



UNDP Project Document

Government of China

Xinyang Municipal Government of Henan Province

United Nations Development Programme

PIMS 3934 - Conservation and Sustainable Use of Biodiversity in the Headwaters of the Huaihe River Basin

Brief description

The project forms a key element of the China Biodiversity Partnership Framework (CBPF). It aims to ensure that biodiversity conservation is integrated into the management of Important Ecological Function Areas (IEFAs) to address national environmental management objectives and to conserve global biodiversity values. Baseline efforts to develop specialized management regimes for such areas provide an *opportunity* to mainstream biodiversity conservation into the management of significant numbers of important landscapes across China by building on the complementarity and synergies between ecosystems function conservation and biodiversity conservation. Such a solution would offer an essential complementary element to China's protected area strategy. The project will work with relevant stakeholders at national, provincial and local levels to address barriers to launching this important management approach. GEF support will focus on ensuring that biodiversity considerations are fully taken into account within this process. The project will demonstrate mainstreaming in the national-level IEFA to be established in the Headwaters of the Huaihe River Basin (HHRB), a biodiversity-rich, 21,109-km² area considered a high priority by the Ministry of Environmental Protection. Based on the HHRB pilot experience, the project will seek encourage replication at IEFAs throughout China.

Table of Contents

SECTION I: ELABORATION OF THE NARRATIVE	4
PART I: SITUATION ANALYSIS.....	4
PART II: STRATEGY	17
PART III: MANAGEMENT ARRANGEMENTS.....	31
PART IV: MONITORING AND EVALUATION PLAN AND BUDGET	33
PART V: LEGAL CONTEXT	40
SECTION II: STRATEGIC RESULTS FRAMEWORK AND GEF.....	41
PART I: INCREMENTAL COST MATRIX	41
PART II: LOGICAL FRAMEWORK MATRIX	44
SECTION III: TOTAL BUDGET AND WORKPLAN.....	50
PART I: TOTAL BUDGET AND WORK PLAN	50
PART II: BUDGET NOTES.....	53
SECTION IV: ADDITIONAL INFORMATION.....	59
PART I: OTHER AGREEMENTS.....	59
PART II: ORGANIGRAM OF PROJECT.....	59
PART III: TERMS OF REFERENCES FOR KEY PROJECT STAFF	60
PART IV: STAKEHOLDER INVOLVEMENT PLAN	64
PART V: APPLYING THE GEF TRACKING TOOLS IN GEF-4.....	68
PART VI: HHRB SECTORAL OVERVIEWS	77
PART VII: OVERVIEW OF IEFAS DUE TO BE ESTABLISHED BY 2020.....	87
PART VIII: EXISTING AND PROPOSED PROTECTED AREAS IN HHRB	89
PART IX: MAPS	ERROR! BOOKMARK NOT DEFINED.

Acronyms and Abbreviations

APR	Annual Project Report
AWP	Annual Work Plan
CAS	Chinese Academy of Sciences
CBPF	China Biodiversity Partnership and Framework for Action
CBD	Convention on Biological Diversity
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
CO	Country Office
CPD	Country Programme Document
ECBP	EU-China Biodiversity Programme
EIA	Environmental Impact Assessment
EPB	Environmental Protection Bureau
FECO	Foreign Economic Cooperation Office of the Ministry of Environmental Protection
GEF	Global Environment Facility
GoC	Government of China
Ha.	Hectares
HCLG	HHRB National Ecological Function Conservation Area Construction Leading Group
HHRB	Headwaters of Huaihe River Basin
HQ	Headquarters
IEFA	Important Ecological Function Area
IW	Inception Workshop
KFAs	Key Function Zones
LDAs	Limited Development Areas
LPMO	Local Project Management Office
MDGs	Millennium Development Goals
MEP	Ministry of Environmental Protection
M&E	Monitoring and Evaluation
NDRC	National Development and Reform Commission
NEX	National Execution
NTFP	Non-timber forest product
PA	Protected area
PIR	Project Implementation Review
PMO	Project Management Office
PSC	Project Steering Committee
RCB	Regional Centre in Bangkok (of UNDP)
RMB	Reminbi
SEPA	State Environmental Protection Agency
SP	Strategic Priority
TAG	Technical Advisory Group
TCM	Traditional Chinese Medicine
TPR	Tripartite Review
TTR	Terminal Tripartite Review
UNDAF	United Nations Development Assistance Framework
UNDP	United Nations Development Programme
US\$	United States Dollars
XMEEA	Xinyang Municipal Eco-Environmental Association
XMG	Xinyang Municipal Government

SECTION I: ELABORATION OF THE NARRATIVE

Part I: Situation Analysis

1. In 2006, under the preparatory phase of the China Biodiversity Partnership Framework (CBPF)¹, UNDP-GEF and the Government of China undertook an in-depth Gap Analysis to identify major shortcomings in the strategies, systems and implementation of biodiversity conservation in China. The analysis focused on the following major themes: biodiversity governance; mainstreaming biodiversity into development planning and policy making; investments in the protected area system; investments in conserving biodiversity in ecosystems and landscapes outside of protected areas, and cross-cutting and emerging issues. The analysis found that, in general, previous measures to conserve biodiversity had focused mostly on time-bound, isolated efforts to protect specific habitats or to change behaviour of a limited number of resource users. These actions have thus far proven insufficient, and indications are that biodiversity continues to be lost at troubling rates.

2. Mainstreaming biodiversity conservation in production landscapes² is critical for conserving China's globally significant biodiversity resources, and its importance as a strategy was highlighted by the CBPF Gap Analysis. Mainstreaming is especially important given the country's high population densities, somewhat limited scope for protected area expansion and rapid pace of economic growth. One promising approach is to link mainstreaming efforts to broader environmental protection strategies. This requires identifying and working closely with government initiatives aimed at achieving specific environmental objectives, such as the conservation of ecological functions. Such initiatives offer hope for the emergence of sustainable development patterns within ecologically important landscape areas, many of which also sustain important biodiversity values. Robust environmental protection efforts across these landscape areas would provide a foundation of sustainable development upon which incremental global biodiversity considerations could build.

3. In recent years, the Government of China (GoC) – in particular its Ministry of Environmental Protection (MEP)³ – has been identifying, and working to enhance the protection of, broad landscape areas that support 'critical' ecological functions. Ensuring landscapes' abilities to perform critical functions is considered essential to maintaining ecological balance in river basins and regions, to preventing and mitigating natural disasters, and to assuring the overall ecological safety of regions. In addition, conserving ecological functions across a defined production landscape can, if undertaken in an appropriate manner, markedly enhance that landscape's 'biodiversity-friendliness'. This includes both the landscape's ability to support biodiversity directly as well as its capacity to act as an effective buffer for, and corridor between, neighbouring protected areas (PAs). Given that sharp declines in ecosystem functioning associated with land degradation and habitat loss would likely correlate closely with biodiversity losses within most landscape types, conserving ecosystem functions and biodiversity may be seen as potentially highly complementary objectives. This complementarity is particularly strong in geographical areas that also support protected areas. *Within this complementarity lies an unparalleled opportunity to mainstream biodiversity conservation in China.*⁴

¹ See Government of China. 2007. "Information Note on the China Biodiversity Partnership and Framework for Action." Submitted to GEF by the Government of China through UNDP. Theme 2 of CBPF is "Mainstreaming biodiversity into planning and policy making," and theme #4, "Investing effectively in conserving biodiversity in ecosystems and landscapes outside of protected areas," is also closely related.

² For an introduction to the concept of mainstreaming, see Petersen, Caroline and Brian Huntley. 2005. *Mainstreaming Biodiversity in Production Landscapes*. Washington, D.C.: Global Environment Facility.

³ Previously the State Environmental Protection Agency (SEPA).

⁴ This logic should be seen as somewhat independent of the ongoing scientific debate concerning the degree of correlation and causality, and the associated mechanisms, by which levels of biodiversity and levels of ecosystem functioning may be inter-

4. As part of its extensive work aimed at protecting ecological functions, the Government of China has identified the following five critical ecological functions:

- i. water source / supply,
- ii. water and soil conservation,
- iii. windbreaks and sand fixation,
- iv. flood regulation and peak water storage,
- v. maintenance of biological diversity.

5. The process of identifying “Important Ecological Function Areas (IEFAs),” or landscape areas where at least one of the above functions is considered of national importance, began in 2001 with a national ecological survey. By 2004, SEPA (now MEP), working closely with China’s Academy of Sciences, had drafted a national ecological functions zoning scheme, which identified 50 IEFAs, including the Headwaters of Huaihe River Basin (HHRB),⁵ and jointly published by the two institutions in July 2008. Together, these areas cover 2.2 million km², which is equivalent to 22% of China’s total land area and is nearly 50% larger than China’s entire protected area system (the latter currently covers 1.5 million km²).

6. For each IEFA, a single ‘primary’ ecological function, together with one or more ‘secondary’ functions, has been identified from among the above-mentioned six.⁶ Of the 50 IEFAs identified, 34 have primary objectives other than biodiversity conservation. They include 17 water source areas, four water and soil conservation areas, seven wind protection and sand fixation areas and six flood regulation areas. Their combined area of 1.6 million km² constitutes about 75% of the total IEFA area, and many of the areas harbour globally important ecosystems and species.⁷ All 16 IEFAs where biodiversity conservation has been identified as a primary ecological function, and many of the 34 IEFAs where it has not, present important opportunities for mainstreaming biodiversity.

7. Given their large size and relatively high population densities— including some major urban areas – it is not feasible to designate most IEFAs as traditional protected areas. However, these areas are considered too ecologically important and sensitive to be allowed to develop haphazardly and without special environmental oversight. Therefore, and in light of repeated calls from China’s top leadership, including its State Council, the Government has been moving to manage IEFAs more effectively so as to build China into a resources-saving and environmentally friendly society.

8. Designating as IEFAs would make them subject to special management and zoning regulations aimed at ensuring that economic and other anthropogenic activities within their boundaries do not reduce their long-term capacity to perform critical ecological functions and deliver corresponding ecological services. In the case of HHRB classified as a water source type of IEFA, suggested management measures in the National Ecological Function Zoning include protection of vegetation, control over economic activities and production practices that are not conducive to the function of water source conservation, restoration of degraded ecosystems, etc. While 50 IEFAs are identified in the Zoning scheme, the necessary policy and regulatory mechanisms for biodiversity management and their wide replication in China remain for the most part to be developed.

related across various ecosystem types. See, e.g., Cardinale, Bradley J. *et. al.* 26 October 2006. “Effects of biodiversity on the functioning of trophic groups and ecosystems.” *Nature Vol. 443*; Kinzig, Ann P. 2002. *The Functional Consequences of Biodiversity*. Princeton: Princeton University Press. According to a recent formal meta-analysis of studies undertaken by Cardinale *et. al.*: “...the average effect of decreasing species richness is to decrease the abundance or biomass of the focal trophic group.” The same authors conclude that “the average species loss does indeed affect the functioning of a wide variety of organisms and ecosystems, but the magnitude of these effects is ultimately determined by the identity of the species that are going extinct.”

⁵ It should be noted that the IEFA designation alone has no immediate practical or legal implications for management or planning.

⁶ Section IV, Part VII presents a breakdown and description of the 50 IEFAs according to primary ecological function. It should be noted that some IEFAs were also designated as having one or more ecological functions of secondary importance.

⁷ See Section IV, Part VII.

Context and global significance

9. China's biodiversity is among the richest in the world, mainly because of the country's vast land area and diverse climatic conditions. A conservative estimate of the total value of China's ecological products and services is somewhere between US \$ 257 billion and US \$421 billion per year. To conserve its biodiversity, China has designated over 2,000 nature reserves, representing about 15% of China's total land area. These nature reserves protect about 70% of the endangered species, thus playing a key role for *in-situ* conservation. Forest coverage has also increased significantly in recent years. Despite conservation efforts, the diversity of biological resources is being seriously threatened. Estimates from China's Red Data Book of endangered species show that more than 10% of the country's vertebrate species are endangered.⁸

10. China's large and still growing population, combined with inappropriate land use practices and rapid levels of growth, have had various negative impacts on the quality of scarce productive lands and other natural resources. These have included land degradation, grassland destruction, soil erosion and water pollution – all of which threaten both China's agricultural potential and its globally significant biodiversity.⁹

11. To reverse the trend of biodiversity loss, it is necessary to address the fundamental governance weakness in the current approach to biodiversity conservation. Biodiversity concerns need to be better integrated into overall planning and decision-making. At the local level, problems related to user rights and ownership of natural resources needs to be solved, and farmers' incentives to protect natural resources increased. Effective mechanisms to increase public environmental awareness are needed as well.

12. As highlighted by the IEFA process, maintaining ecological functions of natural ecosystems in headwaters of major Chinese river basins is of paramount importance to sustaining China's growing economy and livelihoods of people in the middle and lower streams. The Huaihe River is China's third longest, with a length of 1,078 kilometres and a drainage area of 270,000 km² (see **Map 1**). Its source is located to the east of Tongbai Mountain in Tongbai County, Henan Province. The Huaihe used to flow to the sea through present-day northern Jiangsu province. However, beginning in 1194, the Yellow River to the north changed its course southwards to run into the Huaihe River. It changed back and forth several times over the next 700 years. The resulting siltation was so heavy that, since the Yellow River changed back to its northerly course for the last time in 1897, the Huaihe has no longer been able to continue along its old course. Instead, it pools up into Lake Hongze, and then runs southwards towards the Yangtze River. The unusual course of the river is an important factor in making it extremely prone to flooding, as it did to severe effect in 2007.¹⁰

13. The Huaihe—particularly in its middle and lower reaches—is also one of the most polluted rivers in China. Thousands of small factories sprang up along the river in the 1980s, with few pollution controls. Beginning in the 1990s, efforts to improve water quality have included shutting down hundreds of polluting plants, constructing sewage collection and treatment facilities and taking steps to reduce pollution from agriculture. These have all been part of a US\$7.2 billion campaign to clean up the river. Despite these measures, water quality along much of the Huaihe remains 'toxic,' with an estimated 31.5% of industrial operations continuing to discharge pollutants 'far exceeding legal limits.' In addition to

⁸ Common Country Assessment 2004 – Balancing Development to Achieve an All-Round Xiaokang and Harmonious Society in China.

⁹ See United Nations Development Framework for the People's Republic of China (2006-2010), a product of close and collaborative efforts between the government and the UN Country Team.

¹⁰ See, e.g., http://www.chinadaily.com.cn/china/2007-07/15/content_5435189.htm; http://news.xinhuanet.com/english/2007-07/21/content_6410535.htm

killing off aquatic life, pollution of the Huaihe has led to increased rates of cancer and other severe economic and human health impacts.¹¹

14. In 2001, in recognition of its national importance as a water supply area and as an area of biodiversity importance, the Headwaters of the Huaihe River Basin (HHRB) was designated by SEPA as one of 50 IEFAs. The site (see **Map 1**), which encompasses the primary drainage area of the upper Huaihe River, covers a total of 21,109 km² and is distributed among administrative units as follows:

- Henan Province's Xinyang Municipality, with 18,915 km² or 90% of the total, which is further sub-divided administratively into eight counties and two districts;¹²
- Henan Province's Nanyang Municipality, with 1,324 km², or 6% of the total area, within a single county (Tongbai);
- Hubei Province's Suizhou Municipality, with 870 km² or 4% of the total area¹³

15. HHRB has a total population of 8.2 million people, 7.9 million of whom live in Xinyang Municipality. Total GDP for 2006 was estimated at 61.98 billion RMB, giving the area a GDP per capita of approximately 7,500 RMB (US\$1,068). Poverty levels are high within HHRB, with six 'National Poor Counties' and 855,000 people, or just over 10% of the total HHRB population, living in poverty.¹⁴

16. Of Xinyang's 7.9 million inhabitants, some 2.12 million people migrate to cities within and outside Henan for better job opportunities, thereby generating a total income of 123 million RMB, which is equivalent to 60% of the total income of all farmers in Xinyang. As a result of the large numbers of migrant workers, most remaining farmers are old and/or women with low literacy. They tend to lack the necessary technical capacity to use high-tech fertilizers, undertake soil analysis, grow vegetables in off-seasons and cash trade on husbandry and cultivation of economic crops. The large aging and feminized populations in the project area creates important opportunities for the project to pilot interventions oriented towards these groups.

17. HHRB's global biodiversity significance is linked to its special position within China's complex eco-geography. The area is located in the southern part of Henan Province and the northern part of Hubei Province, in the transition zone between the warm-temperate and semi-tropical zones (see **Maps 1 and 2**). It thus lies along the geographic and climatic boundary between northern and southern China. Biodiversity conservation in this transitional region makes it possible not only to conserve a great deal of north-south zone biodiversity in the same region, but also to avoid the extinction or loss of this characteristic, transitional region biodiversity. Furthermore, HHRB provides endemic, corridor and migratory habitat for many species of fauna, especially birds during winter-spring migrations.¹⁵

18. HHRB is also well diversified in terms of ecosystems. The area supports four distinctly separate and significant ecosystem types—montane forest, river, wetland and agro-ecosystems. In a region of very high population density, HHRB represents one of few remaining areas where substantial forest and

¹¹ See, e.g. "Provinces Vow to Clean up Huaihe" at english.acca21.org.cn/pic/news20041026-7.html; "Huaihe River Clean-Up Project Needs Accelerating" at www.china.org.cn/english/government/165982.html

¹² These are Guangshan, Shangcheng, . Luoshan, Xinxian, Xixian, Huaibin, Huangchuan and Gushi Counties and Pingqiao and Shihe Districts, which together constitute Xinyang Municipality. Additional administrative levels are: Townships (of which there are 219 in Xinyang), Village Administrative Committees (3,024) and Villager Groups (48,000).

¹³ Project activities will focus on the first two areas, both of which lie within Henan Province, and which together cover 96% of HHRB. Unless otherwise stated, all site references and statistics provided below refer to the 11 counties and districts located within Henan Province.

¹⁴ This estimate is for the end of 2007 and is based on an average annual income of less than 994 RMB Yuan.

¹⁵ There are 163 species of migratory birds, including: *Ciconia boycican* / White Stork, *Ctis tarde dybowskii* / Great Bustard, *Cygnus* / Whooper Swan, *Cy. Columbianus* / Whistling Swan, *Accipter gentilis* / Goshawk, *Egretta eulophotes* / Chinese Egret, 88 of which were listed in the Agreement on Protecting Migrating Birds & Their Habitats between Chinese and Japanese governments in 1981.

wetland ecosystems can still be found. About 33% of the area is categorized as 'woodland.' There are natural wetlands of 89,929 hectares and artificial wetlands of 169,712 hectares.

19. A preliminary investigation shows that the HHRB region supports about 5,660 species of vascular plants, 5,600 species of insects, and 396 species of birds, accounting for approximately 13%, 14% and 30% respectively of each group in the whole country.¹⁶ Altogether, more than 1,800 species of plants and animals found in the area are considered to have important scientific and/or economic value. These include 35 endemic species such as Shangcheng Fat Salamander (*Pachyhynobius shangchengensis*), Chinese Carabid Beetle (*Carabus <Coptolabrus> lafossei*), Jigongshan Mock Orange (*Philadelphus incanus* var. *baileyi*), Jigongshan Pseudosasa (*Pseudosasa maculifera*) and Xinyang Maojian Tea. HHRB is particularly rich in medicinal plant resources which are critical for Traditional Chinese Medicine (TCM), and as a result is regarded by the State Administration of TCM as one of the main production bases of TCMs. Hence, preservation, management and sustainable use of medicinal plants for TCM are considered as key needs.

20. At least 59 threatened animal species have been recorded at the site, including: Crested Ibis (*Nipponia nippon*), Leopard (*Panthera pardus*), Chinese Giant Salamander (*Andrias davidianus*), Reeves's Pheasant (*Symaticus reevesii*), Fairy Pitta (*Pitta nympha*), Chinese Goshawk (*Accipiter soloensis*), Golden Eagle (*Aquila chrysaetos daphanea*), Black Stork (*Ciconia nigra*), Great Bustard (*Otis tarda dybowskii*), White Stork (*Ciconia ciconia boyciana*), Whooper Swan (*Cygnus cygnus*) and Large Indian Civet (*Viverra zibetya*). There are also 65 threatened plant species including: Bald Fir (*Taiwania flousiana*), Chinese Dove Tree (*Davidia involucrata*), Wild Soybean (*Glycine soja*), Fragrant Fruit Tree (*Emmenopterys henryi*), Chinese Orchid (*Cymbidium goeringii*), Uniflower Orchid (*Changnienia amoena*), Ginkgo (*Ginkgo biloba*), Yew (*Taxus chinensis*), Metasequoia (*M. glyptroboides*), Chinese Tulip Tree (*Liriodendron chinensis*), Katsura Tree (*Cercidiphyllum japonicum*), Eucommia (*Eucommia ulmoides*) and Chinese Cypress (*Glyptostrobus pensilis*).

21. Many of the above are also among the 124 species of threatened animals and plants recorded at HHRB which are listed under the Convention on International Trade of Endangered Species (CITES). These also include Crested Ibis (*Nipponia nippon*), White Stork (*Ciconia ciconia boyciana*), Black Stork (*Ciconia nigra*), Chinese Giant Salamander (*Andrias davidianus*), Tiger Frog (*Rana tigrina*), Gastrodia Tuber (*Gastrodia elata*), Officinal Dendrobium (*Dendrobium candidum*), Chinese Orchid (*Cymbidium goeringii*) and Uniflower Orchid (*Changnienia amoena*).

22. HHRB's ecosystems and biodiversity have drawn substantial attention from Government. Twelve Natural Reserves (NRs) totalling over 220,000 ha. have been established to date. These include three National Nature Reserves (NNRs) – Dongzhai NNR, Jigong Mountain NNR, and Liankang Mountain NNR – nine provincial-level NRs. There are also five national forest parks, one national geological park and four national water resource scenic areas.¹⁷ Finally, an additional four nature reserves totalling 14,600 ha. are planned within HHRB.

Threats and root causes

23. A substantial range of threats is facing HHRB's biodiversity, many of which are common across China's production landscapes. These stem mainly from unsustainable use of natural resources and destruction of wildlife habitat. The most important threats and associated underlying causes are described

¹⁶ Reports on Scientific Survey in National Level Reserve of Jigong Mountain by China Forestry Publishing House (1973) , Reports on Scientific Survey in National Level Reserve of Dongzhai, Henan (1996), Reports on Scientific Survey in National Level Reserve of Liankang Mountain of Henan by Science Publishing House (2002) and Wang Sung, et al. 1997; Wang Sung, 1998; MacKinnon, J. et al. 2000.

¹⁷ Section IV, Part VIII provides details on HHRB's system of protected areas.

below.¹⁸ **Section IV, Part VI** presents sectoral overviews, which describe, *inter alia*, threats associated with specific economic sectors at HHRB.

i. Illegal and unsustainable extraction of trees and plants from natural habitats for use as ornamentals

24. With the rapid development and increasing wealth of urban areas in China, demand for landscaping products is high. Purchasers include city governments as well as private property owners and developers. Mature trees, bushes and flowering plants are in particularly high demand and are extracted indiscriminately from forests.

25. While plant nurseries have sprung up in response to this growing demand, a quicker and more profitable method of obtaining plant materials has been wild collection. Since HHRB is located in a transitional climatic zone (from northern warm temperate to semitropical), trees and other plants from the region are adapted to a broad range of conditions. Survival rates of trees undergoing transplantation are high, as techniques have improved in recent years. Consequently, HHRB has become a trade distribution centre for old and valuable trees, with the market network now spread across a significant number of large and medium-sized cities. An old and perhaps unusually shaped tree can easily be sold at over 1,000 RMB, with rarer specimens fetching as much as 100,000 RMB. High prices are also paid for wild-growing orchids with rare colours.

26. Demand has fuelled supply and local villagers now consider uprooting trees for sale to be a profitable new source of income. Driven by the financial benefit, farmers in the mountainous areas transplant old and precious trees, shrubs and rare flowers from old forests to their own gardens. After short-term cultivation and maintenance, they sell these trees and flowers to the cities, institutes and businesses. Some farmers even collect trees and flowers from the mountains and then directly transport them by truck to the sale destination. The annual trade in the villages of Shihe District along National Highway 107 alone, for example, could be as high as several million plants.

27. Mass collecting and sale of ancient and precious trees has the following impacts on ecosystems and biodiversity:

- Habitat degradation: Forest habitat is negatively impacted by this trade. In addition to the direct impact associated with the loss of a large percentage of mature trees, e.g., loss of nesting habitat, there are further environmental impacts associated with the trade. In order to reduce damage to tree roots during transplantation, a large area of soil must be removed around the roots. A big hole is thus formed when removing a tree, resulting in damage to the natural vegetation and its environment. This exposed soil is easily eroded during the rainy season, thus bringing negative effects to the whole ecosystem.
- Threat to individual species: The trade threatens to cause local extirpation of some species, including endemic species, with loss of associated genetic diversity. Specimens of rare species naturally tend to command higher prices, which further increases the pressures to remove them. In addition, the stress of transplantation and inadequate care can result in removed trees failing to survive, which obviously increases pressure further.

ii. Over-exploitation of plants and animals for use in Traditional Chinese Medicine (TCM)

28. Nationally, HHRB is one of the main production bases for Traditional Chinese Medicine. The basin holds more than 1,800 medicinal plant and animal species, over 35 of which are endemic. Most are collected wild. Because of their high medical value, HHRB TCMs are widely exported to Japan, Korea and other Asian countries with continually increasing market prices. Local farmers as well as individuals

¹⁸ This analysis draws on, *inter alia*, the 2007 Grant Agreement between UNDP and Xinyang Municipality Eco-environmental Association for the project on 'Integrated Biodiversity Conservation in the Headwaters of the Huaihe River Basin'. This project is financed by the EU-China Biodiversity Partnership, which is an important co-financing partner for the present GEF project.

from outside of the region dig up medicinal plants in the mountains almost year round, causing severe damage to the local wild TCM resources. Medicine from herbs (i.e. flowering plants) is often derived from the stem and root, which necessitates removal of the entire plant body. For example, the entire body of Official Dendrobium (*Dendrobium candidum*) is used, while the stem and root of Changium (*Changium smyrnioides*) is used. If plants are collected prior to seed set or vegetative reproduction, then genetic stock is being lost.

29. As far as animals are concerned, medicine derived from animal parts can only be obtained by killing them. The testicles of musk deer (*Moschus moschiferus*) and large Indian civet (*Viverra zibetia*) are used, while people often use the bile of pallas pit viper (*Agkistrodon halys*) and its whole body from which the internal organs are removed. The existing collection method of TCMs has negative impacts on TCM resources and ecosystems due to its unsustainable nature and may cause some rare species to become locally extinct. The annual local production volume of TCMs has been reduced from more than 1,000 tons in the 1990s to less than 100 tons presently in Shangcheng County. The population sizes of some rare species are obviously decreasing and it is rare to observe them in the wild now, such as dendrobium (*Herba Dendrobii*), gastrodia (*Rhizoma Gastrodiae*), musk deer and otter (*Lutra lutra*), all of which are used for the TCM trade.

30. Collection of wild medicinal plants and animals is largely stimulated by high market prices for these products, which are partly due to their increasing rarity. In a context of widespread poverty, local villagers have an incentive to collect these products; in the absence of effective management arrangements, they have few incentives to conserve them.

iii. Water pollution and land degradation from mining

31. Large-scale digging and mining in mountain areas of HHRB causes damage to the native vegetation and direct loss of habitat. In addition, processing of mineral ores causes water pollution. Gold, silver, copper and other minerals are processed using chemicals containing mercury, arsenic, chromium, volatile phenol and permanganate, which can easily contaminate local water resources. The volume of wastewater discharge from the mining sector is approximately 30 million tons per year, part of which is directly discharged into the rivers and streams, thus polluting the waters of Huaihe River and damaging the aquatic environment.

32. Annual tailings produced reach five million tons and ore residues (including the solid wastes generated from the separation of minerals from the mountain or generated after the mineral products are refined) reach approximately 200 million tons. In the course of development of perlite and natural soda mines, etc, substantial tailings and ore residues are generated. These are left in wetlands and mountain lands, seriously damaging ecosystems and polluting the environment. Finally, open-air explosions during mineral excavations also have direct impacts on animals and plants.

iv. Loss of wetlands

33. In addition to impacts from mining, uncontrolled use of wetland has been a major threat to HHRB biodiversity. HHRB has multitude of natural wetlands – including several streams, their floodplains as well as artificial wetlands including paddy fields and reservoirs. These play an important role in conserving headwaters, storing water and regulating local climate. However, due to population increases and the strain of economic development, natural wetlands have been converted paddy fields or drained for other types of farming.

34. Wetland is drained by digging ditches, which causes it to become farmland or dryland. For example, half the wetland in Luoshan County (~10,000 ha) became farmland or dryland after the government called upon farmers to change all year paddy fields into two-season crop farmland of wheat and rice. These measures have a certain effect in increasing farmers' grain output and income, but the consequence is that

areas under paddy fields with four-season water have decreased. The results include loss of habitat for aquatic animals and plants; birds lose food sources; and wetland loses its function to conserve headwater and other relevant ecological functions. Because these draining measures give farmers visible profits and have been sanctioned by government, the awareness of the damage caused has been low, and the trend for conversion continues. Increasing food prices are likely to provide additional impetus for such continued conversion.

v. Overuse of chemical fertilizers and pesticides in agriculture

35. HHRB is a major production centre for agricultural products such as rice, tea, and vegetables. With an increasing demand for food, and the introduction of high-input agricultural techniques, use of agro-chemicals has risen sharply. Statistics show that the quantity of chemical fertilizers used per ha. in HHRB has increased nearly tenfold from 1975 to 2005, which is far higher than national and provincial averages. Runoff from this heavy chemical use causes serious aquatic pollution and disruption of ecological processes.

vi. Illegal timber exploitation

36. In addition to removal of live trees (see i. above), trees are also being unsustainably harvested for timber. Local farmers illegally cut trees and sell them to local lumber mills, which use them to produce wooden board. Households also rely on firewood from forests for daily cooking and winter heating. Finally, some tea factories use large amounts of firewood to dry fresh tea, and some local farmers illegally cut trees to sell firewood for this purpose.

vii. Infrastructural developments

37. There are three freeways and three national railways crossing the HHRB area. The north-south freeways are respectively Jingzhu (Beijing--Zhuhai), A'shen (A'rong banner of Inner Mongolia--Shenzhen) and the east-west freeway is Hushan (Shanghai--Shan'anxi). Their total length in HHRB is 470 km. The national railways are north-south railways of Jingguang (Beijing--Guangzhou), Jingjiu (Beijing--Jiulong), and the east-west railway is Ningxi (Nanjing--Xi'an). Their total length in HHRB is 520 km. Biodiversity and to a certain extent ecosystem functions were not carefully taken into account during the construction of this transport infrastructure: impacts were not evaluated and relevant protection measures were not taken. Economic development plans for future infrastructure development have not considered ecological impacts fully.

Barriers

38. A number of barriers have combined to create a situation in which biodiversity and ecological functions have failed to be conserved at HHRB and at other IEFAs across China. These may be grouped into three broad categories—to be addressed by corresponding project components—which are discussed below.

BARRIER 1: LOCAL-LEVEL GOVERNMENTS LACK TOOLS AND STRUCTURES TO ENSURE THE ELABORATION AND ACHIEVEMENT OF LONG-TERM, LANDSCAPE-LEVEL GOALS RELATED TO CONSERVATION OF BIODIVERSITY AND ECOSYSTEM FUNCTIONS

39. Devising, and monitoring the achievement of, longer-term landscape-level conservation goals is a key challenge facing land managers across China, particularly those responsible for IEFAs. Local governments lack tools and structures for integrated planning, monitoring and co-ordination of economic activities in a manner that conserves ecological functions and biodiversity. Several inter-linked factors combine to hinder effective management at this inter-sectoral level:

- *Inadequate coordination among horizontal sectors and vertical government levels:* Responsibilities for biodiversity conservation are dispersed across government agencies but are rarely explicit in the plans and policies of those agencies, resulting in inadequate coordination in planning and implementation of programs and plans. While awareness of ecological services of biodiversity is relatively high among decision makers at national level, biodiversity policies need to be implemented at local level, where priority is given to economic growth and development over biodiversity conservation. For example, in the medicinal plants sector, management responsibilities are scattered amongst different departments and organizations, leaving management uncoordinated and causing serious damage to traditional Chinese medicinal plant and animal resources.
- *Poor understanding and capacity of line ministries and local authorities to identify and implement “win-win” land use and other development policies that are ecosystem-function and biodiversity friendly:* Land use planning at national level is primarily the responsibility of the Ministry of Land and Resources (MLR) and is focused on preventing loss of agricultural land to urbanization, thus biodiversity is not incorporated into the land use master plan. Though MLR recently became a member of the Steering Committee for Implementation of Convention on Biological Diversity in China, full understanding of biodiversity and integration into sectoral work program at different levels still need to be improved.
- *Failure to develop a coherent multi-sectoral strategy – including a set of policies, laws, regulations and planning mechanisms – to address biodiversity and ecological function conservation:* Most Chinese laws protect biodiversity either with a species approach, such as wild animals and wild plants, or through protection of certain types of ecosystems such forest, grassland, or through protection of habitats of threatened species by creating nature reserves, or through protection of certain types of natural resources such water and land. Limited by the mandates from these laws, strategies, programs and plans for one type of ecosystem such as wetlands are formulated in isolation with those of other sectors such as land use. Therefore, synergies are lost, with frequent overlapping in investment. IEFAs are new and innovative approaches to protect biodiversity at landscape level, which necessitate a coherent multi-sectoral strategy to address biodiversity and ecological function conservation.

BARRIER 2: ECONOMIC ACTIVITIES IN SECTORS SUCH AS AGRICULTURE, MINING AND FORESTRY ARE SUBJECT TO REGULATORY FRAMEWORKS THAT ARE POORLY ENFORCED AND WHICH ARE IN ANY CASE NOT TUNED TO THE PARTICULAR NEEDS OF IEFAS

40. The building blocks of inter-sectoral co-ordination (see previous barrier) consist of well managed economic sectors which are providing employment and economic gain for local people while simultaneously conserving the resource base on which development depends. However, local sectoral-level managers at HHRB and other IEFAs across China are failing to maintain these building blocks. For example, at HHRB, land, water and forest resources are currently exploited in unsustainable ways that are scarcely discouraged—and in some cases are even encouraged—by the existing regulatory and incentive structure. Several factors are contributing to this situation:

- *Limited awareness among policy makers of the value of biodiversity and ecosystem functions, leading to policies and regulations that may be favourable for short-term economic growth, but unfavourable for long-term sustainable development or biodiversity conservation:* Economic sectors such as mining, forestry, agriculture and tourism at national and local levels as in the case of Xinyang are primary contributors to biodiversity loss, partly because of the low awareness of the value of biodiversity in provisioning, regulating and supporting services.

Drainage of wetlands for agricultural production and other land use types are typical examples of areas where awareness raising is needed among decision makers.

- *Limited public awareness and participation by local stakeholders, in particular villagers' committees and rural farmers, in biodiversity conservation efforts:* Command and control is still practiced in many places of China, with inadequate participation of stakeholders in planning, decision-making and implementation policies, resulting in low compliance with policies and legislation. Awareness of existing government policies related to biodiversity conservation is also considered weak, particularly among the local stakeholders such as farmers and villagers. In the case of Xinyang, there are still counties below the national poverty lines with widespread illiteracy among the villagers and rare access to basic information, much less biodiversity conservation policies and legislation.
- *Technical limitations in various sectors, including mining and biodiversity management:* Technical limitations exist in biodiversity planning, monitoring, restoration of ecosystems as well as artificial propagation of medicinal plants which all affect the achievement of objectives of IEFAs. This gap can be bridged through mobilization of international expertise, demonstration of successful experiences elsewhere in China in HHRB as well as production of knowledge products taking stock of best available technologies and practices.
- *Poor enforcement of existing regulations:* Henan government has promulgated a number of regulations to manage the collection and mining activities. Nevertheless, few of these policies, laws and regulations make any mention of biodiversity conservation. Therefore, the policies, laws and regulations are unsound and ineffectively enforceable and the local governments and enterprises are lacking in initiative in consideration of the eco-environment and biodiversity conservation.

BARRIER 3: POVERTY ALLEVIATION EFFORTS FAIL TO TAKE ACCOUNT OF CONSTRAINTS AND OPPORTUNITIES ASSOCIATED WITH BIODIVERSITY AND ECOSYSTEM FUNCTIONS

41. Conservation of ecological functions and biodiversity in China must in all cases take account of the urgent need for sustainable human development of the most impoverished sectors of Chinese society. This is particularly true of landscape level mainstreaming efforts such as the IEFA strategy, which by definition will impact upon not only the industrial development but also livelihoods of the rural poor and vulnerable groups such as women. The combination of the resource-richness of IEFAs and the resource-dependence of China's rural poor means that poverty alleviation strategies have a substantial potential either to complement or to derail the achievement of conservation goals.

42. However, baseline poverty alleviation efforts show little recognition of the above inter-dependency. The following factors are contributing to this failure:

- *Limited understanding of potential synergies among poverty alleviation, ecosystem function conservation and biodiversity conservation:* While market-based certification schemes for agricultural and other products have made some progress, there has been no specific effort made to encourage the production of biodiversity-friendly products in potential high impact locations (i.e., IEFAs) or among target beneficiaries such as the rural poor. Such strategies would offer important win-win opportunities for both raising incomes and conserving ecological functions and biodiversity.
- *Limited technical understanding of biodiversity-friendly business and land-use practices:* As new market opportunities increase for sustainably produced agricultural products and sustainably collected wild products such as medicinal plants, knowledge barriers are substantial. This is particularly true for small-scale, artisanal producers.

Stakeholder analysis

43. There are six main groups of stakeholders for this project: (i) Municipal and county-level officials at HHRB, (ii) production sector agents in the agriculture, mining, tourism and forestry sectors at HHRB and (iii) MEP officials responsible for the planning of IEFAs, (iv) national-level officials in relevant sectoral ministries and other Government departments, particularly those involved with issues such as ecologically sound land use management, ecological certification and other incentive programs; (v) officials at other IEFAs throughout China, and; (vi) municipal and county-level women's federations to represent the interests of the aging and women's populations. The wider CBPF partnership is considered the seventh main stakeholder group. Extensive consultations were taken with representatives of these groups through a series of presentations, interviews, and informal workshops during project preparation for this project preparation. A complete list of stakeholders and an accompanying Stakeholder Involvement Plan is provided in **Section IV, Part IV**.

Baseline analysis

44. At national level, the Government has been laying the groundwork for IEFA establishment since 2001. Milestones related to policy, planning and implementation levels have included the following:

- 2001-2004: A national ecological survey conducted by SEPA in co-operation with China's Academy of Sciences, identifies "Important Ecological Function Areas," or landscape areas where at least one of the following ecological functions was considered of national importance: (i) water source / supply, (ii) water and soil conservation, (iii) windbreaks and sand fixation, (iv) flood regulation and peak water storage, (v) maintenance of biological diversity, (vi) important marine ecological functions. The resulting draft Ecological Function Zoning scheme delineates 50 IEFAs, together covering 2.2 million km². Of the 50 IEFAs identified, 38 have primary objectives other than biodiversity conservation. They include 17 water source areas, five water and soil conservation areas, seven wind protection and sand fixation areas, five flood regulation areas and four marine ecosystems.
- 2006 – The Outline of the 11th Five-year plan for National Economic and Social Development" defines the strategy of "Key Function Zones" and divides China's territory into four types of zones: (i) Prohibited Development Areas, (ii) Limited Development Areas, (iii) Key Development Areas and (iv) Optimized Development Areas.¹⁹ Zonation is on the basis of an area's population, resources and carrying capacity of the environment. Thus, a 'Limited Development Area' is defined as "...an area that has a relatively poor carrying capacity in terms of its resources and ecological environment... unsatisfactory demographic conditions and concerns the ecological safety of the whole country or a relatively large area."²⁰
- 2008 - China's Ecological Function Zoning scheme jointly issued by MEP and CAS delineates 50 IEFAs.

45. The State Council published the Outline of the 11th Five-Year Plan (2006-2010) which defines the goal and strategy for dividing China's territory into four zones, including as the first step 22 so-called "Limited Development Areas" which were designated on the basis of 22 of the 50 identified IEFAs by MEP and CAS. During the period covered by the GEF project, National Development and Reform Commission plans to complete the zoning of the four types of Key Function Zones (KFZs) primarily taking into account the status of human population, resources and carrying capacity of environment, and have them approved by the State Council. The identified 50 IEFAs will primarily serve as the scientific basis for designation of Limited Development Areas designated in areas outside existing protected area system.

46. Under a business-as-usual scenario, it is therefore likely that China would continue to progress towards the establishment of a system for managing landscape areas where conservation of ecological functions is of national importance. However, such progress would continue to be hindered by institutional rivalries in an atmosphere where the environmental economic benefits of 'special' management regimes for such territories had not yet been clearly demonstrated and absorbed. In this case, numerous areas where ecological functions and important biodiversity overlap, covering millions of hectares across China, would continue to witness patterns of degradation associated with rapid, but ecologically unsustainable, growth. Economic activities in various sectors – like agriculture, wild harvesting of medicinal plants and animals, mining and forestry – operating within ecologically sensitive landscapes would continue being regulated in much the same manner as anywhere else. Biodiversity losses would be particularly great in the many areas where such landscapes are connecting protected areas,

¹⁹ This would seem to have updated the 2000 breakdown through the addition of a fourth category, i.e., for prohibited development (i.e., protected areas).

²⁰ Outline of the 11th Five Year Plan, Chapter 20.

serving as vital lifelines for the latter. Thus, both landscape-level biodiversity as well as the sustainability of the protected areas system would suffer.

47. Even assuming substantial progress towards zoning a certain number of IEFAs, there is a strong possibility that biodiversity conservation would not receive needed levels of attention at those sites. Management of IEFAs like HHRB might not adequately emphasize biodiversity conservation nor pay particular attention to *global* biodiversity values. Under the baseline, even management of the twelve areas identified as biodiversity areas may only focus on achieving domestic biodiversity benefits and not on maximizing global biodiversity benefits. For example, land restoration may be undertaken using fast growing exotic species, which is not compatible with biodiversity conservation. In the case of most IEFAs, their management would not, therefore, necessarily enhance a landscape's 'biodiversity-friendliness,' including its capacity to act as an effective buffer for, and corridor between, protected areas (PAs). The potential complementarity and synergies between ecosystem functions enhancement and biodiversity conservation would not be achieved.

48. At the HHRB, under the baseline scenario, the management of IEFAs without the project is likely to be very slow and without adequate linking of biodiversity conservation and other ecological functions. As mentioned above, HHRB is an area with substantial poverty and economic development imperatives will continue to drive local agenda – without due considerations to global biodiversity conservation. Five of Xinyang Municipality's eight counties are considered 'National Poor Counties'.²¹ HHRB has benefited since 2006 from a national-level subsidized loan programme aimed at alleviating poverty. By the end of 2007, 2,365 households in Xinyang Municipality had received loans under this programme, with 38.9 million RMB Yuan in loan funds disbursed. Average loan size was approximately 16,500 RMB. Loans are provided for various activities in agriculture, aquaculture, processing, commerce, etc. Support is channelled through the Xinyang Municipal Poverty Alleviation Office, with beneficiaries chosen by Village Administrative Committees (VACs) and township governments.

49. Given the existing high levels of poverty within HHRB, attempts to conserve ecological functions and/or biodiversity could inadvertently have adverse effects on jobs, incomes and other socio-economic indicators. This is especially so given that it is the poor who most often rely on biodiversity resources. Under the baseline scenario, poverty alleviation programmes such as the lending programme described above would lack the technical ability to adapt to changing circumstances and create 'win-win' opportunities.

50. Given the above factors, under the baseline scenario, it is unlikely that there would be significant progress either in conserving ecological functions or biodiversity at HHRB. Threats from key sectors such as medicinal plants collection, agriculture, mining and forestry would be likely to continue relatively unabated, with substantial resulting losses to the area's globally significant biodiversity.

51. Baseline scenarios in key areas of project activity are as follows:

- Structures for integrated management: Biodiversity concerns would remain isolated considerations of the local Environmental Protection Bureaus and a few other bureaus of local government, rather than being considered in an integrated manner by EPB, sectoral ministries and by the provincial, municipal- or county-level executive bodies.
- Sectoral management: Some progress would be made in developing more biodiversity-friendly production methods in sectors such as forestry, mining and medicinal plants. However, progress overall would likely remain limited.
- Poverty alleviation: Under the current baseline, poverty alleviation lending and environmental and biodiversity management goals are rarely connected either at national level or at the HHRB site. This means that efforts to strengthen environmental controls risk having unintended negative

²¹ These are Luoshan, Guangshan, Shangcheng, Xinxian and Gushi County.

impacts on the poor. It also represents a missed opportunity to re-orient productive methods of the poor in a more biodiversity-friendly direction.

- Lesson learning: HHRB would remain relatively isolated from national- and international-level trends in ecological land use and biodiversity conservation. In general, managers of IEFAs and LDAs around China would not be well informed about such matters, and China-specific experience itself would be less widely known.

Part II: Strategy

Institutional, sectoral and policy context

52. The comprehensive mainstreaming approach being taken by the project will implicate multiple and diverse layers of institutions, sectors and policies. Environmental and biodiversity governance of HHRB and other IEFAs typically involves at least four levels of Government, including central, provincial, municipal and county. Within each of these levels, governance will involve various executive, sectoral and inter-sectoral agencies, including executive bodies like Mayors' offices, inter-sectoral agencies like Environmental Protection Bureaus and sectoral bodies responsible for agriculture, forestry, mining, tourism, etc.²²

53. At a national level, the most central element of the institutional and policy context is the Key Function Zones (KFZs) initiated by the government. This new zoning system will divide China's territory into the following 'main functioning areas': (i) prohibited development areas (national parks, etc.), (ii) limited development areas (a.k.a. IEFAs), (iii) key development areas, and (iv) optimized development areas. In this connection, IEFAs will provide the basis for designation of limited development areas (LDAs) according to human population, natural resources and carrying capacity of the environment.

54. Separately, but also at national level, a number of sectoral policies and programmes have been developed, at least in part, to support the conservation of ecological functions and natural resources. For example, several policies and programmes have been established to help regulate the trade in wild medicinal plants and to encourage the cultivation the same species or of substitutes. An incentive programme to encourage wild medicinal plants production has also been introduced. Finally, some progress has been made nationally in the direction of organic certification. In the mining sector, laws and regulations have been developed related to environmental impact assessment (EIA), rehabilitation of mining lands, control of mining pollution and a mining 'security deposit' law. Each of these laws represents progress in controlling the environmental impacts of mining, yet each in its own way also exhibits certain shortcomings. In addition, they fail almost entirely to address the biodiversity impacts of mining.

55. The provincial level of Government is responsible for providing policy and financial support for IEFA management. The role of provincial government may be particularly important in cases where IEFAs need to cross municipal boundaries, as is the case at HHRB.

56. Municipal and county-level institutions are involved in the implementation of higher-level policies, laws and regulations; they also have a certain amount of autonomy to develop their own regulations, particularly at municipal level. While the project demonstration site spans two municipalities and 11 counties and districts, 10 of these administrative units, and about 90% of the site area, are located within Xinyang Municipality. Thus, Xinyang, which is entirely located within HHRB, represents the key administrative actor in determining HHRB governance.

²² See Stakeholder analysis above, as well as Section IV, Part IV.

57. Xinyang Municipality has taken a number of steps in recent years to manage its natural resources more effectively, some of which may be seen as an attempt to respond to the challenge of its IEFA. These are seen in the following documents and regulations:

- The Xinyang Municipal Eco-Environmental Protection Plan was approved by the Xinyang Municipal Government (XMG) in July 2003 in response to SEPA's (now MEP) requirements to develop policies and plans for environmental protection in Xinyang. The plan provides direction regarding the management of forest, water, air, land and other resources. However, it largely fails to address the issue of biodiversity conservation.
- Xinyang Municipal National Ecological Demonstration Area Construction Overall Plans (including eco-forestry, eco-agriculture, eco-tourism and environment, technology and education sub-programmes) were created by approval of the XMG in September 2001. They defined a series of policies regarding construction of a National Ecological Demonstration Area, including indicators related to total GDP and eco-economic development level, forest coverage, etc.
- The Opinion of Xinyang Municipality on Active Development of Flowers and Trees Industry: was approved by the XMG in October 2005. It aims to increase income by using the rich biodiversity resources in HHRB, but pays little attention to conservation.

58. In addition, the Xinyang Municipality is also working with international partners to conserve biodiversity in their area – and have recently obtained support from the EU-China Biodiversity Project (ECBP), which will co-fund this GEF project.

Project Rationale and Policy Conformity

59. In order to redress the weaknesses in its current approach to biodiversity conservation, to exploit unique opportunities, and to significantly lessen threats to biodiversity nationally, the Government of China has developed a new approach which will involve a coordinated and strategic response from all stakeholders, including socio-economic planners, line agencies, investors, national institutions, provincial and local government decision-makers, biodiversity managers, communities, donors and NGOs. To operationalise this approach, the Government has established a new and innovative Partnership, with the capacity and ability to leverage changes in current systems and practices. The Partnership is built around a multi-level, multi-phase, multi-component, well-funded and results-oriented Framework for Action. Taken together, the Partnership and the Framework constitute the China Biodiversity Partnership and Framework for Action (CBPF).

60. The present project represents an integral element of the CBPF. The HHRB Project aims to mainstream biodiversity conservation into a key landscape management system at the national level, as well as in a critical watershed with global biodiversity significance as a demonstration. The project will contribute substantially to the following elements of the CBPF results framework:

- Result 13: An incentive framework for the natural resource based business sector to conserve or sustainably use biodiversity is established;
- Result 14: Biodiversity conservation and poverty alleviation in China are mutually supportive;
- Result 21: Land use planning and management systems contribute effectively to conserving biodiversity.

61. The project focuses on the management of IEFAs, of which 50 covering approximately 22% of China's land area have been identified. It advocates a comprehensive mainstreaming approach to management of these lands, along the lines set forward by the Government of China for the establishment

of KFZs. The project will contribute to the evolving KFZ process to help ensure that its outstanding potential to achieve global biodiversity benefits will be effectively realized.

62. The IEFA management has been identified as an *opportunity* to mainstream biodiversity conservation into the management of significant numbers of important landscapes across China by building on the complementarity and synergies between ecosystem function conservation and biodiversity conservation. Such a solution would offer an essential complementary element to China's protected area strategy in three respects: (i) by providing important habitats in their own right, (ii) by helping to reduce pressures on PAs currently isolated within rapidly degrading landscapes, (iii) by enhancing connectedness among PAs.

63. The project will work with relevant stakeholders at national, provincial and local levels to address barriers to mainstreaming biodiversity conservation within the IEFA system. It will demonstrate mainstreaming techniques at the Headwaters of the Huaihe River Basin (HHRB), a site, which is considered a high priority by the MEP. In addition to its biodiversity values, HHRB is one of China's important water supply source areas; work at this site will have a particularly direct demonstration value for 16 other water supply source sites defined as IEFAs, as well as for 12 areas identified for their biodiversity importance. Overall, the project aims to create important lessons for management of all 50 IEFAs across China.

64. An important element of the project strategy is the partnership it represents between UNDP-GEF and the EU-China Biodiversity Programme (ECBP), which is also being implemented by UNDP. At national level, ECBP is an important partner in the CBPF. As such, it is expected to participate in the discussion and dissemination of project results through its network of projects. At site level, during the preparation stage of the GEF proposal, ECBP approved and began implementation of its own closely linked project at HHRB. Activities being supported through the ECBP grant have been fully integrated into the design of the present proposal, particularly Outcomes 1 and 2, and its \$980,000 budget is reflected as such in the incremental cost analysis. ECBP activities represent key elements of the demonstration work being undertaken at HHRB. Design of the GEF project has thus been undertaken in close co-operation with the ECBP project in order to ensure complementarity between the strategies and outcomes of the two projects.²³

65. The approach will demonstrate techniques and disseminate lessons involving locally-driven, landscape-level mainstreaming into the following areas:

- IEFA management structures,
- planning systems,
- monitoring and standard setting,
- key productive sectors, namely mining, agriculture, forestry (including non-timber forest products such as medicinal plants) and tourism, and
- poverty alleviation.

66. While baseline co-financing will focus on mainstreaming ecosystem function conservation within IEFAs, the GEF increment will focus on ensuring biodiversity conservation and on removal of associated barriers. Project results will shed important light on how China can conserve both biodiversity and ecosystem functions across these critical landscapes. In particular, the project will help in the identification of global biodiversity values of all planned IEFAs and focus on helping to scale up approaches and lessons from the demonstration site to other IEFAs with high global biodiversity values. A comprehensive lesson learning and dissemination component, facilitated by the existence of the CBPF, will ensure achievement of this latter result.

²³ The ECBP project is titled "Integrated Biodiversity Conservation in the Headwaters of the Huaihe River Basin." Outputs 1.1, 1.2, 2.2 and 2.3 (see below) have been designed to reflect and integrate the aims of the ECBP project, which began implementation in January 2008 and is due to be completed in February 2010.

67. The project will generate global environmental benefits at both site and national levels. At site level, pressures facing a number of globally threatened plant and animal species at HHRB will be sharply reduced through the project's mainstreaming efforts. Nationally, the project is expected to have a highly significant demonstration effect, with the potential to impact on policies and approaches for a huge and important segment of China's territory, i.e., within future IEFAs that harbour globally significant biodiversity. By demonstrating pragmatic, complementary approaches to conservation of ecosystem functions and biodiversity, the project can help to ensure that these considerations are addressed in tandem throughout China's nascent KFZ system, in particular in those areas where global biodiversity significance is high in LDAs.

68. The project will support achievement of GEF Strategic Objective 2, which is "To mainstream biodiversity in production landscapes/seascapes and sectors." Most of its activities fall under Strategic Program 4, which is defined as "Strengthening the policy and regulatory framework for mainstreaming biodiversity." The project supports SP-4 by strengthening municipal-level policy and regulatory frameworks at the HHRB demonstration site and by supporting replication of the resulting approaches at other IEFA sites across China. In particular, **Outcome 1** develops the overall framework for mainstreaming ecosystem and biodiversity concerns into governance at the project demonstration site. It establishes inter-sectoral management structures, which help to oversee the development of municipal and county-level plans as well as setting broad ecosystem-function and biodiversity targets for the site. **Outcome 2** works directly with key target sectors, including agriculture, mining, forest management, traditional Chinese medicine and tourism. It assesses and quantifies negative impacts emanating from these sectors, reviews the effectiveness of existing laws, policies, incentives, etc., develops alternative policies and incentive-based programs and, finally, increases awareness and capacities to manage and respond to revised regulations and incentives. See the following outputs in particular:

- removing knowledge barriers (see Outputs 1.3, 2.1, 4.1-4.3),
- developing institutional capacities (see Outputs 1.1 and 2.3),
- establishing policies, legislative and regulatory frameworks (Outputs 1.2, 2.2)

69. Concerning SP-5, "Fostering markets for biodiversity goods and services," under **Outcome 3**, the project will support the development of such markets through support for biodiversity-friendly production methods and associated certification mechanisms within the agricultural and medicinal plants sectors. It will work with existing government financial institutions providing credits to producers, cooperatives and companies, to ensure that these institutions take biodiversity-friendliness into account when providing and monitoring credits. In addition, credit lines provided through co-financing support will be transformed in order to enable access to finance for producers, cooperatives and companies producing biodiversity-friendly products. The project will thus support the identification and expansion of lending for new and innovative production and land use methods that have the potential to create substantial biodiversity benefits. Biodiversity-friendly management practices will be encouraged through lending and technical support for increased production and certification of Traditional Chinese Medicines (TCM) and other agricultural products (Camellia oil, tea, fish, etc.).

70. The project supports achievement of GEF Strategic Objective 2, which is "To mainstream biodiversity in production landscapes/seascapes and sectors." Most of its activities fall under Strategic Program 4, which is defined as "Strengthening the policy and regulatory framework for mainstreaming biodiversity." However, some of its activities more closely reflect Strategic Priority 5, which involves "Fostering markets for biodiversity goods and services."

71. The project is fully in line with the latest GEF policy guidance, in particular the Strategy for Biodiversity adopted by the GEF Council Meeting of April 2007. The following aspects may be noted in this regard:

- *High-leverage opportunities:*²⁴ While the project strategy is not entirely without risk (see below) the project will clearly contribute to the development of China's strategies for ecologically sound land use. This strategy has a huge potential payoff, with the ultimate possibility of mainstreaming biodiversity conservation with ecological function conservation strategies across some 20% of China's land area.
- *Integrating conservation, sustainable use and maintenance of ecological goods and services:* Individually, these are key elements of GEF's biodiversity programme.²⁵ With this project, an important contribution will be made to their practical integration within a mega-diversity country.
- *Relevance to MDGs²⁶ and poverty alleviation:* The GEF biodiversity strategy emphasizes that "the strategic objectives will make a substantial contribution to implementing most of the Millennium Development Goals, particularly environmental sustainability and poverty reduction..." The efficacy of the project's approach depends largely on its ability to show that biodiversity and ecosystem function conservation can be accomplished in a manner that does not exacerbate poverty in the short term, while contributing to long-term poverty reduction through enhanced sustainability. A successful demonstration in this regard within the poverty-ridden HHRB landscape could be of crucial importance to the project's potential replicability.

Project Goal, Objective, Outcomes and Outputs/activities

72. The project goal is that of the CBPF as a whole, i.e., to significantly reduce biodiversity loss in China as a contribution to sustainable development. The project objective is to demonstrate practical mechanisms to mainstream biodiversity in China's IEFAs.

73. The project consists of four mutually supportive outcomes. **Outcome 1** develops the overall framework for mainstreaming ecosystem and biodiversity concerns into governance at the project demonstration site. It establishes inter-sectoral management structures, which help to oversee the development of municipal and county-level plans as well as setting broad ecosystem-function and biodiversity targets for the site. This component will also demonstrate inter-sectoral management structures to develop and implement IEFA plans. **Outcome 2** works directly with key target sectors. It assesses and quantifies negative impacts emanating from these sectors, reviews the effectiveness of existing laws, policies, incentives, etc., develops alternative policies and incentive-based programs and, finally, increases awareness and capacities to manage and respond to revised regulations and incentives. **Outcome 3** ensures that biodiversity and ecosystem conservation goals are effectively integrated into poverty alleviation efforts; it draws heavily on the lessons emerging from Outcome 2 sectoral-based efforts, while demonstrating approaches to transforming those sectors. Results of this Outcome will be assessed not only by the level of lending to poverty alleviation efforts meeting the criteria of eco-friendly land use practices, but also by the biodiversity benefits achieved via these loans. Finally, **Outcome 4** supports the establishment of lesson learning networks at local and national levels. The dissemination and replication of resulting lessons learned—related to planning, management and implementation of IEFAs—will be supported through improved guidance in IEFA planning for replication at national and local levels.

74. Project outcomes and outputs are described below.

²⁴ Biod. strategy, para. 1.

²⁵ Biod. strategy, para. 2.

²⁶ See also para. 111 below.

Outcome 1: Biodiversity and ecological function conservation mainstreamed into HHRB planning and monitoring (GEF – US\$711,600; Government of China – US\$2,662,500; XMEEA - US\$737,500)

75. This outcome will ensure that Xinyang Municipality – representing more than 90% of HHRB as it has been defined – incorporates biodiversity and ecosystem function conservation into a wide range of governance systems and processes. Mainstreaming efforts will take place at municipal as well as county and district levels. The hallmark of the work taking place under this outcome is the emphasis on integrated, inter-sectoral systems that transcend and build upon sectoral efforts, the latter being supported under Outcome 2.

76. Activities under this outcome have been grouped into three major functional categories and associated outputs: local governance, planning and monitoring. Building capacities, raising awareness and acquiring knowledge will constitute activities under each of these outputs, as needed. The outputs are described below.

Output 1.1: Institutional arrangements and capacities for mainstreaming the conservation of biodiversity and ecosystem functions into local governance

77. A HHRB National Ecological Function Conservation Area Construction Leading Group (HCLG), established under the chairmanship of the Vice Mayor of Xinyang Municipality, co-funded by the ECBP project, will be responsible for inter-sectoral co-ordination and, more generally, the IEFA planning process. This will include overseeing the land use planning process (see 1.2 below) to ensure that biodiversity conservation is fully mainstreamed therein. This Leading Group will also review and oversee the formulation and implementation of important policy documents such as the Biodiversity Action Plan (see Output 1.2). The HCLG will meet quarterly and a Project Management Office (PMO) to be established in Xinyang will act as its Secretariat. Membership of the HCLG is shown below in Part III, Management Arrangements. The project will build capacities of the members of the HCLG to ensure that they can continue to mainstream conservation into their work even after the project ends.

78. Following the conclusion of the project, or possibly before (e.g., if an IEFA has already been established), the HCLG will be replaced by an HRBB IEFA Management group or an equivalent permanent Committee of the Xinyang Municipal Government (XMG), which will ensure the long-term sustainability of inter-sectoral decision-making related to ecological functions and biodiversity management.

79. Analogous efforts will be made at county/district level. Five demonstration counties/districts have been tentatively selected for focused support under the GEF and ECBP projects.²⁷ These are: Shangcheng County, Luoshan County, Shihe District, Guangshan County and Xinxian County. Each demonstration county/district will establish a local-level HCLG, similar in composition to that being established at Xinyang Municipal level. All five local-level HCLGs will operate under the coordination and supervision of the Xinyang Municipal-level HCLG. The Deputy Governor of each county / district will act as the leader of each group, under which a Local Project Management Office (LPMO) will be opened. LPMOs will be embedded within the respective County Environmental Protection Bureau (EPB). Following the completion of the project, HCLGs will be established as standing bodies of each county government to co-ordinate future conservation work. Civil society participation will be ensured mainly through ECBP support.

²⁷ This is not meant to imply that other counties will be excluded from the project, but only that certain activities will be concentrated in these demonstration counties.

80. Finally, a multi-sectoral Technical Advisory Group (TAG) will be established to provide technical support to the Municipal and county-level HCLGs, as and when needed. The TAG will draw on expertise within and outside of government. The TAG will also continue operating following project completion.

81. Both the PMO and the LPMOs will benefit from the technical support of the TAG, as well as various awareness raising, capacity building and training efforts. These efforts will focus, *inter alia*, on raising awareness and understanding of upstream and downstream values of HHRB ecosystem functions and biodiversity and the costs and benefits of associated incentive and disincentive policies.²⁸ The project will adopt the outcomes of ECBP, such as biodiversity situation survey. The specific roles and responsibilities of both the HCLGs and TAG will be developed during the inception phase in the form of rules of operation.

Output 1.2: Biodiversity-friendly land use planning mechanisms (Municipal and County levels) and associated plans

82. As was the case with support to management structures under Output 1.1 above, mainstreaming into planning will include both municipal and county/district level support. A Henan province-level functional zoning exercise is scheduled for 2009. UNDP-GEF support under the Priority Institutional Strengthening and Capacity Development to Implement CBPF Action Project will aim at mainstreaming biodiversity conservation into this planning exercise and will constitute an important source of province-level complementary financing.²⁹

83. Closely linked to the above process, baseline efforts underway in 2008-2009 include the development of Municipal and County-level land use plans. GEF funding will support the preparation of biodiversity overlays for use in both the municipal and county-level planning exercises. Preparation of these overlays will involve a substantial information gathering exercise as well as targeted improvement of the existing knowledge base concerning the status and trends of biodiversity and ecological functions in HHRB. This will include a baseline biodiversity and ecological functions survey and county-level threat analyses, building on work undertaken during project preparation. These are areas, which are essential for effective planning and where information is currently lacking.

84. In addition to support for land use planning, a Biodiversity and Ecological Functions Action Plan will be developed and implemented. This Action Plan will address, *inter alia*, the important area of water resource management, improvement of which is a key objective under the IEFA establishment programme. The project will support the identification of critical zones for biodiversity conservation outside protected areas to complement this activity. Such identification of critical ecological zones will be fed into both wider landscape level landuse planning and also incorporated into the local biodiversity strategy and actions plans.

85. Finally, the project will support the development of an IEFA-establishment plan. This plan, which is expected to emerge in the latter stages of the project, will benefit from the lessons learned through other project components that will precede it.

86. All of the above plans will need to take account of the needs and plans of HHRB's Natural Reserves and other protected areas. In this way, landscape level plans may effectively serve conservation goals, *inter alia*, by ensuring a high level of support to, and connectivity among, existing and planned PAs. In

²⁸ See Output 2.1 below.

²⁹ The IS project is thus supporting a higher-level planning exercise, upon which the HHRB work will build through more fine-grained, municipal and county-level work.

addition, the risks and uncertainties posed by climate change will be an important factor to take into consideration in the development of these plans.³⁰

87. Throughout each of the above planning exercises, efforts will be made to enhance public awareness of key issues and participation in the process (see **Section IV, Part IV**, Stakeholder Involvement Plan). Capacity building of relevant government officials will be another important element to ensure sustainability.

Output 1.3: Revised standards and monitoring system for biodiversity and other ecological functions

88. Under this output, the existing set of ecological and biodiversity monitoring standards will be reviewed and updated to reflect the special characteristics of an Important Ecological Functions Area (IEFA). This process has the potential to lead to several types of changes. First, the number, geographic extent and frequency of monitoring of specific parameters may be increased. Second, standards may be strengthened in specific areas. Third, enforcement efforts, including the use of penalties, may be modified, particularly in cases where standards are clearly not being met.³¹ Overall, the output is expected to lead to both a strengthened system of monitoring as well as improved long-term performance on meeting associated standards. Proposed revised standards will be reviewed by the TAG and approved by the municipal-level HCLG.

Outcome 2: Biodiversity and ecological function conservation mainstreamed into key productive sectors (GEF – US\$716,800; Government of China - \$1,737,500; XMEEA - \$362,500; Private sector - \$500,000)

89. At present, the legal, regulatory and incentive framework facing individuals and businesses operating within specific productive sectors at HHRB is not very different from those facing similar operators elsewhere in China. For example, regulations and incentives facing a pesticide-using farmer in HHRB may be nearly identical to those facing a farmer in another area of China, despite the fact that the actions of the HHRB farmer may have greater potential to impose external economic costs – including downstream costs – due to the importance of the area’s ecological functions and biodiversity. The same may be said of the HHRB mineworker, medicinal plant harvester, logger and tourism operator.

90. The aim of this outcome is therefore to design and implement a set of IEFA-specific distinctions within the regulatory and incentive policies facing key productive sectors. This will include demonstrating tools and techniques for encouraging the sustainable, biodiversity-conserving development of key productive sectors within HHRB. Emphasis will be placed on altering incentives within these sectors in ways that encourage a transition from current unsustainable practices, while minimizing economic dislocations. In this way, the regulatory structure can help to nurture a form of economic development at HHRB which is appropriate and sustainable and which safeguards the values inherent in the area’s ecological functions and biodiversity. This would be an extremely valuable achievement, and one, which would be widely applicable across many of China’s IEFAs, where these same sectors are frequently active.

91. Outputs are described below.

Output 2.1: Enhanced knowledge, understanding and quantification of the impacts of key HHRB

³⁰ Here too, the project will benefit from work being done under the IS project, namely Outcome 5, which addresses the issue of adapting conservation strategies to climate change.

³¹ Definition of both standards and enforcement measures will be closely linked with sectoral work being done under Outputs 2.1 and 2.2 below, including improved understanding of associated costs and benefits.

productive sectors on biodiversity and ecological functions

92. Output 1.3 above will clearly identify a set of critical ecological functions and associated targets for HHRB. The present output will contribute to that process by identifying the specific sectoral drivers of deterioration of these functions and will attempt to quantify their respective impacts. Key sectors to be examined include, as previously noted, mining, forestry, agriculture and tourism. GEF support will focus on biodiversity impacts, while government co-financing will contribute to improving understanding of impacts on ecological functions such as water retention. Building on estimations of physical impacts, environmental economic analyses will estimate upstream and downstream values of HHRB ecosystem functions and biodiversity, as well as losses associated with negative impacts. Finally, a trigger price analysis will examine the overall cost effectiveness of the mainstreaming approach.

Output 2.2: Sectoral policies, laws, regulations, incentives, enforcement methods and standards are assessed and IEFA-specific alternatives are developed

93. A series of regulatory impact assessments will identify and evaluate the entire range of policies, laws, regulations, incentives, enforcement methods and standards currently controlling relevant productive sectors. These will identify, also in light of the findings of Output 2.1, priority areas in which the existing regulatory structure is failing to achieve goals associated with ecosystem function and biodiversity conservation.

94. Based on the findings of these assessments, a revised set of IEFA-specific policies, laws, regulations, etc., will be developed and implemented. In addition to traditional command-and-control regulatory approaches, the use of incentive-based policies aimed at achieving ecosystem-function and biodiversity conservation goals at HHRB will be extended and improved. This will include: (i) a focus on reducing or eliminating subsidies associated with negative impacts; (ii) attempts to adapt existing national-level programs to the particular needs of an IEFA, (iii) the potential role of payments for environmental services (PES) schemes, and (iv) efforts to develop improved positive incentive schemes, including piloting of at least two new incentive programs.

Output 2.3: Increased awareness and capacities among public and private sector stakeholders to respond to revised regulations and incentives

95. Having strengthened the regulatory system to make it more responsive to the identified needs and goals of an IEFA, the project will work to build capacities among both public and private sectors to manage and respond to, respectively, this new regulatory environment. Where capacity constraints are limiting the effectiveness of response to new incentives, these will be addressed through capacity building efforts. This may also include raising awareness and otherwise encouraging private sector actors to take advantage of opportunities to market biodiversity-friendly goods and services, which will have become more attractive under the new regulatory and incentive structure. Wherever possible, this work will target poor, aging and women of HHRB society, who will benefit from related loan support being provided under Outcome 3.

96. At the community level, the ECBP project will help build awareness and capacities for community-based management by demonstrating the use of 'Authorized Management' systems in three sectors: (i) forest and TCM resource management (ii) wetland and bird management, and (iii) mountain and flora resource management. The main purpose is to incorporate biodiversity conservation into collectively-

owned forest by establishing Focus Groups or Farmer Specialized Cooperatives, which will be put into operation in the relevant villages in the three demonstration counties.³²

Outcome 3: Biodiversity and ecosystem function considerations are regularly mainstreamed into poverty alleviation strategies and programmes (GEF – US\$465,800; Government of China - \$1,655,000; XMEEA - \$150,000)

97. The transition to ecosystem function-conserving, biodiversity-friendly production methods being supported under Outcome 2 above will represent a critical step in improving management of IEFAs. This kind of transition should have important long-term benefits for poor and vulnerable rural populations across China in the form of a more sustainable development process. However, there are also likely to be short-term impacts on the poor, as environmentally damaging—but in the short-term profitable—activities are curtailed.

98. Outcome 3 will focus on the linkages and potential synergies among biodiversity, ecosystem functions and poverty alleviation in HHRB. More specifically, it will help to counteract short-term impacts on poor rural populations and communities by stimulating the introduction and dissemination of newly emerging, biodiversity-friendly production methods. By the end of the project, short-term income losses should have been outweighed by income gains associated with new biodiversity-friendly production, thereby serving to demonstrate the essential compatibility of poverty alleviation with ecosystem function and biodiversity conservation.

99. In order to achieve the above, the project will leverage existing sources of poverty alleviation spending by the Chinese Government, particularly a programme that provides small, zero-interest loans to poor borrowers. GEF-funded technical co-operation will enable these funds to be used, not only to alleviate poverty, but also to finance, and demonstrate the feasibility of, biodiversity-friendly production and land use methods.

100. Outcome 3 consists of two outputs, which are described below.

Output 3.1: A strategy to capture potential synergies between poverty alleviation lending, ecosystem function conservation and biodiversity conservation

101. Since poverty alleviation efforts and biodiversity conservation have been operating in separate domains, there is no detailed picture of the overall relationship between the two. There may be cases where poverty alleviation efforts are actually exacerbating processes of environmental degradation and biodiversity loss, e.g., by providing loans for environmentally unsustainable small business or land use practices. On the other hand, poverty alleviation efforts may be having some positive impacts that are not currently identified. This output will begin by surveying and assessing HHRB's existing poverty lending portfolio—which consists of over 2,300 small loans together valued at some 38.9 million RMB Yuan (US\$5.5 million)—for both positive and negative impacts on biodiversity and ecosystem functions.

102. Next, the project will develop and implement guidelines for further poverty lending to ensure that future loans avoid harmful impacts on biodiversity and ecosystem functions. This step should ensure that, at a minimum, all loans operate in a biodiversity and ecosystem function 'neutral' manner. Capacities will be built among programme managers to ensure that these guidelines are clearly understood and fully implemented.

³² For additional details on this and other aspects of ECBP support, see ECBP. 2007. "Integrated Biodiversity Conservation in the Headwaters of the Huaihe River Basin." Grant agreement.

103. Finally, the project will identify opportunities for new, biodiversity-friendly lending to the poor within key economic sectors determined to be having impacts on ecosystem functions and biodiversity.³³ Specific biodiversity-friendly land use and business practices will be identified that have strong potential to alleviate poverty while generating environmental and biodiversity benefits. The general feasibility of lending to the poor in these sectors will be assessed, along with typical ‘win-win’ activities within each sector. Opportunities for biodiversity-friendly lending will be identified in, *inter alia*, the agriculture, aquaculture, stock-breeding, forestry, farming industry, commerce, transportation, eco-tourism and medicinal plant and animal conservation and cultivation. These may include, *inter alia*, opportunities identified through community-based natural resource management work being supported through ECBP project’s co-funding (see Output 2.3 above). These opportunities will be identified in association with sectoral analyses taking place under Output 2.1, as well as a gender impact analysis, in order to maximize their impacts and cost effectiveness. Sector-specific criteria will be developed to allow loan programme managers to determine and report on whether biodiversity-friendly practices have indeed been implemented as a result of individual loans; for example, proximity to protected areas will be one such criterion. In this way, lending programme administrators will be made aware of, and able to act upon, poverty-ecosystem function-biodiversity linkages and associated potential synergies.

Output 3.2: Poverty alleviation lending and associated technical support programmes that directly encourage biodiversity and ecosystem function conserving production

104. Under this output, technical support will be provided to the identification, benefit monitoring and evaluation of a portfolio of new, ecosystem function and biodiversity-friendly small loans to be provided through Xinyang Municipal Poverty Alleviation Office. Based on the knowledge of productive sectors gained under Outcome 2, and the enhanced understanding of the poverty-biodiversity-ecosystem function nexus gained in Outputs 3.1 and 3.2, the output will ensure that poverty alleviation lending in HHRB serves the multiple goals newly outlined for it. All loan funds will be provided by Chinese Government co-financing. Targeted loans will, *inter alia*, provide support for new and innovative production and land use methods that have the potential to create substantial biodiversity benefits. Such lending will also aim to counteract any negative impacts on the poor, aging and women associated with a more environmentally stringent regulatory system.

105. Specific biodiversity-friendly lending opportunities will be identified in the sectors listed under Output 3.1 above. Decrease in application of fertilizers and pesticides, market share taken by artificially propagated threatened and rare medicinal plants and precious trees, and relevant certification schemes, e.g., for organic tea or medicinal plants production, will serve as indicators that biodiversity-friendly practices have in fact been adopted. In addition, it will be important to ensure that biodiversity-friendly small businesses and land use practices face a supportive enabling environment, including appropriate positive incentive (subsidy) schemes (see Outcome 2).

Outcome 4: Lessons learned at HHRB inform and strengthen ongoing efforts to manage IEFAs throughout China (GEF – US\$560,400; Government of China - \$1,320,000; XMEEA - \$230,000)

106. As previously described, China has identified 50 IEFAs to be sustainably managed. Given the difficulties to date in achieving meaningful changes in regulatory and management systems at these sites and in practical management, this component will provide technical support to creating an enabling policy and regulatory environment for the establishment and management of IEFAs as well as refining the

³³ It should be noted that these are the same sectors where broader mainstreaming efforts will take place under outcome 2; thus, outcomes 2 and 3 are highly complementary.

Guidelines for IEFA Planning, benefiting from the demonstration of IEFA management in HHRB. A successful demonstration at HHRB—if properly documented and widely disseminated—could represent something of a breakthrough. Conversely, work at HHRB will benefit from a clear understanding of similar challenges and efforts facing land managers throughout China. Opening these twin channels of communication is essential to ensuring that the project achieves its full potential for local and national-level impacts. The outputs needed to enable these processes are outlined below.

Output 4.1: National and local-level learning networks gather and / or generate lessons learned

107. Under this output, lesson learning networks will be established at local and national levels to ensure the two-way flow of ideas and lessons learned from activities at HHRB and from related activities elsewhere in China and beyond. At HHRB, the Technical Advisory Group (see Outcome 1), along with the local Project Management Office (PMO), will facilitate the capture, generation and exchange of lessons learned from site-level activities. Lessons will be grouped in a logical manner, including sectoral and cross-sectoral components, with the common theme being the conservation of ecological functions and biodiversity within production landscape areas of HHRB.

108. At national level, networks being organized by a National Knowledge Management Officer, who will be supported by this project, will be the primary channel for gathering and/or generating relevant lessons learned elsewhere in China. This officer, based within the PMO of the GEF Institutional Strengthening (IS) project, will be responsible for gathering related lessons from previous and ongoing projects in China and elsewhere, as well as supporting HHRB lesson learning efforts. Particular emphasis will be placed on learning from the experiences of other IEFAs throughout China. This process will enable areas of commonality to emerge, so that subsequent dissemination efforts (see 4.3 below) may be targeted at defined sub-groups of IEFAs, e.g., important medicinal plant production areas, water retention areas, etc. The CBPF will be used as a mechanism to ensure that lessons from HHRB are fed into other similar planned initiatives in China on mainstreaming biodiversity – and especially for other IEFAs and KFZs.

Output 4.2: Communication, dissemination and exchange of lessons learned among HHRB project stakeholders, IEFA managers and, through CBPF network, relevant sectoral agencies (mining, forestry, land use management)

109. Lessons will be disseminated both to and from the HHRB demonstration site. In the former case, in order to inform work being done at the site, the Knowledge Management Officer will ensure that the local PMO and TAG are provided with the latest information and analysis of experience gained elsewhere in China and beyond.

110. Second, the Knowledge Management Officer, working where appropriate through the CBPF network, will ensure that lessons learned through demonstration work at HHRB are channelled to national-level officials and site-level officials at IEFAs throughout China. Outreach activities, workshops, study tours, seminars and training programmes, together with the materials developed under 4.2, will enable lesson learning by specific target audiences. Initial efforts will focus on local government executives (Mayor's offices, etc.) in order to ensure top-level local support for mainstreaming. Linkages will be developed with local and national media to help ensure a wide dissemination of key lessons and materials developed under Outcome 4.

Output 4.3: Revision of Guidelines for IEFA Planning and adoption of IEFA policy measures, biodiversity indicators and targets with water retention and biodiversity values

111. Individual lessons gathered, generated and / or learned through the above networks will be synthesized and used to support the revision of Guidelines for IEFA Planning which will be adopted as a national guideline for IEFA planning. Legal and institutional analyses in relation to IEFA planning, management, implementation mechanisms, complementarities with existing legal system will be conducted to provide the basis for drafting guidelines for policy measures, biodiversity indicators and targets for IEFAs with water retention and biodiversity values in China. International experiences will be learnt and fed in the guidelines formulation process along with extensive consultations with stakeholders through workshops, seminars and study tours. Given the nature of this Output, MEP will lead the implementation of this Output with support of the National Knowledge Management Officer. The results of this output will be revised Guidelines for IEFA Planning and *publication of the Guidelines for Policy Measures, Biodiversity Indicators and Targets for IEFAs with Water Retention and Biodiversity Value*. Based on lessons learned at HHRB as well as lesson learning experience from LDA implementation elsewhere in China, NDRC and MEP – with support from the project – will prepare and publish Guideline for Policy Measures, Biodiversity Indicators and Targets of IEFAs with Water Retention and Biodiversity Values. The Guidelines will define the objectives, rationale, principles, indicative policy measures, biodiversity indicators and targets, monitoring and evaluation, responsible parties, etc..

Incremental reasoning and expected global, national and local benefits

112. In the baseline scenario, development and implementation of most IEFAs would address environmental services and natural resource management issues without accounting for global biodiversity conservation priorities. For example, maximising ecological services may in some cases reduce overall biodiversity value, e.g. through reforestation with fast-growing exotics. In partnership with Government and donor co-financing, the proposed alternative will help to overcome technical, knowledge and capacity-related barriers to establishing a system that has the primary goal of enhanced environmental management for over two million km² of China's landscapes. Robust efforts to conserve ecosystem functions across these landscape areas will provide a sustainable development baseline upon which incremental global biodiversity considerations, supported by GEF, can build.

113. GEF support will generate global benefits by ensuring that biodiversity conservation considerations are mainstreamed into the planning and implementation of IEFAs, both through spatial and development planning systems, as well as within specific sectoral development strategies and management practices. The above benefits will accrue both at the biodiversity-rich HHRB demonstration site as well as, subsequently, through a demonstration effect upon management of numerous biodiversity-rich IEFAs. Lessons learned within individual sectors (medicinal plants, mining, etc.) are also expected to be applicable throughout China's production landscape, and not solely within IEFAs.

Country Ownership: Country Eligibility and Country Drivenness

114. China ratified the Biodiversity Convention on 5 January 1993 and is eligible to receive funding from UNDP. The project has been endorsed by China's national operational focal point for GEF (see attached endorsement letters).

115. The project is highly relevant to national priorities, as shown by its close linkages to three of China's top priority environmental and biodiversity efforts. First of these is the CBPF, which is China's primary investment strategy for biodiversity conservation. As previously noted, the project will contribute directly and substantially to Results 13, 14 and 21 of the agreed CBPF Framework.³⁴ The CBPF, in turn, will assist in implementing China National Biodiversity Strategy and Action Plan, which is currently being revised.

³⁴ *Vide supra, para. 54.*

116. Second, the project supports a long-standing and high-priority national process, led by the MEP, aimed at improving environmental management of a large portion of China's land area through the establishment of IEFAs. This process has been supported by several recent declarations of China's State Council.³⁵

117. Third, the project is also consistent with China's 11th Five-Year National Socio-economic Development Plan (2006-2010) which specifies "developing the recycling economy, protecting the environment and speeding up the construction of a resource-saving and environment-friendly society" as one of its core strategies.

118. This project also conforms to China's Millennium Development Goals (MDG), its United Nations Development Assistance Framework (UNDAF) and UNDP's Country Programme Document (CPD). For example, MDG 7, Target 9 seeks to integrate the principles of sustainable development into policies and programmes and reverse the loss of environmental resources, while China's UNDAF (2006-2010) includes an outcome on "more effective conservation and sustainable use of biodiversity." The UN system aims to strengthen the national coordination mechanism for effective biodiversity management, to mainstream biodiversity into the planning and investment process, and to provide management support in targeted areas.

119. Mainstreaming environment and energy and mobilizing environmental financing are among the operations of UNDP in the field of environment and sustainable development of the Strategic Plan for 2008-2011. UNDP will support capacity development to ensure environment is taken into account in drawing up and implementing national policies, strategies and programmes including substantive support to biodiversity and ecosystem services for development. UNDP's programme of environmental financing will develop new approaches to stimulating markets and payments for environmental services such as markets for ecosystem services. Both operation lines are closely linked to the outcomes of this project.

Sustainability

120. The project design pays substantial attention to the issue of sustainability. Various elements of sustainability are supported as follows:

- *Environmental* sustainability is inherent to the entire project design, given its focus on establishing a partnership with baseline, landscape-level efforts to conserve ecological functions. By identifying synergies between ecosystem function conservation and biodiversity conservation, the project will greatly enhance the prospects for sustainability of both categories of effort.
- *Social* sustainability is strongly supported by Outcome 3, which emphasizes the integration of poverty alleviation with biodiversity conservation at the project site. This will help to ensure that the net impact of IEFA-type regulatory measures on the poor is at worst neutral in the short term while being beneficial in the long run.
- Strong local government commitment to the project represents an important indicator of *institutional* sustainability. This includes specific commitments on the part of Government to maintain support for institutional structures such as HCLGs and the TAG, following project completion.
- In terms of *financial* sustainability, new co-ordination structures to be established by the project will have minimal costs. In any case, the Xinyang Municipal Government has agreed to continue supporting their operations following project completion.

Replicability

³⁵ *Vide supra*, footnote 8.

121. The project has been designed with replication in mind. Biodiversity conservation efforts have been linked to an environmental mainstreaming programme that is ultimately expected to affect land management on 50 sites covering over 2 million km², or more than 20% of China's land area. Biodiversity conservation has already been identified by Government as an ecological function of primary importance at 12 of these sites. Outcome 4 will focus on lesson learning, dissemination and replication through training, workshops, and study tours, etc., all of which are expected to enhance the prospects for replication.

Part III: Management Arrangements

122. Xinyang Municipal Government (XMG), as the Implementing Agent, will undertake the whole responsibilities of the project implementation together with Foreign Economic Cooperation Office (FECO) of Ministry of Environmental Protection (MEP) and Henan Provincial Finance Bureau. XMG is committing significant co-funding for the project implementation.

123. Foreign Economic Cooperation Office (FECO) of Ministry of Environmental Protection (MEP) will be responsible for implementation of Outcome 4 of the project on communication, dissemination of experiences and lessons of headwaters of Huaihe River Basin to other IEFAs through the Project Officer supported with funding from this component. S/he will be based in the PMO of the GEF Institutional Strengthening project of CBPF, also responsible for coordination with Theme 4 (biodiversity conservation outside protected areas) of CBPF. The Project Officer reports financial and technical progress of Outcome 4 to the Project Director or Associate Director of the PMO in Xinyang on a quarterly basis.

124. Henan Provincial Finance Bureau is a government department in charge of financial affairs, and accepts the operational guidance of Ministry of Finance. Henan Provincial Finance Bureau, as a partner of the project, will appoint a provincial project coordinator as co-financing, be responsible for coordination of the related sectors, and provide financial and policy support to the project. This coordination will relate to the establishment of provincial-level regulations, plans and policies about biodiversity conservation, and for co-financing of Government contribution to ensure adequate and timely financial support to project implementation. A provincial project coordinator will be a member of the PSC once the project starts. Provincial agencies will also be invited as PSC members and will be kept regularly informed of progress in project implementation.

125. It will also guide and monitor the project financings in place, ensuring the project funds and goods and materials procured conform to the project requirements and UNDP NEX procedures.

126. The HHRB National Ecological Function Conservation Area Construction Leading Group (HCLG), established under the leadership of the Vice Mayor of Xinyang Municipality, will be responsible for inter-sectoral co-ordination and, more generally, by the IEFA development process. This Leading Group will also review and oversee the formulation and implementation of important policy documents such as the Biodiversity Action Plan. The HCLG will meet quarterly and a Project Management Office established in Xinyang will act as the Secretariat.

127. The following bodies will participate in the HCLG:

- Xinyang Vice Mayor in charge of protection of ecological environment (chairman);
- Xinyang Environmental Protection Bureau
- Xinyang Development & Reform Commission (DRC)
- Xinyang Finance Bureau
- Xinyang Forestry Bureau
- Xinyang Water Resources Bureau

- Xinyang Agriculture Bureau
- Xinyang Land and Resources Bureau
- Xinyang Drug Administration Bureau
- Xinyang Tourism Bureau
- Xinyang Poverty alleviation Office
- Xinyang Municipal Eco-Environmental Association
- Xinyang Women's Federation

128. A Project Steering Committee (PSC) will be built once the project starts. The PSC will be responsible for coordination and communication among the executing party, the other partners and UNDP-CO, and decision-making related to issues raised by co-operation with Xinyang field project under ECBP and UNDP-GEF. The PSC will review and approve the Annual Workplan & Budget and oversee the implementation of the project. The members of the PSC are:

- Xinyang Municipal Government
- Foreign Economic Cooperation Office of MEP
- Henan Development & Reform Commission
- Henan Provincial Finance Bureau
- Henan Environment Protection Bureau
- UNDP CO
- CBPF Programme Manager
- Other Henan Provincial Departments

129. PSC meetings will be held once a year with participation of the members of HCLG and of PSC. In the meetings, annual work planning, annual progress report and other key issues and risks in implementation will be reviewed and adopted.

130. The Project Management Office (PMO), which is under the supervision of and reports to the HCLG, will be responsible for day to day management of the project. It will be headed by the Director General of the Xinyang Environmental Protection Bureau as the Chair, assisted by a Vice-Chair, both of whom are co-financed by the local government. A Project Manager will be recruited with GEF funding to be responsible for work planning, reporting, mobilization of inputs to the project and supervision of two assistants in PMO, one of which will be funded with GEF grant and the other with government co-financing.

131. The PMO will be based in Xinyang Municipal Eco-Environmental Association (XMEEA), which will put into 1,480,000 USD dollars in kind. XMEEA, established with approval of Xinyang Municipal Government in December 2001 and registered in civil administration government, is an independent juridical association for preparing HHRB national Ecological Function Conservation Area. Its tenet is to conduct survey, research, training and project development related to eco-environment and biodiversity conservation in HHRB, and to engage in international exchange and cooperation of biodiversity conservation in HHRB to promote construction of HHRB national IEFA. Now the association is staffed with 38 members, including 12 senior technical personnel. Since 2001, the association has directly applied for and implemented various international bilateral and/or multilateral cooperation projects granted by WFP, UNDP, NUICEF and EU, and has achieved satisfactory social results and won the unanimous appraisal and recognition at home and abroad.

132. In each of the selected demonstration counties/districts, a county-level Local Project Management Office (LPMO) will be established which will operate under the coordination and supervision of the Xinyang Municipal PMO. The LPMO will be embedded within the respective County Environmental Protection Bureau.

133. Finally, a multi-sectoral Technical Advisory Group (TAG) will be established to provide technical support to the PMO and LPMOs, as and when needed. The TAG will draw on expertise within and outside of government. The TAG will also continue operating following project completion.

134. Both the PMO and the LPMOs will benefit from the technical support of the TAG, as well as various awareness raising, capacity building and training efforts. These efforts will focus, *inter alia*, on raising awareness and understanding of upstream and downstream values of HHRB ecosystem functions and biodiversity and the costs and benefits of associated incentive and disincentive policies.³⁶ The project will adopt the outcomes of ECBP, such as biodiversity situation survey. The specific roles and responsibilities of both the HCLGs and TAG will be developed during the inception phase in the form of rules of operation.

135. The GEF grant in this project will be directly transferred from the UNDP Country Office (UNDP CO) to a special account designated by Xinyang Municipal Finance Bureau on a quarterly basis in accordance with the annual workplan. The owner of the account will take due diligence to ensure management of funding conforms to UNDP National Execution Manual (1998).

136. In order to accord proper acknowledgement to GEF for providing funding, a GEF logo should appear on all relevant GEF project publications, including among others, project hardware and vehicles purchased with GEF funds. Any citation on publications regarding projects funded by GEF should also accord proper acknowledgment to GEF. The UNDP logo should be more prominent and separated from the GEF logo if possible, as UN visibility is important for security purposes.

137. Finally, the project will liaise closely with managers of the ECBP project, with whom several consultations were held during the preparatory period. Specific aspects of local-level co-ordination between the PMOs of the two projects will be defined during the inception phase, and will be incorporated into the ToR of the GEF project PMO.

138. The Organigram of the project is provided in **Section IV, Part II**.

Part IV: Monitoring and Evaluation Plan and Budget

139. Project monitoring and evaluation will be conducted in accordance with established UNDP and GEF procedures and will be provided by the project team and the UNDP Country Office (UNDP-CO) with support from UNDP/GEF. The Logical Framework Matrix in Annex 1 provides *performance* and *impact* indicators for project implementation along with their corresponding *means of verification*. These will form the basis on which the project's Monitoring and Evaluation system will be built.

140. The following sections outline the principle components of the Monitoring and Evaluation Plan and indicative cost estimates related to M&E activities. The project's Monitoring and Evaluation Plan will be presented and finalized at the Project's Inception Report following a collective fine-tuning of indicators, means of verification, and the full definition of project staff M&E responsibilities.

Monitoring and Reporting

i. Project Inception Phase

141. A Project Inception Workshop will be conducted with the full project team, relevant government counterparts, co-financing partners, the UNDP-CO and representation from the UNDP-GEF Regional Coordinating Unit, as well as UNDP-GEF (HQs) as appropriate.

142. A fundamental objective of this Inception Workshop will be to assist the project team to understand and take ownership of the project's goals and objectives, as well as finalize preparation of the

³⁶ Vide supra, Output 2.1.

project's first annual work plan on the basis of the project's logframe matrix. This will include reviewing the logframe (indicators, means of verification, assumptions), imparting additional detail as needed, and on the basis of this exercise finalize the Annual Work Plan (AWP) with precise and measurable performance indicators, and in a manner consistent with the expected outcomes for the project.

143. Additionally, the purpose and objective of the Inception Workshop (IW) will be to: (i) introduce project staff with the UNDP-GEF *expanded team* which will support the project during its implementation, namely the CO and responsible Regional Coordinating Unit staff; (ii) detail the roles, support services and complementary responsibilities of UNDP-CO and RCB staff vis à vis the project team; (iii) provide a detailed overview of UNDP-GEF reporting and monitoring and evaluation (M&E) requirements, with particular emphasis on the Annual Project Implementation Reviews (PIRs) and related documentation, the Annual Project Report (APR), Tripartite Review Meetings, as well as mid-term and final evaluations. Equally, the IW will provide an opportunity to inform the project team on UNDP project related budgetary planning, budget reviews, and mandatory budget rephasings.

144. The IW will also provide an opportunity for all parties to understand their roles, functions, and responsibilities within the project's decision-making structures, including reporting and communication lines, and conflict resolution mechanisms. The Terms of Reference for project staff and decision-making structures will be discussed again (as needed) in order to clarify for all, each party's responsibilities during the project's implementation phase.

ii. Monitoring responsibilities and events

145. A detailed schedule of project reviews meetings will be developed by the project management, in consultation with project implementation partners and stakeholder representatives and incorporated in the Project Inception Report. Such a schedule will include: (i) tentative time frames for Tripartite Reviews, Steering Committee Meetings, (or relevant advisory and/or coordination mechanisms) and (ii) project related Monitoring and Evaluation activities.

146. Day to day monitoring of implementation progress will be the responsibility of the Project Coordinator, Director or Technical Adviser (depending on the established project structure) based on the project's Annual Work Plan and its indicators. The Project Team will inform the UNDP-CO of any delays or difficulties faced during implementation so that the appropriate support or corrective measures can be adopted in a timely and remedial fashion.

147. The Project Coordinator and the Project GEF Technical Advisor will fine-tune the progress and performance/impact indicators of the project in consultation with the full project team at the Inception Workshop with support from UNDP-CO and assisted by the UNDP-GEF Regional Coordinating Unit. Specific targets for the first year implementation progress indicators together with their means of verification will be developed at this Workshop. These will be used to assess whether implementation is proceeding at the intended pace and in the right direction and will form part of the Annual Work Plan. The local implementing agencies will also take part in the Inception Workshop in which a common vision of overall project goals will be established. Targets and indicators for subsequent years would be defined annually as part of the internal evaluation and planning processes undertaken by the project team.

148. Measurement of impact indicators related to global benefits will occur according to the schedules defined in the Inception Workshop. The measurement, of these will be undertaken through subcontracts or retainers with relevant institutions (e.g. vegetation cover via analysis of satellite imagery, or populations of key species through inventories) or through specific studies that are to form part of the projects activities (e.g. measurement carbon benefits from improved efficiency of ovens or through surveys for capacity building efforts) or periodic sampling such as with sedimentation.

149. Periodic monitoring of implementation progress will be undertaken by the UNDP-CO through quarterly meetings with the project proponent, or more frequently as deemed necessary. This will allow

parties to take stock and to troubleshoot any problems pertaining to the project in a timely fashion to ensure smooth implementation of project activities.

150. UNDP Country Offices and UNDP-GEF RCUs as appropriate, will conduct yearly visits to projects that have field sites, or more often 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 Steering Committee can also accompany, as decided by the SC. A Field Visit Report will be prepared by the CO and circulated no less than one month after the visit to the project team, all SC members, and UNDP-GEF.

151. Annual Monitoring will occur through the *Tripartite Review (TPR)*. This is the highest policy-level meeting of the parties directly involved in the implementation of a project. The project will be subject to Tripartite Review (TPR) at least once every year. The first such meeting will be held within the first twelve months of the start of full implementation. The project proponent will prepare an Annual Project Report (APR) and submit it to UNDP-CO and the UNDP-GEF regional office at least two weeks prior to the TPR for review and comments.

152. The APR will be used as one of the basic documents for discussions in the TPR meeting. The project proponent will present the APR to the TPR, highlighting policy issues and recommendations for the decision of the TPR participants. The project proponent also informs the participants of any agreement reached by stakeholders during the APR preparation on how to resolve operational issues. Separate reviews of each project component may also be conducted if necessary.

153. The Terminal Tripartite Review is held in the last month of project operations. The project proponent is responsible for preparing the Terminal Report and submitting it to UNDP-CO and LAC-GEF's Regional Coordinating Unit. It shall be prepared in draft at least two months in advance of the TTR in order to allow review, and will serve as the basis for discussions in the TTR. The terminal tripartite review considers the implementation of the project as a whole, paying particular attention to whether the project has achieved its stated objectives and contributed to the broader environmental objective. It decides whether any actions are still necessary, particularly in relation to sustainability of project results, and acts as a vehicle through which lessons learnt can be captured to feed into other projects under implementation or formulation.

154. The TPR has the authority to suspend disbursement if project performance benchmarks are not met. Benchmarks will be developed at the Inception Workshop, based on delivery rates, and qualitative assessments of achievements of outputs.

iii. Project Monitoring Reporting

155. The Project Coordinator in conjunction with the UNDP-GEF extended team will be responsible for the preparation and submission of the following reports that form part of the monitoring process. Items (a) through (f) are mandatory and strictly related to monitoring, while (g) through (h) have a broader function and the frequency and nature is project specific to be defined throughout implementation.

(a) INCEPTION REPORT (IR)

156. A Project Inception Report will be prepared immediately following the Inception Workshop. It will include a detailed First Year/ Annual Work Plan divided in quarterly time-frames detailing the activities and progress indicators that will guide implementation during the first year of the project. This Work Plan would include the dates of specific field visits, support missions from the UNDP-CO or the Regional Centre in Bangkok (RCB) or consultants, as well as time-frames for meetings of the project's decision making structures. The Report will also include the detailed project budget for the first full year of implementation, prepared based on the Annual Work Plan, and including any monitoring and

evaluation requirements to effectively measure project performance during the targeted 12 months time-frame.

157. The Inception Report will include a more detailed narrative on the institutional roles, responsibilities, coordinating actions and feedback mechanisms of project related partners. In addition, a section will be included on progress to date on project establishment and start-up activities and an update of any changed external conditions that may effect project implementation.

158. When finalized the report will be circulated to project counterparts who will be given a period of one calendar month in which to respond with comments or queries. Prior to this circulation of the IR, the UNDP Country Office and UNDP-GEF's Regional Coordinating Unit will review the document.

(b) ANNUAL PROJECT REPORT (APR)

159. The APR is a UNDP requirement and part of UNDP's Country Office central oversight, monitoring and project management. It is a self-assessment report by project management to the CO and provides input to the country office reporting process and the RCU, as well as forming a key input to the Tripartite Project Review. An APR will be prepared on an annual basis prior to the Tripartite Project Review, to reflect progress achieved in meeting the project's Annual Work Plan and assess performance of the project in contributing to intended outcomes through outputs and partnership work.

160. The format of the APR is flexible but should include the following:

- An analysis of project performance over the reporting period, including outputs produced and, where possible, information on the status of the outcome
- The constraints experienced in the progress towards results and the reasons for these
- The three (at most) major constraints to achievement of results
- AWP, CAE and other expenditure reports (ERP generated)
- Lessons learned
- Clear recommendations for future orientation in addressing key problems in lack of progress

(c) PROJECT IMPLEMENTATION REVIEW (PIR)

161. The PIR is an annual monitoring process mandated by the GEF. It has become an essential management and monitoring tool for project managers and offers the main vehicle for extracting lessons from ongoing projects. Once the project has been under implementation for a year, a Project Implementation Report must be completed by the CO together with the project. The PIR can be prepared any time during the year (July-June) and ideally prior to the TPR. The PIR should then be discussed in the TPR so that the result would be a PIR that has been agreed upon by the project, the executing agency, UNDP CO and the concerned RC.

162. The individual PIRs are collected, reviewed and analysed by the RCs prior to sending them to the focal area clusters at the UNDP/GEF headquarters. The focal area clusters supported by the UNDP/GEF M&E Unit analyse the PIRs by focal area, theme and region for common issues/results and lessons. The TAs and PTAs play a key role in this consolidating analysis.

163. The focal area PIRs are then discussed in the GEF Interagency Focal Area Task Forces in or around November each year and consolidated reports by focal area are collated by the GEF Independent M&E Unit based on the Task Force findings.

164. The GEF M&E Unit provides the scope and content of the PIR. In light of the similarities of both APR and PIR, UNDP/GEF has prepared a harmonized format for reference.

(d) QUARTERLY PROGRESS REPORTS

165. Short reports outlining main updates in project progress will be provided quarterly to the local UNDP Country Office and the UNDP-GEF regional office by the project team. See format attached.

(e) PERIODIC THEMATIC REPORTS

166. As and when called for by UNDP, UNDP-GEF or the Implementing Partner, the project team will prepare Specific Thematic Reports, focusing on specific issues or areas of activity. The request for a Thematic Report will be provided to the project team in written form by UNDP and will clearly state the issue or activities that need to be reported on. These reports can be used as a form of lessons learnt exercise, specific oversight in key areas, or as troubleshooting exercises to evaluate and overcome obstacles and difficulties encountered. UNDP is requested to minimize its requests for Thematic Reports, and when such are necessary will allow reasonable timeframes for their preparation by the project team.

(f) PROJECT TERMINAL REPORT

167. During the last three months of the project, the project team will prepare the Project Terminal Report. This comprehensive report will summarize all activities, achievements and outputs of the Project, lessons learnt, objectives met, or not achieved, structures and systems implemented, etc. and will be the definitive statement of the Project's activities during its lifetime. It will also lay out recommendations for any further steps that may need to be taken to ensure sustainability and replicability of the Project's activities.

(g) TECHNICAL REPORTS

168. Technical Reports are detailed documents covering specific areas of analysis or scientific specializations within the overall project. As part of the Inception Report, the project team will prepare a draft Reports List, detailing the technical reports that are expected to be prepared on key areas of activity during the course of the Project, and tentative due dates. Where necessary this Reports List will be revised and updated, and included in subsequent APRs. Technical Reports may also be prepared by external consultants and should be comprehensive, specialized analyses of clearly defined areas of research within the framework of the project and its sites. These technical reports will represent, as appropriate, the project's substantive contribution to specific areas, and will be used in efforts to disseminate relevant information and best practices at local, national and international levels.

(h) PROJECT PUBLICATIONS

169. Project Publications will form a key method of crystallizing and disseminating the results and achievements of the Project. These publications may be scientific or informational texts on the activities and achievements of the Project, in the form of journal articles, multimedia publications, etc. These publications can be based on Technical Reports, depending upon the relevance, scientific worth, etc. of these Reports, or may be summaries or compilations of a series of Technical Reports and other research. The project team will determine if any of the Technical Reports merit formal publication, and will also (in consultation with UNDP, the government and other relevant stakeholder groups) plan and produce these Publications in a consistent and recognizable format. Project resources will need to be defined and allocated for these activities as appropriate and in a manner commensurate with the project's budget.

Independent Evaluation

170. The project will be subjected to at least two independent external evaluations as follows:

i. Mid-term Evaluation

171. An independent Mid-Term Evaluation will be undertaken at the end of the second year of implementation. The Mid-Term Evaluation will determine progress being made towards the achievement of outcomes and will identify course correction if needed. It will focus on the effectiveness, efficiency and timeliness of project implementation; will highlight issues requiring decisions and actions; and will

present initial lessons learned about project design, implementation and management. Findings of this review will be incorporated as recommendations for enhanced implementation during the final half of the project's term. The organization, terms of reference and timing of the mid-term evaluation will be decided after consultation between the parties to the project document. The Terms of Reference for this Mid-term evaluation will be prepared by the UNDP CO based on guidance from the Regional Coordinating Unit and UNDP-GEF.

ii. Final Evaluation

172. An independent Final Evaluation will take place three months prior to the terminal tripartite review meeting, and will focus on the same issues as the mid-term evaluation. The final evaluation will also look at impact and sustainability of results, including the contribution to capacity development and the achievement of global environmental goals. The Final Evaluation should also provide recommendations for follow-up activities. The Terms of Reference for this evaluation will be prepared by the UNDP CO based on guidance from the Regional Coordinating Unit and UNDP-GEF.

iii. Audit Clause

173. The Government will provide the Resident Representative with certified periodic financial statements, and with an annual audit of the financial statements relating to the status of UNDP (including GEF) funds according to the established procedures set out in the Programming and Finance manuals. The Audit will be conducted by the legally recognized auditor of the Government, or by a commercial auditor engaged by the Government.

Learning and Knowledge Sharing

174. Results from the project will be disseminated within and beyond the project intervention zone through a number of existing information sharing networks and forums. In addition:

- ◆ The project will participate, as relevant and appropriate, in UNDP/GEF sponsored networks, organized for Senior Personnel working on projects that share common characteristics. UNDP/GEF shall establish a number of networks, such as Integrated Ecosystem Management, eco-tourism, co-management, etc, that will largely function based on an electronic platform.
- ◆ The project will identify and participate, as relevant and appropriate, in scientific, policy-based and/or any other networks, which may be of benefit to project implementation though lessons learned.

175. The project will identify, analyze, and share lessons learned that might be beneficial in the design and implementation of similar future projects. Identify and analyzing lessons learned is an on- going process, and the need to communicate such lessons as one of the project's central contributions is a requirement to be delivered not less frequently than once every 12 months. UNDP/GEF shall provide a format and assist the project team in categorizing, documenting and reporting on lessons learned. To this end, a percentage of project resources will need to be allocated for these activities.

TABLE 1: INDICATIVE MONITORING AND EVALUATION WORK PLAN AND CORRESPONDING BUDGET

Type of M&E activity	Responsible Parties	Budget US\$ <i>Excluding project team Staff time</i>	Time frame
Inception Workshop	<ul style="list-style-type: none"> ▪ Project Coordinator ▪ Xinyang PMO ▪ UNDP CO ▪ UNDP GEF 	5,000	Within first two months of project start up
Inception Report	<ul style="list-style-type: none"> ▪ Xinyang PMO ▪ UNDP CO 	None	Immediately following IW

Type of M&E activity	Responsible Parties	Budget US\$ <i>Excluding project team Staff time</i>	Time frame
Measurement of Means of Verification for Project Purpose Indicators	<ul style="list-style-type: none"> ▪ Project Coordinator will oversee the hiring of specific studies and institutions, and delegate responsibilities to relevant team members 	To be finalized in Inception Phase and Workshop. Indicative cost 8,000	Start, mid and end of project
Measurement of Means of Verification for Project Progress and Performance (measured on an annual basis)	<ul style="list-style-type: none"> ▪ Oversight by Project GEF Technical Advisor and Project Coordinator ▪ Measurements by regional field officers and local IAs 	To be determined as part of the Annual Work Plan preparation. Indicative cost 8,000	Annually prior to APR/PIR and to the definition of annual work plans
APR and PIR	<ul style="list-style-type: none"> ▪ Xinyang PMO ▪ UNDP-CO ▪ UNDP-GEF 	None	Annually
TPR and TPR report	<ul style="list-style-type: none"> ▪ Xinyang Municipal Government ▪ UNDP CO ▪ Xinyang PMO ▪ UNDP-GEF Regional Coordinating Unit 	None	Every year, upon receipt of APR
Steering Committee Meetings	<ul style="list-style-type: none"> ▪ Project Coordinator ▪ Xinyang PMO ▪ UNDP CO 	12,000	Following Project IW and subsequently at least once a year
Periodic status reports	<ul style="list-style-type: none"> ▪ Xinyang PMO 	3,000	To be determined by Xinyang PMO and UNDP CO
Technical reports	<ul style="list-style-type: none"> ▪ Xinyang PMO ▪ Hired consultants as needed 	10,000	To be determined by Xinyang PMO and UNDP-CO
Mid-term External Evaluation	<ul style="list-style-type: none"> ▪ Xinyang PMO ▪ UNDP- CO ▪ UNDP-GEF Regional Coordinating Unit ▪ External Consultants (i.e. evaluation team) 	18,000	At the mid-point of project implementation.
Final External Evaluation	<ul style="list-style-type: none"> ▪ Xinyang PMO, ▪ UNDP-CO ▪ UNDP-GEF Regional Coordinating Unit ▪ External Consultants (i.e. evaluation team) 	30,000	At the end of project implementation
Terminal Report	<ul style="list-style-type: none"> ▪ Xinyang PMO ▪ UNDP-CO ▪ External Consultant 	None	At least one month before the end of the project
Lessons learned	<ul style="list-style-type: none"> ▪ Xinyang PMO ▪ UNDP-GEF Regional Coordinating Unit (suggested formats for documenting best practices, etc) 	9,000	Yearly
Audit	<ul style="list-style-type: none"> ▪ UNDP-CO ▪ Xinyang PMO 	30,000 (average 7,500 per year)	Yearly

Type of M&E activity	Responsible Parties	Budget US\$ <i>Excluding project team Staff time</i>	Time frame
Visits to field sites (UNDP staff travel costs to be charged to IA fees)	<ul style="list-style-type: none"> ▪ UNDP Country Office ▪ UNDP-GEF Regional Coordinating Unit (as appropriate) ▪ Government representatives 	16,000 (average one visit per year)	Yearly
TOTAL INDICATIVE COST <i>Excluding Xinyang PMO staff time and UNDP staff and travel expenses</i>		US\$ 149,000 ³⁷	

Part V: Legal Context

176. This Project Document shall be the instrument referred to as such in Article I of the Standard Basic Assistance Agreement between the Government of China and the United Nations Development Programme, signed by the parties on 29 June 1979. The host country implementing agency shall, for the purpose of the Standard Basic Assistance Agreement, refer to the government co-operating agency described in that Agreement.

177. The UNDP Resident Representative in China is authorized to effect in writing the following types of revision to this Project Document, provided that he/she has verified the agreement thereto by the UNDP-GEF Unit and is assured that the other signatories to the Project Document have no objection to the proposed changes:

- a) Revision of, or addition to, any of the annexes to the Project Document;
- b) Revisions which do not involve significant changes in the immediate objectives, outputs or activities of the project, but are caused by the rearrangement of the inputs already agreed to or by cost increases due to inflation;
- c) Mandatory annual revisions which re-phase the delivery of agreed project inputs or increased expert or other costs due to inflation or take into account agency expenditure flexibility; and
- d) Inclusion of additional annexes and attachments only as set out here in this Project Document.

³⁷ This figure is higher than the budget for activity 4.1.4 (project monitoring and evaluation - \$110,000) because funds for audit and lessons learned are shown on different budget lines (project management and activity 4.1.1 respectively).

SECTION II: STRATEGIC RESULTS FRAMEWORK AND GEF Part I: Incremental Cost Matrix

Benefits	Baseline (B)	Alternative (A)	Increment (I = A-B)
<p>Domestic Benefits</p>	<p>Important ecological function areas (IEFAs) across China continue to deliver valuable ecological services, but these are declining in the face of rapid growth, population pressures and inadequate environmental controls.</p> <p>At HHRB and other Headwaters regions, water retention, flood control and soil stabilization functions are threatened by existing land use and business practices.</p> <p>Biodiversity within IEFAs across China continues to provide multiple domestic use and non-use benefits, but in steadily declining amounts as processes of degradation spread and deepen.</p>	<p>Land uses and other anthropogenic activities at LDAs and other IEFAs increasingly reflect the need to conserve ecological functions at these areas.</p> <p>At HHRB, ecological functions are being better conserved through targeted planning, active policy measures and increased capacities. Other Headwaters regions are benefiting from a demonstration effect.</p> <p>Synergies are demonstrated between ecological function and biodiversity conservation, allowing IEFA managers to target both simultaneously.</p>	<p>Long-term higher and more sustainable levels of ecosystem functions and associated services emanating from IEFAs.</p> <p>Higher sustainable levels of use and non-use values from biodiversity coming from both protected and landscape areas of IEFAs.</p>
<p>Global Benefits</p>	<p>Opportunities to conserve globally significant biodiversity are missed at 38 IEFAs, covering over 1.5 million km², as land use and resource management focuses (at best) on ecological functions, without identifying or taking advantage of potential synergies with biodiversity conservation.</p>	<p>HHRB pilot work and associated replication provide tools and lessons to enable policy makers and land users to incorporate conservation into policies and practices.</p>	<p>Globally significant biodiversity at the HHRB pilot site, including rare and threatened species of medicinal plants and animals, and other species of global significance (see paras. 20-22 above) face enhanced prospects for survival.</p> <p>Protected areas (PAs) within the site area are increasingly sustainable thanks to the landscape's enhanced ability to act as an effective buffer for, and corridor between PAs.</p> <p>Globally significant biodiversity at IEFAs across China faces reduced long-term extinction risk.</p>

Outcomes	Baseline (US\$ over 4-year period)			Increment		
	Baseline (US\$ over 4-year period)	Alternative	Increment	Baseline (US\$ over 4-year period)	Alternative	Increment
Outcome 1: Biodiversity and ecological function conservation mainstreamed into HHRB planning and monitoring	Xinyang Municipal Government	Xinyang Municipal Government	Xinyang Municipal Government	Xinyang Municipal Government	Xinyang Municipal Government	Xinyang Municipal Government
	1,200,000	GEF	GEF	2,662,500	GEF	711,600
	Total: 1,200,000	XMEEA	XMEEA	4,111,600	XMEEA	737,500
				Total: 4,111,600	Total: 711,600	Total: 737,500
Outcome 2: Biodiversity and ecological function conservation mainstreamed into key productive sectors	Xinyang Municipal Government	Xinyang Municipal Government	Xinyang Municipal Government	Xinyang Municipal Government	Xinyang Municipal Government	Xinyang Municipal Government
	400,000	GEF	GEF	1,737,500	GEF	716,800
	Total: 400,000	XMEEA	XMEEA	362,500	XMEEA	362,500
				500,000	Private Sector	500,000
			Total: 3,316,800	Total: 3,316,800	Total: 2,916,800	
Outcome 3: Biodiversity and ecosystem function mainstreamed into poverty alleviation strategies and programmes	Xinyang Municipal Government	Xinyang Municipal Government	Xinyang Municipal Government	Xinyang Municipal Government	Xinyang Municipal Government	Xinyang Municipal Government
	700,000	GEF	GEF	1,655,000	GEF	465,800
	Total: 700,000	XMEEA	XMEEA	150,000	XMEEA	150,000
				2,270,800	Total: 2,270,800	Total: 1,570,800
			Total: 2,270,800	Total: 2,270,800	Total: 1,570,800	
Outcome 4: Lessons learned at HHRB inform and strengthen ongoing efforts to manage IEFAs throughout China	Xinyang Municipal Government	Xinyang Municipal Government	Xinyang Municipal Government	Xinyang Municipal Government	Xinyang Municipal Government	Xinyang Municipal Government
	0	GEF	GEF	1,320,000	GEF	560,400
	Total: 0	XMEEA	XMEEA	230,000	XMEEA	230,000
				2,110,400	Total: 2,110,400	Total: 2,110,400
			Total: 2,110,400	Total: 2,110,400	Total: 2,110,400	

Project Totals:	Xinyang Municipal Government	2,300,000	Xinyang Municipal Government	7,375,000	Xinyang Municipal Government	5,075,000
			GEF	2,454,600	GEF	2,454,600
			XMEEA	1,480,000		1,480,000
			Private sector	500,000		500,000
		Total:	2,300,000	Total:	11,809,600	Total:

Note: Project management cost is not a part of above captioned incremental cost analysis. Project management total cost is US\$ 1,272,600 of which US\$272,600 is GEF financing, and US\$ 1,000,000 is co-financing.

Part II: Logical Framework Matrix

Project Goal: To significantly reduce biodiversity loss in China as a contribution to sustainable development					
	CBPF / Project indicator	HHRB baseline	HHRB Target	Sources of verification	Risks and assumptions
Objective of the project: To demonstrate practical mechanisms to mainstream biodiversity in China's IEFA	CPBF Result 21: Land use planning and management systems contribute effectively to conserving biodiversity	Existing land use planning and management systems take no special account of HHRB's critical ecological functions or biodiversity values, leading to substantial loss of both	Reversing trends in habitat loss associated with land use changes. Changes in land-use on the following scale are expected: increased forest cover (50,000-60,000 ha.), reduced mining surface (1,000-1,500 ha) and increased wetland area (30,000 ha). Biodiversity-friendly matrix of land uses arising from Municipal and county-level 5-year land use plans provide enhanced connectivity amongst 22 existing and four planned protected areas (totalling 235,000 ha.)	Project evaluations; municipal and county plans	Targets are set high enough so that meeting them has the intended effect of 'significantly' reducing biodiversity loss
	CBPF Result 13: An incentive framework for the natural resource based business sector to conserve or sustainably use biodiversity is established	Despite ecological significance of the site, few incentives exist to encourage biodiversity-friendly and ecosystem function conserving production methods	By end of year 4, an integrated, multi-sectoral incentive structure designed to meet the needs of a biodiversity-rich IEFA in place, including county-, municipal- and province-level components	Project evaluations; IEFA Committee reports	Non-incentive-sensitive portions of the local economy, i.e., public sector, does not overwhelm private sector in terms of impacts
	CBPF Result 14: Biodiversity conservation and poverty alleviation in China are mutually supportive	Biodiversity conservation is widely seen as imposing short-term costs on vulnerable segments of society	By project completion, biodiversity and ecosystem function conservation widely recognized within HHRB as being fully compatible with, and in many cases complementary to, poverty alleviation objectives	Project evaluations; IEFA Committee reports	Perceptions are a good indicator of reality in this case
Outcome 1: Biodiversity and ecosystem function conservation mainstreamed into HHRB planning and monitoring	Specialized land use planning, zoning and management systems for areas having important ecological functions and/or biodiversity	Land use planning, zoning and management systems are nearly identical to those employed in areas zoned for normal development	By end of project, land use plans and decisions at HHRB incorporate agreed quantitative targets on conservation of biodiversity By end of Year 3, municipal level specialized land use planning mechanism in place.	Provincial-level gazette Project annual report	Adequate funding to institutionalize IEFA management Land use plan is adhered to / enforced

To significantly reduce biodiversity loss in China as a contribution to sustainable development					
Project Goal:	CBPF / Project indicator	HHRB baseline	HHRB Target	Sources of verification	Risks and assumptions
	County land-use plans prepared following biodiversity guidelines	County land use plans within Xinyang Municipality do not address biodiversity or ecosystem function conservation	By end of Year 4, new land use plans have been prepared for two HHRB counties in line with biodiversity and ecosystem-function conserving guidelines (latter being prepared under IS project)	Published plans	Land use plans are adhered to / enforced
	Performance on ecological and biodiversity indicators	Current performance not adequate to safeguard ecological functions, including biodiversity maintenance	Improved performance on various ecological and biodiversity monitoring standards (Parameters to be determined in Inception Phase)	Government monitoring data and reports	
Output 1.1: Institutional arrangements and capacities for mainstreaming					
1.1.1	Strengthen Municipal-level (Xinyang) and County-level 'Leading Groups' (LGs), i.e., inter-sectoral coordinating and decision-making bodies				
1.1.2	Establish and operate Municipal-level Technical Advisory Group (TAG)				
1.1.3	Biodiversity conservation capability and situation survey				
1.1.4	Raise awareness and build capacities of LG and TAG members regarding environmental economic values and complementarity of ecosystem functions and biodiversity				
1.1.5	Mechanisms and support for civil society contribution and participation in LG/TAG/IEFA decision-making processes, including biodiversity network, biodiversity research society				
Output 1.2: Biodiversity-friendly land use planning mechanisms (Municipal and County levels) and associated plans					
1.2.1	Land use plans for Xinyang Municipality, including biodiversity and ecological functions overlays				
1.2.2	Land use plans for two demonstration counties, including biodiversity and ecological functions overlays				
1.2.3	IEFA establishment plan				
Output 1.3: Revised standards and monitoring system for biodiversity and other ecological functions					
1.3.1	Biodiversity and ecological function monitoring standards developed by TAG and approved by Municipal LG				
1.3.2	Biodiversity and ecological functions monitoring				
Outcome 2: Biodiversity and ecological function conservation mainstreamed into key productive sectors					
	Existence and effectiveness of financial subsidy / penalty schemes associated with biodiversity conservation / damages by natural-resource based businesses	Existing schemes, e.g., those affecting mining and medicinal plants sectors, are having some environmental impact, but largely failing to focus on biodiversity conservation aspect	By end of Year 4, at least two new positive incentive schemes in place for local communities and the private sector within key sectors in HHRB for biodiversity friendly practices	Baseline and follow up surveys	Target sectors are well selected and pilot schemes are expanded
	Private and public sector capacities to undertake and/or oversee biodiversity-	Regulatory agencies and private sector firms have limited awareness of how	By end of project, increased ecosystem resilience associated with a 20%+ reduction in fiscal incentives (subsidies) having negative environmental impacts	Baseline and follow up surveys	
			At least 30% increase in local government capacities to mainstream conservation of biodiversity and other	Baseline and follow up capacity assessments	

To significantly reduce biodiversity loss in China as a contribution to sustainable development					
Project Goal:	CBPF / Project indicator	HHRB baseline	HHRB Target	Sources of verification	Risks and assumptions
	friendly actions and investments in response to a corresponding regulatory and incentive framework Biodiversity losses and other ecological damages arising from natural-resource based businesses	their policies and actions, respectively, impact on ecosystem functions and biodiversity	ecosystem functions into local governance, as measured by UNDP's capacity scorecard		
		Tens of thousands of live trees, including old and rare specimens, being removed from Luoshan and other counties annually	60% reduction in baseline levels of live tree trade—amounting to at least 10,000 trees annually, including numerous very old specimens and threatened species—in Luoshan County, with remaining trade subject to careful regulation re. species and methods; efforts are made to ensure that trade is not simply 'shifted' to other counties / locations	Baseline and follow up surveys	Success in preventing 'leakage' of trade to neighbouring counties
		Annual pollution emission and tailings from mining reach 5 million tons and ore residues reach approximately 200 million tons.	50% reduction in index of mining impacts on biodiversity in Guangshhan County (index and baseline measurements to be developed during inception phase), including at least 100 ha of mining land restored in biodiversity-rich areas	Baseline and follow up surveys	
		Widespread use of unsustainable techniques and practices associated with medicinal plant and animal collection	At least 70% of medicinal plants collected in at least one (demonstration) county are being harvested according to sustainable practices, resulting in enhanced viability of 15 threatened plant species.	Baseline and follow up surveys	
		Approximately 180 ha. of certified organic crop plantings in Xinyang Municipality	At least 100,000 ha of agricultural lands close to high biodiversity and other ecologically important areas under eco-friendly management	Baseline and follow up surveys	
		50,000 out of 259,000 ha of wetlands reclaimed for agriculture and other purposes	60% of reclaimed wetlands totalling 30,000 ha restored by project end;	Baseline and follow up surveys	
<p><i>Output 2.1: Enhanced knowledge, understanding and quantification of impacts of HHRB productive sectors on biodiversity and target ecological functions</i></p> <p>2.1.1 Detailed assessment of impacts, by sector, on ecological functions and biodiversity</p> <p>2.1.2 Environmental economic studies</p>					

Project Goal: To significantly reduce biodiversity loss in China as a contribution to sustainable development					
CBPF / Project indicator	HHRB baseline	HHRB Target	Sources of verification	Risks and assumptions	
<p>2.1.3 Trigger price analysis of cost effectiveness of mainstreaming</p> <p><i>Output 2.2: Sectoral policies, regulations, incentives, enforcement methods and standards are assessed and IEFA-specific alternatives are adopted</i></p> <p>2.2.1 Regulatory impact assessments for key sectors</p> <p>2.2.2 Development of IEFA-specific policies, regulations, standards and enforcement strategies</p> <p>2.2.3 Pilot incentive programmes</p> <p><i>Output 2.3: Increased awareness and capacities among public and private sector stakeholders to respond to revised regulations and incentives</i></p> <p>2.3.1 Awareness raising on new regulatory environment and associated incentives</p> <p>2.3.2 Capacity building for ecosystem function and biodiversity-friendly production methods</p>					
<p>Outcome 3: Biodiversity and ecosystem function considerations are regularly mainstreamed into poverty alleviation strategies and programmes at HHRB</p>	<p>Extent of operational linkages between poverty alleviation and biodiversity conservation programmes</p>	<p>No operational linkages</p>	<p>At least \$5 million in poverty alleviation spending in HHRB is disbursed in accordance with guidelines designed to avoid harmful impacts on biodiversity and other ecosystem functions</p>	<p>Minutes of inter-agency consultation process; project evaluations</p>	<p>Conclusions of inter-agency processes are followed up at field level</p>
		<p>614.76 kg (net weight of nitrogen, phosphorus and potassium) of fertilizers and 14.6 kg (dosage) of pesticides are applied per ha; content of COD in water is 15.8 mg per liter; water quality belongs to Category III of GB3838-2002.</p> <p>Market supply of</p>	<p>At least \$1 million in new Government loans to poor and vulnerable populations are designed to have positive impacts on ecosystem functions and biodiversity and at least 80% of loans by value are determined to have been successful in this respect</p> <p>Above funds contribute to biodiversity benefits in relation to live tree trade and herb collection defined under Outcome 2, i.e., they contribute to reduced impacts from target sectors.</p> <p>Annual reduction in application of agricultural fertilizers and pesticides per unit area by 8% from the baseline level and increase in applications of organic agricultural fertilizers and pesticides by 30% by end of project. Content of COD and water quality in HHRB will be kept at the baseline level and improved gradually at the end of the project.</p> <p>Market supply of 3 to 5 commonly used</p>		

Project Goal: To significantly reduce biodiversity loss in China as a contribution to sustainable development				
CBPF / Project indicator	HHRB baseline	HHRB Target	Sources of verification	Risks and assumptions
	commonly threatened herbs are met by wild collected plants	threatened herbs from artificial propagation nurseries in accordance with CITES criteria accounting for 80% of the market;	follow up surveys and reports	
	180 ha of agriculture land is certified as organic	30,000 of hectares of organic teas and other agricultural practices certified;	Baseline surveys and monitoring reports	
<p>Output 3.1: A strategy to capture potential synergies between poverty alleviation lending, ecosystem function conservation and biodiversity conservation</p> <p>3.1.1 Baseline poverty lending survey and assessment</p> <p>3.1.2 Guidelines for poverty lending</p> <p>3.1.3 Preparation of sectoral feasibility assessments, including lending and monitoring criteria</p> <p>Output 3.2: Lending for dual objectives of poverty alleviation & conservation</p> <p>3.2.1 Technical co-operation for loan identification, monitoring and lending</p> <p>3.2.2 Biodiversity and ecosystem function friendly lending</p>				
<p>Outcome 4: Lessons learned at HHRB inform and strengthen ongoing efforts to manage LDAs throughout China</p>	Management framework for conserving biodiversity and ecological functions at ten target IEFAs across China	No differentiation within policy framework of critical areas from generic landscape areas	Initial set of measures designed and being implemented to slow the rate of biodiversity loss at ten or more of the 22 priority IEFAs—covering at least 400,000 km ² and including at least 4 areas defined as high priority for biodiversity conservation. Design of measures is based to a significant degree on replication of lessons learned and adaptation of decision-making tools introduced by the project and in association with CBPF.	Semi-annual project replication reports (beginning year 2)
	Levels of identification, dissemination and uptake of	Pre-project: Lessons from previous attempts to	Revised Guidelines for IEFA Planning incorporating lessons and experiences of HHRB and other IEFAs Guidelines for Policy Measures and Biodiversity Indicators for IEFAs with Water Retention and Biodiversity Values: 10 key lessons from review of 2002-2007 period learned and disseminated	Project learning report Older lessons can be effectively

To significantly reduce biodiversity loss in China as a contribution to sustainable development			
Project Goal:	CBPF / Project indicator	HHRB baseline	HHRB Target
	pre-project and project lessons	encourage ecosystem function conservation have not been fully learned Project: NA	within HHRB
			Project learning reports
			Project learning reports
			Local barriers do not prevent application of lessons learned. Lessons learned are applicable in varied institutional & ecological contexts
<p>Output 4.1: National and local level learning networks generate and gather lessons learned</p> <p>4.1.1 Activities of HHRB lesson learning network</p> <p>4.1.2 Learning from experience of other IEFAs</p> <p>4.1.3 Study tours (China)</p> <p>Output 4.2: Communication, dissemination and exchange of lessons learned among HHRB stakeholders, IEFA managers and, through CBPF network, relevant sectoral agencies (mining, forestry, land use management, etc.)</p> <p>4.2.1 Workshops and training programmes</p> <p>Output 4.3: Revision of Guidelines for IEFA Planning and development of IEFA policy measures, biodiversity indicators and targets with water retention and biodiversity values</p> <p>4.3.1 Development and production of learning materials</p> <p>4.3.2 Revision of the Guidelines for IEFA Planning;</p> <p>4.3.3 policy and institutional analysis and support to preparation of guidelines of policy measures and biodiversity indicators</p> <p>4.3.4 Workshops and seminars and study tours</p>			

SECTION III: TOTAL BUDGET AND WORKPLAN

Part I: Total Budget and Work Plan³⁸

Award ID:	00049070		
Award Title:	PIMS 3934 BD FSP China – Conservation and Sustainable Use of Biodiversity in the Headwaters of the Huaihe River Basin		
Business Unit:	CHN10		
Project Title:	Atlas Project ID 00059594 PIMS 3934 BD FSP China – Conservation and Sustainable Use of Biodiversity in the Headwaters of the Huaihe River		
Implementing Partner (Executing Agency)	Xinyang Municipal Government (XMG)		

OUTCOME 1: Biodiversity and ecosystem function conservation mainstreamed into HHRB planning and monitoring	Xinyang Municipal Government (XMG)	62000	GEF	71200	International Consultants	\$48,000	\$12,000	\$24,000	\$96,000
				71300	Local Consultants	\$56,100	\$32,100	\$21,600	\$134,400
				72100	Contractual services	\$80,000	\$100,000	\$65,000	\$320,000
				71600	Travel	\$36,000	\$41,000	\$21,000	\$125,000
				72200	Equipment & Furniture	0	0	0	\$0
				74500	Miscellaneous Expenses	\$2,500	\$13,500	\$7,700	\$36,200
					Total Outcome 1	\$222,600	\$198,600	\$151,100	\$711,600
OUTCOME 2: Biodiversity and ecological function conservation mainstreamed into	Xinyang Municipal Government	62000	GEF	71200	International Consultants	\$60,000	\$36,000	\$24,000	\$120,000
				71300	Local Consultants	\$39,600	\$60,600	\$21,600	\$155,400
				72100	Contractual services	\$75,000	\$70,000	\$33,000	\$213,000
				71600	Travel	\$64,000	\$60,000	\$12,000	\$151,000

³⁸ Note on shift in budgetary allocations: As compared with the allocations foreseen at the time of PIF approval, the budget for Outcome 4 has increased significantly. This is entirely due to two factors: (i) belated recognition that monitoring and evaluation costs belonged under Outcome 4, (ii) a decision to allocate a long-term national expert wholly to this outcome, rather than to distribute his/her costs across all outcomes. Other outcomes have seen their budgets reduced, albeit with slight differences based on additional refinements in the initial budgetary estimates.

key productive sectors	72200	Equipment & Furniture	\$60,000	0	0	0	0	\$60,000
	74500	Miscellaneous Expenses	\$4,350	\$4,350	\$4,350	\$4,350	\$4,350	\$17,400
		Total Outcome 2	\$302,950	\$230,950	\$111,950	\$70,950	\$716,800	
OUTCOME 3: Biodiversity and ecosystem function considerations are regularly mainstreamed into poverty alleviation strategies and programmes at HHRB	71200	International Consultants	\$24,000	\$36,000	\$12,000	\$12,000	\$84,000	
	71300	Local Consultants	\$69,600	\$27,600	\$30,600	\$30,600	158,400	
	72100	Contractual services	\$45,000	\$35,000	\$30,000	\$30,000	140,000	
	71600	Travel	\$18,400	\$17,000	\$17,000	\$11,000	63,400	
	72200	Equipment & Furniture	0	0	0	0	0	
	74500	Miscellaneous Expenses	\$5,000	\$5,000	\$5,000	\$5,000	20,000	
		Total Outcome 3	\$162,000	\$120,600	\$94,600	\$88,600	465,800	
OUTCOME 4: Lesson-learning networks ensure the generation of lessons learned at HHRB and the free flow of these and similar lessons between HHRB and other ecologically important production landscape areas in China	71200	International Consultants	\$12,000	\$24,000	\$24,000	\$24,000	\$84,000	
	71300	Local Consultants	\$32,100	\$41,100	\$47,100	\$35,100	\$155,400	
	72100	Contractual services	\$35,000	\$35,000	\$72,000	\$70,000	\$212,000	
	71600	Travel		\$35,000	\$35,000	\$14,000	\$84,000	
	72200	Equipment & Furniture	\$0	\$0	\$10,000	\$0	\$10,000	
	74500	Miscellaneous Expenses	\$3,000	\$5,000	\$5,000	\$2,000	\$15,000	
		Total Outcome 4	\$82,100	\$140,100	\$193,100	\$145,100	\$560,400	
PROJECT MANAGEMENT UNIT	71200	International Consultants					0	
	71300	Local Consultants	\$42,000	\$42,000	\$42,000	\$42,000	\$168,000	
	72100	Contractual services	\$7,500	\$7,500	\$7,500	\$7,500	\$30,000	
	71600	Travel	\$12,650	\$12,650	\$12,650	\$12,650	\$50,600	

Part II: Budget Notes

General Cost Factors:

In general, national consultants (NC) are budgeted in the range \$3,000 - \$3,500 per month. This is based on UNDP standard costs. Longer term NC generally budgeted at \$3,000 per month. National assistants are budgeted at \$1,000-1,500 per month.

International consultants (IC) are budgeted at \$500 - 550/day or \$12,000 per month.

Outcome 1:

1. **Local consultancy outputs** (\$134,400, consisting of 32 months of short-term consultant support at the rate of US\$3,000 /month and 16 months of long-term consultant support at US\$2,400 / month):
 - Establishment of terms of references of each member of Technical Advisory Group (TAG) and draft workplans of TAG as inputs to the establishment and operation of TAG (Activity 1.1.2, 1 p/m).
 - Baseline surveys of awareness and capability of LG and TAG members regarding environmental economic values and complementarity of ecosystem functions and biodiversity and series of training workshop materials to raise awareness and build capacity. Awareness and capacity assessment of the LG and TAG members and preparation of a capacity development plan (Activity 1.1.4, 4 p/m).
 - Baseline surveys of awareness and capability of civil society regarding ecosystem functions and biodiversity conservation and series of training workshops to raise the awareness and build the capacity. Awareness and capacity assessment of civil society and preparation of a capacity development plan (Activity 1.1.5, 5 p/m).
 - Development of Municipal land use plan, including biodiversity and ecological functions overlays (Activity 1.2.1, 5 p/m).
 - Development of county-level land use plans, including biodiversity and ecological functions overlays (Activity 1.2.2, 6 p/m).
 - A comprehensive review of national and local laws and policies of relevance to IEFA (Activity 1.2.3, 4 p/m).
 - Development of IEFA plan (Activity 1.2.3, 3 p/m)
 - Technical support to review and redefinition of monitoring standards, focused on integrating biodiversity considerations (Activity 1.3.1, 2 p/m).
 - Technical support and capacity building for newly introduced biodiversity monitoring methods (Activity 1.3.2, 2 p/m).
 - Long-term technical support to implementation of Outcome 1 (Senior Biodiversity Expert, 16 p/m)
2. **International technical assistance outputs** (\$96,000, consisting of 8 consultant months, at the rate of US\$12,000/month; for travel and per diem costs, see travel budget).
 - Technical support to Technical Advisory Group (Activity 1.1.2, 1 p/m)
 - Raise awareness and build capacities of LG and TAG members regarding environmental economic values and complementarity of ecosystem functions and biodiversity (Activity 1.1.4, 1 p/m)

- Provide technical support and recommendations on incorporating international best practices to national sub-contractor(s) and local Government department(s) responsible for developing biodiversity overlays for municipal and county-level land use plans (Activity 1.2.1-1.2.2, 2 p/m)
 - Technical support for development of IEFA establishment plan (Activity 1.2.3, 1 p/m)
 - Provide technical support and recommendations on incorporating international best practices to national sub-contractor(s) and local Government department(s) responsible for development and pilot implementation of revised IEFA-specific ecological and biodiversity monitoring standards (Activity 1.3.1-1.3.2, 3 p/m)
3. **Contractual services** US\$320,000 has been budgeted for contractual services, to be allocated as follows:
- One or more provincial-level institutions are contracted to provide expert technical support to supplement local government expertise on TAG (Activity 1.1.2 - \$55,000).
 - Series of capacity building workshops to be delivered by national-level experts to strengthen the awareness of officials and civil society (Activity 1.1.4 - \$75,000).
 - Conduct field survey for preparation of Municipal-level biodiversity overlay and produce overlays (Activity 1.2.1 - \$50,000).
 - Conduct the field survey of biodiversity overlays and workshops, and the overlays produced (Activity 1.2.2 - \$60,000).
 - Fulfilled *Construction Plan for HHRB* IEFA and make assessment and policy suggestion to the production sectors such as agriculture, forestry, mining and tourism of Xinyang Municipality (Activity 1.2.3 - \$30,000).
 - Review and redefinition of monitoring standards, focused on integrating biodiversity considerations (Activity 1.3.1 - \$20,000)
 - Support to implementation of revised monitoring programme (Activity 1.3.2 - \$30,000)
4. **Travel:** (\$125,000) \$85,000 has been budgeted for travel under this outcome by national consultants, sometimes as part of a multidisciplinary team, to undertake the required reviews, stakeholder consultations, capacity assessments, training material development and actual training and field based work. Consultants will be selected on a competitive basis and may not necessarily be based in Xinyang or the project sites. Consultants would need to travel to Beijing where the MEP and other ministries related to IEFA are located, as well as to the field sites of the five counties within Xinyang. Moreover, travel to the different field sites (in five counties) will be necessary for both the local consultants and international consultants to be able to deliver the outputs planned under this outcome. An additional \$40,000 has been budgeted for travel and per diem of international consultants (based on \$5,000 per p/m).
5. **Miscellaneous** \$36,200 has been budgeted under miscellaneous for Outcome 1. The precise costs of the field trials are difficult to anticipate as much will depend on the site-specific conditions, including such things as labour charges, the nature and amount of equipment and other materials and goods required for land use planning. Travel and other costs are also likely to rise over the life of the project due to inflation and foreign currency fluctuations. The project will look for cost-savings wherever possible, particularly in relation to travel to the field sites, for example, where it makes sense to pool activities required to deliver outputs under different outcomes and where it is possible to identify qualified consultants capable of delivering these outputs to reduce the number of visits to a particular field site.

Field surveys are required to determine the baselines and facts about land use planning. Various specialized materials and goods will be required for conducting these surveys and for cultivation trials in different sites spread over the HHRB.

Outcome 2:

6. **Local consultancy outputs** (\$155,400, consisting of 39 months of short-term consultant support at the rate of US\$3,000 /month and 16 months of long-term consultant support at US\$2,400 / month):
 - Environmental economic studies (Activity 2.1.2, 8 p/m).
 - Trigger price analysis of cost effectiveness of mainstreaming (Activity 2.1.3, 3 p/m)
 - Review of existing legal mechanisms and regulatory impact assessments for key sectors, such as forestry, mining, agriculture and tourisms (Activity 2.2.1, 6 p/m).
 - Development of IEFA-specific policies, regulations, standards and enforcement strategies (Activity 2.2.2, 5 p/m).
 - Pilot incentive programs (Activity 2.2.3, 7 p/m).
 - Awareness raising re. new regulatory environment and associated incentives (Activity 2.3.1, 4 p/m)
 - Capacity building for ecosystem function & biodiversity-friendly production methods (Activity 2.3.2, 6 p/m)
 - Long-term technical support to implementation of Outcome 2 (Senior Biodiversity Expert, 16 p/m)
7. **International technical assistance outputs** (\$120,000, consisting of 10 consultant months, at the rate of US\$12,000/month; for travel and per diem costs, see travel budget)
 - Working with national consultants (see above), develop environmental economic valuation analyses of total economic value of biodiversity and ecological functions in HHRB (Activity 2.1.2, 3 p/m)
 - Working with national consultants (see above), prepare a trigger price analysis of cost effectiveness of mainstreaming (Activity 2.1.3, 1 p/m)
 - Provide technical support and recommendations on incorporating international best practices to national sub-contractor(s) and local Government department(s) responsible for development and pilot implementation of IEFA-specific policies, regulations, standards and enforcement strategies (Activity 2.2.2, 2 p/m)
 - Provide technical support and recommendations on incorporating international best practices to national sub-contractor(s) and local Government department(s) responsible for development and implementation of pilot incentive programs⁴⁰ (Activity 2.2.3, 2 sectoral experts, 1 p/m each)
 - Provide capacity building support for ecosystem function and biodiversity friendly production methods (Activity 2.3.2, 2 p/m)
8. **Contractual services** (US\$213,000 has been budgeted for contractual services) to be allocated as follows:
 - Conduct assessments of impacts, by sector such as agriculture, forestry, mining and tourism, on ecological functions and biodiversity (Activity 2.1.1 - \$55,000).

⁴⁰ Expertise to be specified based on target sectors identified during implementation phase.

- Hold relevant workshops on the sectors such as agriculture, forestry and mining to make environmental economic studies (Activity 2.1.2 - \$20,000).
 - Hold workshops on regulatory impact assessments for key sectors such as agriculture, forestry, mining and tourism (Activity 2.2.1 - \$20,000).
 - Workshops and discussions on pilot incentive programs (Activity 2.2.3 - \$26,000).
 - Workshops and discussions on awareness raising re. new regulatory environment and associated incentives (Activity 2.3.1 - \$32,000).
 - Trainings and workshops on capacity building for ecosystem function & biodiversity-friendly production methods (Activity 2.3.2 - \$60,000).
9. **Travel** (\$151,000) \$101,000 has been planned under this outcome in Years 1-4 to enable national consultants and contracted local companies/NGOs to travel to the 5 demonstration counties since much of the work planned under this outcome needs to be conducted within HHRB, but there also needs to be coordination between the Xinyang and with relevant provincial and central government agencies as well as relevant technical agencies. It is highly unlikely that it will be possible to identify suitable consultants or local companies and NGOs from within the project sites given the specialized nature of the planned work and the relatively low capacity of the demonstration sites, which are among the least developed in China. Overseas study tour will be needed to learn from the advanced experiences of developed countries. Additionally, it will be necessary to travel to each of the five field sites in order to develop comprehensive baseline and to establish appropriate regulations and policies to adapt to the real situation of the demonstration counties. An additional \$50,000 has been budgeted for travel and per diem of international consultants (based on \$5,000 per p/m).
10. **Equipment** \$60,000 has been planned under this outcome in Year 1. Specialized equipments will be needed to raise awareness re. new regulatory environment and associated incentives.
11. **Miscellaneous** A small amount (\$17,400) has been budgeted under the miscellaneous head for Outcome 2. The project will look for cost-savings wherever possible, particularly in relation to travel to the states and field sites, and where it makes sense to pool activities required to deliver outputs under different outcomes. Also see Budget Note 5.

Outcome 3:

12. **Local consultancy outputs** (\$158,400, consisting of 40 months of short-term consultant support at the rate of US\$3,000 /month and 16 months of long-term consultant support at US\$2,400 / month):
- Baseline poverty lending survey and assessment (Activity 3.1.1, 3 p/m).
 - Guidelines for poverty lending (Activity 3.1.2, 3 p/m).
 - Preparation of (six) sectoral feasibility assessments, including lending and monitoring criteria (Activity 3.1.3, 14 p/m).
 - Technical co-operation for biodiversity-friendly loan identification, monitoring and evaluation (Activity 3.2.1, 20 p/m).
 - Long-term technical support to implementation of Outcome 3 (Senior Biodiversity Expert, 16 p/m)
13. **International technical assistance outputs** (\$84,000, consisting of 7 consultant months, at the rate of US\$12,000/month; for travel and per diem costs, see travel budget).

- Provide technical support and recommendations on incorporating international best practices to national sub-contractor(s) and local Government department(s) responsible for designing guidelines and preparing six sectoral assessments for a biodiversity-friendly poverty lending programme (2 experts, 3 p/m, 3 missions)
 - Provide technical support and recommendations on incorporating international best practices to national sub-contractor(s) and local Government department(s) responsible for loan identification, monitoring and evaluation of a biodiversity-friendly poverty lending programme (4 p/m, 3 missions)
14. **Contractual services** (US\$140,000 has been budgeted for contractual services) to be allocated as follows:
- Conduct field baseline poverty lending survey and assessment and hold relevant workshops (Activity 3.1.1 - \$15,000).
 - Conduct surveys, assessments and workshops on borrowers that will be grouped by 'theme' to improve cost-effectiveness (Activity 3.2.1 - \$125,000).
15. **Travel** US\$ 63,400 has been budgeted under this outcome in Years 1-4 as much of the planned work is field-based. US\$35,000 of the total travel budget is allocated to international consultants.
16. **Miscellaneous** \$20,000 has been budgeted for miscellaneous expenses to cover unanticipated costs. Also see Budget Note 5.

Outcome 4:

17. **Local consultancy outputs** (\$155,400, consisting of 21 months of short-term consultant support at the rate of US\$3,000 /month and 33 months of long-term consultant support at US\$2,800 / month):
- Support for activities of HHRB lesson learning network (Activity 4.1.1, 2 p/m).
 - Learning from experience of other IEFAs (Activity 4.1.2, 2 p/m).
 - Support for M&E, including mid-term evaluation, final evaluations, lessons learnt assessments, logframe revision exercise with regard to replication of successful models of conservation and sustainable use of biodiversity resources.(Activity 4.1.1, 4.1.2 and 4.2.1, 4 p/m)
 - Legal and institutional analysis for *development of IEFA policy measures, biodiversity indicators and targets with water retention and biodiversity values*; (Activity 4.2.3, 8 p/m)
 - Support to revision of Guidelines for IEFA Planning; (Activity 4.2.2, 2 p/m)
 - Support for workshops and training programmes. (Activity 4.3.1, 3 p/m)
 - Long-term technical support to implementation of Outcome 4 (National / Knowledge co-ordinator , 33 p/m)
18. **International technical assistance outputs** (\$84,000, consisting of 7 consultant months, at the rate of US\$12,000/month; for travel and per diem costs, see travel budget).
- Working closely with national expert for national and knowledge co-ordination, provide technical support and recommendations to local Government, MEP and Project Management Unit on study on policy measures and preparation of biodiversity indicators and targets for all IEFAs, and development and implementation of a lesson learning, dissemination and replication strategy involving HHRB and other IEFAs across China, including: oversight of lesson learning activities; sectoral specific liaison; technical

support for development of learning materials; dissemination and awareness raising strategies (5 p/m)

- Support for M&E, particularly mid-term and final evaluations (2 p/m)

19. **Contractual services** (US\$212,000 has been budgeted for contractual services) spread over Years 1-4 will be used to:

- Project M&E, particularly mid-term and final evaluations (Activity 4.1.4 -\$110,000).
- Evaluate and adapt or develop training materials and learning materials, and disseminate such materials and conduct some key training (Activity 4.2.1 - \$22,000).
- Series of publicity by broadcasts, TVs, newspapers and CDs and publicity promotions produced and disseminated (Activity 4.2.2 - \$50,000).
- Series of workshops, seminars and activities on consultation with stakeholders on the draft *development of IEFA policy measure and biodiversity indicators with water retention and biodiversity values*. document and disseminate project results and key lessons learned nationally and internationally (Activity 4.3.1 - \$30,000).

20. **Travel** Travel by national and international consultants (\$84,000 over 4 years, of which \$35,000 is allocated to international consultants travel) will be required to develop the replication strategy, conduct monitoring and evaluation, to test the replication methods and materials as well as to allow exchange visits between key actors and beneficiaries from project counties and the proposed replication counties.

21. **Equipment and furniture** A small amount is budgeted for equipment and furniture (\$10,000) in order to ensure effective dissemination and uptake of successful project approaches and models in the replication counties. A variety of media (visual, TV, radio, etc.) will be used for dissemination purposes to ensure that information is communicated in local languages and through a variety of media and not just written documents given the relatively low literacy rates in many rural parts of China.

22. **Miscellaneous** A small amount has been budgeted for miscellaneous expenses (\$15,000) to cover unanticipated costs. Also see Budget Note 5.

Project Management:

23. **Local Consultants:** \$168,000 has been allocated to cover the costs of staff of the Project Management Office (PMO) in Xinyang (remaining project staff to be funded by Government co-financing).

24. **Office supplies:** A total of \$24,000 has been budgeted for office supplies. To make the PMO operational it is needed the supplies of stationeries, communication, audiovisual, printing costs.

25. **Contractual services:** \$30,000 has been budget for financial audits.

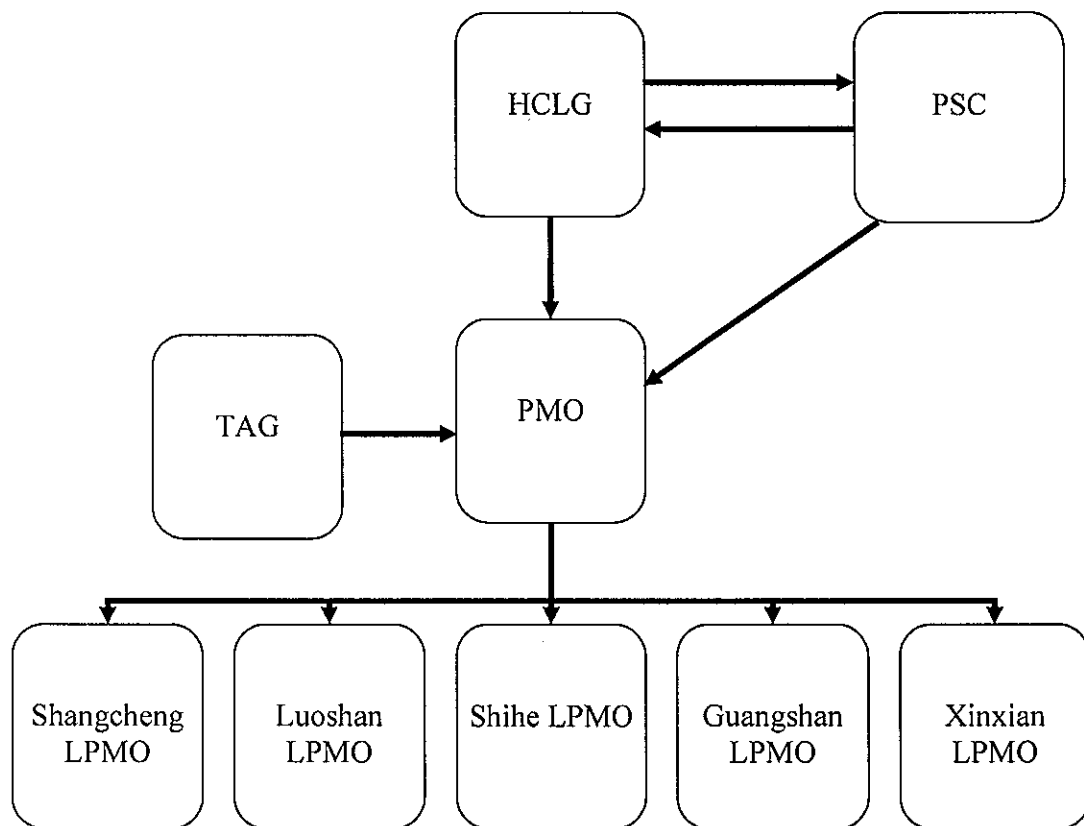
26. **Travel:** A total of \$50,600 has been budgeted for travel by staff of the PMO to allow for effective project coordination between the PMO and the different field sites in each county.

SECTION IV: ADDITIONAL INFORMATION

Part I: Other agreements

Please see separate file

Part II: Organigram of Project



Part III: Terms of References for Key Project Staff

DRAFT Terms of reference for key project staff

1. Project Director (Part-time, total 24 months during life of the project)

The Project Director is ultimately responsible and accountable to UNDP for signing the agreement and implementation of the proposed project on behalf of XMG, the Implementing Agency. S/he will act as the focal point and responsible party for implementation of the project and will ensure that all partners' committed contribution to the project is available to the project in a timely manner. S/he will also be responsible for policy support and coordination of all the relevant sectors.

2. Project Associate Director (Part-time, total 24 months during life of the project)

The Project Associate Director is concretely responsible for implementation of the proposed project. S/he will assist Project Director to be responsible for signing the agreement, related quarterly, annual or financial report, work plan and budget of the proposed project on behalf of XMEEA, the Implementing Agency, or when the Project Director is absent, s/he will fully act the duties of the Project Director. S/he will act as one of the principals for project funds mobilization and for advances and expenditure.

In particular, the Project Associate Director will:

- ◆ Help to take responsibility for all project activities and for coordination with all partners.
- ◆ Participate in and represent the project on the Leading Group and PSC when the Project Director will be absent.
- ◆ Discuss project implementation with the Project Manager and the National Experts on a day-to-day basis and with the International Experts on a regular basis.
- ◆ Be responsible for the annual and quarterly work plans for the project and request quarterly advance payments from UNDP-CO according to UNDP procedures.
- ◆ Be responsible and accountable for advance funds received and submit required financial reports to UNDP-CO.
- ◆ On advice of the Experts, approve technical and work reports prior to publication and/or circulation.
- ◆ Ensure that the workplans are implemented according to the timeframes identified and that activity monitoring is full and effective.
- ◆ Represent the XMG in official meetings regarding the project.
- ◆ Ensure that there is a clear and unambiguous decision-making process for project implementation so that project activities are planned well in advance and necessary funds, personnel and equipment are provided in good time for implementation of project activities.

3. Project Manager (Full-time, 48 months)

The Project Manager will be based in Xinyang and will have direct responsibility for implementation of Outcomes 1-4 under the leadership of the Project Director or Associate Director.

The project manager (PM) will be in charge of assisting Project Director or Associate Director to oversee the day-to-day project implementation and management of project activities, organizing and overseeing national and international consultant input, and overseeing monitoring and evaluation and ensuring that the project is on track. One of the most important responsibilities of the project manager will be working effectively with members of all partners to ensure that

project activities proceed on schedule and with high quality. The PM will be part of the Project Management Office (PMO) and work closely with the Senior Biodiversity Specialist and other staff. The PM will accept the leadership of the Project Director or Associate Director and report to them.

Key responsibilities will include:

- ◆ Assist to the Project Director or Associate Director to lead the PMO to enable it to function efficiently and fulfil its mandate.
- ◆ Coordinate the planning, management and implementation of project activities as set out in the project document and as guided by the Project Steering Committee.
- ◆ Work in close collaboration with the partners to ensure coherence between all the project components and partners.
- ◆ Ensure the sharing and flow of information in a transparent manner among all the project stakeholders as appropriate.
- ◆ Coordinate the preparation of detailed annual work plans consistent with the envisaged outputs and objectives of the Project Document that incorporates the work plans prepared by all the implementing partners.
- ◆ Manage the project budget under the leadership of the Project Director and Associate Director and ensure that timely financial reports are submitted by all implementing partners.
- ◆ Participate in the recruitment of project personnel, subcontractors and consultants and supervise project personnel to enable strong quality control.
- ◆ Assist the work of the procurement and maintenance of project equipment.
- ◆ Supervise the timely preparation and submission of quarterly and annual progress reports, work plans, budgets, and financial reports by all the implementing partners.
- ◆ Ensure regular liaison with government agencies, and all project partners.
- ◆ Undertake monitoring of the project, facilitate internal and external evaluations and promote information dissemination and sharing of lessons learnt through the implementation of this project.
- ◆ Support resource mobilization efforts and development of partnerships.

4. National / Knowledge Coordinator (Part-time in Beijing, total 33 months during life of the project)

Under the leadership and supervision of Project Director or Associate Director, s/he will be responsible for coordination and communication of all sectors in the national level. S/he will be based in the PMO of the GEF Institutional Strengthening project of CBPF, also responsible for coordination with Theme 4 (biodiversity conservation outside protected areas) of CBPF. S/he will be responsible for the relevant activities of Outcome 4 and seek the policy and technical support in the national level. Specifically these involve:

- ◆ Technical or knowledge backstopping to the project in the national level.
- ◆ Participate in the Leading Group and PSC.
- ◆ Report financial and technical progress of Outcome 4 to the Project Director or Associate Director of the PMO in Xinyang on a quarterly basis.
- ◆ Direct the work of all consultants and ensure agreed outputs are met on time, with the Project Manager and the national experts.
- ◆ Facilitate smooth links between the PMO, IS project and UNDP, and communicate with them as required both formally and informally.
- ◆ Provide on-the-job training, guidance and mentoring to project staff and counterparts.

5. Senior Biodiversity Advisor (Full-time, 48 months)

Working under the supervision of the Project Manager, the Senior Biodiversity Advisor will provide technical advice leading to common understanding of the project's direction, the development of coherent work plans, quality review of project outputs and required monitoring and reporting.

Specifically the Senior Biodiversity Advisor will have the following tasks:

- ◆ Provide technical guidance and advice to all project staff and partners, on biodiversity conservation of HHRB, capacity development, project implementation and management.
- ◆ Contribute to training courses, workshops and other technical meetings.
- ◆ Take a major role in preparation of project work plans and progress reports, undertaking field missions when necessary.
- ◆ To assist the Project Manager in all phases of project implementation to prepare technical report for the Project Director or Associate Director.
- ◆ With the Project Manager and the International experts support all the work of the project and ensure agreed outputs are met on time.
- ◆ Facilitate smooth links between the PMO and UNDP-CO, and communicate with them as required both formally and informally.
- ◆ Provide on-the-job training, guidance and mentoring to project staff and counterparts
- ◆ Undertake the responsibility of the International experts when the latter is absent.
- ◆ Lead and/or participate in the implementation activities that require biodiversity skills and knowledge, such as natural resources policy, wetland and bird resources protection, and forestry ecosystem and Chinese herbal medicines planting.
- ◆ Technical liaison with the work of all partners.

6. Administrative Officer/Translator (Full-time, 48 months)

Working under the supervision of the Project Director or Associate Director the Administrative Officer/translator will be responsible for routine administrative procedures and daily management of the project office, the paper and computer archiving systems and day to day interpretation and translation.

In particular, the Administrative Officer/Translator will:

- ◆ Record and file incoming and outgoing memos, letters, faxes and e-mails, including attached documents, ensuring adequate back-up facilities for electronic archives and reasonable balance between paper and electronic archiving practices.
- ◆ Maintain administrative files of the project in an orderly fashion.
- ◆ Update and maintain the office computer network and database so that files are backed up regularly and all project reports and other documents are easy to locate and can be produced quickly in paper and electronic versions on demand.
- ◆ Arrange for the periodic maintenance of office equipment (photocopiers, telephones, and fax machines); keep control of the maintenance system for office equipment; organize and keep catalogues, guarantees, operating instructions and manuals for all project equipment.
- ◆ Develop procurement orders and process these according to UNDP requirements.
- ◆ Keep minutes of project meetings.
- ◆ Translate written materials from English to Chinese and from Chinese to English and submit the translations in printed and/or electronic form as required.
- ◆ Interpret for project staff and consultants and for visitors to the project, as required. Interpretation will normally be sequential and not simultaneous.

- ◆ Review translated documents received from other translators working for the project on contract and either return for revision or revise in house as appropriate.

7. Information Officer (Full-time, 48 months)

Working under the supervision of the Project Director or Associate Director, the Information Officer will be responsible for internal and external publicity about the project and the field activities of the demonstration counties in general.

In particular, the Information Officer will:

- ◆ Take charge of project extension and publicity including but not limited to the following: 1) Pay great efforts to strengthen the coordination and communication with the National/Knowledge Coordinator in Beijing. 2) Be responsible for the project website design and operation, and ensure that the website is kept up to date with recent developments on the project and in related field activities of demonstration counties and that it is easily accessible in China and worldwide. 3) Edit a printed quarterly project newsletter including contributions solicited and gathered from project staff, consultants and partners and others. 4) Develop knowledge sharing practices for the project.
- ◆ Be responsible for collection of news and documents relevant to the project by using the internet and a network of contacts. Ensure mutual exchange of information between the project and relevant government agencies inside and outside HHRB.
- ◆ Act as liaison for the project with the press, including newspapers, TV and radio and ensure that the project gains appropriate publicity in the media.

8. Project Accountant (Full-time, 48 months)

Working under the supervision of the Project Director or Associate Director, the Project Accountant will:

- ◆ Maintain financial records and monitoring systems to record and reconcile expenditures, balances, payments, statements and other data.
- ◆ Prepare recurring reports as scheduled and special reports as required for budget preparation, audits and other reasons.
- ◆ Maintain an inventory of capital equipment and prepare the annual inventory report.
- ◆ Prepare budget revisions to reflect previous and planned expenditure.
- ◆ Advise and assist project staff on their allowances, salaries, travel claims and other financial matters.
- ◆ Give basic instruction in accounting procedures to consultants and recipients of small grants.
- ◆ Facilitate the annual audit.

9. Project Cashier (Full-time, 48 months)

Working under the supervision of the Project Director or Associate Director, the Project Cashier will take charge of the following aspects of office administration:

- ◆ Keep control of stationery and office supplies and distribute to office staff as necessary.
- ◆ Pays office bills on time.
- ◆ Assist consultants and staff members to arrange their accommodation and travel.
- ◆ Make practical arrangements for all seminars and other meetings.
- ◆ Carry out all required duties as cashier, under the supervision of the Accountant.

Part IV: Stakeholder Involvement Plan

1. Stakeholder identification

Stakeholders include international agencies, and national, provincial and local government authorities, relevant scientific and research institutes, non-governmental organization, private sectors and local communities. The following sectors/groups are important stakeholders in this project: environmental protection, forestry, agriculture, land and resources, tourism, finance, DRC, water resources and poverty alleviation, local private sectors, communities and NGOs.

List of stakeholders

Level	Stakeholders
Central government bodies	Ministry of Finance (MOF), Ministry of Land and Resources (MLR), Ministry of Water Resources (MWR), Ministry of Agriculture (MOA), State Forestry Administration (SFA) and the Ministry of Environmental Protection (MEP)
Provincial government bodies	Henan Provincial Government: department of environmental protection, forestry, agriculture, land and resources, tourism, finance, DRC, water resources and poverty alleviation; The provinces in which national IEFA to be established
Local government bodies	Xinyang Municipal Government: department of environmental protection, forestry, agriculture, land and resources, tourism, finance, DRC, water resources and poverty alleviation County-level Governments in HHRB and the relevant governments regarding to biodiversity conservation.
Local communities	Farmers, and other local residents.
Private sectors	Interested private sectors, such as flowers and trees companies, TCM production enterprises, both inside and outside the demo counties
International organizations	United Nations Development Programme (UNDP); Global Environment Facility (GEF); European Union (EU)
NGO	Xinyang Municipal Eco-Environmental Association Women's Associations at municipal and county levels
Scientific and research institutes	Institute of Botany, Chinese Academy of Sciences (CAS), Institute of Zoology, CAS; other universities and colleges

Main local stakeholders are described below:

1.1 *Xinyang Municipal Environmental Protection Bureau*

It is a governmental department set up by XMG for implementing national regulations and laws and policies of environmental protection. In recent years it has conducted a series of measures to

control and monitor pollution of water resources, soil, air, radiation and nuclear. It contributed much to the clear water, green mountains in HHRB. It will participate in the implementation of the project to establish IEFA to conserve biodiversity and ecosystem function in HHRB.

1.2 Xinyang Municipal Forestry Bureau

It is a governmental department set up by XMG for implementing national regulations and laws and policies of forestry and ecological construction, protecting wildlife and wetland resources. In recent years, it has implemented a series of national and international projects about forestry construction and ecology conservation, including integrated development of mountain area, Huaihe River Protection Forests Project, World Bank Loan-Supported Afforestation Project, Reuse Farmland for Afforestation Project, etc., but these projects paid little attention to biodiversity conservation. Presently, it is conducting collective forest tenure reform and formulating Xinyang Municipal Forestry Eco-City Construction Plan. Through the project input, biodiversity conservation can be integrated into the reform to provide a possibility for HHRB biodiversity conservation.

1.3 Xinyang Municipal Agricultural Bureau

It is a governmental department set up by XMG for implementing national agricultural laws and regulations and policies, giving guidance to rural economic development, supervising management of food crops seeds, chemical fertilizer and pesticide. In recent years, it has conducted a certain work about original environments of wild food crops. Firstly, a 33-ha. wild Lotus original environment protection zone, and a 53-ha. wild Soybean original environment protection zone were established. Another 70-ha. wild Soybean original environment protection zone is being established. Secondly, it organized experts to survey the wild agricultural plants in National Key Protected Wild Agricultural Plants Summary. Meanwhile it conducted TCM resources survey and preparation for TCM development plan. Meanwhile following the arrangement of higher organization, it conducted the work of prevention and cure of agricultural external or foreign pernicious species outbreak.

1.4 Xinyang Municipal Land and Resources Bureau

It is a governmental department set up by XMG, responsible for the local land use planning and exploitation of the local mineral resources and supervision. In recent years, it has been conducting the Municipal land use planning, which will be finished by the end of 2009. It will participate in the implementation of the project to mainstream biodiversity conservation into the local land use planning, and will establish a series of regulations and incentives to guide exploitation of mineral resource to achieve balanced development of mineral resources and biodiversity conservation.

1.5 Xinyang Municipal Poverty Alleviation Development Office

It is a governmental department set up by XMG for carrying out the poverty alleviation policy from higher organization, administering poverty alleviation project and supporting farmers to be lifted out of poverty and backwardness to riches. The Government of China puts financial poverty alleviation 60 million RMB yuan (aid given gratis) into Xinyang Municipality every year, for example, 68 million RMB yuan in 2006 and 66.41 million RMB yuan in 2007. In addition, there are agricultural discount loan 80 million RMB yuan every year. Therefore, 140 million RMB yuan poverty alleviation capital is totally put in Xinyang Municipality every year. These capitals are used to build road for poor villages, to rebuild farmland irrigation works to address drinkable water of man and livestock, and to conduct labour force technique training. To date there is little attention paid to sustainable use of biodiversity, and no money put in related field of biodiversity conservation.

1.6 Xinyang Municipal Tourism Bureau

It is a governmental department set up by XMG for implementing national tourism policy, law and regulation, managing tourism resources and tourism development. Presently, its main task is developing tourism resources to promote tourism development. It pays little attention to biodiversity conservation and lacks awareness of eco-tourism. Moreover, there is no money invested in this aspect. Therefore, it is very necessary to enhance the ideas of conservation and sustainable use in tourism industry.

1.7 Xinyang Municipal Water Resources Bureau

It is a governmental department set up by XMG for implementing national laws and regulations and policies regarding water resources use and protection. It is responsible for water resources use, water conservancy and aquatic species protection. It will participate in the project to protect the biodiversity and water ecosystem function conservation in HHRB.

1.8 Xinyang Women's Federation

Xinyang Women's Federation is a quasi-governmental organization seeking to protect the rights of women and promote gender equality. This association has branches at county and township levels. It will be invited to participate in the Leadership Group meetings to ensure that needs and interests of aging people and women are adequately addressed.

1.9 Henan Jinghua Biological Engineering Limited Company (JBEC)

JBEC was established in March 2001, with registered capital 30 million RMB yuan and now it is staffed with 1200 persons. It mainly deals in tissue culture, selective breeding and management of the seed sources of plants such as nursery stock and flower, vegetable etc; in production of biological pesticides, organic fertilizers and garden machinery; and in garden projects, biological techniques training and new technique extension, etc.

Under the company, there are three full capital subsidiary companies: Jinghua Flowers and Trees Company, Jinghua Garden Filiale and Jinghua Layout and Design Institute and several departments such as engineering department, general trade union office and financial department. At present, the company has 197 ha. nursery stock and flower culture base, it has cultured and spread 300 kinds of flowers and seedlings. These years the company has successfully applied and implemented several large and medium sized ecological construction projects, fulfilled the layout, design construction of several garden greening and biological projects and the related popular science education, technique consultation and training, with good economic and social benefits.

The company will participate in the project, mainly involving in the activities of Activity 2.2.3 and Activity 2.3.2. It will put into 500,000 USD dollars in kind.

2. Information dissemination, consultation during project preparation

Several rounds of discussions were held during the preparatory phase. Initial discussions were held in 2006, at the time of preparation of a PDF-A proposal. Follow up discussions were held on three occasions in 2007/08. These involved a wide variety of stakeholders, including local and national officials, experts and individuals from the private sector. In Xinyang Municipality, stakeholder consultations were held in Xinyang city as well as in two counties. In addition to

Government officials, discussions were held with private sector representatives from the mining, medicinal plants, agriculture and horticulture sectors.

3. Stakeholder participation planned during implementation and evaluation

The local stakeholders such as environmental protection, land and resources, agriculture, forestry will participate in the activities of Outcome 1. The productive sector agencies such as agriculture, mining, forestry and tourism, and some private sectors will actively participate in the activities of Outcome 2. The poverty alleviation office and some local communities will participate in activities of Outcome 3 to produce alternative livelihoods. The Foreign Economic Cooperation Office of the MEP will involve in implementation of Outcome 4.

Special days will be targeted to generate publicity. These include holidays and festivals, recognition days such as Earth, Biodiversity, Environment, Wetlands Day, Women's Day and Children's Day. The progress and outcomes of the project will be disseminated through some media publicity, including in Henan Daily, Xinyang Daily, Henan television, Xinyang television and website of XMG, and using the network of HHRB regularly update online contents.

4. Stakeholder participation in decision making and implementation

Relevant departments at national and provincial levels will be involved in coordination and implementation.

Key local stakeholders will participate in PSC and/or BCLCs meetings, and all of them will be directly involved in the implementation of relevant project components. Therefore, all will be active participants in the project and will help steer it in desired direction. All will participate in the relevant demonstration activities and training, making and revising some related regulations and incentives to adapt to the establishment of IEFAs.

5. Social issues

Local population with varied socio-economic background is the key stakeholder and will be involved in some plans related to biodiversity conservation and other key activities such as poverty alleviation to raise their awareness, and will receive information from the project. Local communities will participate directly in the demonstration activities, especially alternative livelihoods.

It should be noted that in these project objectives, particular attention shall be given to the participation of women. The three national nature reserves in HHRB will be selected as students' extra-curricular teaching bases. Teachers and selected students (those studying biology classes with an interest in the subject) will visit these sites to enhance their understanding of biodiversity.



Part V: Applying the GEF Tracking Tools in GEF-4

Note: Given changes in the GEF's biodiversity strategy in GEF-4, a slightly modified Tracking Tool for this strategic objective has been developed. Please use this tool for all GEF-4 funded projects that fall under this strategic objective.

Objective: To measure progress in achieving the impacts and outcomes established at the portfolio level under the biodiversity focal area. The following targets and indicators are being tracked for all GEF-4 projects submitted under Strategic Objective Two and the associated Strategic Programs

Impact and Outcome Indicators for Strategic Objective Two and Associated Strategic Programs

Strategic Objective	Expected Long-Term Impacts	Indicators
To mainstream biodiversity conservation in production landscapes/seascapes and sectors	Conservation and sustainable use of biodiversity incorporated in the productive landscape and seascape	<ul style="list-style-type: none"> • Number of hectares in production landscapes/seascapes under sustainable management but not yet certified⁴¹ • Number of hectares/production systems under certified production practices that meet sustainability and biodiversity standards • Extent (coverage: hectares, payments generated) of payment for environmental service schemes
Strategic Programs for GEF-4 under Strategic Objective Two	Expected Outcomes	Indicators
4. Strengthening the policy and regulatory framework for mainstreaming biodiversity	<ul style="list-style-type: none"> • Policy and regulatory frameworks governing sectors outside the environment sector incorporate measures to conserve and sustainably use biodiversity 	<ul style="list-style-type: none"> • The degree to which polices and regulations governing sectoral activities include measures to conserve and sustainably use biodiversity as measured through the GEF tracking tool

⁴¹ This indicator will measure the coverage of management systems in production landscapes and seascapes that are in a transition process to certified production practices.

GEF-4 Tracking Tool for GEF Biodiversity Focal Area Strategic Objective Two:
Mainstreaming Biodiversity Conservation in Production Landscapes/Seascapes and Sectors

Strategic Programs for GEF-4 under Strategic Objective Two	Expected Outcomes	Indicators
5. Fostering markets for biodiversity goods and services	<ul style="list-style-type: none"> • Markets created for environmental services • Global certification systems for goods produced in agriculture, fisheries, forestry, and other sectors include technically rigorous biodiversity standards 	<ul style="list-style-type: none"> • Number and extent (coverage: hectares, payments generated) of new payments for environmental service schemes created • Published certification systems that include technically rigorous biodiversity standards

Rationale: Project data from the GEF-4 project cohort will be aggregated for analysis of directional trends and patterns at a portfolio-wide level to inform the development of future GEF strategies and to report to GEF Council on portfolio-level performance in the biodiversity focal area.

Structure of Tracking Tool: Each tracking tool requests background and coverage information on the project and specific information required to track the indicator sets listed above.

Guidance in Applying the Tracking Tool: The tracking tools are applied three times: at CEO endorsement⁴², at project mid-term, and at project completion.

In GEF-4, we expect that projects, which fall clearly within Strategic Objectives and support specific Strategic Programs under each Strategic Objective hence only one tracking tool, will need to be completed.

On *very rare occasions*, projects make substantive contributions to more than one strategic objective. In these instances, the tracking tools for the relevant strategic objectives should be applied. It is important to keep in mind that the objective is to capture the full range of a project's contributions to delivering on the targets set for each of the strategic priorities. The GEF Implementing Agency/Executing Agency will guide the project teams in the choice of the tracking tools. Please submit all information on a single project as one package (even where more than one tracking tool is applied).

Multi-country projects may face unique circumstances in applying the tracking tools. The GEF requests that multi-country projects complete one tracking tool per country involved in the project, based on the project circumstances and activities in each respective country. The completed forms for each country should then be submitted as one package to the GEF. Global projects which do not have a country focus, but for which the tracking tool is applicable, should complete the tracking tool as comprehensively as possible.

The tracking tool does not substitute or replace project level M&E processes, or GEF Implementing Agencies'/Executing Agencies' own monitoring processes. Project proponents and managers will likely be the most appropriate individuals to complete the Tracking Tool, in collaboration with the project team, since they would be most knowledgeable about the project.

⁴² For Medium Sized Projects when they are submitted for CEO approval.

GEF-4 Tracking Tool for GEF Biodiversity Focal Area Strategic Objective Two:
Mainstreaming Biodiversity Conservation in Production Landscapes/Seascapes and Sectors

Staff and consultants already working in the field could also provide assistance in filling out the Tracking Tool.

Submission: The finalized tracking tool will be cleared by the GEF Implementing Agencies and Executing Agencies before submission. The tracking tool is to be submitted to the GEF Secretariat at three points:

- 1.) With the project document at CEO endorsement⁴³;
- 2.) Within 3 months of completion of the project's mid-term evaluation or report; and
- 3.) With the project's terminal evaluation or completion report, and no later than 6 months after project closure.

I. Project General Information

1. Project Name: Conservation and Sustainable Use of Biodiversity in the Headwaters of the Huaihe River Basin
2. Project Type (MSP or FSP): FSP
3. Project ID (GEF):
4. Project ID (IA): 3943
5. Implementing Agency: UNDP
6. Country(ies): China

Name of reviewers completing tracking tool and completion dates:

	Name	Title	Agency
Work Program Inclusion	Wang Zengguo	Associate Director	Xinyang Municipal HHRB Project Management Office
Project Mid-term			
Final Evaluation/project completion			

7. Project duration: *Planned* 4 years *Actual* _____ years

8. Lead Project Executing Agency (ies): Xinyang Municipal Government

9. GEF Strategic Program:

√ Strengthening the policy and regulatory framework for mainstreaming biodiversity (SP 4)

√ Fostering markets for biodiversity goods and services (SP 5)

10. Production sectors and/or ecosystem services directly targeted by project:

10. a. Please identify the main production sectors involved in the project. Please put "P" for sectors that are primarily and directly targeted by the project and "S" for those that are secondary or incidentally affected by the project.

Agriculture P

⁴³ For Medium Sized Projects when they are submitted for CEO approval.

GEF-4 Tracking Tool for GEF Biodiversity Focal Area Strategic Objective Two:
Mainstreaming Biodiversity Conservation in Production Landscapes/Seascapes and Sectors

Fisheries
Forestry
Tourism
Mining
Oil
Transportation
Other (please specify) Medicinal herbs

II. Project Landscape/Seascape Coverage

11. a. What is the extent (in hectares) of the landscape or seascape where the project will directly or indirectly contribute to biodiversity conservation or sustainable use of its components? An example is provided in the table below.

Targets and Timeframe	Foreseen at project start	Achievement at Mid-term Evaluation of Project	Achievement at Final Evaluation of Project
Project Coverage			
Landscape/seascape area <u>directly</u>⁴⁴ covered by the project (ha)	2,110,900 ha.		
Landscape/seascape area <u>indirectly</u> covered by the project (ha)	40,000,000 ha. ⁴⁵		

(Note: The following table lists protected areas are within the area directly covered by the project. Several dozen more PAs are in areas covered indirectly (via learning exchanges) by the project.)

Explanation for indirect coverage numbers:

Output 4.3: Dissemination and exchange of lessons learned among HHRB project stakeholders, IEFA managers and relevant sectoral agencies (mining, forestry, land use management). Lessons will be firstly disseminated to the around area of demonstration site in the HHRB. The HHRB project will publicize their lessons to other IEFAs throughout China. **11. b. Are there Protected Areas within the landscape/seascape covered by the project? If so, name these PAs, their IUCN or national PA category, and their extent in hectares.**

Name of Protected Areas	IUCN and/or national category of PA	Extent in hectares of PA
Henan Jigong Mountain National NR	National	2,917
Henan Dongzhai National NR	National	46,800

⁴⁴ Direct coverage refers to the area that is targeted by the project's site intervention. For example, a project may be mainstreaming biodiversity into floodplain management in a pilot area of 1,000 hectares that is part of a much larger floodplain of 10,000 hectares.

⁴⁵ Estimated area of ten IEFAs where lessons learned at HHRB will be applied during the project.

GEF-4 Tracking Tool for GEF Biodiversity Focal Area Strategic Objective Two:
Mainstreaming Biodiversity Conservation in Production Landscapes/Seascapes and Sectors

Name of Protected Areas	IUCN and/or national category of PA	Extent in hectares of PA
Henan Liankang Mountain National NR	National	10,587
Xinyang Tianmu Mountain NR	Provincial	3,860
Xinyang Huaibin wetland NR	Provincial	3,600
Shangcheng Huangbai Mountain NR	Provincial	8,000
Shangcheng Jingangtai NR	Provincial	5,000
Shangcheng Nianyu Mountain NR	Provincial	4,000
Xinyang Siwang Mountain NR	Provincial	3,000
Taibai peak of Tongbai NR	Provincial	5,000
Zhenlei Mountain NR	Provincial	4,000
Yellow-margined Box Turtle (<i>Cuora flavomarginata</i>) NR	Provincial	123,260
	TOTAL	220,024

11. c. Within the landscape/seascape covered by the project, is the project implementing payment for environmental service schemes? If so, please complete the table below. An example is provided.

Note: Payment for environmental services will be one kind of incentive scheme considered under the project (see Output 2.2).

Targets and Timeframe	Foreseen at Project Start		Achievement at Mid-term Evaluation of Project		Achievement at Final Evaluation of Project	
Coverage	Extent in hectares	Payments generated (US\$)	Extent in hectares	Payments generated (US\$)	Extent in hectares	Payments generated (US\$)
Environmental Service						

III. Management Practices Applied

12.a. Within the scope and objectives of the project, please identify in the table below the management practices employed by project beneficiaries that integrate biodiversity considerations and the area of coverage of these management practices. Please also note if a certification system is being applied and identify the certification system being used. Note: this could range from farmers applying organic agricultural practices, forest management agencies managing forests per Forest Stewardship Council (FSC) guidelines or other forest certification schemes, artisanal fisherfolk practicing sustainable fisheries management, or industries satisfying other similar agreed international standards, etc. An example is provided in the table below.

Specific management practices that integrate BD	Name of certification system being used (insert NA if no certification system is being applied)	Area of coverage foreseen at start of project	Achievement at Mid-term Evaluation of Project	Achievement at Final Evaluation of Project
1. Organic planting	Good Agricultural Practice for Chinese Crude Drugs(GAP)	100 hectares		
	Organic food certification	Camellia oil (80 ha)		
2. CITES register of artificial propagation of plants	Registration of operations through artificial propagation of threatened and endangered species under CITES	None		
3. geographical locations	Certificate of origin	Xinyang Maojian tea (450 ha.), <i>Astragalus sinicus</i> L. (400 ha.) and Nanwan fish (1000 ha.), Gushi chicken (3,500 households), freshwater shrimp (300 ha.).		
4. Ecotourism	NA			
5. Forestry	NA			
6. Mining	NA			

IV. Market Transformation

13. For those projects that have identified market transformation as a project objective, please describe the project's ability to integrate biodiversity considerations into the mainstream economy by measuring the market changes to which the project contributed. The sectors and subsectors and measures of impact in the table below are illustrative examples, only. Please complete per the objectives and specifics of the project.

Name of the market that the project seeks to affect (sector and sub-sector)		Unit of measure of market impact	Market condition at the start of the project	Market condition at midterm evaluation of project	Market condition at final evaluation of the project
Ecological tourism		Ecological tourism tourist number/ yr			
GAP planting		Sales of GAP product	0		
Organic planting or marks of origin planting in Agriculture	Organic tea production	Sales volume/yr	2,000,000 kg/yr		
	Organic Camellia oil	Sales volume/yr	30,000 kg/yr		
	<i>Astragalus sinicus</i> L.	Sales volume/yr	72,000 kg/yr		
	Nanwan fish	Sales volume/yr	750,000 kg/yr		
	Gushi chicken	Sales volume/yr	7,000,000 chickens/yr		
	Freshwater shrimp	Sales volume/yr	420,000 kg/yr		

V. Policy and Regulatory frameworks

For those projects that have identified addressing policy, legislation, regulations, and their implementation as project objectives, please complete the following series of questions: 14a, 14b, 14c.

14. a. Please complete this table at **CEO endorsement for each sector** that is a primary or a secondary focus of the project.

Sector	Agriculture	Forestry	Tourism	Other (Mining)	Other (Medicinal herbs)
Statement: Please answer YES or NO for each sector that is a focus of the project.					
Biodiversity considerations are mentioned in sector policy	NO	YES	YES	NO	YES
Biodiversity considerations are	NO	NO	NO	NO	NO

GEF-4 Tracking Tool for GEF Biodiversity Focal Area Strategic Objective Two:
Mainstreaming Biodiversity Conservation in Production Landscapes/Seascapes and Sectors

mentioned in sector policy through specific legislation					
Regulations are in place to implement the legislation	NO	NO	NO	NO	NO
The regulations are under implementation	NO	NO	NO	NO	NO
The implementation of regulations is enforced	NO	NO	NO	NO	NO
Enforcement of regulations is monitored	NO	NO	NO	NO	NO

14. b . Please complete this table at **the project mid-term for each sector** that is a primary or a secondary focus of the project.

Please answer YES or NO to each statement under the sectors that are a focus of the project.

Sector	Agriculture	Forestry	Tourism	Other (please specify)	Other (please specify)
Statement: Please answer YES or NO for each sector that is a focus of the project.					
Biodiversity considerations are mentioned in sector policy					
Biodiversity considerations are mentioned in sector policy through specific legislation					
Regulations are in place to implement the legislation					
The regulations are under implementation					
The implementation of regulations is enforced					
Enforcement of regulations is monitored					

14. c. Please complete this table at **project closure for each sector** that is a primary or a secondary focus of the project.

Please answer YES or NO to each statement under the sectors that are a focus of the project.

Sector	Agriculture	Forestry	Tourism	Other (please specify)	Other (please specify)
Statement: Please answer YES or NO for each sector that is a focus of the project.					
Biodiversity considerations are mentioned in sector policy					
Biodiversity considerations are					

GEF-4 Tracking Tool for GEF Biodiversity Focal Area Strategic Objective Two:
Mainstreaming Biodiversity Conservation in Production Landscapes/Seascapes and Sectors

mentioned in sector policy through specific legislation					
Regulations are in place to implement the legislation					
The regulations are under implementation					
The implementation of regulations is enforced					
Enforcement of regulations is monitored					

All projects please complete this question at the project mid-term evaluation and at the final evaluation, if relevant:

14. d. Within the scope and objectives of the project, has the private sector undertaken voluntary measures to incorporate biodiversity considerations in production? If yes, please provide brief explanation and specifically mention the sectors involved.

An example of this could be a mining company minimizing the impacts on biodiversity by using low-impact exploration techniques and by developing plans for restoration of biodiversity after exploration as part of the site management plan.

VI. Other Impacts

16. Please briefly summarize other impacts that the project has had on mainstreaming biodiversity that have not been recorded above.

Part VI: HHRB Sectoral Overviews

A. Medicinal Plants and Animals

Resources

HHRB belongs to a transition area between a southern warm temperate zone and a northern subtropical zone, where the southern species and northern species converge. The climate and the geographical features of this transitional area make HHRB a significant area for the production of valuable and rare Chinese medical herbs. From as early as the Tang and Song Dynasties, HHRB has been an important production region of ingredient materials for traditional Chinese medicine.

The area abounds with traditional Chinese herbal resources, with approximately 1,800 species of medicinal plants. About 35 of these are species for which Xinyang is well known across China for the quality of the local production and for the important roles they play in health care. In particular, gastrodia tuber, tuckahoe, *Rhizoma pinelliae*, *Caulis dendrobii*, fleece-flower root, angelica, *Codonopsis pilosula*, balloonflower root, dogwood fruit, etc., have long been recorded in “Chinese Pharmacopoeia” as among the most valuable and rare of traditional Chinese medicines.

In addition to medicinal plants, there are approximately 102 families of medicinal animals, including 143 genera and 161 species (not including introduced species). Commonly-seen species include *Moschus moschiferus*, *Allolobophora caliginosa* trapezoids Ant. Duges, Scorpion, *Hirudo nipponia* Whitman, *Scolopendra*, *Panthera pardus* Z., *Bufo gargarizans* cantor., *Viverra zibetha* L. and *Lutra lutra*, etc. The whole or part of all of these animals is used as valuable and rare traditional Chinese medicines. As they have a high medicinal value, they are greatly in demand in the market and their prices are continuously rising. Therefore, a large number of medicinal animals are being hunted and killed every year.

Development and utilization

At present, the annual output of medicinal plants within the project area reaches approximately 2,000 tons,⁴⁶ a small portion of which is supplied to local pharmaceutical enterprises and the domestic market. The remainder is sold to Japan, Korea and European and American countries and areas, with the overall annual sales turnover exceeding 100 million yuan (\$13.1 million).

There are twelve Chinese medicine processing enterprises in the area with an annual industrial output of 700 million RMB yuan and an earned profit of 300 million RMB yuan, which gives a simultaneous boost to the development of the relevant industries, thus forming a complete industrial chain ranging from medicinal plant digging to purchasing and processing. There are two medium / large-sized enterprises and 10 medium / small-sized enterprises. The main products are categorized into 240 kinds into 11 categories with the annual profit up to 400 million RMB yuan.

To take one example, the large-scale pharmaceutical enterprise “Henan Lingrui Pharmaceutical Company Ltd” produces more than 200 kinds of medicines within 10 categories with the annual output capacity of 400 million RMB yuan, annual sales income of 392 million RMB yuan and the annual profit of 18.06 million RMB yuan. The main products, “Sticking-plaster for hyperosteogeny with magical curative effect”, “Shen-qi-jiang-tang Capsule on blood sugar and blood lipid” and “Tongnaoling Capsule in Treating Sequelae of Apoplexy”, etc., all of which are manufactured with the local Chinese medicinal materials as the main ingredients. Take “Tongnaoling Capsule in Treating Sequelae of Apoplexy” for instance, its main ingredients are fleece-flower root, RADIX REHMANNIAE PREPARATA, Scorpion,

⁴⁶ According to data provided by Xinyang and Nanyang Municipalities.

asparagus, *Cyclemys flavem arginata* Gray, Pilos Antler, *Hirudo nipponia* Whitman, *Allolbophora caliginosa* trapezoids Ant Duges, etc., but except for Pilose Antler which shall be externally purchased, the remaining Chinese medicinal materials all derive from the local places in HHRB.

Employment and social aspects

About 400 outlets for collecting medicinal plants are scattered in every county, township and town providing employment to some 2,000 people. People involved in collecting traditional Chinese medicinal materials are mainly local farmers, and digging and collecting the medicinal plants constitutes an important source of income for many. In the seasons for collecting the Chinese medicinal plants, they earn income by selling medicinal plants to the purchasing outlets. Plants are supplied in accordance with purchasing information, including technical requirements, released by the purchasing outlets.

Environmental and biodiversity impacts

The main usable part of most Chinese medical herbs is the root of the wild plants, which means that the herbs must be rooted out. Digging and rooting up the herbs of course kills the plant, which has led to a reduction in the resources of many valuable and rare Chinese medical herbs, to the point that some particularly valuable and rare Chinese medical herbs have been driven to the point of local extirpation. At present, the annual output of herbs has decreased to less than 2,000 tons from the record high 40,000 tons, and many valuable and rare medical herbs have become rare in the mountainous areas. Extreme digging and rooting out of the herbs have already caused serious damage to the area's habitat, depriving many valuable and rare Chinese medical herbs of their living environment.

The random collection of most raw Chinese medicinal plants causes damage to the Chinese medicinal plant resources. For instance, the Chinese medicinal plants of herbaceous species are mainly collected from the root and rootstock of these plants because they can only be collected by digging. Therefore, the old-fashioned Chinese medicinal plant collection method may cause greater destruction to the Chinese medicinal plant resources and the natural ecosystem, driving a large number of valuable and rare species into local extinction and posing a serious threat to biodiversity in HHRB. Overall, the species and quantity of the Chinese medicinal plants are diminishing considerably and some species are less than one tenth in quantity compared with levels in the previous century.

Similarly, the whole body or specific parts of medicinal animals are used as medicinal ingredients, which can be only acquired after the animals are captured and killed.

Laws, regulations and institutional responsibilities

The supervision and management of the traditional Chinese medicine business reside in the local foodstuff and medicine supervision and management departments, while the business operation and sales are conducted by various companies, including Xinyang City Medical Group Co., Ltd, as well as private companies.

In recent years, the inadequacy of the Chinese medicine system reform and of relevant laws and regulations has posed a serious threat to Chinese medicinal plant resources. Due to economic backwardness and population pressures, the focus of work for the local government has shifted towards economic growth and poverty alleviation; meanwhile, Chinese medicinal plant resources and biodiversity conservation have been neglected. The inadequate legal and regulatory system and policy measures have made it difficult to incorporate the sustainable use and conservation of Chinese medicinal plant resources in HHRB into the local mainstreaming work agenda or to bring them into local economic and social development initiatives.

Xinyang Municipal Eco-environmental Association and relevant traditional Chinese medical research organizations have developed some new methods for the conservation and sustainable use of traditional

Chinese medicinal plant resources. Pilot plantation of medicinal herbs has taken place in Shangcheng, Guangshan and Xinxian counties and has been successful, with as much as 5,000 ha planted in Xinyang as a whole. According to this approach, only the seeds of herbaceous plants can be collected in the wild, and it is strictly prohibited from rooting them out. The seeds are then used for cultivation, thus enabling the sustainable use of these plants.

As far as medicinal animals are concerned, seasonal restrictions on hunting wild animals and methods for domestic breeding have been developed in order to achieve their conservation and sustainable use of wild populations. Nevertheless, the backwardness of the local economy, traditional concepts, a lack of awareness of biodiversity on the part of the local public and a lack of effective funding mechanisms or other policy support have combined to make it difficult to promote these approaches on a large scale.

The Chinese government has promulgated and enacted various laws and regulations, such as “Law of the People's Republic of China on the Administration of Drugs”, “Regulations for Traditional Chinese Medicine in People's Republic of China”, “Requirements for the Application and Review of Health Food Made of Wild Animals and Plants (interim)”, “A Notice Concerning the Protection of Traditional Chinese Medicine”, etc. However, there is at present an absence of relevant and supporting local policies, laws and regulations concerning the protection and management of traditional Chinese medicine. Management responsibilities are scattered amongst different departments and organizations, leaving management uncoordinated and causing serious damage to traditional Chinese medicinal plant and animal resources.

Although the local government has made great efforts to protect the local valuable and rare Chinese herbal resources by formulating the relevant protection regulation and plans and setting up nature reserves, it is necessary to undertake additional measures to protect the local valuable and rare Chinese medical resources within the landscape because of the lack of the necessary policy measures, the lack of necessary resources of the local farmers coupled with the strong temptation posed by the international and domestic market price of medicinal herbs and the deteriorating situation of random digging.

Finally, as for the problems related to the organic production and certification, HHRB has long noted for the high quality of its farm produce. As early as 1918, “Xinyang Maojian Tea” was awarded the Gold Prize at the World's Fair for its top-notch quality. Some of the subsidiary agricultural products produced in this area, such as, rice, wheat, rapeseed, oil-tea camellia and tea, have obtained different organic foodstuff certificates.⁴⁷ However, as most of the traditional Chinese medicinal plants are scattered in the deep mountains and jungles, the species under manual cultivation and breeding remain few. Though cultivation of traditional Chinese medicinal plants has had some success, it remains few species with limited output and scale. Furthermore, the organic certification for the traditional Chinese medicine production is rather complicated, so there is no obvious progress in relation to the certification. Currently, no medicinal plant product has been awarded organic certification.

B. Mining

Resources

There are approximately 53 kinds of minerals abundantly deposited in HHRB, 21 of which have been quantified in terms of estimated deposits. These mainly include perlite, bentonite, limestone, granite, marble, natural soda and gold, silver, molybdenum and chromium, etc, among which perlite and natural soda represent the largest deposits in Asia.

⁴⁷ Many of these have expired, however, and need to be re-certified.

Development and Utilization

At the end of 2006, there were 33 main mining locations within the HHRB area, with some 224 enterprises engaged in mining there. These include 14 large, 6 medium-sized and 204 small mining enterprises.⁴⁸ The medium and small-sized privately-owned enterprises in particular tend to lag far behind in terms of mining and processing technology and management level. Predominant mining methods are open-air mechanical drilling and gunpowder explosion.

In addition to mining enterprises, there are 800+ mineral product processing enterprises in the HHRB area. However, the local processing technology is not well developed and many raw ores are sold after only minimal processing.

Twenty six minerals are currently being exploited in the area, including perlite, bentonite, iron ore, gold, silver, limestone, etc. The annual mining and processing capacity reaches three million tons, including 0.5 million tons of perlite, 0.6 million tons of natural soda, 60,000 tons of bentonite, 0.15 million tons of iron ore, 500 kilograms of gold (refined gold), 63,000 tons of coal, 0.65 million tons of limestone and sandstone for construction, etc. Many of these minerals, e.g., perlite and iron ore, are directly sold as raw minerals, with most of the minerals crushed into smaller pieces and put into fractional pack, with a total annual sales turnover up to 400 million RMB yuan. At the same time, 5 million tons of tailing⁴⁹ and a great deal of ore residue remain in the exploitation of these minerals, thus posing a great damage to the environment.

Employment and social aspects

Approximately 12,000 workers are involved in mining and processing (a figure which appears to be increasing), with an annual industrial value-added turnover reaching approximately 300 million RMB yuan, making mining one of the key industries in HHRB. Ancillary industries include, for example, industries related to the exploitation of perlite, such as machinery, transportation, power, chemical industry and construction material, etc.

Environmental and biodiversity impacts

Large-scale digging and mining in the mountain area cause damage to the original vegetation and cause a direct loss of habitat. In addition, processing of mineral ores causes water pollution. To be specific, gold, silver, copper and other minerals are processed together with other components, such as mercury, arsenic, chromium and volatile phenol and permanganate, etc, which can easily contaminate local water resources. The volume of industrial wastewater discharge is approximately 30 million tons per year, part of which is directly discharged into the rivers and streams, thus polluting the waters of Huaihe River and damaging the living environment of the aquatic animals and plants.

Annual pollution emission and tailings reach 5 million tons and ore residues (including the solid wastes generated from the separation of minerals from the mountain or generated after the mineral products are refined) reach approximately 200 million tons. In particular, in the course of development of perlite and

⁴⁸ Note: The large, medium and small-sized enterprises are categorized in accordance with the number of employees or the sales volume or the total assets, as illustrated in the following table:

Enterprise Type	Number of employees	Sales income (10000 yuan)	Total Assets (10000 yuan)
Large-scale enterprise	More than 2000 persons	Or >30000	Or >40000
Medium-size enterprise	300-2000 persons	Or 3000-30000	Or 4000-40000
Small-size enterprise	Less than 300 persons	Or <3000	Or <4000

⁴⁹ Tailing means the raw ore with lower degree of effective components or not complied with requirements of the specifications.

natural soda mines, etc, substantial tailings and ore residues are generated. They are randomly piled up, occupying large areas of ponds and mountains, etc, seriously damaging ecosystems and polluting the environment.

Open-air gunpowder explosion during mineral development causes convulsion and great impact to animals and plants.

Local and provincial-level laws, regulations and institutional responsibilities

The **land and resources administration** department is directly responsible for the exploitation of the local mineral resources and supervision and the **environment protection department** is responsible for the environment conservation and management of the mines.

For the purpose of eliminating the damage to the environment caused by the development of minerals in these areas, the local government has formulated “An Overall Plan for Ecosystem Rehabilitation and Control of Key Mining Areas” so as to reinforce the momentum to bring the mining environment under strict control and protection; however, these plans and control and protection measures do not pay enough attention to biodiversity conservation.

Henan Provincial Government has also formulated the following regulations, “Methods for the Implementation of Mineral Resources Law of the People's Republic of China”, “Regulations of Henan Provincial Government on Mining Management” and “Management Method for Collection and Utilization on compensation payment of mineral resources”, etc. Nevertheless, few of these policies, laws and regulations make any mention of biodiversity conservation. Therefore, the policies, laws and regulations are unsound and ineffectively enforceable and the local governments and enterprises are lacking in initiative in consideration of the eco-environment and biodiversity conservation. In addition, the eco-environment and biodiversity conservation have been faced with serious threats.

Baseline activities

By the end of 2006, the land area occupied by the mines and the damaged land area was estimated at some 3,800 ha. (see **Table 1**). Ecological restoration to date reaches 700 ha. In 2006 alone, 6 million RMB yuan was spent for restoration and control of the mining environment, with a total ecological restoration area of some 200 ha.

Although the state has some requirements for ecosystem protection and environmental impact assessment, there is little directly concerning biodiversity conservation. Overall, there is minimal attention and concern for biodiversity conservation in the development of the minerals in HHRB.

C. Forestry

Resources

HHRB is an important ecological zone in the central area of China, with complex forest ecology and abundant forestry resources. The topography consists mainly of mountains and hills, which account for 75.4% of the total country area. The area of forest is 7,050,000 ha, with 35% forest cover. More than 60 wild plants used in TCM and their derivatives are found here, such as Chinese Chestnut, seeds of Oil-Tea Camellia, seeds of the Tung Tree, seeds of the Chinese Tallow Tree, and Gingko. Because the majority of forested areas are located adjacent to the headwaters of the Huaihe River Basin, the main purpose of developing sustainable forestry is to protect the area's ecological balance and to conserve water resources.

The added value from forestry in 2007 was 1,466 million RMB Yuan, which translates into 176 Yuan per person. Added value from forestry is equivalent to less than 7% of the total added value from agriculture. The annual output of the main forestry products include 64,000 cubic meters of timber, 10,231,000 stems of bamboo, 120,000 tons of Chinese Chestnut, 20,000 tons of Oil-Tea Camellia seeds, 6,000 tons of Tung Tree seeds, and 4,000 tons of Chinese Tallow Tree seeds.

Development and utilization

Various forestry-related projects are underway in the HHRB. These include the Converting the Land for Forest Project, supported by the state, the Afforestation Project, supported by a World Bank loan, a second Afforestation Project supported by the Japanese government.

The Converting the Land for Forest Project started in 2002 and will end in 2012. It involves 11 counties (districts), with a total state investment of 1.59 billion RMB Yuan. By the end of the project, it is expected that the total area of reclaimed forest land will reach 333,500 ha. By 2006, the state had invested some 670 million RMB Yuan thus reclaiming about 127,931 ha of forest. The overall project goals are set to be achieved through an eight year subsidy for timber forest, at an annual rate of 750 RMB Yuan per ha, as well as a five year economic forest subsidy, at an annual rate of 3,450 RMB Yuan per ha.

The World Bank Loan-Supported Afforestation Project, which started in 1998 and will continue to 2009, is intended to result in 43,000 ha of reclaimed forest area benefiting 11 counties (districts) in HHRB. The total investment value is about US\$ 25.33 million for this project, which consists of four stages (the fourth stage commenced in 2003 and ends in 2009). By the end of 2006, investment in the project had reached US\$21.43 million and had enabled the afforestation of 38,000 hectares.

The five year Japanese government-supported Afforestation Project (2007 to 2011) intends to increase afforested areas by 25,993 ha. The total investment in this project is 111,768,600 RMB Yuan, and benefits 8 counties and districts in HHRB, including Shihe District, Pingqiao District, Xixian, Luoshan, Guangshan, Xinxian, Shangcheng, and Gushi County. In 2007, the afforested area as a result of this project was 14,974 ha.

Employment and social aspects

There were over 3,700 staff totally who engage in forestry management by the end of 2007. They work in 11 state forestry centres, 5 forest parks and 12 nature reserves, as well as 1 forest research institute, 1 forestry secondary school and 22 forest public securities. The added value from forestry in 2007 was 1,466 million RMB Yuan, which translates into 176 Yuan per person. Added value from forestry is equivalent to less than 7% of the total added value from agriculture.

Environmental and biodiversity impacts

Mass collecting and sale of ancient and precious trees has the following impacts on ecosystems and biodiversity:

- **Habitat degradation:** Forest habitat is negatively impacted by this trade. In addition to the direct impact associated with the loss of a large percentage of mature trees, e.g., loss of nesting habitat, there are further environmental impacts associated with the trade. In order to reduce damage to tree roots during transplantation, a large area of soil must be removed around the roots. A big hole is thus formed when removing a tree, resulting in damage to the natural vegetation and its environment. This exposed soil is easily eroded during the rainy season, thus bringing negative effects to the whole ecosystem.

- Threat to individual species: The trade threatens to cause local extirpation of some species, including endemic species, with loss of associated genetic diversity. Specimens of rare species naturally tend to command higher prices, which further increases the pressures to remove them. In addition, the stress of transplantation and inadequate care can result in removed trees failing to survive, which obviously increases pressure further.

Even though the forest cover has increased recent years, the forest variety in the newly planted forest is limited, for example, only poplar trees have been planted, which does not maximise possible positive impacts on biodiversity.

Animal and plant smuggling has been an ongoing problem in the HHRB. From 1998 to 2007, at least 2,000 cases were dealt with, and 2,375 offenders were prosecuted. Of these documented cases, 60 cases entailed the illegal collection/trade of wild plants, and 2,240 cases involved the illegal collection of wild animals. Enforcement efforts have succeeded in ensuring the release of 360,000 wild animals, among which there were more than 230 national key protected fauna, such as Swan (*Cygnus cygnus linnaeus*), Snowy Owl (*Bubo scandiacus*), White-tailed Eagle (*Haliaeetus albicilla*), Chinese Giant Salamander (*Andrias davidianus*), Water Monitor (*Varanus salvator*), as well as 300,000 frogs and over 3,000 snakes.

In 2005, 18 cases were processed concerning the illegal collection of 126,000 wild fauna, including 535 kg of snakes. In 2006, 24 similar cases were processed, and in 2007, 24 more. These concerned the illegal collection of 50,000 wild fauna in 2006 and 56,000 in 2007.

To address some of these pressures on the area's biodiversity, tracts of land have been set aside for protection. In the HHRB there are 12 Natural Reserves (NR) above the provincial level (among which there are 3 national NRs), 5 National Forest Parks, 4 National Water Resource Scenic Areas and 1 National Geological Park. These play an important role in biodiversity conservation.

Laws, regulations and institutional responsibilities

The **forestry department** is responsible for implementing national regulations and laws and policies of forestry and ecological construction, protecting wildlife and wetland resources.

The national laws related to forestry are:

- The Forest Law of The People's Republic of China;
- The Law of The People's Republic of China on the Protection of Wildlife;
- Regulations of the People's Republic of China on Imported and Exported Endangered Wild Animals and Plants;
- Decision on Accelerating Forestry Development by the CPC Central Committee and State Council;
- Notice of the General Office of State Council on Improved Grain Subsidy Methods for Converting the Land for Forestry, and
- Supervision and Inspection Methods for Administrative Licensing on Forest Management by Ministry of Forestry.

The provincial level laws are:

- Regulations of Henan Province on the Protection of Wildlife;

- Implementing Opinions of Henan Provincial Forestry Bureau on Overall Advancing Management Forest according to Law, and
- Notice of General Office of Henan Provincial Government on Further Strengthening the Results of Converting the Land for Forest.

D. Tourism

Resources

The physiognomy of the HHRB area is complicated and diversified, and the area boasts a favourable climate, abundant bio-resources and a rich culture and history. This combination makes the area attractive for tourism. There are 12 Natural Reserves at provincial level (including 3 national NRs), 5 National Forest Parks, 4 National Water Resource Scenic Areas and 1 National Geological Park. These protected areas offer areas of natural beauty for people to enjoy. In addition, the area is culturally and historically rich, boasting various renowned historical sites such as temples and monasteries. Wild flora and fauna are also abundant, and much of the area is pristine.

Development and utilization

Since 1998, Xinyang has devoted 0.28 billion Yuan to the construction of tourism facilities and attractions, of which a number have recently been completed and opened to the public. At present, there are more than 1,500 sites of interest and 32 international and domestic tourism agencies. The area has 18 star-level hotels, including 2 four-star level hotels, 13 three-star hotels and 3 two-star hotels. The total number of hotel rooms is 3,700, at a capacity of 8,000 beds. In 2007, hotels in the area received 6,147,300 domestic and international tourists, generating a profit of 1.13 billion Yuan.

Employment and social aspects

Income from tourism in HHRB constitutes an important source of revenue into the local economy and provides alternate sources of income for local farming communities. This revenue is expected to increase with the observed rise in tourist visitation rates over the years. Between 2005 and 2007, tourist numbers increased from 3,632,000 to 6,147,300, and revenue from tourism nearly doubled from 603,000,000 Yuan in 2005 to about 1,132,000,000 Yuan in 2007.

Environmental and biodiversity impacts

The development of tourism in HHRB certainly contributes to alleviating poverty in the area. However, at the same time as the government puts great effort into promoting tourism, little attention is paid to potential tourism impacts on the area's natural heritage.

Negative impacts on biodiversity caused by rapid and sizeable tourism expansion can be attributed mainly to inadequate and incomplete management guidelines and strategies to ensure the sustainable use of tourism hotspots. As a result, ongoing and uncontrolled damaging practices take place within core zones of natural reserves. In addition, inadequate protection measures are put in place in areas where tourism is actively promoted, which puts pressure on the area's cultural and historical monuments (for example temples) and also disturbs and alters sensitive habitats.

Some counties/districts have developed rudimentary plans for tourism development. However, these do not take on board the protection of the area's natural or cultural heritage. For example, Xinyang Municipality developed some tourism development plans for sites of attraction in that province. Unfortunately, these plans do not include any sections relevant to sustainable tourism development, but were rather drafted to accommodate the rapid expansion and development of tourism facilities. Urgent action is needed to introduce appropriate management plans for tourism, and to update existing plans to conform to international sustainable tourism standards.

Because no appropriate management plans are in place, core areas of nature reserves come under intense pressure from tourism. Evidence of damage to the natural environment from uncontrolled tourism influx and development manifests itself in several ways. First, poor awareness results in the damage and removal of wild flora and fauna, and second, prolific construction of tourism facilities and infrastructure, such as massive hotels and service roads in and around protected areas, leads to considerable damage of fragile habitats. Roads also render once inaccessible and remote habitats accessible to tourism traffic, which is another serious concern. Furthermore, waste and pollution associated with tourism (wastewater, solid waste, air pollution) is another factor to be considered.

Laws, regulations and institutional responsibilities

The **tourism department** is responsible for implementing national tourism policy, law and regulation, managing tourism resources and tourism development. Presently, its main task is developing tourism resources to promote tourism development.

Laws and policies have been put in place to promote rapid and smooth tourism development. However, due to low public awareness and so far uncontrolled development, the potential risks of environmental degradation resulting from tourism are still present. This has drawn the attention of relevant departments of state and local government, resulting in some of the following regulations and guidelines:

- Interim Regulations on the Administration of Tourist Agencies;
- Examination, Acceptance and Assessment Standards for the Comprehensive Improvement of National Scenic Spots and Historical Sites;
- Some Guiding Opinions on the Improvement of Countryside Tourism Development;
- Notice on Further Strengthening the Conservation of Ecologically Important Tourism Destinations;
- Notice on Some Matters Requiring Attention Concerning Newly Developed Tourism Scenic Spots;

In 1998, the Xinyang Municipal Committee of the Communist Party of China and XMG issued the Decision on Accelerating Tourism Development and then formulated and implemented Several Opinions on Accelerating Tourism Development. Tourism was also integrated into the 11th Five-Year Plan Outline of the National Economic and Social Development of Xinyang Municipality as well as the Xinyang Municipal Plan Outline of Comprehensively Building a Well-Off Society. However, these laws and regulations are concerned with how to increase revenue from tourism, and seldom involve biodiversity considerations.

Table 1: Baseline situation of mineral resources production and eco-restoration at HHRB

Henan Province Shangtianti non-metal, Co., Ltd	Perlite	30	460	30	900	100	0			
Luoshan Tianyi Nonferrous Metals Silver Mining Co., Ltd.	Silver mine	3	250	3	273	29	9	20	20	20
Shangcheng County Jiufeng Mining Co., Ltd	Super Iron Concentrate Powder	3	260	3	1,500	18				
Xinyang Yunan Qiangshan Group Co., Ltd	Limestone	30	374	30	420	3	0			
Xinyang City Shihe District Deyuan Mining Industry Co., Ltd	Super Iron Concentrate Powder	3	230	3	1,300	16	0			
Xinyang City Shihe District Shuangji Ci'ershan Iron Mine	Super Iron Concentrate Powder	3	260	1.8	400	21	0			
Xinxian Country Magnetic Separation Plant	Super Iron Concentrate Powder	14	440	0.3	60	3	2	28	28	28
Henan Gushi Yangshan Coal Mine	Anthracite	10	580	6.3	330	17				
Xinyang Shenyang Mining Co., Ltd	Perlite	8	170	5	177	17	0			
Tongbai County Baoshuyan Iron Mine	Super Iron Concentrate Powder	3	220	3	1,680	25				
Tongbei Silver Mining Co., Ltd	Silver, lead and zinc (Na2Co3)	26.4	841	25.2	4,200	100	1			
Tongbei Anpengkai Mining Co., Ltd		24	426	31.5	34,172	3				
Tongbei Xingye Mining industry Co., Ltd	Gold mine	4.5	245	5.4	3504	21				
Tongbei County Tongpo Gold Mine	Gold mine	19.8	1,156	17.9	6611	211	87	11	11	11
Other medium and small size enterprises(210 in total)	Iron, perlite, limestone and sandstone, etc.		6,088			3,217	639	549	499	50
Total		191.7	12,000	165.4	55,527	3,800	738	608	558	50

⁵⁰ A – Central Government investments

⁵¹ B – Investment by enterprises

Part VII: Overview of IEFAs

Water retention	17	820,000	<p>1) located in headwaters of key rivers in China with high ecological and environmental sensitivity; 2) ecosystem types are mainly forests, wetlands and grassland; 3) unsustainable use of minerals, biological resources, hydropower and unsustainable development of tourism leading to ecological deterioration and reduction in water retention functions; 4) water pollution from industrial and non-point sources.</p> <p>The 17 key IEFA areas include: Altai forest in Xinjiang; water sources of Yellow River, Yangtze River and Mekong River in Qinghai; Ruo'ergai wetland of Sichuan; South Gansu (Yellow River); headwaters of Brahmaputra; Tianshan highlands; Qilian Mountain forests (black river); headwater of Dongjiang River in Jiangxi; headwater of Huaihe; drinking water supply areas in middle route of South-North Water Transfer Program; upper reaches of Xin'an Jiang River; Nan Ling mountains; water sources areas of Beijing and Tianjin; drinking water supply areas of east route of South-North Water Transfer Program; forests in middle of Hainan Island; forests of Da Xing'an Ling mountains and Xiao Xing'an Ling Mountains; and Chang'bai Mountain Forests.</p>
Water and soil conservation	4	300,000	<p>1) with serious water and soil loss; 2) water and soil loss deteriorated by unsustainable human activities including reclamation on slopes, encroachment through deforestation for agriculture, overgrazing, exploitation of minerals and urbanizations; and 2) frequent geological disasters.</p>
Wind prevention and sand fixation	7	360,000	<p>1) located in arid and semi-arid areas in north China; 2) deserts and grassland as main ecosystem types; 3) vegetation deteriorated, land covered by sand and oasis shrunk as a result of overgrazing and reclamation of grassland; 4) unsustainable water resources use leading to scarcity of water resources; and 5) frequent occurrence of dust storm.</p>
Flood regulation	6	160,000	<p>1) located at middle reaches of large rivers; 2) consisting primarily of lakes and wetland; 3) reclamation of lakes and wetland and siltation in lakes leading to low capacity of lakes and reduced flooding absorbing capacity; and 4) water polluted from industrial and urban sewage and non-point source pollutants</p>
Biodiversity	16	510,000	<p>1) critical areas of biodiversity conservation; 2) highlands, wetland and grassland as</p>

			<p>key ecosystem types; 3) habitat destruction and fragmentation from unsustainable agricultural reclamation, urbanization and hydropower development; and 4) severe situation of alien invasive species.</p> <p>The 16 IEFAs include: Forests in Qin-Ba highlands; Forests in Sichuan and Yunnan; forests in Southeast of Tibet; desert of Qiangtang in northwest of Tibet; highland in Yili-Tianshan mountain; forest in Minshan mountain and Qionglai mountain; Xishuangbanna of Yunnan; limestone areas of southwest Guangxi; forests in Wuling Mountain; wetland in coastal areas of north Jiangsu; wetland of Yellow River delta; wetland of Liaohe delta.</p>
Total:	50	2,150,000	

Part VIII: Existing and Proposed Protected Areas in HHRB

A. List of established Nature Reserves of IEFA in HHRB

Henan Jigong Mountain National NR	2917	Forest Ecosystem	Rare and endangered species of transition forest ecosystem such as <i>Emmenopterys henryi</i> , <i>Davidia involucrata</i> Baill, <i>Taiwania flousiana</i> Gaussen.etc.	National	1988
Henan Dongzhai National NR	46800	Wild Animals	Rare birds and wild animals such as <i>Nipponia nippon</i> , <i>Ciconia nigra</i> , <i>Syrmaticus reevesii</i> (Gray) etc.	National	2001
Henan Liankang Mountain National NR	10587	Forest Ecosystem	Rare and endangered species of transition forest ecosystem such as <i>Panthera pardus fosca</i> , <i>Audrias davidiaus</i> (Blanchard)	National	2004
Xinyang Tianmu Mountain NR	3860	Forest Ecosystem	Rare and endangered species of transition forest ecosystem	Provincial	2001
Xinyang Huaibin wetland NR	3600	Wet land and water area	Wet land and Rare wild animals such as <i>Cygnus</i> , Crane etc.	Provincial	2001
Shangcheng Huangbai Mountain NR	8000	Forest Ecosystem	Rare and endangered species of transition forest ecosystem	Provincial	1982
Shangcheng Jingangtai NR	5000	Forest Ecosystem	Rare and endangered species of transition forest ecosystem	Provincial	1982
Shangcheng Nianyu Mountain NR	4000	Forest Ecosystem	Rare and endangered species of transition forest ecosystem	Provincial	2001
Xinyang Siwang Mountain NR	3000	Forest Ecosystem	Rare and endangered species of transition forest ecosystem	Provincial	1982
Taibai peak of Tongbai NR	5000	Forest Ecosystem	Rare and endangered species of transition forest ecosystem	Provincial	1982
Zhenlei Mountain NR	4000	Forest Ecosystem	Rare and endangered species of transition forest ecosystem	Provincial	2004
Yellow-margined Box Turtle (<i>Cuora flavomarginata</i>) NR	123260	Wetland and low mountain ecosystem	Rare and endangered animals such as Yellow-Margined Box Turtle	Provincial	2004

B. List of nature reserves planned to be established within the IEFA in HHRB

1	Wenshu lao Mountain in Guangshan Wet land NR	Guangshan County of Xinyang	4000	<i>Cygnus cygnus</i> Linnaeus) , <i>Cygnus columbianus</i> (Ord) etc. in Wetland ecosystem
2	Jingju Temple of Guangshan NR	Guangshan County of Xinyang	3000	Rare and endangered species of transition forest ecosystem
3	Gaolao Mountain NR	Tongbai County of Nanyang Municipality	3600	Rare and endangered species of transition forest ecosystem
4	Longfei Mountain NR	Pingqiao District of Xinyang Municipality	4000	Rare and endangered species of transition forest ecosystem

Part IX: Maps

Map 1: Zoning of HHRB

Map 2: Vegetation and Nature Reserve Map in the Headwaters of the Huaihe River Basin

SIGNATURE PAGE

Country: China, People's Republic

UNDAF Outcome(s): Outcome 3 – More efficient management of natural resources and development of environmentally friendly behaviour in order to ensure environmental sustainability

Expected CP Outcome(s): Outcome 7 – Conservation and sustainable use of biodiversity is more effective

Expected Output(s):
 Output 7.1 - Joint CBPF Group established and Joint Results Framework agreed upon;
 Output 7.2 - Existing policies, plans and regulations reviewed and recommendations for changes made, NAP updated and fed into national and local five-year plan;
 Output 7.3 - Number of laws and regulations on biodiversity promulgated;
 Output 7.4 - Greater institution of local NGOs and communities to participate in BD conservation activities strengthened;

Implementing partner: Xinyang Municipal Government, Henan Province, China

Other Partners: Foreign Economic Cooperation Office of Ministry of Environmental Protection; Henan Provincial Finance Bureau

Programme Period: <u>2009-2013</u> Programme Component: Sustainable Energy and the Environment Project Title: <u>PIMS 3934 Conservation and Sustainable Use of Biodiversity in Headwaters of Huaihe River Basin</u> Project ID: 00059594 Project Duration: <u>four years</u> Management Arrangement: NEX

Total budget:	US \$13,082,200
Allocated resources:	
• GEF	US \$2,727,200
• Co-financing	US \$10,355,000
Xinyang Government:	US \$8,375,000
XMEEA:	US \$1,480,000
Private Sector:	US \$500,000

Agreed by:	Signature	Date	Name and Title
MOF (GEF Focal Point in China)	_____	_____	_____
Xinyang Municipal Government (Implementing Partner):	_____	_____	_____
UNDP: (GEF IA)	_____	_____	_____