulations and management framework strengthened in collaboration with other responsible divisions of SFA and MEPs. The framework will include:	GEF TF	11,968,716	98,924,000

[1] This fee is the total IA fees for the seven projects under the Programme and does not include IA fees for PPG or programme coordination budget to be requested.

[2] The total programme cost represents the net amount of the projects and does not include IA fees, PPGs and their IA fees nor the Programme Coordination Budget. The total Programme Budget including the IA fees, PPGs and their IA fees and Programme Coordination Budget is US$ 26,000,000.

<table>
<tr>
<td>PA sub-system</td>
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<td>18,208,600 ha of wetlands in 822 PAs covering 48,962,400 ha and all 42 wetland types identified in the Ramsar Convention. Improved protection will be measured by:
- increase in METT for a sample of Natural Reserves
- approved national systems plan for wetlands
- new PA categories suited for wetland protection in place;
- exclusive jurisdiction of SFA over core zone of national nature reserves for conservation purposes.

▪ Coverage of natural wetlands in the national PA network, increased from the baseline of 50.3% to 55%, adding an extra 1.7 million hectares under protection and reducing representativity gaps as follows:
<table>
<tr><th rowspan="2">Type of wetlands</th><th rowspan="2">Total area (mil. ha)</th><th colspan="2">% under PA</th></tr>
<tr><th>Base-line</th><th>Tar-get</th></tr>
<tr><td>Natural lakes</td><td>8.35</td><td>53</td><td>58</td></tr>
<tr><td>Coastal Wetlands</td><td>5.94</td><td>61</td><td>67</td></tr>
<tr><td>Riverine Wetlands</td><td>8.2</td><td>32</td><td>35</td></tr>
<tr><td>Marshes</td><td>13.7</td><td>55</td><td>61</td></tr>
<tr><td>Total</td><td>36.2</td><td>50.3</td><td>55</td></tr>
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▪ Biodiversity health status index[3]monitoring system and better staff competencies enables improved support with higher budget, technical capacity and up-to-date information and data to be channelled quickly to wetland PAs that are most in- need and thereby improving management effectiveness.

▪ PA management effectiveness for the provincial wetland PA systems improved as measured by the METT; (the baseline is to be determined during the project preparatory phase.). This conveys increased protection to biodiversity in</td>
<td>(i) National Wetland Conservation Regulation passed by the State Council; (ii) 7 Provincial regulations on PA or wetland management; (iii) 5 Standards and management guidelines for different types of wetland PA; (iv) 3 Guidelines for managing wetlands to increase resilience; (v) Compliance monitoring mechanisms and penalties.

▪ <u>New wetlands added to the PA system</u> to meet national targets and address climate change threats. This will include : (i) A systematic review of the wetland PA coverage in relation to climate change threats and adaptation needs; (ii) 5 Areas selected in critical areas to increase resilience and connectivity; (iii) PAs set up in these critical areas; gazetted and basic operation started

▪ <u>Protection status of the wetland PAs strengthened</u> through upgrading of at least 20 sites from provincial to national NRs, and through designation of at least 6 new Ramsar sites, entailing (i) biodiversity survey of these sites; (ii) management planning in line with international standards, (iii) training of staff, (iv) provision of monitoring and patrolling equipment.

▪ <u>Planning and monitoring wetlands PAs and Ramsar Sites strengthened</u> through institutional strengthening of the SFA and its provincial bureaus. This includes: (i) introduction of standardized PA reporting and performance monitoring system nationwide and demonstration in wetland PAs through provincial level projects; (ii) standardized monitoring and reporting system on indicators of biodiversity and ecosystem health for all wetland NRs, designed to provide an overall index of wetland health, including habitat value, habitat impact and species status; (iii) strategic training and development and adoption of a set of professional competency standards for wetland PA management staff as a basis for enhanced performance.

▪ <u>Transforming management practices</u> in six different provinces which harbour important wetland. Targeted interventions include: (i) improved park management planning and boundary demarcation, (iii) setting up ecological monitoring and</td>
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[3] Biodiversity health is reflected in the ability of a site to maintain its biodiversity values. Many wetland sites are very dynamic and it is important to measure this ability as this will become increasingly important as climate and water flow patterns change. The project will set up a biodiversity index linked to habitat suitability in each site for important biodiversity and its status to measure biodiversity health and potential to adapt to climate induced change.

		model wetland PAs measured by 20% improvement in biodiversity health index over baseline (to be established in PPG phase) ▪ Increased protection in model wetlands along with additional wetlands incorporated into the wetlands sub-system increases the number of unprotected threatened species under protected (e.g. Chinese beaver, moose, Yangtze crocodile, finless porpoise and red-crowned crane) – see Annex 3 for more details.	wetland use management systems; (iv) enforcement strengthening (surveillance, interception of malfeasance and prosecution), (v) staff training tailored to improving management of specific threats at each site, (vi) co-management practices established with communities.			
2. Mainstream-ing wetland PAs[4] in development and sectoral planning	TA	▪ National PA system management mainstreamed within national and provincial development planning framework enables increased financial security for PA management and promotes threat reduction at source by ear-marking budget for adoption of new PA management and sector standards and practices, in the sectoral development plans at national and provincial levels and in the 13th 5-year plan and sub-plans.; ▪ Strengthened national development and sector planning framework provides safeguards from sector practices in and near wetland PAs in the long term reducing pressures on biodiversity from agricultural; industrial and mining-related pollution; IAS threat; habitat change including water related disturbances from dams. Estimations of this pressure reduction will be developed as part of the process of setting up these safeguards. The biodiversity health index to be set up by the national level project will enable monitoring of pressure reduction and achievement of targets. ▪ Increased financial sustainability for wetland PA	▪ Wetland PAs mainstreamed into national development planning process and budget allocation systems. These processes provide the broad framework for development and determine the details of mega national projects and their associated budget allocation including that for PA management. The programme will include: (i) design and use of economic tools for proving and quantifying economic value of wetland PAs; (ii) enhancing coordination with other sectors (water, agriculture, infrastructure, mining, energy and fisheries sectors); (iii) integration of wetland biodiversity concerns in the sectoral planning at national level. ▪ Wetland PA system integrated into provincial development planning process which determines most site-level land use and development. The programme will include: (i) adoption of climate resilient provincial PA system plans; (ii) enhanced inter-sectoral coordination; (iii) integration of wetland conservation in land use plans; (iv) inclusion of quantitative biodiversity indicators in provincial and local development plans; (v) economic valuation of ecosystem services. ▪ Sector specific standards and safeguards developed to protect wetland PAs from biodiversity threatening sector practices. This includes (i) setting up of standards for infrastructure development and operation, standards and procedures for mining; (ii) issuance of official guidelines for fisheries, aquaculture and agriculture in and around wetland PAs. Some safeguards	GEF TF	7,830,000	27,000,000

[4] Wetlands PAs are a sub-system of the total PA system comprising sites primarily established to protect important wetlands including lakes and water-ways. For more detail, see section C under "China's PA System and Sub System of Wetland PAs" on page 9 .

		management indicated by: - Increased national and provincial governmental budget allocations: an increase of >50% over baseline amount of $300 million/per year. - Broadened access to new funding sources indicated by the number of successful new sustainable financing mechanisms for PAs (to be determined during PPG) - Reduction of funding gap for model PA due to improved planning and budget allocation efficiencies; increased revenues; and reduced cost from threat reduction at source. (Funding gap baseline and targets to be established during PPG)	would be more generic at the level of national sectors and others more specific addressing specific site based threats and based on the lessons learnt from provincial projects. ▪ Provincial PA system financing strengthened and guided by a financing plan to meet actual management needs. This includes (i) improved financing planning skills; (ii) increased cost efficiencies through improved budget allocations and threat reduction at sources; (iii) diversifying financing mechanisms including through the application of eco-compensation schemes; (iv) increasing government budget appropriations through active participation in planning processes and through promoting economic values of wetland (marketed and non-marketed values), including roles of wetlands in climate change adaptation and disaster mitigation proven through a series of strategic assessments			
3. Knowledge Management and Lesson Sharing	INV /TA	▪ Strengthened data sharing system between the PA sites and between sectoral agencies, catalyzing improved wetland and PA management: indicated by open access knowledge management platform, being routinely updated by wetland sites and used by planners and in EIA procedures, and by uptake of knowledge and replication of management practices from the provincial projects to similar types of wetland county wide (replication targets to be set during PPG) ▪ Improved understanding among decision makers and the public on value of wetlands and PA system: indicated by Knowledge, Attitude and Practices surveys to be conducted at start and end of projects.	▪ Data and information system on the PA management and wetland management. This includes consolidating data from various agencies, and making it accessible to PA managers, provincial and national government agencies, scientists and the general public. The information system will contain *inter alia*: climate change risk management (ecosystem/biodiversity resilience enhancement), restoration parameters and functional management to maintain critical biological, physical and chemical functions of wetlands. It will also have a knowledge management and sharing component to store and avail information and technical knowhow on successful wetland management cases around the country to promote replication. ▪ Awareness on the importance of wetland PAs dramatically increased among national and provincial decision makers, government practitioners and the general public, through intensive evidence-based awareness campaigns including production of tools for decision makers, media campaign including use of social media and organisation of special events at national and local levels.	GEF TF	2,062,199	10,700,000
Subtotal					21,860,915	136,624,000
Program management cost				GEFTF	1,150,000	5,976,000
Total program costs					**23,010,915**	**142,600,000**

C. INDICATIVE CO-FINANCING FOR THE PROGRAM BY SOURCE AND BY NAME IF AVAILABLE, ($)

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Amount ($)
National Government	State Forestry Administration	Grant	16,000,000
National Government	State Forestry Administration, Ministry of Environmental Protection	In-kind	3,980,000

Local Government	Xinjiang, Hainan, Hubei, Jiangxi, Anhui, Heilongjiang, Inner Mongolia	Grant	99,500,000
Local Government	Xinjiang, Hainan, Hubei, Jiangxi, Anhui, Heilongjiang, Inner Mongolia	In-kind	17,740,000
GEF Agency	UNDP	Grant	5,000,000
GEF Agency	FAO	Grant	380,000
Total Co-financing			**142,600,000**

D. GEF RESOURCES REQUESTED BY AGENCY, FOCAL AREAS AND COUNTRY

GEF AGENCY	TYPE OF TRUST FUND	FOCAL AREA	Country name/Global	Project amount (a)	Agency Fee (b)	Total c=a+b
UNDP	GEF TF	Biodiversity	China	17,708,442	1,593,760	19,301,627
FAO	GEF TF	Biodiversity	China	5,302,473	477,223	5,779,696
Total GEF Resources				**23,010,915**	**2,070,982**	**25,081,897**

Note: This table does not include PPG and IA fees for the PPG and the Programme Coordination Fee to be requested.

A. GOAL OF THE PROGRAM:

The goal of this programme is to: **Catalyze the sustainability of the National Protected Area System for Conservation of Globally Significant Wetland Biodiversity**

B. DESCRIPTION OF THE CONSISTENCY OF THE PROGRAM WITH:

B1.1. THE GEF FOCAL AREA STRATEGIES:

1. The CBPF-MSL Programme is aligned with the GEF BD-1 objective: Improve Sustainability of Protected Area (PA) Systems. More specifically, the Programme contributes to 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 Programme focuses on strengthening the wetland PA sub-system, recognising the special nature of the wetland PAs. Compared with other terrestrial PAs, wetland PAs are much more directly affected by externalities from development activities outside their borders, which can undermine ecosystem functions vital to the protection of biodiversity. The Programme will contribute to the objective and outcomes by creating a strong national system for managing wetland PAs covering 48,962,400 ha, improving the spatial design of the wetland PA sub-system and bringing an additional 1.7 million ha under protection, ensuring better terrestrial wetland ecosystem representation and filling ecosystem coverage gaps. This will increase the resilience of the sub-system in the face of a fast changing climate by maintaining functional connectivity at landscape level, addressing non climate change related anthropogenic stressors that are undermining wetland resilience, and ensuring adequate protection of upstream non-wetland habitats such as forests and grasslands that serve as vital catchments for the wetlands themselves.

2. The Programme will also consolidate and strengthen the enabling legal, planning and institutional framework for effective management of PAs with globally significant wetlands; and strengthening the capacity (strategies, tools, mechanisms, knowledge, skills and resources) to support the operational management and financing of wetland PAs system at the national, provincial and site levels. The stronger wetland PA system would indirectly improve management of over 36.2 million ha of natural wetlands in the country. It will further catalyse the improved management of the entire national PA system covering 143 million ha. Given the vulnerability of wetland PAs to external threats, systemic capacity not only to manage the PA sites but also to manage activities in the immediate landscapes will be required. Furthermore, the Programme will support mainstreaming of wetland PAs within sector practices so as to reduce pressures on wetland PAs and making them more sustainable and resilient in the face of climate change. The Programme will consist of a set of interlinked projects that would create a strong national system for managing wetland PAs, transforming management practices in seven different provinces which harbour important wetland biodiversity and address the management needs of different wetland types and develop a data base and networks that would inform the management of these types country wide.

3. In addition, the Programme directly contributes to the goals of the Programme of Work on Protected Areas (PoWPA) in particular, Goal 1.1: To establish and strengthen national and regional systems of protected areas integrated into a global network as a contribution to globally agreed goals; Goal 1.2: To integrate PAs into broader land- and seascapes and sectors so as to maintain ecological structure and function; Goal 1.4: To substantially improve site-based protected area planning and management; Goal 1.5: To prevent and mitigate the negative impacts of key threats to protected areas; Goal 2.2: To enhance and secure involvement of indigenous and local communities and relevant stakeholders; Goal 3.1: To provide an enabling policy, institutional, and socio-economic environment for PAs; Goal 3.2: To build capacity for the planning, establishment and management of PAs; Goal 3.4: To ensure financial sustainability of PAs and national and regional systems of PAs; Goal 3.5: To strengthen communication, education and public awareness; Goal 4.1: To develop and adopt minimum standards and best practices for national and regional PA systems; Goal 4.2: To evaluate and improve the effectiveness of PA management; and Goal 4.3: To assess and monitor protected area status and trends.

B.2. National strategies and plans or reports and assessments under relevant conventions, if applicable, i.e. NAPAS, NAPs, NBSAPs, national communications, TNAs, NIPs, PRSPs, NPFE, etc.:

4. The proposed CBPF-MSL Programme is well aligned with several national and provincial policies and programmes. The Constitution of the People's Republic of China is the basic law which establishes that the State will protect and will improve the living and ecological environment, prevent and eliminate pollution and other hazards to the public; ensure reasonable use of nature resources, and protect rare animals and vegetation. The 11th National Five-year Plan (2006 - 2010) identifies protection of ecosystems and environment as a key strategy and clearly stipulates the principle of "polluters pay". The Programme is also in line with the Government's Western Development Strategy, which was launched in 2000, aiming to help the underdeveloped western region (6 provinces, five autonomous regions and one municipality with a combined population of about 370 million) catch up with the more prosperous eastern region. The Programme will implement one of the key principles guiding the Strategy to strengthen environmental protection including biodiversity conservation and restoration of natural ecosystems and their services. The 12th National Five-year Plan (2011-2015) promotes environmental protection and sustainable growth, enhancing "ecological conservation and restoration." The plan urges the reinforcement of biodiversity conservation, strengthening monitoring in Nature Reserves (NR) – the main protected area category - and improving their management and protection. Details of sectoral plans under the 12th Plan and activities are still being formulated, presenting an opportunity to mainstream wetlands concerns in the plans.

5. The Programme addresses key priorities under the National Biodiversity Conservation Strategy and Action Plan (NBCSAP 2011-2030), launched in September 2010, through implementing its priority strategy of strengthening the effectiveness of PA system in China and contributing directly to the following action programmes under the Plan.

- Action 12: Coordinating action to implement and improve the national nature reserve plan
- Action 13: Enhancement of biodiversity conservation in priority areas of protection
- Action 14: Standardization of nature reserves to carry out actions to improve the quality of nature reserve management

6. In addition, the NBCSAP identifies 35 biodiversity priority protection regions in China (see Annex II), which covers most of the important wetland areas and the provincial areas that are targeted through the Programme. The Programme will not only enable the State Forestry Administration (SFA) to achieve its target of adequately protecting 55% of the natural wetlands in China by the end of 2015, but also create the necessary foundation to ensure that these new areas are effectively managed and ensure mitigation of further loss of natural wetland areas and degradation of their functions.

7. As reflected by the programme's short title (CBPF-MSL), the Programme is also in line with, and falls under, the China Biodiversity Partnership and Framework for Action (CBPF), which is China's primary

investment strategy for biodiversity conservation, supported by the GEF and other financiers. This Programme has been designed to advance CBPF objectives, addressing urgent, priority and catalytic outputs under the framework, in particular under Theme 3: "Investing and Managing Effectively in Reducing Biodiversity loss in Protected Areas". It will contribute directly to the following Results of the agreed CBPF Framework:

- Result 4: Financial flows to biodiversity conservation increase over current baseline;
- Result 16: Effective governance and legal framework for the national protected area system
- Result 17: Harmonised and effective national system for selecting, designing, managing and monitoring protected areas
- Result 18: NRs and PNRs are effectively managed;
- Result 19: National NRs and PNRs have stable and sufficient finance;
- Result 20: at National NRs and Provincial NRs, local communities, NGOs and/or the private sector are involved in PA co-management and development

8. The programme framework fills a clear gap in the current CBPF actions by addressing a specific need; namely to elevate conservation of wetland ecosystems that are under severe threat. The Programme will achieve this by strengthening PA management, focusing on PAs with important wetlands. It seeks to create a stronger national systemic framework for managing wetland PAs and engineer the necessary transformational shift in management at site level, to address threats to biodiversity. The Programme will build on the lessons learned in the CBPF, in particular from the EU-China Biodiversity Programme (ECBP) which will close by the end of 2011. Of particular relevance will be some of the successful examples under the ECBP of stewardship partnerships developed with local communities for co-management of NRs and some of the 'green' alternative livelihood schemes through branding of sustainably harvested medicinal plants. The Programme will upscale these successes through providing a system level mechanism to synthesise the wetland PA management specific achievements from various on-going and past investments.

C. Rationale of the Programme and description of strategic approach (including description of current barriers to achieve the stated objectives):

Context and Global Significance

Socio-Economic Context

9. China has a total land area of 9.6 million km² with a population of 1.3 billion people projected to grow by 25% over the next 30 years. It is now the world's second largest economy and the economy continues to grow at a fast pace. The two most important economic sectors in China are agriculture and industry, which together employ more than 70% of the labour force of over 819 million and account for more than 60% of GDP. China's GDP is US$ 7,518 per capita. The country has 22 provinces, 4 municipalities, 5 autonomous regions and 2 special administrative regions. Since 1979, following economic reforms, China's GDP has grown rapidly, and nominal per capita income has increased by a factor of 50. Between 1981 and 2004, the absolute number of poor people decreased from 652 million to 135 million, or from 65.2% to 10.4 %. China's Human Development Index [5] has also increased by 52.2% over the last decades. However, human development disparity between urban and rural areas, different regions and diverse social groups have also grown sharply, and hundreds of millions of people are still living in poverty and lack access to an adequate supply of safe drinking water and other basic public infrastructure. The benefits of rapid growth have not come without costs, in particular damage to the environment, biodiversity and natural resources. As an economic superpower with a huge economic footprint, China's development impacts biodiversity in all corners of the planet. This makes the country's capacity to safeguard biodiversity and natural resources, and to maintain ecosystem services, crucial to global conservation.

[5] The Human Development Index is calculated as the simple arithmetic mean of three sub-indices that measures basic dimensions of human life: i) Life expectancy at birth, to represent the dimension of a long and healthy life; ii) knowledge represented by adult literacy rate, and combined school enrolment ratios at primary, secondary and tertiary levels; and iii) real GDP per capita to serve as a proxy for the resources needed for a decent standard of living.

Biodiversity Significance

10. China has a wide range of biological features from mountain chains, to deserts, to grasslands, to forests ranging from boreal to tropical evergreen types and mangroves; it also has extensive marine areas including important coral reefs. China contains parts of 58 (7%) of the 825 WWF global terrestrial ecoregions. 30 of these lie entirely within China and many of them are associated closely with wetland ecosystems within them. The country contains parts of 32 (7.5%) of the 426 globally recognised freshwater ecoregions; 17 of these lie entirely within China. It contains parts of 6 of the WWF's Global 200 freshwater priority ecoregions (3 entirely within China) and 10 of the Global 200 terrestrial priority ecoregions (2 entirely within China). As a consequence of its size, topography, diverse geological features and complex geological history, China harbours an extremely wide range of habitat types and species assemblages. Approximately 30,000 species of higher plants belonging to 353 families and 3,184 genera occur. Moreover the country harbours an estimated 10% of all vertebrates found on the planet including many endemics. Wetland ecosystems are sources of life and provide essential hydrological services that are vital in most of the ecoregions and provide necessary habitats, breeding, feeding and nesting grounds for the survival of a large number of species.

11. Wetlands biodiversity is especially impressive. Because of her vast territory, complicated geography, range of climate, China is home to all the 42 types of wetlands that are classified by the International Convention on Wetlands. China's coast-line extends over 18,000 km and is comprised of a rich diversity of ecosystems including estuaries, gulfs, coastal wetlands, coral reefs, and mangrove forests. China's natural wetlands are estimated to total 36.2 million ha, comprising marshes (13.7 million ha), natural lakes (8.35 million ha), coastal wetlands (5.94 million ha), and riverine wetlands (8.2 million ha). In addition, artificial lakes, ponds and reservoirs total 2.285 million ha and rice fields 38 million ha which also support a wealth of wetland biodiversity. These wetlands are found in all biotic regions and physical zones of China from the coastal, low lying areas to the high plateaus. They include lakes, oases and the streams of the arid zones; the peat bogs, floodplain lakes and varied wetlands of the rest of inland China plus specialized coastal wetlands around the eastern and southern coasts. It is estimated that China's wetlands contain over 6,500 plant species representing 101 families of which 100 species are endangered. Coastal wetlands harbour 5,000 plant species and 3,200 animal species whilst inland sites have recorded 1,548 plants and 1,500 higher animal species. 770 species of freshwater fish (including many endemic species) and 54% of all Asia's endangered wetland bird species are represented. China's wetlands harbour 50 species of the duck family Anatidae, 30% of the global total, and 9 crane species out of a global total of 15. 95% of the entire world population of Siberian Cranes winters at Poyang Lake in Jiangxi Province. In terms of the number of amphibian species occurring in the country, China ranks 7th in the world. Of the 326 amphibian species found in China, 88 are under threat of extinction.

Wetland's Importance for National Development

12. Wetlands are vital for national development, as they underpin water supply for a very large and growing population, the agriculture and fisheries sectors, and industries. Water is the most precious commodity in China. With a vast territory and large population, China's volumes of water resources per capita and per mu (1 mu=666.6 m^2) are 2,200 m^3 and1,440 m^3 respectively, accounting for only one quarter and 60 % of the world average. Given the shortages of water resources in China combined with the country's high population and fast development, the importance of wetlands is at least theoretically well recognized as very high not only for their role in safeguarding water supply but also in preserving a rich heritage of biodiversity. The dual roles of wetlands are closely connected since a healthy biota is directly associated with healthy ecosystems and better delivery of vital ecosystem services, including water provisioning, regulation and flood control functions. However, pressures placed upon wetlands are extremely high and very complex. Finding good conservation models in such multi-use systems is very difficult. The situation is compounded by the ecologically dynamic nature of many of China's wetlands and the uncertainties of climate change and major dams and water diversion schemes. In recent years, China has faced increasingly frequent and desperate water shortages, disastrous flooding, and dangerous levels of

water pollution. Water shortages are already limiting industrial and agricultural output in some areas. The mouth of the Yellow River is now dry for more than half the year. This is of significance both for national development and the protection of biodiversity values and assets

Threats to Wetlands Biodiversity and Current Status

13. The globally significant wetland biodiversity in China is being lost at a fast rate. The proportions of endangered species for most taxa are among the highest of all countries worldwide and especially for plants as a result of the huge impacts on natural habitat by the fast pace of development. Flagship wetland species such as the Yangtze dolphin have become extinct. Finless porpoise is critically endangered and many water birds are endangered or threatened. In addition, 40 % of all amphibia and 88% of all fish evaluated are categorised as threatened in the China Red List. Wetland biodiversity is under severe pressure from the following factors.

14. Loss/degradation of habitat: Natural wetland areas in China have been shrinking at a fast rate. Many wetlands are being drained for agriculture, or are impounded and cut off from each other by dams and weirs, breaking migratory pathways between upstream breeding areas and downstream feeding areas and otherwise fragmenting many aquatic species populations. River connections are blocked by thousands of large-scale dams, changing water flow and chemistry, blocking fish migration paths and displacing millions of people. Many upstream activities such as offtake of water for agriculture and overgrazing of grassland and desertification have reduced water flow to wetlands, dried up some waterways and decreased the wetlands' water retention capacity. Half of China's coastal wetlands (including 72% of original mangroves) have been lost for reclamation and urban development. Over 1.3 million ha of lake surface has been lost to reclamation and more than 1,000 lakes have disappeared forever. Large lakes have been reduced e.g. Dongting was 430,000 ha in 1940s but is only 240,000 ha today. Marshes have been drained. For instance Sanjiang Plain had 2.44 million ha of marshland in 1975 but was reduced to only 1.13 by 1990. Increased siltation from forest loss upstream severely degrades wetlands downstream. Uncontrolled mass-tourism at wetland sites has also degraded critical wetland ecosystems through causes such as inappropriate tourism facility development and trampling. Loss and degradation of wetland habitats are also compromising the ecosystems' abilities to provide, regulate and purify water, resulting in the alarming trend of clean water shortages and an extremely large number of cases of water-borne diseases as described earlier. Given the critical situation surrounding wetlands in China, there is a pressing need for urgent and concerted actions to change the course of development.

15. Overexploitation of natural resources: Most wildlife species, including many wetland dependent species like waterfowl, in China have already been reduced by hunting to very low population numbers. Continuing hunting pressure whether it be legal or illegal remains a threat to surviving populations in most areas. Hunting is compounded by demands for many wetland species, in particular turtle species and amphibians such as frogs and newts, by a growing traditional Chinese medicine trade, by the habits of eating wildlife and by the valuable trade in some rare species such as falcons, shatoosh wool, etc. Overfishing of wild freshwater and marine species remains out of control. Many formerly common commercial species are now endangered e.g. sturgeon, shad and icefish or can no longer be found in the wild such as Chinese Paddlefish.

16. Pollution: According to CCICED (2010), 850 out of 1,200 monitored rivers are polluted. 50% of remaining lakes are now eutrophic, which is harmful to fisheries, agriculture and human health. Furthermore, marine habitats are becoming polluted by silt, metals and fertilizers washing from China's rivers. Many water courses, lakes and coastal waters are severely polluted as a result of agricultural run-off, industrial and domestic discharges. Introduction of new agricultural technologies increased chemical use that endangers many downstream ecosystems and water ways. The pollution has severely degraded aquatic ecosystems, is a major threat to human health, and may limit economic growth. Excessive nitrogen in water leads to increasing outbreaks of toxic algal blooms. The use of untreated water affects development especially in the poorer, more disadvantaged regions.

17. Climate change: Climate changes will cause redistribution of major ecological zones across the face of China requiring adjustments in species distributions, migration patterns and phenology. Sea levels will rise threatening many coastal habitats. Over the last four decades, there has been a significant increase in extreme weather events such as droughts, heat-waves, out of season temperature plunges and floods. The frequency and intensity of typhoons reaching China has doubled over the past 30 years. These changes may mean some PAs are unable to protect the species for which they were established. More attention will need to be paid to connectivity to allow wild species to survive by moving to different areas. Climate changes dramatically impact wetlands by affecting seasonality of water flow, water temperature, pH and oxygen content. These in turn impact the biota including suitability of sites for migrating species. Climate change massively impacts the vital ecological services delivered by wetlands in China.

18. Invasive alien species: With such dynamic changes to the landscape, changing climate, changing agricultural practices, extensive reforestation and massive global trade, China is particularly susceptible to the threat of Invasive Alien Species (IAS). Such species already caused large financial losses and become a growing threat to PAs. Wetlands are particularly threatened and are being damaged by an invasion of exotic water hyacinth, other water weeds, mollusks, introduced crustaceans, fish, terrapins and even mammals (muskrats). Zebra mussels are blocking drains and aggressively displace local fauna in the south and south east coast of China. Louisiana crayfish in the south east lakes of China is weakening and undermining flood dykes and killing and displacing local crustaceans and other fauna. Golden apple snails are destroying rice in the southern provinces, outcompeting local mollusks and destroying food species populations due to over-predation. These are just some examples of wetland IAS threatening biodiversity and causing big economic losses to the country.

Wetland Biodiversity Governance

19. In China, the government responsibilities for biodiversity conservation are divided into three functions. Ministry of Environmental Protection (MEP) has the general administrative mandate for biodiversity conservation, being the primary government agency in charge of issues related to Convention on Biological Diversity (CBD). The main implementer of biodiversity conservation work is the SFA which is in charge of forests, wetlands and the vast majority of NRs in China, as well as management of wild flora and fauna in the country. In particular, the Wetland Conservation Management Centre of the SFA with its 15 staff members has the overall mandate to ensure technically sound management of all wetlands in China and coordination among different agencies. It is the focal government department for the Ramsar Convention and administers Ramsar sites. In each of the provincial governments, there is a provincial forestry department that reports directly to the SFA, as well as to the provincial governor. There is also the wildlife conservation bureau within the provincial government which is a subsidiary agency to the provincial forestry department. The wildlife conservation bureau is in charge of NR management and wildlife protection and management as well as wetland protection at the provincial and site levels. Although policies and laws related to wetland protection and biodiversity conservation are set at the national level, provincial and local governments can also issue their own provincial laws as long as they are in line with the national laws and policies.

20. Although not mandated to conserve biodiversity, a number of other government agencies and their provincial departments have direct involvement in use of wetland resources. These agencies include MEP, Ministry of Agriculture, Ministry of Water Resources, Ministry of Lands and Resources that is in charge of planning of land use and resources including geological resources for mining, and the National Development and Reform Commission which is in charge of drafting and implementing government development programmes including wetland development programme or rehabilitation programme.

The Nation's Efforts to Date

21. The Chinese Government has taken concrete steps to systematically address the above mentioned threats, through its efforts to mainstream wetland conservation in development planning. The country joined the International Convention on Wetlands in 1992 and originally nominated 7 sites as RAMSAR Wetland Sites of International Significance. In 2002, SFA with the cooperation of 17 other ministries/agencies published the China National

Wetland Conservation Action Plan which included a description of wetlands in China, their conservation and management status, problems and threats, importance of wetlands, guiding principles for their wise use and conservation, and priorities for conservation action. Following this action plan many new wetland nature reserves (NRs) and Ramsar sites have been established and many national and international interventions have been undertaken to address the complex threats posed to the safeguarding of these precious national resources.

22. Concerted efforts have been made through the UNDP/GEF supported *Wetlands Biodiversity Conservation and Sustainable Use Project* which ended in 2009. This focused on wetlands in the broader production landscape and on supporting the Government to successfully mainstream wetland conservation in general in national development planning without any distinction for those in PAs, resulting in the incorporation of specific actions, such as wetland restoration and rehabilitation, and integrated water resource management to enhance wetland BD conservation in the 11th National Five Year Plan (2006 – 2010) and increasing amount of investment in wetland conservation programmes. During the 11th Five-Year Plan period, since the State Council approved the National Implementation Plan on Wetland Conservation Programme, the Chinese central government has invested US$ 216 million[6] in carrying out wetland conservation, restoration, sustainable use demonstration and capacity building. To date, over 200 wetland-related projects have been undertaken across China, including 134 projects implemented by the forestry sector, with a total local government co-funding of over US$ 263 million. However, even this level of investments is not sufficient to tackle the growing problems of wetland degradation and biodiversity loss, and continuous government investments will be necessary.

23. As part of the UNDP/GEF investment, the China Wetland Information System (CWIS) was established as a tool to share data on wetlands and biodiversity, by consolidating the data from the first national wetland survey that took place in the 1990s from text format to database format. National Wetland Conservation Regulation has been drafted, providing, *inter alia*, for cross-sector coordination at national and provincial levels and cost sharing mechanisms to maintain wetland ecological features, monitoring regime for wetland status and threats, and integration of wetland conservation into national plan for payment for Ecosystem Services (PES). Eleven provinces have issued wetland conservation regulations. National support structures for integrated wetland management in the form of the Wetland Conservation and Management Centre was established in 2007. Through the EU China Biodiversity Programme (2005-2011), implemented by the MEP through the UNDP, the Government has invested US$ 80 million in strengthening biodiversity conservation in the country and has supported mainstreaming of wetlands into broader development landscapes through 18 field projects.

24. In addition, with the World Bank implemented and GEF financed projects, Hai River Basin Integrated Water Resource Management Project (2004-2010), improving integrated water and environmental planning and management in the basin. An integrated water and environment management plans (IWEMP) were developed for five key counties in Beijing, Hebei Province and Tianjin Municipality. Also Strategic Action Plans (SAP) on IWEMP were developed for the Hai Basin and the ZhangWeiNan sub Basin. There have also been a number of site based efforts, that were supported by the GEF, including Sanjiang Plain Wetland Protection Project (ADB – 2005-2010), the Lake Dianchi Freshwater Biodiversity Restoration Project (IBRD – 2003-2008), the Participatory Planning and Implementation in the Management of Shantou Intertidal Wetland (UNEP – 2007-2010). These efforts have borne fruit in terms of enhanced awareness and improved management of wetlands at site level.

25. In addition, there are a number of on-going and emerging projects that have been developed under the CBPF framework, which are highly complementary to the Programme. UNDP/IBRD supported mainstreaming biodiversity protection within the production landscapes project aims to restore the productive and protective functions of the Lake in Xinjiang by addressing the interlinked problems of biodiversity loss and land degradation. The UNDP/ADB supported Jingsu Yancheng Wetland System Protection Project aims to conserve the coastal and upstream ecosystems of Jingsu/Yancheng wetlands while reducing rural poverty and promoting environmental sustainability through the establishment of an integrated management system.

[6] All the currency conversion in this document is based on the exchange rate of US$ 1 = CNY 6.47 (June, 2011)

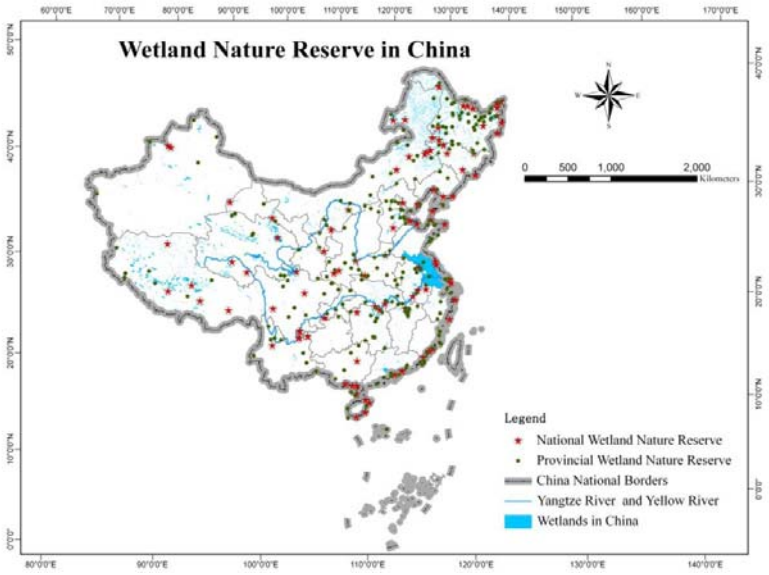
26. However, as described above, given the enormous size of the country, fast growing population and economy, there is more to be done in order to reduce the loss of wetland biodiversity, and a different approach will be necessary to add value to the previous and current investments. This needs to involve an approach to systematically address threats to wetland biodiversity loss, and a system level change to dramatically step up the management effectiveness of wetlands and to reduce pressure on them.

China's Wetland PA Sub-System

27. In addition to the above, in an attempt to significantly slow down wetland habitat degradation and biodiversity loss, the Government has been active in establishing "wetland PAs". Wetlands PAs are considered as the cornerstones of wetland biodiversity conservation in China. Wetland PAs are sites primarily established to protect important wetlands including lakes and water ways, and represent a sub-system of the national PA network. These PAs are areas legally demarcated for biodiversity conservation purposes, with agreed governance structure, budget appropriation and staff to manage the areas. Well-preserved biodiversity is the foundation of maintaining ecological functions of wetland ecosystems, including water provisioning, regulation and reticulation, flood mitigation, pollution control and climate regulation. This makes establishment of PAs and improving PA management the best and most fundamental way to conserve biodiversity and sustain ecosystem services.

28. The wetland PA system is extensive, covering an area of approximately 48,962,400 ha, forming a sub-system of the national PA system consisting of over 5,000 PAs, representing over 18% of the country's land surface. The sub-system consists of 99 National wetland NRs covering an area of 28,022,629 ha, 226 Provincial wetland NRs covering an area of 13,165,081 ha, and over 250 local level NRs covering 6,614,690 ha. In addition, there are 145 National Wetland Parks and 102 Local Wetland Parks that have been established under the National Wetland Park Management Regulations issued in February 2010, covering 1.16 million ha.[7] These are directly managed by the local government through local forestry department and its subsidiary units. All the 42 wetland types identified under the Ramsar Convention occur in the wetland PA sub-system although none are sufficiently protected. 50.3% of all the natural wetlands are represented in the sub-system. (see Table 2 for summary)

Map 1: National and Provincial Wetland Nature Reserves in china



[7] 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." The functions of wetland parks are similar to NRs, but are usually located near urban areas, where people can easily visit. In addition, one of the important functions of wetland parks is the provision of an entertainment area for the general public.

29. National NRs and Provincial and Local NRs: Among those PAs, the most important are the NRs designated under the Regulations on Nature Reserves. Under the Regulations, NRs at the national level, provincial level and local levels can be designated. National NRs are NRs with national and internationally significant biodiversity, or specific research value, and proclamation of a national NR has to be approved by the State Council, thus making them conservation areas of the highest category. Local governments can apply for upgrading of Provincial NRs to national NRs after three years of existence of the reserve. Local departments in charge can apply for a provincial, municipal or county-level NR status, which requires approval from local governments at the corresponding level. There are no differences in management objectives of national, provincial or local level NRs. What is different is the stronger support, in terms of financial and human resource provisions and support through programmes, NRs enjoy from local and national governments.

30. The Regulations specifies that a NR consists of three zones; the "core area", the "buffer zone", and the "experimental zone". The following table describe purpose and management prescriptions of each zone, however, many NRs do not have all the zones and/or zones are not managed according to the prescriptions.

Table 1: Management Prescriptions for Different Zones within NRs

Management Zone	Purpose	Management Prescriptions
Core area	To protect intact ecosystems where rare and endangered animals and plants are concentrated	▪ No entry, except on special permission accorded for scientific studies. ▪ If necessary, people living inside are to be resettled. ▪ Construction of production facilities is prohibited.
Buffer zone	Area surrounding the core area	▪ No tourism, production or trading activities. ▪ Entry permitted on special permission for non-destructive research, specimen collection, and educational purposes ▪ Construction of production facilities is prohibited.
Experimental zone	Area surrounding the buffer zone	▪ Visiting and tourist activities allowed with special permission. ▪ Tourism promotion should not damage or pollute original landforms and scenery. ▪ Visiting and tourist projects that violate the general guidelines of NRs are prohibited ▪ Construction of production facilities that may pollute the environment or damage the natural resources or landscapes prohibited. ▪ Existing facilities are required to reduce and control pollution discharge to be within prescribed standards.

31. Wetland NR Governance: Wetland NRs, like all other NRs, are primarily managed by the SFA[8], with a much smaller number of PAs being managed by other agencies including the State Oceanic Administration (SOA), MEP, Ministry of Water Resources, Ministry of Agriculture, Ministry of Land and Resources. On the ground, these NRs are managed by the local administrative unit of the national agencies. These administrative units (e.g. forestry department in the case of SFA) are located within the provincial (or autonomous region) and local governments (prefecture, county etc.). The provincial Wildlife Conservation Bureau, which is one of the subordinated agencies of the provincial Forestry Department, is an important agency responsible for PA management and planning in the Province. The bureau has a number of sections including NR management section, wildlife management section and wetland protection section. The bureau reports directly to the provincial Forestry Department, which reports to the national SFA as well as to the provincial government. While the national authority sets technical standards, provides technical programme support, manages the central wetland database, and ensures effective management of the national wetland PA system, provincial authorities are

[8] SFA manages 54 out of 99 national NRs (88% of the total areas) as well as 140 out of 226 provincial NRs (51.5% of the total area).

responsible for the management of the provincial PA system as well as for site management. A number of national NRs and PNRs have established dedicated management institutions, which also operate on government funds and report directly to the SFA.

32. Funding for NRs: The wetland PAs, like other PAs, are mainly funded by provincial (or autonomous regional) and local (governments. These funds are mainly allocated to national and some provincial NRs. Personnel costs of provincial NRs are usually included in the provincial and local government budget. National NRs can access national funding for PA management ranging from US$ 155,000 to US$ 4.7 million per annum. These funds are used for improvement of basic capacity and facilities for NR management –i.e. personnel cost and construction of buildings and roads within PAs, however, it does not usually cover training, monitoring and law enforcement. Lower level (Country-level, municipal, prefectural etc.) NRs only receive very small funding support from local government, and often face difficulties even maintaining staff salaries.

33. Tourism income is often an important income source for NRs which receive a large number of visitors. NRs are able to keep the income they generate which is helpful in supplementing their budgets. However, this income tends to be absorbed by the tourism division of the provincial governments, leaving very little for PA management and biodiversity conservation activities. This also tends to lead to incompatible income generation activities by the NR reserve management authority, including sales of wildlife and products from the NRs, to development of large-scale tourism facilities such as big roads, cable cars and gigantic hotels and entertainment centres.

34. Available budget is usually divided into construction funds, operational funds and special programme funds. Construction funds account for the majority of total funds and are usually used for construction of various buildings such as offices, rescue centres, tourism facilities, or even zoos and botanic gardens, and roads. Operational funds are mainly devoted to staff salaries and to subsidise daily office expenses and overheads. Special programme funds may be used in initial surveys of resources and other short-term programmes. The majority of NRs do not have secure budgets for daily patrolling, monitoring and enforcement, indicating that the majority of NRs are facing severe funds shortage and are unable to conduct basic PA management activities.

35. The following table summarises differences between various types of wetland PAs.

Table 2: Types of Wetland PAs in China

PA Type	Governing law/regulation	Management Objective	No.	Ha	Management Authority	Main Funding Sources
National Wetland Nature Reserve	Regulations on Nature Reserves (MEP, 1994)	Conservation of nationally and internationally significant biodiversity and maintenance of wetland ecosystem services and ecosystem restoration	99	28,022,629	SFA, MEP, SOA, MOA, MLR, MWR etc.	National (construction fund and programme fund) and provincial and local government budget (operational fund)
Provincial Wetland Nature Reserve			226	13,165,081		Provincial and local government budget (operational fund) and in some occasions national programme fund to implement national programmes
Local Wetland Nature Reserve			>250	6,614,690		Local government budget (very small)
National Wetland Parks	National Wetland Park Management Regulations (SFA, 2010)	Wetland ecosystem protection and wise use of wetland resources. Provision of recreation areas and promotion of public awareness, knowledge and understanding of wetlands	145	935,000	SFA	National and provincial government budget
Local Wetland Parks			102	225,000		Provincial and local government budget
TOTAL				48,962,400		

Management Effectiveness of Wetland PAs and their Unique Needs

36. The wetland PA sub-system includes 50.3% of China's remaining natural wetland areas. This forms part of the National PA System that through an established governance framework budget appropriation and staff confers protection above and beyond wetlands in the boarder landscape. This undoubtedly provides a significant opportunity to ensure that critical wetland biodiversity is safeguarded. Nonetheless the entire PA system has a number of deficiencies that results in many wetland PAs becoming mere paper PAs with sub-optimal protection. Furthermore wetland PAs, because of the complex characteristics, face a number of specific management challenges.

37. Unlike "forest" NRs with predominantly forest ecosystems, wetland PAs have their own unique problems. Firstly, as wetland areas have high concentrations of human population, their activities such as fishing, sand mining, shipping and dam-building, all pose risks to wetlands. In addition, as the wetland areas are often located in the lower reaches of river basins, such activities as irrigation, water diversion and agricultural fertilizer use in the upper reaches also have impacts on the wetland areas. Most of the wetland areas in the dryland in northern China are affected by water use in the upper reaches, leading to the degradation of wetland areas.

38. Secondly, related to the above, the land tenure of the wetland PAs often does not belong to the SFA as the PA management authority. For example, the user rights for the water surfaces of lacustrine PAs falls into the hands of fishery authorities (or local fishermen/farmers), while the user rights for palustrine wetlands often belong to herders. At present, the wetland PA management authority can only execute management over limited natural resources such as migratory water birds, and lacks effective management authority over water, fishery and grassland resources

39. Thirdly, the zoning of NRs in the traditional sense (core zone, buffer zone and experimental zone) does not often apply to the wetland NRs, in particular the lacustrine wetland PAs. Consequently, such human activities as fishing cannot be completely forbidden in the core zones in many wetland NRs. The delineation of experimental zones is generally made on a subjective basis.

40. Despite this impressive wetland PA sub-system, because of suboptimal management due to a number of both PA generic and wetland specific barriers, wetland biodiversity is still being lost. However, this presents an opportunity to work alongside baseline programmes to reduce pressures and improve wetland biodiversity status through strengthening the management effectiveness of the wetland PA sub-system and improve spatial coverage of the system.

Long-Term Vision and Barriers to Achieving It

41. Given the above, the long-term solution this Programme proposes to safeguard wetland biodiversity is to build a stronger PA system that has a far more robust governance framework to deliver improved conservation across the country. Within this, there should be a subset of specific governance tools that are tailored to the wetland PAs. As part of the long-term solution, provincial and local PAs would be strengthened to comply to the national standards so that they can effectively address existing and potential threats. Relevant institutions will have the capacities to fulfil their functions and site level staff will have the approaches, tools and skills to effectively manage the PAs to counter specific threats. Threat reduction at source would be achieved by development and enforcement of specific standards for sectors near PAs.

42. There are a number of barriers to these long terms solutions that are described in detail below. The Programme has been designed to overcome the barriers and contribute to the long-term solution. It would do this through a three- tiered approach (national, provincial and site). At the national level, the Programme aims to create a strong national system for managing the wetland PA sub-system, strengthening key PA management capacities and tailoring the regulatory framework to better address the specificities of wetland PAs, and establishing mechanisms to systematically reduce threats to wetland PAs posed by different sector activities. At the provincial level, interventions will be developed affecting seven provinces, which harbour important wetland

biodiversity, addressing the management needs of different wetland types and varied threats and the socio-economic context of respective areas. Within these, through the site level interventions, the Programme will demonstrate unique models of increased PA management effectiveness in wetland PAs with different types of wetlands, and inform the rest of wetland PAs country wide through knowledge management and sharing mechanisms. The Programme thus focuses on the wetland PA sub-system, and comprises seven projects; one national level project and six provincial level projects. The Government selected the provinces and target sites according to the NBCSAP's priority settings, the Ecological Function Conservation Area[9] identification, and national conservation priority wetlands with global significance, with different ecosystems, wetland types, different sets of threats and within the socio-economic context. Four out of six areas are directly within the priority sites under the NBCSAP as well as under the National Ecological Function Zones. For the three provincial sites within the Yangtze River Basin, inter-provincial and intra-basin wetland PA system and collaboration will be enhanced to precipitate a wider basin-wide impact of strengthened PAs.

Barriers

Barrier 1: Weak systemic and institutional capacity for effective PA management at the national, provincial and local levels

43. Systemic Barrier: Management effectiveness is hindered by weaknesses in the legal basis for PA development and management, in particular for wetland PAs. Despite many laws and regulations relating to wildlife protection and management of forests, grasslands and other natural systems, there is no comprehensive law for the establishment of PAs. The PAs are established under ministerial Nature Reserve Regulations only, making them vulnerable to pressure from other sectors with strong sector laws[10]. The Regulations on Nature Reserves provides for the process of establishing NRs at different administrative levels, setting broad criteria for the NRs and indicating possible and prohibited activities in the three zones[11]. However, the regulations do not provide much flexibility in terms of zoning and management options. The result is that most PAs are managed in ways that are contradictory to the word and spirit of those regulations. In particular, the zonation of NRs as stipulated in the regulations cannot often be applied to the wetland NRs, in particular lacustrine wetland PAs. Consequently, such human activities as fishing cannot be completely forbidden in the core zones in many wetland NRs.

44. There are no guidelines tailored for management and zoning of different types of wetland PAs, contributing to the establishment of an extensive "paper system of NRs" where *de facto* management comes nowhere near the strict protection regulations for NRs.[12] Wetland PA specific guidelines are essential given that threats to wetland PAs often occur outside the PAs, and are dependent on, and affected by, activities upstream. In addition, wetland ecosystems are highly "fluid" with seasonal changes in water levels making management more complex, with transition ecosystems such as mangroves adding even larger complexities. There is a need for wider categories and more flexible zone options to allow for different levels of naturalness, protection and sustainable utilisation to match local conditions and needs. The current regulations lack provisions for habitat management (which most wetland sites require); provisions or guidelines for community involvement; guidelines

9 In July 2008, the National Ecological Function Zones was jointly issued by the Ministry of Environment Protection and the Chinese Academy of Sciences. The targeted project areas under the Programme have been identified as one of the most important zones for ecological function of biodiversity conservation and water retention in China. Similarly, in 2008, the National Overall Planning of Land Use (issued by the State Council) stated the need for wetland conservation. On June 12, 2011, the National main function area planning was released by the State Council, which divided the land into priority development zones, key development zones, restricted development zones and no-go areas.

10 In China, laws are formulated and issued by the National People's Congress, the highest order in China's legal system. Regulations are formulated and issued by the State Council and provincial People's Congress, or some people's congress of autonomous prefectures and municipalities. Regulations are less powerful than laws. Decrees can be issued by government at different levels through departments.

11 Three management zones in the Regulations are: Core Area (no entry except on special permission accorded for scientific studies), buffer zone (no tourism or trading activities and no construction of production facilities) and experimental zone (visiting and tourist activities allowed, construction of facilities are possible as long as it does not have negative effects on biodiversity.)

12 This problem makes it difficult to assign IUCN categories to most sites. Their legal management objectives should make most of them category I but actual de facto management would leave them as mostly V or VI.

for treatment of alien invasive species; guidelines for adaptation to climate change; scope for meeting the dynamic shifts of wetlands and changing seasonal needs of some wetlands. The regulations lack provisions for allowing sustainable harvesting from within the main zones of NRs. Land tenure rights and water and resource user rights within the wetland PAs also needs to be clarified and coordination and co-management measures need to be developed with a wide range of co-management options under national and provincial regulations.

45. Work is currently ongoing to develop new legislation for a wider range of PA categories, more zoning options and more scope for co-management but progress in adopting such a new law remains slow. Similarly a specific draft law for conservation management of wetlands was drafted in 2004/5, however it still remains in the approval process. There is a need for accelerating these legislative processes, to provide appropriate framework that is applicable to wetland PA management.

46. Representational and Spatial Barrier: Individual wetland PAs are established and exist in isolation without systematic and spatial consideration of effectiveness as wetland PA sub-system. There is no climate change resilience consideration in planning and demarcation of PA boundaries. Accordingly, designation of PAs as different levels of NRs and wetland parks tends to be arbitrary. As a consequence, not all the important types of wetlands are adequately represented in the wetland PA sub-system. Notably, riverine wetlands are severely under-represented. Furthermore, some important wetland NRs which serve as migratory waterfowl habitats such as Shengjinhu NR, Nanwenghe NR, and Liangheyuan NR, are not yet enlisted as Ramsar sites because:1) the designation formalities are complicated; 2) more designations imply more responsibilities for the government; 3) the local governments do not always want to designate their wetlands because they think such a designation will impose more restrictions to economic development. Many provincial and local wetland NRs are heavily under-resourced, and need to be upgraded to national NRs, to ensure adequate protection and financial and human resources. Ramsar status will also provide additional financial, human and technical resources for improved level of conservation.

47. Institutional Barrier: The wetland areas in China are still faced with the challenges of unwise use, resulting in reduction of natural wetland areas and loss of biodiversity, declining wetland services, and the reduced capacity of wetlands to support socio-economic development and regional ecological security. There is a dire need to strengthen the SFA's capacity to plan and manage the wetland PA sub-system through improved coordination, and development of tools and mechanisms for ensuring the standards of wetland PA management.

48. The process of making master plans to justify requests for 'development' investments is well developed. But there is no routine system of developing 'management plans' to define the operational programmes (protection, monitoring, enforcement, visitor use, research, community involvement etc.) that can be approved and ensured funding. International project interventions provide only temporary solutions and so long as the routine funding of basic protection operations of Pas remains unaddressed, this problem will remain. Again the problem is compounded by the low awareness of government planners and finance departments of the real value of the services PAs can deliver to the economy.

49. Most provincial Forest departments' current institutional capacity to oversee multiple PAs, make sound operational decisions, manage budgets, deploy staff, and monitor performance are not adequate for effective PA management. The Bureaus' themselves are mostly understaffed at provincial and sub-provincial levels. NRs lack capacity and GIS software to undertake effective systems planning or biodiversity monitoring particularly when it comes to wetland biodiversity. PA management is the primary responsibility of field staff that the local governments (prefecture and county) allocate and thus they are under local government control and supervision. They have almost no specific training in PA management nor wetland management, and no job standards are applied, although such standards are available in Chinese and have been adopted in some provinces such as Yunnan. Staff performance is also difficult to assess as PAs do not have management plans or business plans, and, thus, progress towards achieving results cannot be measured.

50. Whist national NRs often get a disproportionate share of overall PA budgets, most provincial level NRs receives much less funding, though some are extremely valuable and important for biodiversity conservation and provision of ecosystem services. Even where eco-compensation schemes are being initiated (e.g. for water catchment services and for damage caused by wildlife) and could be used to compensate stewards of good ecosystem protection, payments usually go to provincial government and benefits are not yet felt at NR or local community level. The PA management budgets are allocated based primarily on staff numbers and do not take into account the specific needs of the PAs at any given moment. PA project budget can be applied for, but the process of application takes a long time and therefore they are not flexible when it comes to addressing emergencies.

51. Local communities are heavily dependent on resources inside many of the NRs. They remain too isolated from planning, monitoring and management and could be readily involved in several aspects of management. Under Chinese constitution and laws, although all lands belong to the state, communities are allowed to be involved in management of government lands inside PAs through agreements with the government, and pilot co-management schemes have been attempted in different parts of the country. Co-management agreements are typically signed between community organizations and provincial or local authorities, on management of wildlife resources, grazing land and fire management. Given the high population of the country and the fact that most of the NRs are inhabited, it is important to build on a series of successful co-management models in PA management and wildlife monitoring, that have already been pioneered in China by a variety of NGOs and internationally funded programmes (e.g. under the recently completed ECBP field projects), as well as to learn from other international experiences.

Barrier 2: Disconnect between PA planning and management and national development and sectoral planning plus low financial security

52. Weak Coordination and Cooperation: At the national level, broad five-year economic development plans and subsidiary sector plans are formulated, and large-scale national programmes and projects, many of which have a significant impact on wetland health, are developed. It is therefore critical to ensure that the national development direction and mega-projects do not adversely affect wetland biodiversity and ecosystem services. Coordination between sector agencies is weak resulting in overlaps and inappropriate government projects that are often harmful to the local environment and biodiversity. Some wetlands including the marsh and bogs, which are important habitats for water birds, are categorised as "unused land" in national land use inventories. Water resource development projects for water diversion and irrigation have reduced the water supply to important wetlands in a number of PAs, causing serious degradation of wetlands and harmful impacts to the local environment and biodiversity. There are existing inter-sectoral coordination mechanisms on environment at the national and provincial levels such as the Convention on Biological Diversity National Committee (led by the MEP), National Greening China Committee comprising 18 government agencies and organised by the SFA, and the Wetland Convention National Committee comprising 16 government agencies led by the SFA. These committees tend to focus more on reporting for the conventions and conservation projects supervised by the Committees, rather than influencing the development and sectoral planning for biodiversity conservation. There is a need for creating mechanisms and tools to ensure the strong safeguard measures for wetlands within the PAs from the threats posed by external sector activities.

53. Previous mainstreaming projects addressed some aspects of this mainstreaming but in broader landscape terms. They did not focus on integrating the PA system which needs more specific safeguards and management approaches given their biodiversity status and the negative impacts of losing this. Hence, the wetland PAs are still subject to loss or severe degradation due to regional development and sector development activities. National level budget allocation for SFA and PA management will also directly influence the availability of finance for the wetland PA sub-system and site management, however to date there is no correlation between the budgets and actual management needs of the PA system or sites. At the province level, the provincial 5-year plans and sector plans are the bread and butter of actual site level determination of land-use and development. At the same time, the provincial budget allocation is by far the most important financing source for PA management, covering the

personnel and operational costs, which are the foundation for PA management, while national budget appropriation (only applicable to national NRs) is used only for specific project and infrastructure activities.

54. Several government agencies and their subsidiary units at the provincial level, such as agriculture, environmental protection, mining, water resources also operate inside PAs dealing with particular resources or areas under their jurisdiction within the PAs, alongside the local Prefecture and County governments. These institutions have tended to operate independently from the PA management authorities. Sub-provincial governments also plan and implement work inside PAs without due coordination, or consideration to biodiversity conservation. This has led to promotion of many activities that have had negative biodiversity impacts. For example, large scale fencing of natural pastures inside PAs, mining (legal and illegal), construction of roads, railways, pipelines, canals, pylons, dams and water diversions, pollution from industrial plants, grazing and fish farming.

55. The wetlands PAs face the same generic problems as other NRs in terms of extreme pressure from use of water and aquatic wildlife resources by poor local communities and many other sectors and stakeholders. As mentioned earlier the problems are often even more complicated than other types of PAs due to the following two reasons. Firstly, all wetlands are dependent on water flow, species flow and are affected by movement of pollutants from far outside the NR boundaries and thence way beyond the control of the management authority. This makes wetland PA management ineffective without ensuring adequate safeguards from external threats, ensuring the integrity of the wetland PA system as a whole as well as ensuring a catchment approach to maintaining wetland biodiversity and ecosystem functions. There is a need for a clear mechanism to safeguard wetland PAs from external threats from different sectors.

56. Secondly, the problem is compounded by the fact that different agencies are involved in the establishment and management of PAs. Unlike "forest" NRs with predominantly forest ecosystems, the authority over the land areas of wetland NRs is not exclusive to the SFA as the NR management authority. For example, the user right for the water surfaces of lacustrine NRs falls into the hands of fishery authorities (or local fishermen/farmers), while the user right for palustrine wetlands often belongs to herders. This has led to the promotion of many activities that have negative impacts on biodiversity and ecosystems. At present, the wetland NR management authority can only execute management over limited natural resources such as migratory water birds, however it lacks effective management authority over water, fishery and grassland resources. This makes it critical to improve coordination between the different agencies concerned, and develop viable mechanisms for reducing threats to biodiversity from activities of different sectors operating in and around PAs.

57. Financial Barrier: An underlying issue behind this disconnect is insufficient understanding of the economic value of wetland biodiversity and ecosystem services and how the loss of these will economically affect various industries and peoples' livelihoods. Although a number of economic valuation studies on natural resources and ecosystems have been carried out in China, there is no clear synthesis to cause major policy shift. The creation of payment for ecosystem services mechanisms has been hindered by the lack of standards for valuation methods and service indicator selection and difficulty in determining service providers and receivers due to the complex social and economic structure of the country. In addition, and given the fact that ecosystem service values are often much higher than compensation capacity, the evaluation results could only be considered as theoretical ceiling values when setting compensation standards.[13] Although the government is promoting PES like eco-compensation mechanisms, for watershed protection, grazing area reduction, afforestation and forest

[13] For example, the State Forestry Administration estimated in 2010 that forest ecosystems contribute 10 trillion yuan, or about a third of China's gross domestic product. This estimate takes into account carbon sequestration, water conservation, biodiversity protection and biomass production.

protection with some good successes, there is no established mechanism which is geared towards reducing threats to PAs and increasing PA financing.

58. Related to the above, underfunding for actual management activities of wetland PAs is an important factor for suboptimal management effectiveness of wetland PAs. As described above, wetland PAs, like other PAs, are mainly funded by provincial governments. These funds are mainly allocated to national and provincial NRs and very little goes to local NRs to the extent that these NRs often face difficulties even maintaining staff salaries. SFA currently does not have the capacity nor the tools to identify how much it actually costs to adequately or optimally manage the wetland PA sub-system and the PA system as a whole.

Barrier 3: Insufficient availability and accessibility of information and data and insufficient awareness

59. Both the two barriers listed above are compounded by the lack of awareness about the importance of biodiversity in maintaining vital ecosystem services plus poor access to up to date and accurate data on biodiversity and PAs. For example, only one nationwide inventory on wetland resources (for the wetland areas over 100 ha) has been conducted in China to date and it was conducted in the 1990s. The second national inventory exercise started only in 2009 and is still continuing until 2013. By contrast, seven national inventories on forest resources have been carried out across China. No formal education and discipline on wetlands has been set up in universities in the country, resulting in the thin resource base of wetland data collectors and analysts. Even where data exists, lack of access and sharing prevents it being used for effective planning of PA systems, developments that might adversely impact PAs and biodiversity and planning of mitigation and adaptations strategies in face of changing climate. Knowledge, Attitude and Practices surveys (KAPs) undertaken by the closing ECBP project confirm that understanding of the concept and importance of biodiversity in China remains very poor both among the general public but also among government planners and decision makers. This situation must be rectified for appropriate consideration of biodiversity conservation needs to be reflected and mainstreamed into broader planning processes. SFA already maintains an extensive database on wetlands in China, however the database is not user friendly and not openly accessible to the external users for planning and decision making. Limited access to best practices and technical information also hinders optimal performance and there is plenty of room to greatly improve the availability, accessibility and flow of relevant know-how and successful wetland management cases around the country which were achieved through government and donor – funded initiatives.

D. Discuss the added value of the program vis-à-vis a project approach (including cost effectiveness):

60. Given the aforementioned challenges China faces, to change the trajectory of development, wetlands require much stronger protection codes – i.e. protection under an effectively managed PA system that has appropriate tools and capacity to mitigate threats to biodiversity from outside and within. In order to add value to the past and on-going efforts and to fill the existing gaps within the CBPF, the Programme is designed to strengthen the management effectiveness and sustainability of the sub-system of wetland PAs to safeguard globally significant wetland biodiversity. Strengthening the wetland PA system and ensuring it serves its intended conservation purposes must be a fundamental part of the wetland biodiversity conservation efforts in the country. Otherwise, half of natural wetlands and their globally significant biodiversity, which may be thought to be safe, would be severely threatened. In addition, as with the PA management in general, wetland PA management in particular, requires landscape approach to control existing and potential threats from outside the PAs; in many cases for waterway, thousands of kilometres away from the PAs, the programme will focus on supporting improved and holistic system design, better mainstreaming of wetland PAs (agriculture, land-use planning, water resources, and overall regional developments), strengthened legislative and institutional framework, secure funding, improved coordination and information sharing, awareness and capacity building. Furthermore, as many of the issues that are affecting wetland PAs are common issues for the rest of the national PA network, it is intended that this programmatic investment in the sub-system of wetland PAs will trigger improvement in the national PA system as a whole in the long term.

61. The programmatic approach[14] is adopted in favour of a series of independent stand alone projects because of the heightened synergy and concerted impacts that can be delivered, as well as cost-effectiveness of the approach. Given the enormous size of the country in terms of population, GDP, government and land areas, and the associated magnitude of issues, GEF resources need to be pulled together to a certain critical mass to make tangible and larger impacts from the investment. Advantages of the programmatic approach include:

- Using a set of projects that are implemented within the same period, the Programme will strategically fill the current gaps in the CBPF implementation, which is weak in PA system improvement at the national and provincial levels and try to integrate PA development into the broader development landscape.
- Programmatic approach facilitates integrated impact monitoring and evaluation of the projects, making it easier to assess projects' impacts, in particular in terms of global benefits.
- The Programme allows the "three-tier-approach" for intervention which is difficult in a project due to the sheer size of the country. This is also important because a combination of interventions at the national, provincial and PA site levels, provides strong vertical and horizontal coordination which is necessary as improvement in all the levels are essential in order to ensure sustainability of project impacts.
- The Programme has a strong PA "system" focus: i.e. fixing the PA system as a whole as opposed to improving individual PAs at the site level, thereby increasing the likelihood of sustainability and long-term impact. The system focus approach is also considered cost effective, as it tackles fundamental issues nationwide that need to be fixed to catalyse positive changes.
- Through focusing on a sub-system of wetland PAs, the solutions the Programme pursues will benefit the entire national PA system, given that many of the systemic problems such as legislation and governance are not specific to wetlands.
- The Programme provides for opportunities for "cross-fertilization" between projects. The Programmatic approach facilitates regular exchange and uptake of information, best practices, lessons between the projects.
- The Programmatic approach ensures linkages and concerted impacts. This is important as the individual projects are thematically linked. For instance Heilongjiang protects breeding grounds for birds that then winter in the Yangtze Valley sites. The three Yangtze valley sites all share a common problem from the changes in summer water flow due to water diversions and hold backs by the Three Gorges dam.
- Catalysing sustainability of the country's PA system as a whole through targeted support for the wetland PA sub-system. The framework will facilitate PA planning in a much broader manner than can be undertaken by addressing single sites only. Consideration needs to be paid to upstream developments, downstream connectivity and consequences, migratory path links and climate change scenarios.
- The Programmatic approach will allow sharing of expertise, best practices and technical resources and will avoid duplication, wastage and competition for technical resources between projects and add greatly to the cost-effectiveness of the interventions.

62. By undertaking seven projects under a programmatic approach, including a strong national level project, it is expected that greater impacts can be achieved at removing these wider barriers to success. The central level project will also act as an umbrella project and assume a role of ensuring synergies between the different projects. Thorough analysis of former projects' successes and failures will be conducted during the PPG phase of each projects, in order to develop better ways to achieve sustainable results.

E. Describe the baseline program and the problem that it seeks to address:

63. Given the current water crisis, water resources management is a top priority of the Government. The Government is investing billions of US$ in water resource management, including a large number of dam construction plans and the south-north water diversion scheme to alleviate severe water shortage in northern part of China. The Government is increasingly recognizing the importance of dealing with environmental issues in water resource management, and has adopted integrated water resource management (IWRM) and integrated river

[14] Programmatic Approach is defined by GEF as "a strategic combination of projects and activities with a common focus that build upon or complement one another to produce results (outcomes and/or impacts) that would not be possible to achieve through a project-by-project approach. "

basin management (IRBM) concepts and embedded them into the programme. The main objectives related to water resources management in the 12th Five-Year Plan include flood management system improvement, water supply security, water infrastructure and facility construction, water resources utilization efficiency, water environment and ecology, water laws and regulations. Examples of some key sub-programmes are: 1) Rural water supply security programme (2011-2015) with a budget of US$ 24 billion, including improvement in rural water supply, water source protection and water quality management by using IWRM and IRBM approaches; and 2) Rehabilitation programme for middle and small size rivers with approximately US$ 15 billion budget, which also includes large-scale construction measures such as dams and water diversion schemes and ecological restoration of wetlands. Although these will improve water flow rates and restore ecological functions of some wetlands, they do not sufficiently take into account safeguarding of wetland biodiversity.

64. In addition, the Government is investing in wetland conservation and rehabilitation, in order to combat degradation of ecosystems and their services, and to secure water resources. It launched a number of ecological restoration projects that are among the largest in the world – costing US$ 109 billion – in sectors such as forestry, agriculture, and water resources. In May 2010, the Government decided to earmark US$ 30 million as special funds to subsidise management of 20 Ramsar sites, 16 wetland nature reserves and 7 national wetland parks in China in implementing projects in terms of wetland monitoring and ecological restoration. In addition, in the 12th Five Year Plan Period, the SFA is expected to invest US$180 million annually in managing the 550 wetland PAs under its direct jurisdiction, and 145 national wetland parks. Since 1992, SFA has been responsible for implementation of the Ramsar Convention and has listed 37 Ramsar Sites in the country. The Wetland Conservation Management Centre within the SFA, which coordinates wetland management and activities related to the Ramsar Convention, has an annual budget of US$ 3 million. The Academy of Forest Survey and Planning, a subsidiary institute of the SFA, with an annual budget of US$ 2 million, provides technical support for wetland survey and monitoring. Although the Government investment seems substantial at first glance, the seemingly large annual expenditure becomes dwarfed when the vast size and number of wetland PAs are considered. China is the 4th largest country in the world, and even the combined area size of the national and provincial wetland PAs alone would make the 59th largest country in the world between Iraq (437,072 km²) and Paraguay (406,750 km²).

65. The Government is also investing US$ 25 million (2006-2014) in the Support Capacity Building and Innovations to Promote Green Development in China Project, with US$ 7.6 million co-financing from the UNDP. The Project is implemented by the China International Centre for Economic and Technical Exchange (CICETE), and aims to integrate poverty reduction and rural green economy development with improved environment and capacity to adapt to climate change impacts. Within the programme, community capacity building for conservation and PA compatible land use and resource use practices is targeted. The project fosters inter-sectoral collaboration to promote sustainable development and livelihood within ecological carrying capacity. GIZ is investing US$ 4 million through its new China Wetlands Programme (2011-2015) with the SFA. The project aims to demonstrate wetland protection and development of replicable models of sound wetland management in Heilongjiang, Shandong and Zhejiang Province. There are plans for several international NGOs, such as WWF and Wetland International, to develop programmes in support of wetland conservation in coming years, however, details and the level of investment are still to be determined. While these investments aim to improve site level wetland management, none takes the approach of improving the wetland PA sub-system as a whole at the national level.

66. Policymakers have also become increasingly interested in developing new approaches to address China's multiplying conservation challenges and resource constraints in the face of extremely fast economic growth. This has led China's central and local governments to rapidly expand the range of policy and programme innovations, many under the broad heading of "eco-compensation," that are laying the groundwork for the development of ecosystem services markets. In particular, local governments have been important contributors to this process, rapidly adapting centrally designed "eco-compensation" programmes to their own needs, creating "hybrids" -

programmes that weave together and draw upon multiple central and provincial policies and funding sources - and creating their own distinct initiatives that often feed back into central government policy development.[15]

67. At the provincial level, there are a range of specific baseline projects in the 7 provinces that are covered under the 6 provincial-level projects under this programmatic framework. The baseline projects include provincial and local governments investments in managing their respective wetland PA sub-system (circa US$ 4.6 million per year), special programmes (water resource management, wetland rehabilitation and restoration, green development) funded by the national government targeting the water resource and wetland conservation, amounting collectively approximately in excess of US$ 113 million. Although the baseline projects are critical for securing water resources and wetland conservation, they are not sufficient in terms of addressing wetland biodiversity loss. The baseline project for each province- level project will be detailed in respective PIFs.

F. *Incremental /Additional cost reasoning*: describe the incremental (GEF Trust Fund) or additional (LDCF/SCCF) activities requested for GEF/LDCF/SCCF financing and the associated *global environmental benefits* (GEF Trust Fund) or associated adaptation benefits (LDCF/SCCF) to be delivered by the project:

68. **The incremental approach of the proposed Programme can be summarised as follows:** The Government of China has clearly identified wetland biodiversity conservation as a priority and is making significant investments and efforts for wetland conservation and wetland PA management. However, many investments are solely focused on conserving wetlands to secure water resource without addressing wetland biodiversity conservation and species management. There has also been no systematic effort to remove the existing barriers to a sustainable and effective PA system to ensure at minimum wetland biodiversity within PAs can be safeguarded. In particular, in many existing PAs, pressure for land and water resources, as well as threats coming from distant areas through water courses, requires urgent action in order to prevent further degradation of critical wetland ecosystems and loss of critically endangered species. The proposed programme is particularly opportune because of the existing momentum for wetland conservation among government agencies, fuelled by past and on-going support programmes and projects, water crisis as described earlier, and ever increasing frequency and intensity of drought, flooding and pollution disasters.

69. **Without the GEF investment in the proposed Programme**, there will be no framework and tools for systematic management of the sub-system of wetland PAs. The wetland PAs will continue to be managed at the site level under regulations that are not suitable for the reality of wetland PA management on the ground. The wetland PA management authorities will have limited jurisdiction over the wetlands within the PAs and have no tools nor capacities for mitigating threats coming from outside the PAs. Hence the management effectiveness of wetland PAs will remain weak and highly vulnerable to external influences such as inappropriate development and economic activities within the PAs and in the watershed that directly affect the wetlands within the PAs. As such, the wetland PA system as a whole will remain unable to fulfil its role in safeguarding biodiversity. Suboptimal coordination with other PA management agencies and other economic sectors will remain a bottleneck for engendering systemic improvement in wetland PA management effectiveness. Insufficient staffing and financing for operational activities of the PAs, resulting from suboptimal understanding and appreciation for the importance of wetland PAs for biodiversity conservation and national and local development will continue to hamper fundamental improvements. Insufficient technical and functional capacity of the national, provincial and local forestry departments and lack of mechanisms for viable co-management with resident herding communities will remain a critical bottleneck.

[15] An excellent summary of payment for ecosystem services (PES) and markets (MES) for ecosystem services in China, is available http://www.forest-trends.org/publication_details.php?publicationID=2317 which provides an overview of a range of policy innovations for watershed ecosystem services, carbon markets, forest conservation, improving landscape amenities, biodiversity conservation and anti-desertification. These contain many relevant initiatives that can be brought to play in diverting new revenues for wetlands conservation.

70. **Alternative scenario enabled by the GEF**: Despite the enormity of the scale of the threats to the globally significant wetland biodiversity and massive investments already committed for existing efforts, there are some niches which have not been tackled and where relatively small but targeted investments could yield substantial impacts. The Programme proposes to tackle these niches as described below.

71. The proposed Programme forms part of a long and continuing government effort to conserve wetland and strengthen PAs. It complements baseline programmes and projects, by addressing wetland biodiversity conservation through strengthening the wetland PA sub-system rather than focusing only on PA sites. Given the extensive nature of the national PA system in China and the sheer size of the country, the Programme focuses on the wetland PA sub-system as a way to focus on one nationwide selection of the PAs that are largely under supervision of one division of the SFA. Needless to say, almost all NRs in China contain some level of wetland component and all wetland PAs have a lot of non-wetland habitat inside them. Hence many problems faced by PAs and lessons learned will in most cases be appropriate for the entire PA system. Given this, the Programme will contribute to catalysing improvement in the entire terrestrial PA system covering 14.9% of the country, through addressing issues that are common across the different types of PAs.

72. The Programme will create a strong national system for managing wetland PAs and show the transformation of management practices in five provinces and one trans-provincial area which harbour important wetland biodiversity and different types of wetlands. The Programme will improve management effectiveness and sustainability of the wetland PA system as a whole through increased capacity, improved legislative and regulatory framework at the provincial level, standardised PA reporting and performance monitoring system, strengthening of biodiversity and ecosystem health indicator monitoring system, and provision of strategic training support and development of competency standards for wetland PA management staff. The Programme's landscape approach to biodiversity and water catchment management aims to improve the entire PA system design and better protection of wetland as well as non-wetland catchments.

73. Improved management at the site level will be demonstrated in selected wetland PA sites under the six provincial level projects, each with clear demonstration objectives. These will include landscape approach to strengthening PA management, introduction of innovative co-management arrangements, and eco-compensation financial mechanisms. Systemic and institutional barriers to improved wetland PA management will be removed, both by revising and creating provincial regulations, and inclusion of National NRs to the Ramsar List to provide additional protection status. Many provincial NRs will be upgraded to national NRs with strengthened protection status and increased resources, and a number of new wetland NRs will be established to increase the coverage of natural wetlands in the wetland PA sub-system. Intervention to strengthen knowledge management will also be targeted in order to disseminate the management know-how of PAs containing different wetland types and to promote uptake of good practice. The knowledge management component will also ensure the availability and accessibility of essential data and information for decision making by the PA and sectoral agencies, as well as to ensure improved understanding among decision makers and the public on the value and role of the wetland PAs.

74. **Global benefits.** The GEF funding will secure critically important biodiversity and deliver global benefits including the strengthening of the sub-network of wetland PAs, thus enhancing conservation and management of the habitats of endangered species and many hundreds of endemic mammal, bird, reptile, amphibian and plant species. In particular, the lake, marshland, riverine, coastal and forest habitats that they occupy will be secured by bringing real protection in place of token (paper) protection within a total of 36 of the 58 WWF terrestrial ecoregions that are recognised in China, including 5 WWF Global 200 Ecoregions. The Programme will also strengthen biodiversity management in the two WWF Global 200 Freshwater Ecoregions, namely the Russian Far East Rivers and Wetlands and the Yangtze Rivers and Lakes. The following table indicates the scale of globally significant biodiversity directly affected by the programme and summarises demonstration value and management challenges that are unique to each of the six provincial areas. Annex II shows 22 "flagship" endangered and wetland dependent species which the Programme will directly contribute to conserving, through six provincial level projects, including beaver, moose, finless porpoises, white-naped crane and red-crowned crane. Actual

additional hectares of species habitats and ecosystems that are brought under the wetland PA sub-system through the Programme will be defined during the PPG phase of respective projects.

Table 3: Biodiversity significance of 6 target wetland PA system and their demonstration values and management challenges

Province and Site Name	Main Wetland types	Eco-regions, IBAs etc.	Main BD Value	Demonstration value/management challenge
Altay wetlands, Xinjiang,	Post-glacial, montane peaty bogs and riverine forests	WWF Altai Alpine Meadows and Tundra Ecoregion (1.5 mil.ha) WWF Altai Montane Forest and Steppe Wcoregion (1.8 mil. ha) 4 IBAs	Peat store, wetland flora, northern fauna Beaver, otter northern waterbirds, endemic fish	Collaborative PA management to reduce pressures from overgrazing, mass tourism, pollution from gold mining and over-extraction of water by mining. Transfrontier PA management to safeguard wildlife habitats and population.
Poyang Lake, Jiangxi,	Middle Yangtze Floodplain lake system	Part of WWF Yangtze Rivers and Lakes Freshwater Ecoregion, Changjiang Plain evergreen forest. Chanjiang Valley. IBA, Ramsar Site	Endemic fishes, aquatic mammals endangered wintering waterfowl Black stork, Oriental stork, Siberian crane, White-naped crane, Common crane, Tundra swan, greater white-fronted goose, Finless porpoise	Systematic and coordinated management of a cluster of PAs in the Poyang Wetland Ecosystem to reduce pressure from overfishing Integration of PA management into the Three Gorges Dam operational plan to sustain required inflow into the lake for biodiversity conservation
Hong Hu, Hubei	Middle Yangtze (but independent from Yangtze flow) Oxbow lake with reed beds	Part of WWF Yangtze Rivers and Lakes Freshwater Ecoregion Changjiang Plain evergreen forest, Changjiang Valley. IBA, Ramsar Site.	Endemic fishes, unique aquatic flora, endangered wintering waterfowl Black stork, White-naped crane, Hooded crane, Tundra swan, Swan goose,	PA management to reduce pressures from luxury housing, golf courses, entertainment facilities and IAS in the context of increasing water shortage exacerbated by climate change ;
Hainan mangroves, Hainan,	Mangroves and tidal mudflats	WWF Hainan Island Monsoon Rain Forest (1.4 mil. ha) WWF South China-Vietnam Sub-Tropical Evergreen Forest (2 mil. ha.) CI Indo-Burma Global Hotspot 2 IBAs, Ramsar Site	Diversity of mangrove species, endangered wintering birds Chinese egret, Black-faced spoonbill , Saunders' gull, Spoon-bill sandpiper, Spot-billed pelican	Island PA system consolidation and coastal PA management to reduce pressures from overharvesting of marine resources; and pollution and IAS from aquaculture
Shengjinhu, Anhui,	Lower Yangtze Floodplain lake	Part of WWF Yangtze Rivers and Lakes freshwater ecoregion, Huanghe Plain mixed forest. Changjiang Valley. IBA.	Wintering area for endangered waterfowl Tundra swans, Swan geese, Red-crowned crane, Hooded cranes, White-naped crane, Black stork, Oriental stork, endemic fish species	PA management to restore and rehabilitate lake wetland ecosystem habitats to reduce threats from insufficient water flow, sedimentation and reduced water vegetation, and IAS caused by artificial breeding practices in the lake. Yangtze River Wetland Network alongside local extractive uses (aquiculture etc)
Daxing'anling Region, Heilongjiang/Inner Mongolia Provinces	Forest bogs and lakes	WWF Daurian Forest Steppe (0.24 mil. ha) Part of WWF Russian Far East Rivers and Wetlands Freshwater Ecoregion, Hinggan-Dzhagdy Mts conifer forests, Amur meadow steppe. 3 IBAs	Taiga forest fauna, Amur endemic fish, breeding areas for migrating waterbirds Whooper swans, White-naped crane, Demoiselle crane, Common crane, Spotted Capercaillie, White-tailed	Spatial consolidation and expansion of Daxing'anling Region 's PA system, through multiple use forest planning and management PA system planning and increased management effectiveness to change unsustainable peatland/wetland

			eagle, Gyr falcon, Snowy owl, Great grey Owl, Moose, Reindeer, Sable, Lynx, Wolverine	forestry practices in the region and reduce pressure on biodiversity from hunting of forest/wetland species and uncoordinated and destructive new developments including mining and pipeline placement

75. The Programme, through its seven projects[16] and the following three programmatic components, is designed to address the barriers identified above in a systematic manner, in order to make a significant leap forward possible for conservation of China's wetland biodiversity. While individual Project Identification Forms (PIFs) will describe each project component, outcomes and outputs in more details, programmatic components, outcomes and outputs are summarised here.

Component 1. Enhancing management effectiveness of wetland PA sub-system

76. Under this component, the Programme will focus on strengthening systemic and institutional capacity for effective wetland PA system at the national, provincial and site levels. Through Programme will support improving legal frameworks at the national and provincial levels. At the national level, this includes: Amendment to the Nature Reserve Regulations so that it will provide realistic and effective management standards for wetland PAs and development of the Regulations for Co-management of Wetlands NRs, and the Regulations for the Control of Invasive Alien Species in NRs, in close collaboration with other divisions of the SFA, MEP and sector agencies. Passage of the National Wetland Conservation Regulations will also be supported. At the province level, based on the systemic capacity review during the PPG phase, development and amendment of provincial regulations will be supported. In addition, national official guidelines for management and zoning of wetland PAs will be developed for different types of wetland PAs. These will provide management and zoning options that are specifically tailored to tackle existing and emerging threats to wetland biodiversity. The guidelines will be gazetted and training and application of the guidelines will be supported at the national, provincial and site levels. A range of management tools for wetland PAs will also be developed, drawing on successes and lessons learned from many past and on-going projects at the site level, and their application supported under provincial projects. These will include wetland PA management plan templates, wetland biodiversity status and water quantity and quality monitoring protocols.

77. A systematic review of the wetland PA coverage will be conducted based on representativeness of different wetland types, and with climate change adaptation consideration, at both national and provincial levels. Based on this, five areas will be selected in critical areas to increase resilience and connectivity and PAs will be gazetted and basic operations started in these areas. In total, up to 50 new wetland sites will be added to the PA system, improving the percentage of natural wetlands coverage in the wetland PA network from the current 50.3 % to 55%, adding an additional 1.7 million ha to the national wetland PA sub-system. The Programme will also support upgrading of at least 20 Provincial wetland NRs to National NR status and the enlistment of at least six new Ramsar sites, elevating their protection status and increasing their budget allocation. Designation as a Ramsar site will entail: 1) biodiversity survey of these sites; ii) management planning in line with international standards, iii) training of staff, iv) provision of monitoring and patrolling equipment.

78. BD health status index will be developed and a monitoring mechanism and a system-level crisis management mechanism will be established. This will enable the SFA at different levels to predict crisis and react promptly to a crisis situation and ensure provision of necessary remedial measures such as emergency funds or actions. Biodiversity health index will reflect the ability of a site to maintain its biodiversity values. The biodiversity index will have two components: 1) score of habitat suitability for important biodiversity and 2) status of important biodiversity. Each site using this index will undertake a baseline survey which also selects

[16] See Annex 1 for the list of the projects under the Programme.

indicators and target species for subsequent surveys. The index will be tested and refined through the six provincial level projects.

79. Capacity of the SFA at all levels will be supported for wetland PA planning and monitoring through the seven projects. At the national and provincial level, the capacity development will focus on the SFA's supervisory capacity at the national and provincial level for planning and monitoring of wetland PA system and Ramsar Sites. This will include review and consolidation of staffing structure and development and adoption of a set of professional competency standards for wetland PA management staff as a basis for enhanced performance, as well as technical training.

80. Management effectiveness will be increased at demonstration wetland PAs under the provincial projects, through targeted interventions addressing specific threat scenarios facing each site as indicated in Table 3 above. This will include park management planning, boundary demarcation, ecological monitoring and wetland use management system establishment, enforcement (surveillance, interception of malfeasance and prosecution), staff training, co-management with communities and other sectors with resource user rights. Under the provincial projects, the Programme will target a cluster of wetland PAs around the wetlands with global significance, demonstrating landscape approach to PA management. Under the three projects along the middle Yangtze, intra-basin network of the wetland PA systems will be developed, enhancing collaboration to increase the capacity to collectively deal with common threats to wetland biodiversity. PA management effectiveness for the provincial wetland PA systems will be measured by the METT; the baseline is to be determined during the project preparatory phase.

Component 2. Mainstreaming wetland PAs in development and sectoral planning

81. Component 2 will address inter-sectoral coordination, integration of wetland PAs, its objectives and functions in the national and provincial development and sectoral planning framework. This is expected to lead to significant reduction of threats to wetland PAs and an increase in available financing for PA management. The Programme will strengthen coordination with other sectors that are impacting wetland PA management, including agriculture, environmental protection, mining, and land and water resources (including water diversion schemes and the post Three-Gorges Dam Plan) at all levels. For this, a cross-sectoral body will be established at the national and provincial levels, facilitated by the Wetland Conservation Management Centre within the SFA and provincial forestry departments, in close coordination with the Academy of Forest Survey and Planning and the Department of Wildlife Conservation within the SFA. Through the coordination bodies, the Programme will support embedding of wetlands concerns in major cross-sectoral plans such as climate change mitigation and adaptation, combating desertification and achieving water security. Capacity of the SFA to proactively and meaningfully participate in CBD Steering Committee and China National Commission of Implementing Ramsar Convention will also be supported.

82. A thorough review of the national and provincial development and sectoral planning process will be conducted to identify bottlenecks and areas for interventions for mainstreaming wetland PAs and the PA system as a whole in the planning and budgeting process. In order to provide strong tools for mainstreaming in economic sectors affecting wetland PAs, the Programme will support development of a set of measures to safeguard wetland PAs from sector practices, reducing threats from different sectors. At the national and provincial level, this could include setting up of standards for infrastructure development and operation, development of standards and procedures for mining, and issuance of official guidelines for fisheries, aquaculture and agriculture in and around wetland PAs. At the site level, these safeguard measures will address area specific threats. For example, new dam design standards and siting that minimize water inflow reduction to PAs; new procedures for granting permission for gold and sand mining in wetland PAs; guidelines for aquaculture and agriculture such as crab and duck rearing farms to reduce IAS pathways and pollution; fish catch limits and practices defined to reduce overfishing, and tourism visitation rates and practices standards for different wetland PA types and sites.

83. The Programme will further support compilation of the synthesis on the economic values of wetland PA sub-system (marketed and non-marketed values) following internationally recognized methodologies and making use of existing studies as much as possible. The Synthesis will include case valuation studies focusing on target wetland PAs under the Programme. The economic work should include roles of wetlands in climate change adaptation and disaster mitigation. The implication of the wetland loss and degradation of various economic sectors also will be clarified in economic and financial terms. The Programme is designed with the clear objective of mainstreaming wetland PAs (and the national PA system as a whole) in the 13th five-year development plan, and accompanying communication products especially targeted for policy makers and for mass media, and use of these product will also be supported.

84. Mainstreaming will be geared towards increasing government financing for operational budget (as opposed to construction budget) which is hampering effective management of wetland PAs. This will be done by improving principles and process for budgeting at both national and provincial levels. Financial planning skills for PA management will be improved and cost efficiencies will be increased through improved budget allocations and threat reduction at sources. Innovative funding mechanisms will be developed from the government eco-compensation schemes and private sector investments and by integrating wetlands conservation activities inside other ongoing development programmes of the government. Building on the tried and tested approaches of eco-compensation schemes, the Programme will support development of a scheme which directly supports NR management and local communities. In addition, the project should support drafting of guidelines controlling the site-level development of business ventures that compromise the objectives of wetlands protection.

Component 3: Knowledge management and lessons sharing

85. This component focuses on development of a robust knowledge management system and information and experience sharing platform in support of wetland PA management. This aims to achieve improved awareness of the importance of wetland PAs among decision makers and the general public, and to provide better and up-to-date information from a consistent and reliable source. Data needs continuous updating and improvement through routine collection of fresh data during monitoring of wetland sites, and improved flow and processing of such data into data handling centres. Relevant data must be made easily and understandably available to planners and operators at national, provincial and site levels, so that wetland biodiversity will be protected and wetland services can be fully harnessed and not degraded.

86. The Programme will establish a wetland PA data sharing platform. Building on existing internal database, the virtual database will contain basic details and location data of all major wetlands, boundaries of all wetland NRs; and information about key features, species or vulnerabilities of each site. Data would serve as a baseline for continuing monitoring of sites at local levels. Data should be in line with procedures promoted internationally for Asian Wetland Inventory. The database would be available for open access and form a component of the National Biodiversity Information System (NBIS) which is currently being developed under coordination of MEP (holder of CBD Clearing House Mechanism). There will also be a knowledge management and sharing component in the database, storing and availing information and technical knowhow on successful wetland management cases around the country which were achieved through government and donor-funded initiatives. This would provide a system level mechanism to synthesise the wetland management specific achievements of various investments from different parts of the vast country and enable replication of management practices in other wetlands nationally facing similar threat scenarios. Target primary users are government planners, academics, relevant NGOs, and international agencies. The system needs development, testing and then linking to agreed fields of the existing SFA wetlands database with appropriate virtual links to the NBIS and Clearing House Mechanism for harmonized virtual reporting. The improved data sharing platform will be regularly updated. The Programme will support the establishment of routine monitoring and reporting procedures from sites to provincial centres to the national database to the web platform.

87. Furthermore, understanding among decision makers and the public on value of wetlands and PA system will be dramatically improved, through evidence-based awareness campaigns including production of tools for

decision makers, media campaign including use of social media and organisation of special events at national and local levels. The awareness campaign will clearly link the wetland conservation and national water security, and make the full use of the economic argument for conservation. A range of communication materials including publications, media coverage and blogs will be developed. The lessons sharing workshops will be organised where staff from provincial and other wetlands projects in China annually share experience. The success of the media campaign will be gauged with Knowledge, Attitude and Practices (KAP) surveys to be conducted at start and end of projects. At provincial project level, establishing good communications channels with local communities will also be an important part of project activities.

88. Furthermore, as an umbrella project of the Wetland PA Strengthening Programme, the national level project will ensure coordination between the seven projects and programmatic results and impacts monitoring and reporting. The national project will establish and act as the secretariat for the Programme Steering Committee which meets at least once a year. It will organise an annual exchange and lessons sharing forum with all the participating agencies of the projects. The national project will assure close coordination with, and reporting to, the CBPF Steering Committee. Achievements, knowledge and lessons learned from individual projects under the Programme will be documented both in Chinese and English and disseminated widely.

89. A key indicator of the performance of this component will be the regular updating and use of the open access knowledge management platform, In particular, it is expected that data from the knowledge management system will be used planners and in EIA procedures. Once a solid information base on wetlands is established then EIA regulations could mandate that the database must be referred to in planning all major developments and relevant wetland concerns must be dealt with or mitigated in such plans. Thus open data sharing, use of improved regulations and also monitoring programmes need to be programmatically coordinated. Whilst the Programme will focus on wetland NRs, the data platform and procedures developed can be extended to cover the entire PA system.

90. As indicated in Annex 1, the Programme will consist of seven projects – one at the national level and six at the provincial level. The six wetland PA clusters in seven provinces have been selected, to be targeted under the six provincial level projects. These sites were selected primarily for their global biodiversity significance and demonstration values, as indicated in table 3 above. The selection was made so that a comprehensive set of different threats and challenges will be tackled under the programmatic framework. Provincial level projects will address the management needs of different wetland types and threats to inform the PA authorities so that the effective management approach can be replicated country wide. The three provinces in the middle Yangtze River basin will provide opportunities to develop and test intra-basin collaboration of wetland PA systems in different provinces. PIF for each project will provide details of each province and target sites.

Programme Design Based on Lessons

91. In preparing the programme framework, the lessons learned from other similar integrated conservation and development initiatives in wetland environments and GEF supported PA system strengthening projects around the world have been incorporated into the project design. Pertinent lessons are summarised below.

Lessons Learned	***Design Feature***
High vulnerability to Externalities means it is critical to invest beyond the wetland and across a broad range of situational attributes associated with the wetland.	The programme places a strong emphasis on strengthening the wetland PA management effectiveness through: integration of the wetland PAs and their objectives in provincial and national development planning process; enhancement of coordination with economic sectors and environmental protection agency; and development of sector specific standards and safeguards for operations within the PAs and areas that have direct influence on wetlands within the PAs. These, combined with the rest of the programme outputs, are expected to provide key tools for the Pa management authority to be able to mitigate external threats to the wetland PAs.

Enactment of new legislation and approval of government policies tend to take longer than anticipated therefore project/programme outcomes and outputs should not depend on these actions.	The Programme includes an outcome of creating an effective legal framework for the national wetland PA sub-system, involving interventions at the national and provincial levels. However, cognisant of the risk of delay in the legislative process, the programme is designed so that the possible delay will not halt the progress of other activities nor significantly reduce impact of the Programme, by including some practical measures that can improve management effectiveness without legal improvements. These include development of guidelines that can be adopted in practice under the current legislation and the upgrading of capacity that will use these new guidelines and standards. These will enable the non-legal components of management effectiveness strengthening work to achieve their goals independently.
Economic valuation study can be extremely effective tool to increase financing for protected areas, in particular if the evaluation results indicate real loss (or forfeiting) of actual incomes by the government and individuals.	The Programme places strong emphasis on the development of economic tools for providing and quantifying the economic value of wetland PAs. This will be a key strategy for mainstreaming wetland PAs into national and provincial development planning processes and in the 13th five-year development plan. This is in turn expected to lead to increased governments' investments in PAs. In designing the detail of the economic valuation components under the project, full consideration will be given to the actual influencing power of the valuation exercise including a realistic projection of actual monetary loss to the governments, industries and/or individuals.
There is a need for clearly understanding the roles of different tiers of the government (national, provincial, prefectural etc.) and include institutional development support at different levels.	In order to have tangible impacts with a relatively small amount of investment in an enormous county like China with highly a complex governance structure, it is absolutely important to understand the different roles of different tiers of the government in development planning, sector planning and wetland and wetland PA management planning. It is equally important to comprehend the actual process and the influential players in the various government planning mechanisms. The Programme and comprising projects are designed based on sound analysis of these and identify the investment niche to catalyse larger changes with limited funding. The Programme has a strong institutional capacity development component, taking the "three-tier-approach" for intervention, addressing varying institutional capacity development needs at different levels. The Programme's wetland PA "system strengthening approach" also is expected to ensure the sustainability of project outputs and outcomes.
Strong linkage must be assured between livelihood support and threat reductions at the site level.	The Programme is designed based on a through threat analysis to identify sources of the threats and appropriate measures and activities for addressing those threats. These will be further examined and elaborated to fit the local context during the project preparation stage of individual projects. The Programme also identify the root causes of the threats (particularly policy and incentive barriers) as a critical element to assess project risks and priorities.
Co-management of natural resources and PAs is not easy to engineer. It requires institutions and clear rules; parties need to able to work collaboratively there must be some equity in power relationships. Moreover, the benefits to the different parties need to exceed the costs.	Many of the projects under the programme will have an element of co-management. Development of explicit legal provision for co-management and official guidelines as well as capacity building of both PA management staff and communities and other partners will be supported under the programme. Each co-management system will be based on agreements that stipulate clear rules, roles and responsibilities for site/resource co-management. The agreements will define mechanisms for reducing threats and maintaining biodiversity patterns and processes, as well as mechanisms for accruing benefits to the co-management partners.
Data and knowledge management activities are critical to water and environment management and	The Programme has a prominent knowledge management component, both for fostering knowledge sharing between the projects under the programme and for strengthening the country's knowledge management system in support for wetland PA management. Greater emphasis will be placed on developing transparency in terms of information sharing –

need to be widely communicated and shared. .	baseline data on wetlands, news on wetlands and survey and monitoring results. This can allow wetlands' needs to be more routinely taken into consideration in all wider planning processes**.**

92. **Approaches to Implementation:** In order to complement the past, on-going and emerging efforts to strengthen the PA system and wetland conservation in China, and based on experiences and lessons learned through various initiatives, the implementation of the proposed programmatic framework will further test and promote some of the approaches to wetland PA management to meet the specific peculiarities of wetland sites (multi-functional, dynamic, seasonal, overlapping jurisdictions etc.):

1. **Seasonal NR** –protection of an area for only part of the year. Wetlands in the north of Heilongjiang are completely frozen for several months of the winter. Water birds have migrated south and any residual wildlife is in hibernation. The entire NR can be closed for several months. Conversely during the high water summer months many of the lake wetlands in the middle and lower Yangtze valley are entirely submerged and form part of large fast flowing rivers. It is only for a few months in the winter that water levels drop to reveal a system of lakes and emerging mud banks which become important habitat for water birds and other biota. Such NRs can be closed during the summer months when they are free for use by fishermen and red cutters; staff can be laid off for other work or even seasonally allocated to northern NRs where summer breeding needs additional protection at that season.

2. **Flexible boundaries and zones** – NR boundaries may need a high degree of flexibility to cope with the dynamics of wetland habitat and changes in distribution of fauna or vegetation with season and climate change. For instance the boundary of Poyang Lake NR is chosen to include the main wintering ground of the white crane and big flocks of rare geese. What happens if one year or over a succession of years the birds move their preferences and winter in a different part of the lake? Ideally the reserve should be able to shift with the focus of protection. The total external boundary of the NR may be as big as to include all foreseen circumstances but the core protection zone could be reshaped each season on the basis of where the rare bird species select to distribute themselves, allowing greater levels of utilization (fishing, grazing, reed collection) in less essential parts of the NR that season.

3. **Co-management by local communities or non-governmental units** - such as NGOs or private enterprises. Success has already been achieved in developing co-management of forest areas and high altitude pastoral wetlands in China and these models can be experimentally extended to other wetland types.

4. **Harvesting quota systems** – it is better to legitimatize but control levels of harvesting (on area, season or volume basis) within NRs than to ban harvesting but have no control over large-scale unofficial harvesting of fish, invertebrates, bird eggs, firewood, reeds, fodder, medicinal plants, grazing etc. as now occurs.

5. **Up-scaling of innovative funding mechanisms** – community co-management activities (including monitoring beyond NR boundaries) can be paid for using different eco-compensation schemes. Several such schemes have been developed in China in domestic programmes (grain for green programme) and under international programmes such as ADB Wetlands project. Private sector funding can be drawn in by inviting corporate sponsorship (in return for green branding, good publicity, carbon offsets etc.) or in return for eco-tourism concessions.

G. Describe the socioeconomic benefits to be delivered by the Program at the national and local levels, including consideration of gender dimensions, and how these will support the achievement of global environment benefits GEF Trust Fund) or adaptation benefits (LDCF/SCCF).

93. **As** discussed under section C (page 10), the role of the Wetland PAs extends far beyond protection of wetland biodiversity and migratory water birds. They are vital for providing the most essential water resources for people, agriculture and industries, as well as providing essential aquatic natural resources and serving as nursing grounds for fisheries. Hence wetlands make an enormous contribution to the national economy and ecological and social welfare. Wetland PAs:

- ✓ Provide essential water resources to people and industries – up to 300 million people in China consume contaminated water every day and 190 million are suffering from water related illnesses each year.
- ✓ Provide resilience to the environment through maintenance of valuable ecosystem services to surrounding and downstream areas, through protection of soils and watersheds, climate amelioration etc.;
- ✓ Conserve populations of plant and animals in natural conditions allowing for their continued natural selection, evolution and adaptation to changing conditions. (Gene pools of cultivated plants and domestic animals are important here);
- ✓ Protect representative examples of wetland ecosystems;
- ✓ Protect important breeding and staging areas for migratory species;
- ✓ Protect natural resources of species that can be harvested sustainably *in situ* or in further dispersal areas;
- ✓ Provide sites suitable for ecotourism and accompanying economic opportunities;
- ✓ Provide sites where people can experience the aesthetic and therapeutic values of wilderness, and enjoy themselves in, and take inspiration from, wild settings;
- ✓ Protect natural and cultural heritage and cultural links with nature;
- ✓ Provide opportunities for public education and awareness and living laboratories for continued biological exploration and study;
- ✓ Protect sources of potentially valuable genetic resources;
- ✓ Provide employment opportunities in poor remote areas where other economic opportunities are limited.

94. It has been estimated (CCICED 2004/2010) that these combined services and benefits derived from biodiversity are worth the equivalent of at least 50% of national GDP and that the largest share of this contribution is made by protected areas. Effective management and good governance of China's wetlands is crucial to the welfare of many millions of people via the invaluable ecosystem services provided, such as water security, silt retention, nutrient recycling, purification, flood control, carbon fixation and preservation of valuable genetic resources. In total these services are worth many billions of $US per annum and protect the lives and property of hundreds of millions of people.

Table 4: Positive relationship between Wetland Type and Main Values/services

Habitat /Type / Service/ value	Mangrove	Coastal marsh	Grassy marsh	Reedy floodplain	Alpine marsh	Woody marsh	Salt lake	Saline lake	Freshwater lake	Reservoir pond
Flood reduction/overflow sponge			2	2	3	2			3	2
Water source			1-3	1-2	3	2-3		1	1-2	1-3
Water cleansing			2	2	2	2			2	1
Recreation tourism	1-2	1	1	1	1	1	1-2	1-2	2-3	1-2
Fishery source/harvest	3	2	1	2	1	1	1	1	2-3	2-3
Species breeding area	3	2	2-3	2	2	1-2	1-2	1	2	2

Species feeding area	3	2	2-3	2	2	1-2	2	1	2-3	2
Coastal Protection	3	3		2						
Carbon Fixation	2	1	1	1	3	3				

Table 5: Negative Relationships between Impacts and Service/values

Values / Impacts	Water sponge	Water source	Water cleansing	Recreation	Fishery	Sp. Breeding	Sp. Feeding	Coastal protect.	Carbon fixing
Decreased water supply	--	--	--	-	--	---	---	-	-
Increased water output	--	--	--	-	--	---	---	-	-
Lowered water table	--	--	--	-	-	--	--	-	-
Change in temporal supply	-	-	-	-	-	--	--	-	
Change water level	-	-	-	-	--	--	--	-	-
Change water temperature			-	-	---	--	---	-	
Change water chemistry		--	--	-	--	---	---	-	
Increased sediment load		--	---	--	-	--	--		
Eutrophication		--	--	--	---	--	---		
Toxic chemicals introduced		--	--	--	---	--	---	-	-
Acid runoff		--	--	--	---	--	---	-	--
Pesticides/fertilizer introduced		--	--	--	---	--	---	-	
Organic pollution		--	--	--	---	--	---		
Genetic pollution					--	--	--		
Alien species introduced			-	-	-	---	--	-	
Overharvesting				-	---	--	---		
Habitat changed				--	--	---	---	--	-
Habitat destroyed	--	--	--	--	---	---	---	---	---
Bank erosion		--	--	--	--	---	---	---	-
Increased exposure				--	--	---	--	--	-
Connectivity blocked/fragmentation				-	-	---	---	-	
Human (dog, vehicle) disturbance					--	---	---		
Climate change				-	-	---	---	-	

95. At the local level, these wetlands provide livelihood to local communities of fishermen, reed harvesters, grazers and collection of other renewable resources – medicinal plants, invertebrates, honey, fuel wood etc. Furthermore, wetlands offer additional sources of employment as well as opportunities for ecotourism development. The projects under the Programme include efforts to improve the eco-compensation schemes that can be used to reward local units and communities for good stewardship of wetland sites. Efforts will also be made to ensure that gender-specific targets are built into community involvement programmes and activities. In addition, there will be increased community involvement and co-management components in several projects and as women are the people most involved in collection of food and harvestable resources, it is they who stand to benefit most from improved sustainability of resources and alternative livelihood outputs. Therefore, a thorough gender analysis will be conducted to ensure full participation of women in project activities and to ensure that any activities do not adversely affect women or men.

H. Justify the type of financing support provided with the GEF/LDCF/SCCF resources:

96. The bulk of funding will be provided by national and local government in the form of co-financing. The GEF funding will, however, be essential to enable the Programme to undertake a range of complementary and substitutional actions that cannot be funded using domestic funds. These are mainly the work which requires coordination and collaboration across jurisdictions and between different tiers of the government, which normally do not get funded by the Governments, for example mainstreaming of wetland PAs into national and sectoral development planning and establishment of an information management system which combine and consolidate information from different government agencies. These include provision of international experts and consultants and special training, importation of some specialized technical equipment not available in China and contracting of community involvement up to the point that domestic mechanisms through eco-compensation and other approaches can be mobilized for sustainability. GEF funding will also provide an opportunity for China to access global best practices and lessons to bring about the mind-set change among government officials and stakeholders in China necessary in order to achieve a great leap forward in biodiversity conservation. The GEF investment will be in the form of a grant. No loan or revolving fund mechanisms are considered appropriate, and therefore grant-type funding is considered adequate to enable successful delivery of Programme outcomes.

I. Indicate risks, including climate change risks that might prevent the program objectives from being achieved, and if possible, propose measures that address these risks to be further developed during the program design:

97. The following potential risks and mitigation measures have been identified. Risks for individual projects will also be identified at PIF development and will be reviewed and updated during the project preparatory phase.

Table 6: Identified Risks and Mitigation Measures of the Programme

Risk	Rating	Mitigation Measure
After 2013, China will launch a new round of government institutional reforms to mainstream the people's livelihood-related issues (such as increasing incomes, regional equality, and health) into the agenda of governments. This may reduce the focus on environmental protection (including wetland), disproportion the national investment and budget on wetland conservation in national revenues, and thus hinder the process of achieving wetland conservation objectives.	Low to medium	Wetland conservation and people's livelihoods are closely interlinked, in particular in terms of clean and steady water provision, as well as disaster mitigation. The Programme will ensure that this inter-linkage will be adequately acknowledged by policy makers at the national and provincial level as well as by the general public. The Programme will support necessary strategic studies and production of toolkits and materials to foster better understanding of wetland PAs' contributions to the economy and peoples' welfare and livelihoods. Furthermore, the Programme will promote co-management and equitable sharing of benefits from PAs, as well as the establishment of wetland eco-compensation mechanisms to provide increased opportunities for the local households, communities and institutions engaged in wetland conservation to directly benefit from conservation-oriented activities. The Programme will actively support Communication, Education, Participation and Awareness (CEPA) as tools for the conservation and wise use of wetlands.
The difficulty of coordinating between SFA and other PA management authorities to achieve a coordinated approach on wetland ecosystem and PA management hinders the process of achieving the wetland conservation objectives.	Low to medium	The Programme is fully positioned as an integrated sub-programme of the CBPF, in order to ensure that it contributes directly to the overall biodiversity conservation efforts of the country through implementation of the NBSAP. CBPF and NBSAP implementation fora will be fully utilised in order to ensure that essential coordination between the PA management authorities occurs. During project preparation, initial consultative efforts will lay the basis for the creation of a new, permanent inter-agency coordination and management committee for individual provincial sites, as necessary.
Even under co-management, economic development interests of	Low to medium	Whilst there is significant interest amongst local communities to be entrusted with conservation of the land where they live, the Programme realises that both "carrot and

communities will override conservation priorities, leading to continued loss and degradation of biodiversity		sticks" may be required for some communities to implement agreed conservation actions (when it is not of direct economic benefit for them or actually causes losses in some livelihood opportunities). The government is already experimenting with a variety of eco-compensation schemes and the Programme will build directly on these government efforts. Where co-management is supported, the Programme will also build on global experiences in co-management of PAs and natural resources, and will provide support at every stage of co-management agreement development and negotiations between stakeholders. The Programme will also build on existing co-management models within the country.
There may be a political risk in the ethnically sensitive region of Xinjiang. Any repeat of former rioting could halt or compromise smooth project operations in that Autonomous Region	Low to medium	Xinjiang is only one of six demonstration areas. Recent ECBP Programme was able to complete two projects there despite recent riots. Sensitivity of the region can even be an asset in guaranteeing high level of government attention to the success, good governance and ethnic fairness of activities in that region. Being an autonomous region, with a higher legislative power than provinces, Xinjiang presents an interesting opportunity to establish a modern and solid legal framework for PA establishment and management to enable effective PA management.
The possible water-control project in Poyang Lake has the potential to contribute to changes in wetland ecological dynamics particularly in the timing and degree of water level which in turn could inter-tidal area, vegetation zones and quality of habitat of migratory birds.	Medium	The Jiangxi Provincial Party Committee and Jiangxi Provincial Government supported by national Chinese Academy of Science are actively conducting research into the proposed barrage. Any decision on the barrage is likely to still be several years off into the future. This will provide an opportunity for the Poyang Lake Project through provision of support for the creation of a permanent inter-agency coordination and management committee, economic evaluation of wetland "goods and services" and increasing awareness among decision-makers to create a positive environment to ensure that the Poyang Wetland Ecosystem needs are fully taken into account prior to taking an informed decision. The risk of dam plans is also common in all wetland PAs in China. Therefore the Programme will take a proactive approach to this potential risk, through ensuring that national development and sector planning framework provides biodiversity safeguards at the national and provincial levels. The Programme will also support development of concrete mechanisms to reduce negative impacts from dams at the provincial and site levels; for example integrating wetland biodiversity concerns in dam design, siting and operation.
Currency Risk - Significant fluctuation in foreign currency exchange rates may pose a risk to the achievement of all project outputs and outcomes.	Medium	Ample amounts of government co-financing and the Programme's approach to increase financial sustainability should alleviate the impact of this risk. The Programme will also incorporate appropriate price contingencies in the project's budget.
Legislative revision process takes too long for the project to produce envisaged impacts.	Medium	The National Regulation on Wetland Conservation is already listed in the legislation plan of the Legislative Affairs Office of the State Council, and is expected to be passed in coming years. Through the seven projects, the Programme is expected to generate renewed interest in wetland conservation and expedite the legislative process. The Programme is designed so that sufficient progress can be made and impacts can be generated even if the legislative revision is delayed. In addition, at the provincial level, there are many legislative and policy interventions that can be undertaken without passing of the National Regulation. Most parts of the Programme interventions are confined within revision/update of existing regulations, and are coupled with other interventions including enhanced coordination and mainstreaming of wetland PAs, which increases the probability of producing the envisaged outputs. At the same time, the Programme includes some practical measures that can improve management effectiveness without legal improvements, which enables other components of management effectiveness strengthening work to achieve their goals independently. These include development of guidelines that can be adopted in practice under the current legislation and the upgrading of capacities that will use these new guidelines and standards even if legislative process is delayed.
Mainstreaming wetland biodiversity into sectoral policies will be hindered by poor inter-agency coordination, lack of incentives for	Medium to high	Although this risk is historically very high, with the elevation of environmental agency to a Ministry, it is expected that the government will have a better capacity for identifying and mitigating the severe threats these engineering-oriented programmes poses on biodiversity. Inter-sectoral coordination has generally tended to mean joint meetings to

other sectors and poor enforcement of agreed priorities and plans that may be incompatible with larger hydro-power, water diversion, land conversion or other major engineering-oriented development programmes.		share information as opposed to joint actions for results. Therefore, this Programme proposes to not just focus on coordination but also on joint planning, approval of policy, programmes, and legislation at the provincial level with full participation of key wetland biodiversity impacting sectors and agencies. The Programme will support enabling regulatory framework for mainstreaming, development of tools for mainstreaming such as the consolidated information data base on wetland PAs, wetland PA system review, and economic valuation studies, at national and provincial levels. Under the CBPF umbrella, efforts will be made to develop viable partnerships between different (and sometimes competing) agencies. Given the importance the Central Government has put on wetland and biodiversity management, there is an added impetus for all agencies to work together and the project is being formulated with this spirit of partnership in mind. In addition, the full participation of the private sector, local communities, scientists and other members of civil society in the individual project design and implementation will also be helpful to mitigate this risk.
Severity of climate change impacts will undermine conservation efforts promoted by the project through changes in biodiversity distribution and changes in community resource use intensities	Medium to high	Given that climate change impacts are likely to increase over the long term, the Programme will assess these changes and propose actions and approaches to increase ecosystem resilience. These will include; flexibility of wetland PA zones and boundaries; maintaining a wide range of wetland types and improving connectivity. Migration patterns and timings may change, requiring adjustments in the PAs designed to accommodate migratory species. Take into consideration the issue of climate change in the process of conducting community efforts and pilot projects on alternative/sustainable livelihood.

J. Outline the institutional structure of the program including coordination and monitoring & evaluation:

98. The Programme Steering Committee will be established and will meet at least once a year to supervise and guide the Programme implementation, which will be co-chaired by MOF and SFA, composed of related ministries and provincial authorities from Heilongjiang, Inner Mongolia, Xinjiang, Hubei, Jiangxi, Anhui, Hainan and participating GEF Implementing Agencies. The Programme will also report on its implementation progress and monitoring and evaluation results to the CBPF Steering Committee.

99. UNDP will be the Programme Coordinating Agency (PCA), and will be responsible for *inter alia*:

- Coordinating the national or regional institutions regarding the monitoring and reporting on the progress towards achieving the agreed Programme results;
- Reporting back to the GEF through the Annual Monitoring Review (AMR) of the programme;
- Overseeing submission of required documentation of Programme activities to the GEF in accordance with the GEF project cycle and M&E policy.

- Coordinate the preparation of the programme among participating GEF Agencies and finalise the Programme Framework Document (PFD);
- Liaise with the participating GEF Agencies, including consultation with various stakeholders, all matters leading to the final preparation of the Programme for submission to Council for approval through a GEFSEC work program;
- Coordinate activities under the Programme, such as upstream consultations at the country/regional level, Program monitoring and evaluation, leveraging additional partners and funding sources, and knowledge management;
- Define the monitoring and evaluation, and reporting requirements of the Programme, consistent with the GEF M&E policy, and incorporate this in the PFD;
- Undertake supervision of the Programme, mid-term review and preparation of terminal evaluations as well as submission to GEF Secretariat annual performance review reports for the Programme.

100. UNDP will also serve as the GEF implementing agency for the national level project and five sub-national projects in Daxing'anling, Xinjiang, Hubei, Hainan and Anhui. FAO will be the GEF implementing

agency for the Jiangxi province project focusing on Poyang Lake under the Programme. FAO has been working with the Jiangxi province government since 2009 on the conceptualisation of a project to be co-financed by GEF for the conservation of the Biodiversity in nature reserves in Poyang Lake. The province government has requested FAO support in formulating and implementing this project considering FAO's extensive work on conservation and management of natural resources (primarily forestry and fisheries resources) within an ecosystem approach that this project will be benefiting from. Considering the importance of Poyang Lake for the network of wetlands protected areas in China and in order to maximize synergies among government and GEF investments in wetlands nature reserves, the central government has decided to include the Poyang Lake project supported by FAO in this wetlands programme led by UNDP. FAO will participate in and provide all needed inputs for the UNDP led programme monitoring and coordination and exchange of practices and lessons learned among all the projects of the programme.

101. The Programme entails six provincial projects executed by provincial forestry departments with co-financing from national and provincial governments. The linkages between the programme and project indicators will be ensured, for effective results tracking and aggregation. Each of these projects will be an independent project with its own internal monitoring and evaluation process including regular reporting, however they will benefit from the 7th project which is executed at the national level by the State Forestry Administration with national level co-financing. The national project will be able to tackle a number of systemic barriers (regulations, coordination mechanisms) that must be dealt with at the central level. The national project will also provide a secretariat service for the Programme Steering Committee, providing necessary coordination and ensuring synergy between the different provincial level projects. The national level project will work with the UNDP in compiling the annual Programmatic Performance Review Report to be submitted to the GEF Secretariat and in conducting evaluations of the Programme.

102. This coordination role will be especially important in providing data sharing, training, technological exchange and technical support to the provincial level projects. The national project will also serve an important role in dissemination of project findings and extending best practices (up-scaling) to other wetlands across the country. The success of provincial projects depends upon good attention to catchments that many be hundreds of kilometres upstream of the sites themselves and located in different provinces. Here the national project can serve a valuable function in the wider-scale planning at catchment level, and since SFA controls most of the upstream catchment forests and NRs, the national project can apply valuable coordination with other divisions of SFA, e.g. Wildlife, Protected Areas, Trade (CITES) and research, production and protection forestry divisions.

103. Programme monitoring and evaluation will be conducted in accordance with established UNDP, FAO and GEF procedures and will be provided by the UNDP Country Office (UNDP-CO) with support from the UNDP/GEF Regional Coordination Unit in Bangkok, and in close coordination with the SFA and the FAO Country Office in China (FAOCN) with support from FAO Regional Office for Asia and the Pacific (FAO-RAP) in Bangkok and FAO Headquarters. The Programme Framework in this document provides outcome indicators for the Programme. The Results Framework Matrix of each project document will provide performance and impact indicators for project implementation along with their corresponding means of verification. The METT tool, Financial Scorecard and Capacity Assessment Scorecard will all be used as instruments to monitor progress in PA management effectiveness. Each M&E plan should include: A Project Inception Report, Annual Review Reports, Annual Project Implementation Reviews (PIR), Quarterly progress reports (QPR), Combined Delivery Report (CDR), Project Terminal Report following UNDP or FAO reporting formats and procedures

104. Annual Monitoring of individual projects will occur through the respective Project Steering Committee (PSC) meetings. This is the highest policy-level meeting of the parties directly involved in the implementation of each project. Projects will be subject to PSC meetings at least three times a year. The first such meeting will be held within the first six months of the start of full implementation.

UNDP Country Offices, UNDP-GEF RCU, FAOCN, FAO-RAP and FAO HQ as appropriate, will conduct yearly

visits to project sites based on an agreed upon schedule to be detailed in the project's Inception Report/Annual Work Plan to assess first hand project progress. Any other member of the Project Steering Committee can also accompany this visit. A Field Visit Report/BTOR will be prepared by the mission leader and circulated, no more than one month after the visit, to the project team, all Project Steering Committee members, UNDP-GEF, and in the case of the Poyang project the FAO GEF Coordination Unit.

105. Each project will maintain an Issues Log to capture and track the status of all project issues throughout the implementation, a Risk Log to capture potential risks to the project and associated measures to manage risks and a Lessons Learned Log to capture insights and lessons based on good and bad experiences and behaviour.

As and when called for by UNDP CO, UNDP-GEF or the Implementing Partner, the project teams will prepare specific Thematic Reports, focusing on specific issues or areas of activity and Technical Reports as may be specified in Annual Work Plans.

106. Each project will be subjected to at least two independent external evaluations including an independent Mid-Term Evaluation, and an independent Final Evaluation which will look at the impact and sustainability of results, including the contribution to capacity development and the achievement of global environmental goals. The Terms of Reference for the evaluations will be prepared by the UNDP CO based on guidance from the UNDP-GEF Regional Coordinating Unit or in the case of the Poyang project by FAOCN in consultation with the FAO lead technical unit and the FAO GEF Coordination in HQ, and under the ultimate responsibility of the FAO Office of Evaluation. The Final Evaluation should also provide recommendations for follow-up activities. The Programme will follow the branding policy of the GEF, UNDP, and FAO.

K. Identify key stakeholders involved in the program including the private sector, civil society organizations, local and indigenous communities, and their respective roles, as applicable:

107. The following key stakeholders, their roles and responsibilities in the Programme have been identified. Many of them have been already consulted during the Programme conceptualization process through a series of planning meetings including the programme preparation inception workshop called by the MoF on January 20, 2011, attended by the three GEF Implementing Agencies (UNDP, FAO and UNEP) and representatives from all the participating provinces. Project specific stakeholders will also be identified and consulted during the respective project preparation processes.

Table 7: Key stakeholders and roles and responsibilities in the programme

Stakeholder	Roles and Responsibilities
National People's Congress	The highest organ of state power; responsible for the legal framework and revision of laws and national regulations; approves national development plans
State Council	Executive body of the NPC responsible for formulation and administration of plans and decisions of central government including responsibilities and coordination of ministerial functions
Ministry of Finance	Operational Focal Point (OFP). Coordination and implementation of GEF projects
GEF Secretariat	Approval, financing and supervision for the programme
UNDP	UN Development Agency focusing on capacity building for environmental protection, democratic governance and poverty reduction. It has a large biodiversity and ecosystem programme and a long-term presence in China. The GEF Programme Coordination Agency for this Programme and the GEF Implementing Agency for six projects under the Programme
FAO	Technical agency for UN in agriculture, forestry and fisheries sectors. Develop and supervise Poyang Lake Wetlands Project
Legislative Affairs Office of the State Council	Responsible for coordination of legislation and regulation functions under the State Council, including the regulation of nature reserve management and regulation of wetland conservation.
UNEP, WB, ADB	GEF implementing agencies and partners in the CBPF umbrella programme for CBD actions for biodiversity in China. WB manages another GEF wetlands project in Xinjiang (Lake Aibi) that should be closely coordinated.
Ministry of Environmental Protection	Coordination of environmental issues, pollution and CBD implementation and reporting,

Stakeholder	Roles and Responsibilities
	execution of CBPF. Processing and coordination of drafting new legislation. Must be involved in any proposed regulatory revisions.
State Forestry Administration	Responsible for forest lands, most of China's nature reserves, wildlife issues, wildlife trade (CITES), wetlands protection (Ramsar Convention), drafting of departmental level regulations especially wetlands.
National Development and Reform Commission	The national development planning agency and responsible for macroeconomic policy and management. Examines and approve major construction project. Responsible for promotion of the strategy of sustainable development; to undertake comprehensive coordination of energy saving and emission reduction. The focal agency for the UNFCCC.
Ministry of Water Resources	Responsible for water security. Important stakeholder with high interest in terms of water quality, flood control and other ecological functions. Manages 3 national wetland NRs and 8 provincial wetland NRs aiming for
Ministry of Agriculture	Responsible for agriculture and grasslands. Major stakeholder in terms of water use and a source of agricultural water pollution; responsible for freshwater fisheries. Should mainstream biodiversity and PA protection within their plans and avoid causing pollution of wetland sites. Can help monitor wetland biodiversity on agricultural lands adjacent to NRs. Need cooperation in controlling fishing within sustainable limits.
Ministry of Land and Resources	Responsible for protection and rational use of land and resources in particular geological resources for mining. Manage one wetland NRs.
State Oceanic Administration	Responsible for marine fisheries and ecosystem management, as well as marine NR management.
China Three Gorges Corporation	Responsible for management of 3 Gorges dam including rehabilitation and ecological protection of affected catchments and downstream ecosystems, including water levels of Poyang and Honghu Lakes, provide environmental flows by TGD Operations.
Provincial Bureaus of Finance	Coordination and provision of provincial co-financing of provincial level projects under the same framework.
Provincial Forestry Departments - Heilongjiang, Inner Mongolia, Anhui, Jiangxi, Hubei, Hainan	Planning and management of wetland PAs; project execution at provincial level
GIZ,– Wetlands International, WWF, TNC and domestic level NGOs	Involvement in wetlands and biodiversity projects. Available for technical support, consultancies, training and monitoring. High capacity for grass roots action with local communities. GIZ undertake a parallel project at 4 sites that will be closely coordinated with this programme
Civil-society organisation (CBOs)	CSO participation will be pivotal in implementing the provincial level projects (particularly with regard to the planned community co-management interventions). CSOs will also play a key role in supporting awareness and education.
Chinese Academy of Sciences, several specialized and regional institutes	Technical expertise on hydrological, botanical and zoological aspects
Management Bureaus of individual model protected areas	Involved in project design. Responsible for site-level execution and monitoring
Local communities at county and township levels	Direct beneficiaries of alternate livelihood interventions and increasingly consulted during planning processes and involved in co-management and monitoring

108. The State Forestry Administration, a major national executing partner of this programme, is effectively collaborating with CSOs working in China on wetland conservation and PA management. Annual Memorandums of Understanding, covering a wide range of fields including wetland conservation, restoration and PA management, are signed between SFA and various CSOs and NGOs such as Wetlands International (WI), World Wide Fund for Nature WWF, the Nature Conservancy (TNC) of U.S., Rare Conservation, and Conservation International. The Programme and its sub-projects will engage some of CSOs/ NGOs to undertake appropriate tasks e.g. technical assistance in training, public awareness activities, biodiversity survey and monitoring, community co-management and PA management planning, .

Table 8, Example of potential CSO Partners at different levels

CSOs at different levels	Examples
International NGOs	WWF China, Wetland International China Programme Office, International Crane Foundation, The Nature Conservancy China Programme, CI China, Future Generations China
National NGOs	China Wild Life Conservation Association, Friend of Nature, Globe Village, Beijing Brooks Educational Center, Green Garden, Wetland Ambassador Action, Mountain and Water Conservation
Provincial (Regional) NGOs	Mountain-River-Lake Development Promotion Association of Jiangxi province, Wetland NR Alliance, China Mangrove Conservation Network, Wetland PA Network in Yangtze Basin, College Student Unions for Conservation
Community-based organizations	Eco-fishery association in Honghu Lake NR and Dongzhaigang NR, herder's union in Liangheyuan NR, eco-tourism home-stay association in Altay, Poyang Hometown, retired teacher's union in Shengjin Lake

L. Indicate the co-financing amount the GEF agency is bringing to the project:

109. UNDP provides a total grant of US$ 5 million to this Programme, through investment in several areas that are highly relevant to the Programme outcomes and outputs. UNDP will invest in promoting green development supporting improved governance at national and provincial levels and community based initiatives to promote green development, and help realise the Government vision to build a "*Xiaokang*" society[1]. Wetland as one of the important ecosystems for providing goods and services will play an important role for sustainable development of green development. Therefore, the investment will have a focus on influencing the national policy for wetland restoration and enhance the PAs management. UNDP will also provide a grant to promote the establishment of environmental tribunals and the environmental public interest litigation (PIL) process and thus facilitate the enforcement of new sectoral standards in PAs by providing a forum for discussion of/reporting of infringements. Furthermore, UNDP will invest in forest and wetland biodiversity conservation in Daxing'anling, straddling over two provinces Heilongjiang and Inner Mongolia, as part of the UNDP's Water Resource Conservation Programme, and supporting biodiversity compatible sustainable agriculture development in arid and semi-arid regions in China. The investment will focus on improving river basin management and NR management for providing clean water resources for people and nature. FAO will provide the following in co-financing: USD 60,000 (grant) and USD 325,000 (in-kind).

Table 9: Indicative Co-financing for the Programme

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Amount (US$)
National Government	State Forestry Administration	Cash/In-kind	22,520,000
Local Government	Anhui Province, Hainan Province, Heilongjiang province, Hubei Province, Inner Mongolia Autonomous Region , Jiangxi Province, Xinjiang Autonomous Region	Cash/In-kind	67,100,000
GEF Agency	UNDP	Cash	5,000,000
GEF Agency	FAO	Cash/In-kind	380,000
Total co-financing			95,000,000

[1] The vision of *Xiaokang* refers to a society where people are moderately well off and in which economic prosperity is sufficient to move most of the population in mainland China into comfortable means, but in which economic advancement is not the sole focus of society. Explicitly incorporated into the concept of a *Xiaokang* society is the idea that economic growth needs to be balanced with the sometimes conflicting goals of social equality and environmental protection.

M. How does the program fit into the GEF Agency's programme (reflected in documents such as UNDAF, CAS, etc.) and the Agency staff capacity in the country to follow up program implementation?

110. The Government of China appointed UNDP as the GEF Programme Coordination Agency for this Programme, as well as the GEF Implementing Agency for six of the seven projects under the Programme. Other GEF Implementing Agencies to be involved in the Programme is FAO.

Protected Areas is one of UNDP's signature programmes and the agency has a large portfolio of PA projects globally and across Asia including China. In particular, UNDP is equipped with a wealth of accumulated knowledge and experience from projects around the world in promoting PA system objectives in development and sectoral planning.

111. UNDP has been supporting natural resource management, biodiversity and ecosystem management in China for over three decades, and has a large biodiversity portfolio in the country. UNDP implemented/is implementing a number of GEF supported projects that are complementary to this project. Of particular relevance is the Priority Institutional Strengthening and Capacity Development to Implement the China Biodiversity Partnerships and Framework for Action, which aims to operationalise the CBPF. The inception workshop of this project was held in April, and the progress of co-financing activities was reviewed. An interim CBPF Secretariat was established within the executing agency MEP/FECO. As proposed Programme is a sub-programme of the CBPF, UNDP is in a good place to ensure the integration of interventions undertaken under the MainStreams of Life Programme and other initiatives under the CBPF. UNDP is also the implementing agency for the € 51 million EU-funded ECBP programme, which is part of the CBPF, which targets 18 field pilot projects. In addition, since 2007, UNDP has been the co-executing agency of the GEF supported CBPF, together with MoF and MEP, and has supported development and finalization of the National Biodiversity Strategy and Action Plan in 2010.

112. The United Nations Development Assistance Framework (UNDAF) for 2011 to 2015 provides the framework for the UN-China partnership over the coming five years, coinciding with the period of China's 12th Five Year Plan. One of the three priority areas, or UNDAF Outcomes, is Outcome 1: Government and other stakeholders ensure environmental sustainability, address climate change, and promote a green, low carbon economy. The components of the Programme are a strategic way of achieving this outcome, in particular through directly contributing to Output 1.1. Policies and regulations are strengthened to create a green economy; Output 1.2. Policy and implementation mechanisms to manage natural resources are strengthened, with special attention to poor and vulnerable groups; and Output 1.3. China's vulnerability to climate change is better understood and adaptation responses are integrated into Government policy.

113. Corresponding to the UNDAF, the UNDP Country Programme (2011 to 2015) seeks to reduce the vulnerability of biodiversity to climate change impact, and safeguard local communities potentially affected by negative impacts of climate change by building ecosystem resilience, which is the fundamental building block of the ecosystems' provisioning, regulating and support services that are essential for China's social and economic development. The proposed programme will contribute directly to its Outcome 4: Low carbon and other environmentally sustainable strategies and technologies are adapted widely to meet China's commitments and compliance with Multilateral Environmental Agreements; and Outcome 5: The vulnerability of poor communities and ecosystems to climate change is reduced.

114. These result-oriented interventions will prioritize the institutional coordination and integration of concerted efforts to assess and protect nature and biodiversity inside and outside of protected areas, the promotion of community-based conservation and sustainable livelihoods including empowerment of women, raise the awareness of the values of biodiversity and ecosystems among decision makers and the private sector, and support the creation of effective mechanisms to finance biodiversity.

115. The country office has a large biodiversity portfolio, with one Programme Manager and one Programme Associate specifically assigned to biodiversity-related projects and broader support from the policy, administrative and financial sections. The UNDP Regional Technical Adviser based in Bangkok will provide technical support to the CO for implementation, monitoring and evaluation of the project.

116. FAO, along with other UN agencies in China has worked in developing the UNDAF for 2011-2015. One of the outcomes to be achieved is to strengthen the policy and implementation mechanisms to manage natural resources. FAO, together with other UN agencies in China, will implement programmes to strengthen government capacity to effectively manage land and water resources, enhance government capacity to conserve biodiversity and ecosystems, empower communities to increasingly benefit from the development of eco-based livelihood resources and strengthen government capacity to develop and implement policies that ensure compliance with environmental health and safety requirements. With respect to in-country capacity, during GEF 4, FAO China increased its involvement with GEF particularly with respect to biodiversity projects and established good working relationships with the Chinese government at the national and provincial levels. The FAO Office in China recently assigned programme staff for GEF projects including the preparation and implementation of the Poyang Lake project under the current programme. Additional support and expertise will be mobilized from the FAO Regional Office for Asia and the Pacific (Bangkok) and Headquarters' technical divisions and FAO GEF Coordination Unit when and if needed. The FAO Office in China is managing a growing portfolio of GEF supported projects in China including Securing Biodiversity Conservation and Sustainable Use in China's Dongting Lake Protected Area (under preparation) and Demonstration of Estuarine Biodiversity Conservation Restoration and Protected Area Networking in China (under preparation). Coordination between the UNDP and FAO will be assured through Programme Steering Committee and regular communication between the two agencies at the HQ, regional office and county office levels.

PART III: APPROVAL/ENDORSEMENT BY GEF OPERATIONAL FOCAL POINT(S) AND GEF AGENCY(IES)

A. RECORD OF ENDORSEMENT OF GEF OPERATIONAL FOCAL POINT (S) ON BEHALF OF THE GOVERNMENT(S):

NAME	POSITION	MINISTRY	DATE *(MM/DD/YYYY)*
Jiandi Ye GEF Operational Focal Point	Director: International Financial institution Division III, International Department	Ministry of Finance	08/31/2011

B. GEF AGENCY(IES) CERTIFICATION

This request has been prepared in accordance with GEF policies and procedures and meets the GEF criteria for project identification and preparation. Following the new project cycle, UNDP and FAO will submit all PIFs under the Program within 6 months after Council approval of the PFD.

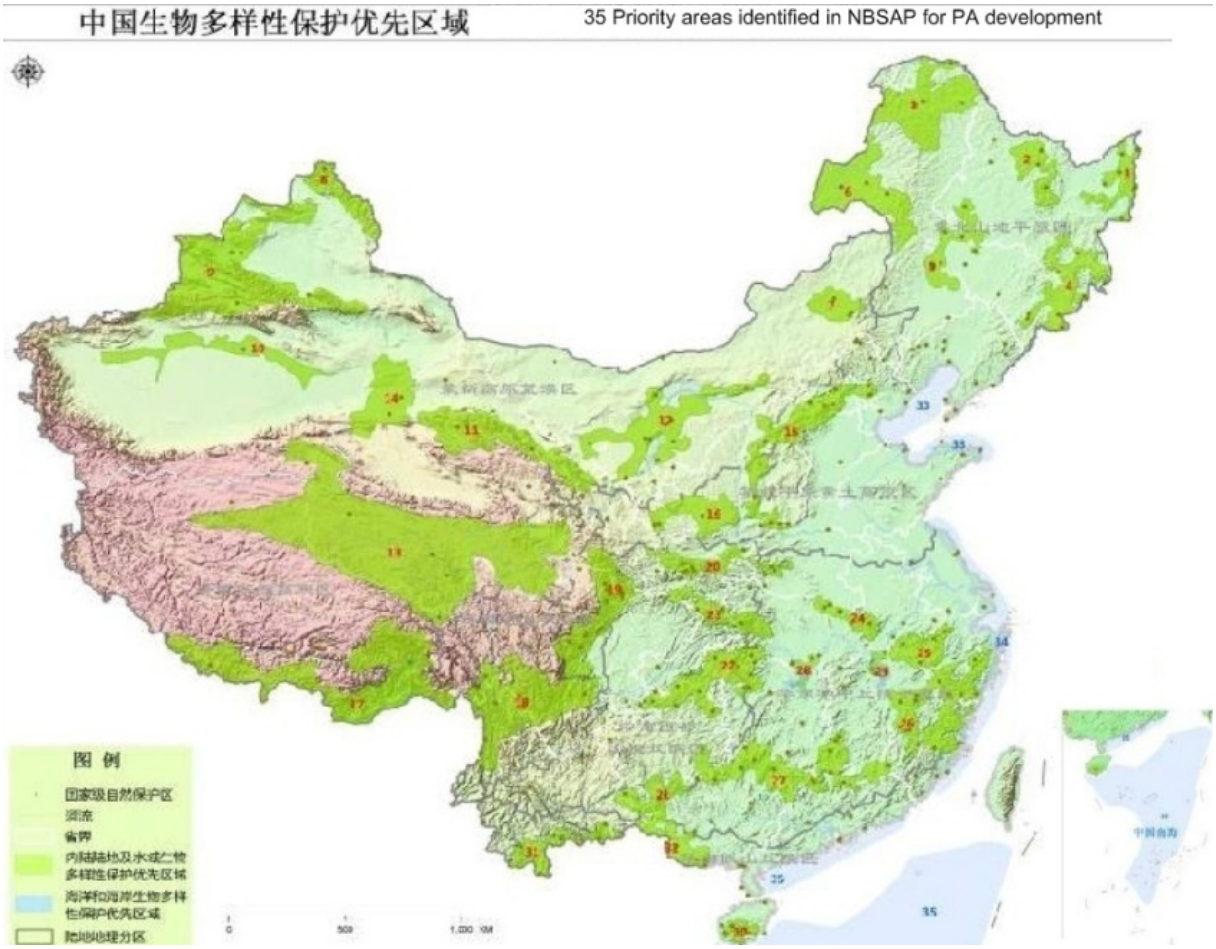
Agency Coordinator, Agency name	Signature	Date	Project Contact Person	Telephone	Email Address
Yannick Glemarec, GEF Executive Coordinator, UNDP		9/19/2011	Midori Paxton, Regional Technical Adviser – EBD, UNDP	+66-818787510	midori.paxton@undp.org
Charles Riemenschneider Director, Investment Centre Division Technical Cooperation Department, FAO		9/19/2011	Rikke Olivera, Programme Officer, TCID, FAO	+3906 5705 5701	rikke.olivera@fao.org
Barbara Cooney GEF Coordinator, FAO					

ANNEX I: List of Projects Under the Programme Framework

Project Submitted for Council Approval in this Work Programme + Future Submissions:						
Project Title	GEF Amount ($)			Agency Fee ($)	Total ($)	Expected Submission Date
	Focal Area 1 Project	Focal Area 2 Project	Total Project			
FSP submitted with PFD in the work programme						
CBPF-MSL Strengthening the management effectiveness of the sub-system of wetland protected areas for conservation of globally significant biodiversity (UNDP)	2,654,771	0	2,654,771	238,929.4	2,893,700.4	August 2011
CBPF-MSL Strengthening the management effectiveness of the protected areas in Altai Mountains and Wetlands Landscape in Xinjiang Autonomous Region (UNDP)	3,544,679	0	3,544,679	319,021.1	3,863,700.1	August 2011
CBPF-MSL Protection and Sustainable Use of Poyang Lake Wetland Ecosystem (FAO)	5,302,473	0	5,302,473	477,223.6	5,779,696.6	August 2011
TOTAL	11,501,923		11,501,923	1,035,173.1	12,537,097.1	
FSP projects to be submitted in future work programme						
CBPF-MSL Strengthening the management effectiveness of the wetland protected area system in Hainan Province (UNDP)	2,654,771	0	2,654,771	238,929.4	2,893,700.4	October 2011
CBPF-MSL Strengthening the management effectiveness of protected areas in the Daxing'anling Landscape (UNDP)	3,544,679	0	3,544,679	319,021.1	3,863,700.1	February 2012
CBPF-MSL Strengthening the management effectiveness of the Honghu PA sub-system in Hubei Province (UNDP)	2,654,771	0	2,654,771	238,929.4	2,893,700.4	February 2012
CBPF-MSL Strengthening the management effectiveness of Shenjinghu PA sub-system in Anhui Province (UNDP)	2,654,771	0	2,654,771	238,929.4	2,893,700.4	February 2012
TOTAL	11,508,992	0	11,508,992	1,035,809.3	12,544,801.3	
GRAND TOTAL	23,010,915	0	23,010,915	2,070,982.4	25,081,897.4	

Note: Figures exclude PPG funding and associated IA fees, as well as the Programme Coordination Budget of US$ 330,000. The total Programme Budget including the Programme Coordination Budget is US$ 26,000,000.

Annex II: 35 Priority Areas identified in NBSAP for PA development



Annex III: Some significant wetland biota to be conserved under this project

Species	Status	Distribution	Project Sites	Expected Threats Reduction
Moose (2 species) *Alces alces, Alces americanus*	EN A2acde, EN A2acde	Extreme NE and NW of China	Altay Daxiang'anling	Control hunting and vastly expand proportion of habitat protected
Chinese Beaver	EN A1bcd	Buergan river, NW China	Altay	Control hunting and extend proportion of habitat protected
Wolverine	EN A1acd	Extreme NE and NW China forests	Altay Daxiang'anling	Greatly enlarge habitat area under protection and secure prey base
Reindeer	NA – only a few hundred animals survived the great fire of 1986	Extreme NE China	Dasiang'anling	Extend PA system to include last wild herds
White-naped Crane	VU A2ce	NE China wintering to Yangtze Valley	Da Xingganling, Poyang, Hong Hu, Shenglin Hu	Strengthen protection of both breeding and wintering areas
White Crane	CR A2cde	Winters in Yangtze valley	Poyang Hu, Hong Hu, Shenglin Hu	Strengthen protection of wintering area
Red-crowned Crane	EN C1	Breeds in NE China and winters in Yangtze valley	Daxiang'anling Poyang Hu, Hong Hu, Shenglin Hu	Strengthen protection of breeding and wintering areas
Whooper swan	VU A1acd	Breeds in NE China and winters in Yangtze valley	Daxiang'anling Poyang Hu, Hong Hu, Shenglin Hu	Strengthen protection of breeding and wintering areas
Black-faced spoonbill	EN A2ce, IUCN CR	Breeds in NE China and winters in Yangtze valley and south coast	Poyang Hu, Dongzhaigang	Strengthen protection of wintering area
Dalmatian Pelican	VU A1ab	Winters in Yangtze valley	Poyang Hu, Hong Hu, Shenglin Hu, Donzhaigang	Strengthen protection of wintering area
Oriental White Stork	EN A2c	Breeds in NE China and winters in Yangtze valley	Poyang Hu, Hong Hu, Shenglin Hu	Strengthen protection of wintering area
Swan Goose	EN A1acd	Winters in Yangtze valley	Poyang Hu, Hong Hu, Shenglin Hu	Strengthen protection of wintering area
Lesser white-fronted goose	VU A1acd	Winters in Yangtze valley	Poyang, Hong Hu	Strengthen protection of wintering area
Finless porpoise	En A1acd	Major eastern rivers and lakes	Poyang	Strengthen and extend protected area
Yangtze Paddlefish	CR A2ae	Yangtze River	Poyang Hu, Hong Hu, Shenglin Hu	Preserve breeding habitat and sites for potential reintroduction
Siberian Huso	EN A1acde	NE rivers	Da Xinggangling	Better protection of spawning areas
Chinese Sturgeon	EN A2cd	Yangtze plus minimal other rivers	Hong Hu, Poyang Hu Shenglin Hu	Protection of different stages in river connection
Schrenck's sturgeon	EN A1acd	NE rivers	Da Xinggangling	Better protection of spawning areas
Reed Parrotbill	VU A1c	Reedbeds of Lower Yangtze	Shengjinhu	Better protection of reed bed breeding habitat
Yangtze crocodile	CR A1c	Lakes and waterways of Lower Yangtze	Shengjinhu	Re-introduce into new habitats
Spoon-billed Sandpiper	VU C1	Winters along coastal mudflats of Hainan and lower Yangtze	Dongzhaigang	Strengthen and extend protection of wintering areas

Annex IV: Global Significance of the PA System in the Target Provinces

Provinces	Extent of the PA system	Biodiversity Significance	WWF Ecoregions (area in million ha)
Xinjiang	35 nature reserves including 8 National NRs and 22 Provincial NRs, covering an area of 22,100,000 ha or 13.6% of the Province's land area. 1 national wetland NR and 5 provincial wetland NRs, covering 561,156 ha. Many other nature reserves in Xinjiang protect wetlands but are not listed specifically as wetland NRs – Bosten Lake, Tarim basin, Sayaram Lake, Bayanbulak swan lake etc.	The Province harbours more than 10% of the higher plant and vertebrate species recorded in China – with a total of 3,537 higher plant species and 717 vertebrate species (including 87 fish, 6 amphibians and 43 reptile species, 398 bird and 146 mammal species). These include 28 species under Category-I protection and 74 under Category-II protection. Important species include beaver, argali, snow leopard, ibex. XUAR contains 40 Important Bird areas as identified by Birdlife International – the third highest number after Sichuan and Chongqing of all Chinese provinces.	13 Ecoregions in the province. Altai alpine meadows and tundra (1.5) Altai steppe and semi-desert (0.25) Altai montane forest and steppe (1.8) Junggar Basin semi-desert* (26) Alashan Plateau semi-desert (1.8) Tianshan montane steppe and meadow (20) Qaidam Basin semi-desert* (2.3) Tianshan foothill arid steppe (1) Tianshan montane conifer forest (1.3) Tarim Basin deciduous forest and steppe* (5) Taklimakan desert* (75) Himalayan rock and Ice (non-ecoregion) (0.8) North Tibetan Plateau-Kunlun Mts* (20) Pamir alpine desert and tundra (3.5)
Hainan	40 nature reserves including 6 National NRs and 34 Provincial NRs, covering an area of 221,000 km^2 or 13.6% of the Province's land area. In addition there are about 35 county level reserves of very small size. The total area of the nature reserves is 305,000 hectares, or 8.9 % of the total land area of the province. 4 national wetland NR and 6 provincial wetland NRs, covering 92,000 ha plus 24,000km^2 of South China Sea	Location in the humid tropics adds greatly to the biological richness of the province. The flora is estimated at 4200 species including 630 endemic species and no less than 450 commercial timber species – floristically one of the richest provinces in China. Mammal and Bird richness are also high with several important endangered and endemic species – Hainan gibbon, Hainan moonrat, Hainan Eld's deer, Hainan hare, Hainan flying-squirrel, White-eared partridge, Hainan warbler etc. Hainan has 13 Important Bird areas as identified by Birdlife International.	2 Ecoregions in province Hainan Island monsoon rain forest* (1.4) S China-Vietnam sub-tropical evergreen forest (2) CI Indo-Burma Global Hotspot
Hubei	57 nature reserves including 8 at national level and 49 at provincial level, covering an area of 11,575km^2 or 6.2% of the province. Of these NRs 5 of the national level sites and 7 of the provincial level sites are labeled as wetlands NRs covering 124,752 ha	Sub-tropical monsoonal climate supports rich evergreen forests. Includes plant-rich Daba mountains and Shennongjia home of traditional medicines – golden monkeys and rich wildlife with endemic Yangtze fish and other aquatic life in rivers and lakes. Mammal fauna listed as 144 species; birds more than 250 species. Hubei has 7 Important Bird areas as identified by Birdlife International.	4 Ecoregions in province Changjiang Plain evergreen forests* (9.5) Qinling Mts deciduous forest* (0.9) Daba Mts evergreen forest* (5.6) Gizhou Plateau broadleaf and mixed forests* (2.7) Part of Yangtze Rivers and Lakes WWF 200
Jiangxi	Jiangxi has a very long list of small local NRs. In total there are 155 NRs of which only 5 are at national level. These cover a total of 8,817 km^2 or 5.2% of the province. Of these NRs 2 of the national level sites and 7 of the provincial level sites are labeled as wetlands NRs covering	Humid sub-tropical with rich evergreen broadleaf forests with more than 2000 plant species; more than 90 mammals and 300 birds. Bio-rich forested hills include Wuyishan, Lushan, with many SE China endemcis – Cabot's Tragopan, Black muntjac, White-eared heron, yellow-bellied Laughing thrush.Aquatic species include sturgeons, dolphins and paddlefish. Unique wintering bird habitat	2 Ecoregions in the province Changjiang Plain evergreen forest* (6.8) Jian nan subtropical evergreen forest* (10) Part of Yangtze Rivers and Lakes WWF 200

Provinces	Extent of the PA system	Biodiversity Significance	WWF Ecoregions (area in million ha)
	153,650 ha	for cranes, geese etc. Jiangxi has 15 Important Bird areas as identified by Birdlife International.	
Anhui	Anhui has 37 NRs including 6 at national level. These have a total area of 4,310 km^2 representing 3.1% of the province area. Of these NRs 3 of the national level sites and 7 of the provincial level sites are labeled as wetlands NRs covering 301,318 ha	South-temperate monsoon climate; lowland valleys but separated by spectacular mountains such as Huangshan. Flora estimated at more than 3200 species, 134 mammals and about 150 birds, including endemic pheasants and wintering cranes, swans and geese. Last stronghold of Chinese alligator. Anhui has 10 Important Bird areas as identified by Birdlife International.	2 Ecoregions in the province Changjiang Plain evergreen forests* (10) Huanghe Plain mixed forest* (3.8) **Part of Yangtze Rivers and Lakes WWF 200**
Daxinggan in Heilongjiang and Nei Menggu	Heilongjiang contains 194 NRs of which 14 are of national level. These total 59,298 km^2 or 12.6% of the province area. Of these NRs14 of the national level sites and 47 of the provincial level sites are labeled as wetlands NRs Nei Menggu has 203 NRs of which 21 are of national level. These have a total area of 160,370 km^2 equivalent to 13.6% of the province area. Of these NRs 7 of the national level sites and 16 of the provincial level sites are labeled as wetlands NRs	Unique taiga larch forests with reindeer, red deer, moose, sable. Breeding grounds for rare cranes, Chinese merganser. Home of endemic Amur river fishes including endangered sturgeons. Full range of grasslands from semi-desert to lush meadows with rare bustards, Mongolian gazelle, raptors and other special wildlife. Forests include many types from conifer to broadleaf, with Manchurian mixed forests and Changbaishan Mts – the richest in species. Heilongjiang bird fauna listed as 326, Nei Menggu at 330 species. Mammal numbers are 103 and 127 respectively. Heilongjiang has 35 IBAs, Nei Menggu has 27 as identified by Birdlife International.	Heilongjiang (9 ecoregions in the province) Da Hinggan-Dzhagdy Mts conifer forests (4.7) Amur meadow steppe (4.9) NE China Plain deciduous forest* (6.1) Manchurian mixed forest (20.9) Suiphun-Khanka meadows and forests (1.7) Changbai Mts mixed forests (0.25) Mongolian Manchurian grasslands (5.1) Nenjiang River grasslands* (1.7) Nei Menggu (10 ecoregions) Da Hinggan-Dzhagdy Mts conifer forests (12) NE China Plain deciduous forest* (3.7) Mongolian Manchurian grasslands (48) Manchurian mixed forest (4.6) Alashan Plateau semi-desert (27) **Daurian forest steppe (0.24)** Helanshan montane conifer forests* (15) Ordos Plateau steppe* (8.8) Eastern Gobi desert steppe (10.5) Central China Loess Plateau mixed forests* (1.5) **Part of Russian Far East Rivers and Wetlands WWF 200**

Note: *Indicates ecor-type is confined to China; bold indicates this is part of a WWF global 200 ecotype of special conservation importance.

Annex V: Preliminary List of Government and NGO Investments in Selected target NRs

Ongoing baseline projects	Investment（X1000 US$）	Investor	Project duration	Project goals
1. Two-river Source Nature Reserve in Altay Mountains, Xinjiang Province				
NR Wetlands conservation and capacity building project	4,518	Central government	2011-2013	Improve conservation management effectiveness and provide sufficient biodiversity conservation in the nature reserve by establishing infrastructure, building conservation capacity, restoration of endangered fauna and flora.
NR Wetlands ecological conservation project	618	Central government	2010-2011	Pilot advanced technology in efficient wetland conservation and restoration.
NR Natural forest protection project (NFPP)	12,893	Central government	2011-2020	Build national strategic wood reserve base; serve as the foundation for the important ecological shelter for Xinjiang Province; improve local forest condition, complete ban on logging of natural forest, improve forest stocking and socio-economic condition of the forested areas; increase biodiversity; improve ecological function of the forest; improve the welfare of the locals.
Grassland ecological conservation subsidy incentives	62,475	Central government		Improve local herders' income and conserve and restore Altay mountains ecological environment
NR operation and running	150	Provincial government	Annual	Staff salary, administrative expenses, equipment, and daily management of NR
2a. Daxinganling Forest Group Cooperation (Heilongjiang Province)				
Nen River Source NR wetland conservation and capacity building project	2,000	Central government (80%) and local government (20%)	2009-2011	Restoration and conservation of wetlands that were damaged by alluvial gold mining
Nan Weng River NR wetland conservation subsidized project	1,400	Central Government special fund (SFA)	2010-2011	Improve ecological supervision infrastructure; enhance management, monitoring and patrolling capacity; steadily restore forest and wetland ecosystem of the reserve
Nan Weng River NR capacity building project (Phase III)	1,500	Central government (80%) and local government (20%)	2011-2013	Improve conservation management infrastructure and other relevant facilities; improve conservation management, public education and awareness on conservation; fully release the ecological function of the forest and wetland ecosystem in the reserve
NRs operation and running	1,550	Provincial and local governments	Annual	Staff salary, administrative expenses, equipment, and daily management of 9 NRs (1 NNR, 2 PNR) and 3 wetland parks.
2b. Daxinganling Forestry Management Bureau, Inner Mongolia				
Hanma National NR capacity building project (Phase III)	1,319	Central government (80%) and local government (20%)	2010-2011	Maximize conservation of fauna and flora resided within forest wetlands ecosystems; enhance its ecological function and habitat condition; restore endangered wildlife. Build a national top demonstration reserve which focusing on conservation with

				appropriate zoning and efficient management by planning, infrastructure, wildlife conservation, monitoring, education and public awareness and training.
Eerguna National NR conservation and capacity building project (Phase I)	1,629	Central government (80%) and local government (20%)	2010-2011	Conservation of forest ecosystem, natural scenery originality and biodiversity by scientific planning and stepwise implementation for the Reserve Conservation and Restoration Project, Scientific Monitoring Project, Education, Awareness Raising and Management Projects. Focusing on scientific research, combining conservation research and education. Actively promote international cooperation; further improve reserve facility and internal operation mechanism to enhance the conservation efficiency.
Bila River NR wetland conservation and restoration project	2,693	Central Government (80%) and local government 20%)	2011-2013	Enhance the biodiversity of wetland ecosystem; maintain wetland ecosystem function; safeguard the virtuous circle of ecosystem process. With the improved reserve environment, to develop ecotourism and increase local economic income sources .
NRs operation and running	250	Provincial and local governments	Annual	Staff salary, administrative expenses, equipment, and daily management of 3 NRs
3. Honghu Lake National Nature Reserve, Hubei Province				
Honghu Lake wetland conservation and restoration project	3,828	Central government (80%) and local government (20%)	2011-2012	Restore aquatic plants habitats and wetlands areas; improve water environment of Honghu Lake; restore wetland biodiversity and wetland ecological function. Gradually improve wildlife habitats, especially bird habitats and fish breeding environment; stop poaching and illegal fishing.
Honghu Lake wetland ecologically observation research station construction project	769	Central government	2011-2012	Provide real-time monitoring of the Honghu Lake ecological change; establish database for scientific management of the reserve.
Honghu Lake wetland ecological subsidy project	646	Central government	2011	Promote the restoration of Honghu Lake wetlands; improve management capacity
Restoration after drought in Honghu Lake	307	Provincial government	2011	Partially restore some aquatic biota
Honghu Lake wetland effective management pilot area construction: pilot on aquatic plants restoration	77	WWF	2011	Research and pilot on aquatic plants restoration; provide scientific base for Honghu Lake wetland restoration
NRs operation and running	1,230	Provincial and local governments	Annual	Staff salary, administrative expenses, equipment, and daily management of 9 NRs (1 NNR, 2 PNR) and 3 wetland parks.
4. Poyang Lake National Natural Reserve, Jiangxi Province				
Poyang Lake National NR wetland conservation and capacity building project	3,900	Central government (40%) and provincial government (60%)	2010-2012	Build new management and monitoring stations (sites) form a three-tiered management system; research on the impact of wetland ecological change on winter habitats for migratory birds; provide scientific evidence for the government on wetland conservation and

				sustainable use plan; improve reserve infrastructure; enhance the reserve public education and conservation awareness raising function for effective wetland conservation.
Poyang Lake topographical and biological survey project	4,440	Provincial government	2010-2012	Surveying on vegetation as well as geographic measuring Poyang Lake covering 5,000 km^2; build Poyang Lake Basic Survey geographic information database
Poyang Lake white crane, wetland environment monitoring and conservation management	11	International Crane Foundation	Annual	Promote ecosystem conservation on habitats of white crane and other waterfowls
RARE pride project	80	RARE company and WWF	2010-2012	Change community livelihood which is not compatible with sustainable natural resource uses.
NRs operation and running	711	Provincial and local governments	Annual	Staff salary, administrative expenses, equipment, and daily management of NR
5. Shenjin Lake National Natural Reserve, Anhui Province				
Shenjin Lake wetland science centre construction project	4,620	Central government (80%) and provincial government (20%)	2011 -2012	Improve wetland science dissemination; awareness raising, training and external collaboration
Shenjin Lake upper lake state-owned water surface natural restoration project	2,475	Private sector for fishery	2011 -2012	Improve water ecological environment for natural increase of fisheries
NRs operation and running	250	Provincial and local governments	Annual	Staff salary, administrative expenses, equipment, and daily management of NR
6. Dongzhaigang National Natural Reserve, Hainan Province				
Internationally important wetland conservation project	952	Central government investment (80%) and local government (20%)	2011	Effectively protect mangrove and wildlife; restore rich biodiversity and their habitats in the reserve.
NR conservation and capacity building project (Phase II)	333	Provincial government	2010-2011	NR infrastructure building and enhancing reserve management capacity
Nursery construction project	222	Central government (80%) and local government (20%)	2009-2011	Provide seedlings for afforest mangrove
Ecological forest conservation project	63	Central government (80%) and local government (20%)	2011	Maintain the state ecological forest
RARE conservation project	108	RARE (U.S. based organization)	2011	Fish conservation
NRs operation and running	476	Provincial and local governments	Annual	Staff salary, administrative expenses, equipment, and daily management of NR

Note: 1 US$=6.465 RMB

Annex VI: List of Past and Emerging GEF Supported Wetland Conservation Projects in China

Project Title	GEF IA	Years	GEF Project Grant (US$)	Geographical Overlap with the Target Sites under the Programme	Project Summary and Key Results where the Programme could build on
Hai River Basin Integrated Water Resources Management	IBRD	2004-2010	17,350,000 (International Waters)	No overlap. This project mainly covers Hebei, Shandong and Henan Provinces, Tianjin Municipality and Beijing Municipality.	The project's overall objective was to catalyze an integrated approach to water resource management and pollution control in the Hai River Basin in order to improve the Bohai Sea and Yellow Sea environments. Specifically, the Project aimed to (i) improve integrated water and environment planning and management in the Hai Basin, (ii) promote institutionally-coordinated and effective local, municipal/provincial, and basin-wide water and environment planning and management, (iii) enhance local capacity in water and environment knowledge management and implementation, and (iv) reduce wastewater discharges from small cities along the rim of the Bohai Sea. The experiences of this project on integrated river basin management and water pollution management will be very useful for site-level activitiesunder the proposed Programme.
China - Sanjiang Plain Wetlands Protection Project	ADB	2005-2011	12,142,000	The site is in the south east of the Heilongjiang Province bordering Jilin Province, and at the totally opposite end of the province form the Daxing'anling Region targeted under the Programme which is shared by northwest Heilongjiang Province and east Inner Mongolian Autonomous Region. The wetland sites in Sanjiang Plain are quite different from those in Daxing'anling because the former are basically flooding alluvial wetlands while the latter are mountainous forest wetlands which are unique in China. In fact, Daxing'anling is an important headwaters area for the Sanjiang Plain.	The Project finances a range of wetland protection and forest plantation in Sanjiang Plain, covering 13 counties in 6 prefectures, and involving 6 Nature Reserves. The Project includes 4 components, which are watershed management, wetland nature reserve management, alternative livelihood programme and education, and capacity building. Experiences and results related to these four aspects will be carefully reviewed during the project preparatory phase, and will be applied in the six sites under the proposed Programme.
Lake Dianchi Freshwater Biodiversity Restoration.	IBRD	2003-2008	997,550	No overlap. The Project site is Lake Dianchi in Yunnan Province.	The objective of the project was to restore and manage habitats around the lake in order to secure the conservation of the remaining endemic species of Lake Dianchi and its immediate tributaries. This would be achieved by providing suitable breeding habitat, comprehensively surveying the biological environment of the Lake and its immediate tributaries, establishing a program to monitor lake quality improvements (using the presence/abundance of the endemic species as indicators of improved ecosystem health), and improving public awareness of the Lake region's unique biological environment. The experiences on biodiversity monitoring and species restoration in a lake ecosystem gained in Dianchi Project will be good examples for capacity building activities under the proposed Programme.

Project Title	GEF IA	Years	GEF Project Grant (US$)	Geographical Overlap with the Target Sites under the Programme	Project Summary and Key Results where the Programme could build on
Development of a Wetland Site and Flyway Network for Conservation of the Siberian Crane and Other Migratory Waterbirds in Asia	UNEP	2003-2009	10,350,000 Regional Project involving China, Iran, Kazakhstan, Russia	This regional project covered several critical wetland sites in China, along the Siberian crane flyway, including Poyang Lake, which is covered under the proposed Programme.	There were three-level activities under this project. Regional level activities focused on the development of wetland site networks, building capacity for the coordination of the flyway networks and applied field research in support of flyway conservation. National level activities focused on expanding the legislative and political framework for wetland protection and improving coordination of wetland conservation efforts within and beyond national borders. Individual sites involved in the project (see site accounts) are seeking to curb specific threats to wetland sites through a range of actions including engaging local communities in programmes to develop more sustainable livelihoods; raising public awareness; building capacity for local site management; developing comprehensive management plans; and improving legal protection. This project gained extensive experiences in habitat improvement for a target species, which will be very useful for improving PA management effectiveness under the proposed Programme. The flyway approach taken by this project could also contribute to securing migratory birds habitats in different parts of the country within the programme sites and beyond.
Wetland Biodiversity Conservation and Sustainable Use in China	UNDP	2000-2009	5,348,973.53	This was a national project with 4 demonstration sites, namely Sanjiang Plain in Heilongjiang Province, Yancheng Coastal Marshes in Jiangsu Province, Dongting Lake in Hunan Province and Ruoergai Marshes transbounding , Sichuan Province and Gansu Province. These sites have no overlap with the proposed Programme.	The project aimed to establish wetland biodiversity conservation as a routine consideration in national, provincial and local government decision making and action. Main achievements include: establishment of the Wetland Conservation and Management Centre within the SFA; Drafting of the National Wetland Conservation Regulations; development of wetland regulations in 11 provinces; mainstreaming of wetland concerns in national development plans; establishment of wetland site information system. The project focused on wetland sites and mainstreaming of wetland concerns in development plan. The proposed Programme complements the achievements by strengthening wetland PA sub-system through a comprehensive set of interventions to improve the PA sub-system as a whole. It will also further the work of the project, by taking forward some of the unfinished work such as the approval of the National Wetland conservation Regulations, at the same time, developing a number of practical measures to reduce threats to wetland biodiversity. This includes development of standards and management guidelines for different types of wetland PAs, and development of sector specific standards and measures to safeguard wetland PAs from sector activities. The development and fiscal planning process will also be targeted for sustainable mainstreaming and increased financing for the wetland PAs.
Biodiversity Management in the Coastal Area of China's South Sea	UNDP	2005-2011	3,195,000	Four marine PAs under the State Oceanic Administration - Nanji Islands, Sanya Coral Reef National Reserve, Shankou mangrove reserve, Dongshan-Nan'ao migratory species corridor. (Hainan, Guangdong, Fujian and Zhejiang)	The Project seeks to ensure the long-term conservation and sustainable use of coastal and marine biodiversity in four sites along China's South Sea coastline. The project main strategies are to: (i) strengthening conservation and sustainable use management capacities at four existing Marine Protected Areas; (ii) control and reduce land based and ship based pollution of marine areas; (iii) foster inter-provincial coordination and public private partnerships; and (iv) community awareness and sustainable livelihood creation in coastal communities. Some of the achievements such as development of inter-provincial fora for conservation, integration of coastal land use plans of adjacent provinces,

Project Title	GEF IA	Years	GEF Project Grant (US$)	Geographical Overlap with the Target Sites under the Programme	Project Summary and Key Results where the Programme could build on
					earmarking of sea-user fees for marine conservation, as well as marketing of "mangrove brand" products for alternative livelihood development would provide good models for adaption and replication, in strengthening wetland PA system. In particular, the experiences in the Sanya Coral Reef National Reserve will provide invaluable lessons for the planned intervention in the Dongzhaigang Mangrove Reserves. It is important to note that Hainan's coastal biodiversity is exceptionally rich with 90% of the mangrove species occurring in China. In Dongzhaigang alone, there are 26" true mangrove species" and 40 "mangrove associate" and "semi-mangrove" species. The island is regarded as one of China's 9 biodiversity hotspots and is part of the Indo-Burma global biodiversity hotspot of Conservation International.
CBPF: Integrated Ecosystem and Water Resources Management in the Baiyangdian Basin	ADB	2008 -2013	3,500,000	No overlap. The project target site is Baiyangdian Basin, Hebei Province	The project aims to introduce integrated ecosystem and water management to conserve biodiversity and improve environmental conditions in the Baiyangdian Basin.The long-term goals of the Project are improved water quality and water quantity inflows into the Baiyangdian wetland and lake system, and enhancement of ecological balance of Baiyangdian and its catchment area through an integrated ecosystem management (IEM) approach. Through targeted interventions for the Rare Bird PNR in Baiyangdian, and the Jin Hua Shan-Heng Lingzi Shan PNR in the Taihang Mountains — the two project sites — the Project is intended to demonstrate good management practices in engaging the private sector and local communities in ecosystem protection. In particular, the development of public-private sector partnerships through good practices in tourism management will be used (i) to demonstrate the viability of attaining both commercial profit and biodiversity benefits within the context of protected area management, and (ii) to showcase a sustainable IEM approach for protected area management and biodiversity conservation that can be replicated at other sites throughout the PRC. Project interventions will also focus on demonstrating replicable good management practices in sustainable natural resource production activities affecting biodiversity resources within Baiyangdian and the Taihang Mountains, including reed *Phragmites communis* harvest and production in the lake area, and harvest of wild non-timber forest products (NTFPs) such as medicinal herbs, wild edible fungi (mushrooms), and nuts, in the mountain area.The proposed Programme will make full use of experiences and good practices on integrated ecosystem management (IEM) approach produced by Baiyangdian Project, especially on sustainable PA financing approaches and multi-stakeholder participation in PA management.
CBPF: Conservation and Sustainable Use of Biodiversity in the Headwaters of the Huaihe River Basin (HHRB)	UNDP	2008-2014	2,730,000	No overlap. Headwater of Huaihe River Basin in Hubei Province	The project aims to demonstrate practical mechanisms to mainstream biodiversity in China's Ecological Function Conservation Areas (EFCAs) in the HHRB. The project will mainstream biodiversity and ecological function conservation into the EFCA planning and management, key productive sectors, poverty alleviation strategies and programmes at HHRB. To date, the project has managed to integrate biodiversity concerns in the 5-year development plan, land use plans and poverty alleviation plans of the Xinyang Municipal

Project Title	GEF IA	Years	GEF Project Grant (US$)	Geographical Overlap with the Target Sites under the Programme	Project Summary and Key Results where the Programme could build on
					Government and 5 pilot county governments. The project is also in the process of developing standards and monitoring system for biodiversity and other ecological functions in the EFCA. These activities among others will inform other EFCAs in the country where some of the Programme's target sites fall under. The project focus is on mainstreaming BD in production landscapes in China's EFCAs. While the project promotes EFCA concept, many of which are areas important for hydrological functions, the proposed Programme will complement the project by strengthening the wetland PAs that are often the critical part of the EFCAs.
Mainstreaming Biodiversity Protection within the Production Landscapes and Protected Areas of the Lake Aibi Basin	IBRD	2011-2014	3,156,000	No overlap. The project site is in Xinjiang Province, however, is in an arid ecosystem outside the Altai Mountains Region .	The project aims to restore the productive and protective functions of Lake Aibi Basin by addressing the interlinked problems of biodiversity loss and land degradation. The project will directly benefit from the PA system strengthening components of the Xinjiang sub-project proposed under the Programme as well from improved systemic and institutional capacity at the national level.
CBPF: Jiangsu Yancheng Wetlands System Protection Project	ADB	2011-2013	2,500,000	No overlap. The project site is Yancheng Wetlands in Jiangsu Province.	The project aims to conserve the coastal and upstream ecosystems of the Jiangsu/Yancheng wetlands while reducing rural poverty and promoting environmental sustainability through the establishment of an integrated wetlands management system. The proposed Programme will maintain communication with Yancheng Project during the implementation phase to ensure effective information exchange.
CBPF: Demonstration of Estuarine Biodiversity Conservation Restoration and Protected Area Networking	FAO	2011-2016	3,636,400	No overlap. The project sites are Yellow River Delta in Shandong Province and Pearl River Delta in Guangdong Province.	The project aims to improve on existing efforts to conserve biodiversity in China's major estuarine ecosystems. The Projects specific objective is to develop a series of best practices based on experience derived from project supported field activities focusing on the creation of marine protected area networks (MPA) and wetland restoration in the Yellow and Pearl River Estuaries, two of China's most important estuarine ecosystems
CBPF: Securing Biodiversity Conservation and Sustainable Use in China's Dongting Lake Protected Area	FAO	2011-2016	3,000,000	No overlap. Dongting Lake is also in the middle Yangtze, however it's located in Hunan Province.	The goal of this project is to secure the conservation of biodiversity of global importance in the Dongting Lake through strengthening existing management efforts and the promotion of the Wetland's long-term sustainable development. Specifically, the project objectives are to: (i) strengthen the existing institutional and policy framework; (ii) strengthen the existing network of 4 wetland nature reserves; (iii) promote an integrated, ecosystem-wide planning and management approach; (iv) identify and demonstrate sustainable and/or alternative livelihoods designed to reduce human pressure on the Wetlands; and (v) increase institutional capacity and public awareness and support for wetlands conservation. The proposed Programme, especially its 3 sub-projects in the Yangtze Basin, will maintain close communication with Dongting Project during the implementation phase to ensure timely exchange and sharing of good experiences and results.