Government of China
United Nations Development Programme
Global Environment Facility

Emergency Biodiversity Conservation Measures for the Recovery and Reconstruction of Wenchuan Earthquake Hit Regions in Sichuan Province

Terminal Evaluation Report
December 2011-January 2012

(Final Version)

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ACRONYMS AND ABBREVIATIONS USED IN THE REPORT

AWP	Annual Work Plan
CAS	Chinese Academy of Sciences
CBPF	China Biodiversity Partnership and Framework for Action
CBSAP	Biodiversity Conservation Strategy and Action Plan in China
CBD	Convention on Biological Diversity
CDR	Combined Delivery Report
CEPF	Critical Ecosystem Partnership Fund
CI	Conservation International
CO	Country Office
CoP	Conference of the Parties
CP	Country Programme (between UNDP and the Government of China)
CPAP	Country Programme Action Plan (UNDP)
CSO	Civil Society Organization
CTA	Chief Technical Officer/ Chief Technical Advisor
DEMS	Dujiangyan City Environmental Monitoring Station of Sichuan Province
ECBP	EU-China Biodiversity Programme
EU	European Union
ESDP	Economic and Social Development Plan
FECO	Foreign Economic Cooperation Office
GEF	Global Environment Facility
GoC	Government of China
IBS	Institute of Biological Sciences
IMHE	Institute of Mountain Hazards and Environment
IR	Inception Report
IW	Inception Workshop
MEMS	Mianyang City Environmental Monitoring Station of Sichuan Province
MEP	Ministry of Environmental Protection (of China)
MoF	Ministry of Finance (of China)
M&E	Monitoring and Evaluation
NBSAP	China National Biodiversity Conservation Strategy and Action Plan
NDRC	National Development and Reform Commission
NGO	Non-Governmental Organisation
NPD	National Project Director
NR	Nature Reserve
NNR	National Nature Reserve
PA	Protected Area
PCG	Project Coordination Group
PIR	Project Implementation Review
PM	Project Manager
PMO	Project Management Office
PRG	Procurement Review Group
PRT	Project Review Team
QPR	Quarterly Progress Report
RCEES	Research Centre for Eco-environmental Sciences of the CAS
RCU	Regional Coordination Unit (of UNDP/GEF)
RMB	Reminbi (Chinese monetary unit, also known as Yuan)

SCAES	Sichuan Provincial Academy of Environmental Sciences
Sichuan BSAP	Sichuan Biodiversity Strategy and Action Plan
SCCSEM	Sichuan Province Central Station for Environmental Monitoring
SCDRC	Sichuan Development and Reform Commission
SCEPB	Sichuan Province Environmental Protection Bureau
SCFB	Sichuan Province Forestry Bureau
SCPPG	Sichuan Provincial Planning Group for Post-quake Recovery and Reconstruction
SCWSCS	Sichuan Province Wildlife Survey and Conservation Station
SFA	State Forestry Administration (of China)
Shan Shui	Shan Shui Centre for Nature and Society
SNNR	Siguniangsha National Nature Reserve of Sichuan Province
SO	Strategic Objective
SP	Strategic Priority
TE	Terminal Evaluation
TMI	The Mountain Institute
TNC	The Nature Conservancy
TNNR	Tangjiahe National Nature Reserve of Sichuan Province
TOR	Terms of Reference
TPR	Tripartite Review
TTR	Terminal Tripartite Review
UNDAF	United Nations Development Assistance Framework
UNDP	United Nations Development Programme
WWF	World Wide Fund for Nature

PROJECT SUMMARY SHEET

Country: People's Republic of China	PIMS Number	4187					
	Atlas Project Number	00050526/00062480					
	Project Type	FSP		MSP	x	EA	
Implementing Agency	Sichuan Provincial Environment Protection Bureau						
GEF Focal Area	Biodiversity Conservation; Short-Term Response Project						
GEF Focal Area Strategic Objective and Strategic Priority	SO-1:To Improve sustainability of protected area systems; SO-2: To Mainstream biodiversity in production landscapes seascapes and/or sectors; and Short term response project						
GEF Operational Programme	OP 3: Forest Ecosystems:						
UNDAF Goal	More efficient management of natural resources and development of environmentally friendly behaviour in order to ensure environmental sustainability						
CPAP Output	Output 7.2: National and local biodiversity action plans updated and mainstreamed into the national and local Five Year Plan; Output 7.3: Capacity of CSOs and communities to participate in biodiversity conservation activities strengthened; and Output 7.5: Capacity to analyze and manage risk at the national and selected communities strengthened.						

Project timeframe:	Project Budget:
Project Document Signature Date: 16/12/ 2008	Total budget: US$2,835,200 of which:
Original Planned Closing Date: 31/12/2009 Closing Date: 31/10/2010 Planned Project Duration: 12 months Actual Project Duration: 22 months	GEF funds US$909,000 UNDP funds US$90,000 (in kind) Chinese Government: US$1,550,000(in kind) NGOs: US$286,200 (all in kind, except for US$30,600 from WWF)

EXECUTIVE SUMMARY

A catastrophic earthquake of a 8.0 Richter scale, known as the "May 12 Wenchuan Earthquake", hit Sichuan province in South-western China on May 12, 2008. The earthquake hit region lies in the upper reaches of Yangtze River Basin, one of 25 global biodiversity hotspots and one of the Global 200 ecoregions. At least 35 nature reserves (NR) have been affected, covering 400,000 hectares of land. It was estimated that the direct economic losses produced by the quake were more than US$ 150 billion.

The GEF-funded Project-Biodiversity Conservation Measures for Recovery and Reconstruction in Response to Wenchuan Earthquake in Sichuan Province is a medium-sized emergency response project, approved by Ministry of Finance (MoF) and Ministry of Environmental Protection (MEP) of the People's Republic of China. The project was conceived shortly after the earthquake in June 2008, and was approved by the GEF on September 5, 2008.

The overall goal of the Project is to 'conserve critical ecosystems and their associated threatened and endangered species in the 2008 quake affected region in China and mitigate the loss of biodiversity occurring as a result of the earthquake'. Its immediate objective is to 'To mainstream biodiversity in the post-quake recovery and reconstruction process and strengthen protected area systems with demonstrations in the quake-hit regions of Sichuan Province'. The five outcomes, which together are intended to achieve the immediate objective, were included. Main findings from the Project TE are summarized as follows:

(1) The Project's development objective is very clear and derived from the core biodiversity issues produced by the earthquake. It is closely connected to Chinese sustainable development strategy at national level as specified in Chinese Economic and Social Development Plan for the 11th (2006-2010) and 12th (2011-2015) five-year and the 11th and 12th five-year Chinese Environmental Protection Plan at sectoral level. The objective of the Project is linked closely to such target groups as the local governments, the academic institutions and NGOs.

(2) The Project is consistent with the priorities China places on reconstruction in Sichuan in the aftermath of the devastating earthquake and aftershocks and contributed to three themes of the China Biodiversity Partnership and Framework for Action and also to UNDP Country Programme Outcome 7 as well as aligned with the 2011-2015 UNDAF outcome 1.2 and outcome 1.5 under Outcome Area 1. The Project continues to support the GEF 5 biodiversity strategy by contribution to the SP3 under its SO1 and the SP4 under its SO2.

(3) The stakeholder participation of the Project mainly focused on a relatively high level though considering some grass-root communities and nature reserves. Its stakeholders and/or implementers of the Project are the local governmental sectors at the provincial level and local academic institutions. The Project have been technically supported from the International and local NGOs, such as WWF, TNC, TMI and Shan Shui.

(4) The Project set out and implemented the standard UNDP / GEF monitoring and evaluation procedures and the overall budget plan for key monitoring and evaluation. The PMO have collected and well documented all implementation information which has been used for development/update of work plans. The Logframe has been used as a tool to monitor the achievement of its indicators and track the progress towards its objective, also including for adaptive management.

(5) The official audit conclusions indicate that the project funds have been used in accordance with the legal/contractual basis. The PMO provided for adequate financial management of the project and for a reasonable prevention and detection of errors, irregularities and fraud. The project financial operation was satisfactory and in agreement with its legal/contractual basis.

(6) The implementation approaches adopted have ensured the attainment of the Project specific objective which has also been verified by its outputs and its effects. The Project has contributed to its developmental objective and supported it at information, policy, capability and awareness levels.

(7) **Achievements and effects of Outcome 1:** The impact of the earthquake on the habitats of 10 selected key species was identified and assessed in 2008-2009. The extent of loss/destruction in the eight national nature reserves focusing on Great Panda conservation was investigated and assessed. 19 local communities/villages surrounding the 8 national NRs were investigated and a series of practical measures were put forward to improve local farmer's livelihood. The mangers and professionals from 12 local nature reserves (NR) were trained.

The survey and assessment of the species have directly led to identification of the priority strategies and actions to increase the species population and to rehabilitate their habitats destroyed in the earthquake. The survey and assessment for NRs have also provided a solid basis for the development of post-quake management capability framework. The survey and analysis for local communities did meet the local governmental needs for the basic information in livelihood for the coming reconstruction. The training activities for the nature reserve's staffs obviously improved their knowledge and skills in biodiversity conservation. In effect, lots of information and data from the survey have been used to development of the plans, policies and action recommendations for biodiversity conservation which effectively supported local recovery and reconstruction. Additionally the Project also increased institutional/individual ability to perform field survey and assessment in the context of a severe disaster.

The achievement of the outcome 1 just spent about one year and 10.47% of total expenditure. The local experts and farmers participated together in the field investigations and visits. Therefore its achievements are very low cost and highly efficient.

(8) **Achievements and effects of Outcome 2:** The 'Ecological Function Regionalization Plan in the Wenchuan Earthquake Worst-hit Area of Sichuan Province' developed through the Project has been adopted by the SCEPB, within which, innovative methods, conclusions and recommendations have been used to update 'Ecological Rehabilitation Plan in Sichuan Earthquake Areas' and planed to scale up by SCEPB in other counties/cities to develop similar regionalization plans.

The updated 'Ecological Rehabilitation Plan in Sichuan Earthquake Areas' has formed an integral component of the 'Sichuan Province Recovery and Reconstruction Master Plan after Earthquake'. The official issuance of Ecological Rehabilitation Plan mobilized all stakeholders concerned to actively support and/or participate in its implementation. What is more important is that it has attracted the central and local fiscal budgets to support its implementation.

The publicity materials for campaigns and outreaches were developed to train local officials and farmers from 15 communities. The training events for the local officials have improved their awareness of biodiversity conservation, thus speeding up translation of

mainstreaming biodiversity concept into action. The training and outreach conducted at community level have led to obvious reduction in illegal activities within the NRs.

In addition, a participatory approach used to identify needs of the local farmers in biodiversity conservation and livelihood improvement has remarkably increased the efficiency of training and outreach activities. The expenditure of the outcome 2 is reasonable, accounting for 14.41 % of total expenditure.

(9) **Achievements and effects of Outcome 3:** The 'Technical Guideline for Ecological and Environmental Monitoring and Assessment in the Earthquake Areas' was accepted by the SCEPA, which met local urgent needs to identify the changes in environmental conditions after the earthquake, especially in natural vegetation which is habitat of the Great Panda and in endangered species population. Two ecological monitoring stations were established at Dujiangyan city and Mianyang city, furnished with instrument and device costing US$ 260,000, which have been used to conduct field monitoring.

The monitoring data collected through the Project were submitted in the official report manner to the MEP and Chinese State Council which gave high recognition to the task and have been used for scientific decision-making for the reconstruction. The Project has updated technology and equipment for monitoring, expanded coverage of field monitoring, improved their expertise and skills in ecological monitoring, and promoted a cooperation project with a local university.

The PMO was fully dependent on local expertise and professionals who have both experience in filed ecological monitoring and are familiar with local environmental features. This approach not only saved time and fund, but also encouraged local participation in the Project. The outcome 3 expenditure made up 35.17% of total expenditure, among which the instrument accounted for 29.99%.

(10) **Achievements and effects of Outcome 4:** The 'Reconstruction Framework for Protected Areas' developed is consistent with the requirements of the 'Ecological Rehabilitation and Environmental Protection Plan in Coming Five Years (2011-2015)' and further supports achievement of the objectives of the SCEPA and SCFB Sectoral Plans. The updated Sichuan BSAP, co-delivered by SCEPA and SCFA in December, 2011, better harmonized biodiversity conservation with local economic development after the earthquake.

Within the 'Reconstruction Framework for Protected Areas', 9 priority actions have been listed and budgeted at about US$ 2.63 million, among which US$ 1.72 has been confirmed from national and local fiscal budgets, forming a direct guidance to rehabilitation actions conducted in the 32 NRs affected by the earthquake in terms of investment. The 66 priority projects of the updated BSAP were identified and the organizers responsible for their implementation in future five years (2011-2015) have also been designated. In particular, some projects related to the earthquake have been or are being implemented. Furthermore, the BASP provides a reference framework for application for international and national projects in the field of biodiversity and also an official document for involvement of the private industries and NGOs in local conservation actions.

The participatory approach of relevant stakeholders is a determinant of successful development of the Framework and the BSAP. The outcome 4 spent only 10.21% of total expenditure and has been achieved in very cost-effective manner against its outputs.

(11) **Achievements and effects of Outcome 5:** The plan for revitalization of their management capacity at two national nature reserves was formulated and demonstrated. The Community-based Reconstruction Centres for Ecological Civilization established at five

villages and relevant training and publicity activities have played a key role in pacifying local farmers who go through the earthquake and also improving their knowledge and skills for livelihood and raising their awareness of biodiversity conservation. The demonstrated plan for management capability revitalization provided a good example for other nature reserves to conduct such revitalization. The instrument bought by the Project has been used for field monitoring and lab experiments and collecting the first-hand data for SCEPA and SCFB.

The local farmers have been organized to voluntarily conduct field patrolling for conservation of the endangered species. The NR staffs have actively supported the Project even though they subordinate to different local governments (SCEPA and SCFB). The Community-based Reconstruction Center for Ecological Civilization has not only increased the efficiency of training but also attracted participation of more local farmers. 30.33 % of the total expenditure has been used for the achievement of the outcome 5, among which the instrument accounted for 26.05%.

(12) **Sustainability and Replication:** Recently, Ecological protection component in Sichuan province has been separately planed and budgeted from its comprehensive economic and social development plan. SCEPB have established a special fund in 2012 to support NRs, endemic species protected areas, and ecological function conservation areas in the key regions. SCFB has financially supported more than 20 NRs in management and wildlife conservation, and will in next two years have RMB 1.8 millions of budget to carry out the Great Panda survey fourth time and RMB 7.5 million to naturalize Great Panda and establish corridor for it. As a whole, the sustainability of all outcomes achieved by the Project will without doubt be very likely in the dimension of finance.

SCEPB and SCFA have also formulated and issued Sichuan BSAP, priority actions and projects of which have been integrated into relevant sector's plans. The many elements in the various plans and frameworks produced by the Project has started to gradually be translated into biodiversity conservation actions. All stakeholders of the Project realized that its outcomes have reflected their priority needs and been owned by them. The Project is Likely in sustainability of socio-political aspects.

The 'Regulation on Biodiversity Conservation and Management in Sichuan' and 'Management Regulation on Key Ecological Function Conservation Areas in Sichuan' will be formulated soon. The village rules in the earthquake areas have been formulated to limit illegal activities unfavourable to local biodiversity. An inter-sector meeting to coordinate all efforts in the field of biodiversity conservation and a Biodiversity Conservation Expert Committee will be set up very soon. The existing networks in environmental monitoring and NR management have been in place and will continue to play a key role in ecological monitoring and survey. Overall, legal environments, mechanisms and institutional capacity will all strongly support sustainability of the Project outcomes in institutional aspects.

The earthquake-induced secondary impacts will still exist in the long run. The reconstruction actions after the earthquake may exert high pressure on the local biodiversity. By and large, there are moderate risks that affect the environmental sustainability of the Project outcomes.

The Project was implemented in its areas and no sites beyond them replicated its activities during its implementation. However, some good practices for filed monitoring have been used in Yushu prefecture of Gansu province where another earthquake happed. In addition, other over 20 NRs which were destructed by the earthquake have conducted management capacity revitalization on the basis of the pilot NRs.

(13) **Lessons learnt:**

- High concern over and perception of biodiversity from governments, academic institutions and NGOs is a basis for successful formulation and implementation of the Project.
- In the context of the earthquake, the Project strategy was designed well using participatory approach, particularly precise establishment of its objective of integrating biodiversity conservation into reconstruction process after the earthquake.
- Effective leadership and organization, together with mutual support of stakeholders at international, central, local and community levels, is the most pivotal factor for achievement of the project outcomes.
- Full dependence on local experts who have a good understanding of local legal status, policy background and environmental conditions facilitated implementation of the Project activities in very limited timeframe and funds.
- Training provided by the MEP and UNDP in terms of administrative and financial management of GEF-funded project has no doubt improved the effectiveness and efficiency of the PMO.
- In the future, more attention needs to be given for tracking and identification of impacts of the Project results and their replications.

(14) **Recommendations:**

- It is suggested that Sichuan provincial government should organize biodiversity-related sectors to further strengthen capacity building at legal and institutional levels (for example, local biodiversity management regulation and cross-sector enforcement group for biodiversity conservation) and develop a detailed annual budget scheme/plan to implement them in a coordinated manner. Furthermore an inter-sector coordinating mechanism, like inter-sector meeting for biodiversity conservation, should be established as soon as possible to coordinate the efforts made by multi-sectors which are involved in biodiversity conservation.
- It is suggested that a performance assessment in the field of biodiversity conservation should be integrated into the whole governmental sector assessment framework.
- It is suggested that innovative approaches need to be developed and demonstrated to combine biodiversity conservation with livelihood improvement of local farmers. In particular, the experience/model from Pingwu County where local farmers achieved an increase in honey production and a remarkable improvement in product quality bee through conserving local wild honey plants should be summarized and further expanded to other areas.
- It is suggested that continuous monitoring and survey in the earthquake-hit areas should be performed to identify the changes of key ecosystems and endangered species using the "Technical Guideline for Ecological and Environmental Monitoring and Assessment in the Earthquake Areas".
- It is suggested that combination of biodiversity publicity with training courses in production technology should continue to be performed using the training material developed by the project.

(16) A summary of **the Project ratings** as shown in the following table.

SUMMARY OF TERMINAL EVALUATION RATINGS

Contents	Rating
Project concept and design	**Satisfactory**
Implementation approach	**Satisfactory**
Monitoring and Evaluation	**Satisfactory**
M&E plan design	Satisfactory
M&E implementation	Satisfactory
Achievement of outcomes	
Outcome 1	**Highly Satisfactory**
Relevance	Highly Satisfactory
Effectiveness	Highly Satisfactory
Efficiency	Highly Satisfactory
Outcome 2	**Satisfactory**
Relevance	Satisfactory
Effectiveness	Satisfactory
Efficiency	Satisfactory
Outcome 3	**Satisfactory**
Relevance	Highly Satisfactory
Effectiveness	Satisfactory
Efficiency	Satisfactory
Outcome 4	**Satisfactory**
Relevance	Highly Satisfactory
Effectiveness	Satisfactory
Efficiency	Satisfactory
Outcome 5	**Satisfactory**
Relevance	Highly Satisfactory
Effectiveness	Satisfactory
Efficiency	Satisfactory
Overall assessment of the prospects for sustainability	**Likely/Moderately Likely**
Financial sustainability	Likely
Socio-economic	Likely
Institutional	Likely
Environmental	Moderately Likely

1 INTRODUCTION

1.1 Purpose of the Terminal Tvaluation

The terminal evaluation (TE) is to assess performance of the medium-sized Sichuan Earthquake Project, entitled 'Project-Biodiversity Conservation measures for Recovery and Reconstruction in Response to Wenchuan Earthquake in Sichuan Province', in a comprehensive and systematic manner, from formulation, implementation and financing arrangements, to an assessment of the processes that affected attainment of results and the extent of achievement of outputs and outcomes towards achieving its objective and sustainable impacts at its end.

The project was evaluated using standard UNDP/GEF evaluation criteria, against the specific development objective established in the Project Document. The TE also considers the extent to which the project is supporting the central/local government of China to achieve relevant national/local strategic objectives, and it's contribution to UNDP CPAP Outputs, the strategic priorities of UNDAF and the biodiversity portfolio in GEF Phase IV.

The Terms of Reference (TOR) attached as **Annex 1** to this report set the purpose of the TE: 'To review development and policy environment relating to biodiversity conservation over the life of Sichuan Earthquake Project, commenting on how these might have affected project performance and assess the extent to which the project remained relevant to the needs of its targets'; 'To perform final assessment of the extent to which Sichuan Earthquake Project has successfully accomplished its objectives in terms of activities, outputs and outcomes as defined in the agreed Project Document (Log frame), and assess the likelihood of achieving them upon project completion in 2011'; 'To identify implementing agency's institutional strengths and weaknesses'; and 'To evaluate the impacts and sustainability of project outcomes'.

1.2 Methodology

The Terminal Evaluation was undertaken by only a national consultant with experience in assessing international projects, including GEF-funded ones in the field of biodiversity conservation and sustainable development. The evaluator was given access to a range of documents, provided throughout the course of the evaluation. The list of documents consulted and reviewed is given in **Annex** 3.

The evaluator undertook semi structured interviews (**Annex 6**) and participatory assessments with key stakeholder groups and site visits to two field sites. **Annex 2** records the Itinerary achieved by the evaluator.

The ET then compiled a draft report, submitted to UNDP and PMO. The comments received on the draft have been considered and incorporated by the evaluator before finalising the report.

1.3 Structure of the Evaluation Report

The evaluation report is structured in the following order: The first section outlines the purpose and methodology of the evaluation. The second section then presents the Project identification and its development context and gives a background to Sichuan Earthquake. This is followed by a review of project concept and its formulation. The fourth section assesses project implementation and the impact of processes that affected attainment of the intended results. The fifth major section of the report reviews and evaluates the results achieved under each of the five main component Outcomes, assessing relevance, effectiveness and efficiency of project delivery at its end. The sixth key section assesses the likelihood of sustainable impact, including the Project replication. The seventh and eighth

section of the report summarises lessons learnt and makes the evaluator's recommendations to increase the likelihood of sustainable impact, respectively.

2 PROJECT IDENTIFICATION AND DEVELOPMENT CONTEXT

2.1 Brief Description of the Project

The Sichuan Earthquake Project, an emergency project, was approved by Ministry of Finance (MoF) and Ministry of Environmental Protection (MEP) of the People's Republic of China on December 16, 2008 and was officially launched in Chengdu city of Sichuan province on April 2, 2009. Actually, its concept paper was developed in June 2008, only one month after the earthquake and its full document submitted in July 2008, which showed high social accountability of UNDP and its quick responsiveness to local emergency needs. The Project Document stated that it would start in June 2008 and terminated in June 2009. However, it was allowed to extend until October 2010 with an approval of UNDP CO due to traffic conditions and priority reconstruction tasks in the Project areas after the earthquake, together with consideration of complex coordination in this special situation.

Total budget of the project was US$ 2,835,200, among which US$ 909,000 was contribution from GEF, 1,550,000 (in kind) from Chinese governments, US$ 90,000 (in kind) from UNDP and 286,200 (almost in kind, but US$ 50,000 from WWF in cash) from NGOs. The Project was executed by UNDP CO at international side and co-implemented by MEP and Sichuan Province Environmental Protection Bureau (SCEPB) at national level. But it has, in practice, been implemented by the Foreign Economic Cooperation Office (FECO) under the SCEPB which was commissioned by the FECO under the MEP through a contract signed by the two parties.

The Project worked at the provincial level in terms of mainstreaming biodiversity but it focused its on-the-ground work in 6 regions, which cover more than 125,000 square kilometres and occupy about 27% of land area of Sichuan province. Particular focus was given to the 29 severely affected counties in these regions.

2.2 May 12 Wenchuan Earthquake and its Environmental Impacts

A catastrophic earthquake of a 8.0 Richter scale, known as the "May 12 Wenchuan Earthquake", hit Sichuan province in South-western China on May 12, 2008. This earthquake affected 417 counties in 16 provinces, municipalities, and autonomous regions across China, resulting in more than 69,000 persons dead and over 370,000 ones injured. Thirty counties in Sichuan province were among the hardest-hit areas where not only tremendous buildings and infrastructure were damaged or destroyed but also environmental conditions were changed, with which biodiversity can be supported and maintained. As of June 2, 2008, 2,498 landslides, 1,518 slope collapses, 476 rock and mud slides, 777 instable slopes and 34 quake-lakes were found in Sichuan province. At least 35 nature reserves (NR) have been affected, covering 400,000 hectares of land. It was estimated that the direct economic losses produced by the quake were more than US$ 150 billion.

The earthquake hit region lies in the upper reaches of Yangtze River Basin, one of 25 global biodiversity hotspots identified by Conservation International (CI), and one of the World Wide Fund for Nature (WWF) Global 200 ecoregions. The ecosystem in this region is recognized as a critical area in the national ecological protection system, which also provides important ecological services for human well-being in the area, including habitat, water resources, and water and soil retention as well as an important role in national

ecological security. In the affected areas, there exist a large number of relic and endemic species such as the Giant Panda (*Ailuropoda melanoleuca*) and Sichuan Partridge (*Arborophila rufipectu*). Additionally, the region is home to 12 of China's 55 ethnic minority groups, including the Tibetans, Qiang, Hui, Miao, Zhuang, Tujia, Man, Li, Uygur and Jino minorities, who are the storehouses of indigenous knowledge on natural resources.

The Chinese Government has responded quickly to the disaster. Various governmental agencies, institutions, the military, Non-governmental organisations (NGOs), volunteers and medical professionals have been mobilized to conduct rescue and relief efforts. By 15 July 2008, more than US$6.6 billion from international and domestic donors and over US$7.7 billion from central and local government sectors had been confirmed available for the rescue operations, disaster relief as well as post-disaster reconstruction and rehabilitation. The rehabilitation of the earthquake-affected area is, therefore, be one of the biggest efforts of its kind in China, also including the proper restoration and management of globally important ecosystems and the prevention of any secondary environmentally-negative impacts produced by reconstruction efforts.

2.3 Issues Addressed by the Project

The earthquake posed threats to biodiversity mainly in the following aspects: (1) The direct habitat loss and fragmentation, loss of wildlife itself and damage to conservation infrastructure and facilities; (2) Threats posed by earthquake-induced environment risks, including sharply reduced food supply for wildlife due to loss of vegetation and alterations to water flow regimes, and species migration due to loss of habitats; and (3) Potential threats posed by disaster relief, recovery and reconstruction measures in the affected areas.

Immediately after the earthquake, the Chinese Government initiated an assessment to develop Sichuan Provincial Planning for Post-quake Recovery and Reconstruction, with the National Development and Reform Commission (NDRC) as leader and participation of 27 ministry-level agencies and the Sichuan Provincial Government. The MEP also took a parallel action focusing on ecological rehabilitation and mainstreaming of environmental issues into the post-quake reconstruction efforts. On the basis of these assessments, the Project Document outlined three issues/barriers which were identified in the post-quake biodiversity conservation to cope with the above threats: (1) The biodiversity-related information gaps for conservation actions; (2) Low awareness and weak capacity in government sectors concerned to integrate biodiversity conservation objectives to avoid or mitigate the secondary environment risks and the threats of the human activity on biodiversity in the process of the post-quake recovery and reconstruction; and (3) The weakened capacity of protected area system in biodiversity conservation after the earthquake.

As stated in the Project Document, it was designed to deal with the above barriers, build necessary capacity, and mainstream biodiversity into post-quake development plans and policies to ensure that reconstruction efforts in Sichuan province can be carried out in environmentally sound way – such that global biodiversity values are not adversely affected but maintained and enhanced.

2.4 Objective and Intended Outcomes of the Project

The overall goal of the Project established by its document is to 'conserve critical ecosystems and their associated threatened and endangered species in the 2008 quake affected region in China and mitigate the loss of biodiversity occurring as a result of the earthquake'. From the evaluator's perspective, the overall goal is equivalent to its development objective though it is in the context of the earthquake. Currently, biodiversity

conservation, as emphasized by some important national strategies and plans, is among priority agenda in the field of environmental protection in China and has been recognized as a basis of sustainable development and has no choice to be compatible with its fast economic growth. Specifically, The Project Document set up an immediate objective for it: 'To mainstream biodiversity in the post-quake recovery and reconstruction process and strengthen protected area systems with demonstrations in the quake-hit regions of Sichuan Province'. The five outcomes, which together are intended to achieve the immediate objective, are:

Outcome 1: Knowledge and understanding improved and information gaps filled on the earthquake induced impacts and post-quake ecological risks on biodiversity in affected areas.

Outcome 2: Recovery and reconstruction plans in project areas incorporate biodiversity conservation objectives.

Outcome 3: Improved monitoring capacity for biodiversity concerns in the process of disaster relief, and post quake recovery and reconstruction.

Outcome 4: Development of protected area (PA) reconstruction framework with prioritized actions for investment by government, and national and international communities.

Outcome 5: Revitalized management capacity in demonstration PA in affected areas.

2.5 Main stakeholders

Main stakeholders have two components: one is the implementing partners that have participated in the activities of the Project and the other is the international and local NGOs that have provided the project with co-finance and technical support.

Main implementing partners include:

- Institute of Mountain Hazards and Environment (IMHE), Chinese Academy of Sciences (CAS)
- Institute of Biological Sciences (IBS), CAS
- College of Life Science, Sichuan University
- Sichuan Province Academy of Social Sciences
- Sichuan Provincial Academy of Environmental Sciences (SCAES)
- Sichuan Province Central Station for Environmental Monitoring (SCCSEM)
- Dujiangyan City Environmental Monitoring Station of Sichuan Province (DEMS)
- Mianyang City Environmental Monitoring Station of Sichuan Province (MEMS)
- Siguniangsha National Nature Reserve of Sichuan Province (SNNR)
- Tangjiahe National Nature Reserve of Sichuan Province (TNNR)
- Sichuan Province Wildlife Survey and Conservation Station (SCWSCS)
- Ecological Division of SCEPB

Main international and local NGOs include:

- World Wide Fund for Nature (WWF)
- The Nature Conservancy (TNC)
- Shan Shui Centre for Nature and Society (Shan Shui)
- The Mountain Institute (TMI)

3 PROJECT CONCEPT AND DESIGN

Summary Rating- Project Concept And Design	Satisfactory

3.1 Origin of the Project Concept

After the 'May 12 Wenchuan Earthquake', GEF Council immediately sent message to the MoF and the MEP for expression of profound condolences to the victims and in the meanwhile decided to donate US$ 2 million [1] as an emergency aid to support the recovery and rehabilitation in the disaster areas. According to the overall arrangement of the recovery and rehabilitation efforts which mainly included assessment, planning and policy support, a rapid assessment for the impacts resulting from the earthquake was made by a national academic institute of CAS, commissioned by the MEP, in collaboration with SCEPB. On the basis of the assessment, a package of recommendations were developed in terms of (1) developing the plan for ecological protection, recovery and rehabilitation, (2) implementing the ecological recovery component within the above plan in the disaster areas, (3) undertaking biodiversity conservation and habitat recovery, and (4) considering ecological protection issues in the process of emigration.

The Project just built on the above recommendations and identified its three key components: to conduct on-site survey for ecological destruction in severe disaster counties/cities, to make special investigation and assessment for the facility damage in the NRs in the hit areas, and to set up ecological monitoring/observation stations in the hit areas. Through a fast track, the Project completed its all procedures for review and approval only within half year and then went into cycle of its implementation. It was the first internationally-aided project in the field of environment in the course of the post-quake recovery and rehabilitation.

The implication of the Project concept may be interpreted as concerns over and support to Chinese biodiversity conservation of international community and as high attention and quick response of Chinese central and local governments to biodiversity conservation after the earthquake, which reflects the degree of their conservation awareness.

3.2 Logframe Analysis of the Project

Generally, the logframe of a project consists of four main components: development objective, specific objective, outputs and activities, together with assumptions corresponding to each, by which the components can be realized or some of them contributed in a project cycle period.

The Project' development objective, as stated in its document, is to 'conserve critical ecosystems and their associated threatened and endangered species in the 2008 quake affected region in China and mitigate the loss of biodiversity occurring as a result of the earthquake', which is very clear and derived from the core biodiversity issues produced by the earthquake (see the threats mentioned in Section 2.3 of the Report). Realization of conservation for the ecosystem and species in disaster areas and of reduction in biodiversity loss from the earthquake is just two elements to which the Project will contribute. The

1 The contribution of US$ 2 million had supported implementation of two projects in total: one is this Project under evaluation and the other is the project of 'Identification, Assessment and Countermeasures of Typical Secondary Environmental Risks in Earthquake Hit Regions of Sichuan Province.

development objective is closely connected to Chinese sustainable development strategy at national level as specified in Chinese Economic and Social Development Plan (ESDP) for the 11th (2006-2010) and 12th (2011-2015) five-year in which ecological protection and rehabilitation have been emphasized. Of course it is also among the priority topics set out in "Biodiversity Conservation Strategy and Action Plan in China (CBSAP)" at national level and the key fields established in "the 11th and 12th five-year Chinese Environmental Protection Plan" at sectoral level. And finally, it should be mentioned that the development objective is consistent with the China Biodiversity Partnership and Framework for Action (CBPF), an influential document produced by the international project which was funded by European Union (EU), and contributed to the following five elements of the CBPF Results Framework, as stated in the Project Document:

Result 5-The general public is supportive of conserving biodiversity;

Result 12- Biodiversity conservation and sustainable use is mainstreamed into local plans;

Result 18- National nature reserves and provincial nature reserves are effectively managed;

Result 20- At national nature reserves and provincial nature reserves, local communities, NGOs and/or the private sector are involved in protected area co-management and development; and

Result 22- Restoration of forest, agricultural, ocean, freshwater, grasslands, dry lands and urban ecosystems demonstrate incorporation of biodiversity objectives.

The specific objective of the Project is to 'mainstream biodiversity in the post-quake recovery and reconstruction process and strengthen protected area systems with demonstrations in the quake-hit regions of Sichuan Province'. It is very specific, concrete, practical and feasible in the Project's time frame. In the specific objective, 'mainstream biodiversity' and 'strengthen protected area system' have clearly shown the key problems to be addressed by the Project. Though mainstreaming biodiversity in the whole country is a long-term effort, the Project tailored the specific objective to the earthquake hit counties/cities and to the specific time context of the post-quake recovery and reconstruction. And additionally the specific objective also linked clearly to the target groups such as: (a) the local governments which are often organizer, coordinator and/or executor for the development and implementation of the policies and plans related to local biodiversity conservation; (b) the academic institutions some of which participated in the project activities; and (c) the NGOs which offered a technical support. It can reflect the main changes the Project is intended to bring about at its end: information identified and assessed, biodiversity mainstreamed through plan/events process, and PA management capability strengthened. The relationship between the specific objective and development one exists strongly logic and supportive. The achievement of the mainstreamed biodiversity and strengthened protected area systems will without doubt contribute to the conservation of biodiversity at ecosystem and species levels and to the mitigation of their losses in earthquake areas. The specific objective is formulated in a verifiable way, being measured by four indicators with a baseline and a target each (Table 1). In summary, the specific objective can be said to be "SMART" [2]

The Project was intended to achieve five outcomes as mentioned in Section 2.4 in this Report, namely the immediate effects/benefits/changes brought about due to its influence.

2 Specific: to avoid differing interpretations; Measurable: to allow the monitoring and evaluation of implementation; Appropriate: to adequately address the problems; Realistic: achievable and meaningful; Time-bound: with a specific time for achieving it.

Each outcome had some indicators to verify its achievement (Table 2). In overall terms, the outcomes are practicable and feasible within the project cycle. The indicators used to verify the outcomes were established well and also enable project managers and evaluators to clearly monitor and evaluate the level of achievement of the Project Outcomes, even though they still existed some shortcomings against the standard "SMART" (Table 2)

Table 1: Specific Objective Indicators and the evaluator's Comments

Indicators	Comments
1. Proper application of biodiversity friendly practices demonstrated in earthquake recovery and reconstruction operations in 2 quake-affected counties by the mid-term of the project and in 29 quake-affected counties at the end of the project. **Baseline:** Biodiversity friendly recovery and reconstruction practices are not properly applied in operations. **Target:** It is indicated by the above indicator.	It should be necessary and thus clearer to present an indicator separately with its baseline and target.
2. At least 134,000 hectares of Giant Panda habitats (including 34,000 hectares of destroyed habitats) are included in the ecological rehabilitation plan of the master plan for reconstruction. **Baseline:** Rehabilitation of damaged and affected panda habitats assessed but is not included in the ecological rehabilitation plan. **Target:** It is indicated by the above indicator.	It should be necessary and thus clearer to present an indicator separately with its baseline and target.
3. At the end of project, patrolling and monitoring capacity of 2 protected areas will be resumed providing first-hand data on population and habitats of 10 critical endangered species. **Baseline:** Patrolling and monitoring are not regularly conducted in PAs. **Target:** It is indicated by the above indicator.	It should be necessary and thus clearer to present an indicator separately with its baseline and target.
4. Knowledge and best practices from biodiversity response measures within the Wenchuan earthquake synthesized for replication in other earthquake affected areas in Wenchuan and elsewhere in the world. **Baseline:** No knowledge product in China related with biodiversity rehabilitation from earthquake. **Target:** It is indicated by the above indicator.	It should be necessary and thus clearer to present an indicator separately with its baseline and target.
5. Relief efforts of 80% of agencies and organizations in relation to biodiversity conservation in quake-affected areas are coordinated. **Baseline:** Relief efforts of stakeholders in PAs of quake-affected areas are poorly coordinated **Target:** It is indicated by the above indicator.	It should be necessary and thus clearer to present an indicator separately with its baseline and target.

The Project intervention included 12 outputs to address the direct causes of the key problem faced by its beneficiaries and 33 activities in total to be conducted to produce the outputs (**Annex 7:** Strategic Results Framework). The outputs of the Project are clearly related to its specific objective and achievable with the resources available. However, a point to mention here is that only one output 1 was designed under outcome 1. In practice, there may be 3–6 outputs, at least 2 outputs established for each outcome. In the evaluator's opinion, it is necessary that the outcome 1 should be further break down into several outputs so that the outputs and the respective activities corresponding to them can be easily scheduled, organized and monitored. At the stage of a project design, more attention should be given to the balance among them in selecting outcome, output and activity to make the best use of resources available in an effective and efficient way.

Table 2: Outcomes, Indicators and the evaluator's Comments

Outcomes	Indicators	Comments
Outcome 1: Knowledge and understanding improved and information gaps filled on the earthquake induced impacts and post-quake ecological risks on biodiversity in affected areas.	1. 1: Adequate knowledge acquired on at least 10 critical species; 1.2: Losses in all national nature reserves identified.	It is advisable to present a specified timeframe such as at the end of the project (same shortcoming with some of other indicators under the Project).
Outcome 2: Recovery and reconstruction plans in project areas incorporate biodiversity conservation objectives.	2.1: Recommendations on establishment of ecological function conservation areas are proposed; 2.2: Sichuan earthquake ecological rehabilitation plan prepared and improved; 2.3: User's guide for biodiversity friendly recovery and reconstruction practices prepared and printed for distribution; 2.4: Increased awareness of biodiversity significance of earthquake hit areas improved among decision makers, planners and the public; 2.5: Hand-on trainings to 50 planners, 200 managers on integrating biodiversity into recovery and reconstruction operations.	For the indicator 2.1, it may be better to specify what agency the recommendations should be submitted to or used in its decision-making process. The indicator 2.4 is defined in a too broad way and thus is not easy to verify. Again, it is not very specific and has some overlap with the indicator 2.5 which is actually relevant closely to the conservation awareness. It is, therefore, unnecessary to set up the indicator 2.4.
Outcome 3: Improved monitoring capacity for biodiversity concerns in the process of disaster relief, and post quake recovery and reconstruction.	3.1: Draft technical guidelines for ecological monitoring in earthquake hit areas developed to guide establishment of monitoring stations; 3.2: Two demonstration ecological monitoring stations in operation producing the first monitoring report in June 2009.	The two indicators were well defined, which considered two dimensions to improve monitoring capacity for biodiversity: 'soft' thing-technical guidelines and 'hard' thing-establishment of ecological monitoring stations.
Outcome 4: Development of PA reconstruction framework with prioritized actions for investment by government, and national and international communities.	4.1: PA system reconstruction framework with prioritized actions in consultation with government and international communities developed and approved by relevant agencies; 4.2: Sichuan biodiversity strategy and action plan taking into consideration of earthquake is adopted by provincial government agencies.	The indicator 4.2 did not show the relationship of the outcome 4 with Sichuan Biodiversity Strategy and Action Plan. It is a little difficult to understand use of the indicator as the outcome 4. To the evaluator's understanding, Sichuan BSAP should reflect the elements related to the PA reconstruction framework. So the BSAP adopted by provincial government agencies will facilitate and support the implementation of the framework. Anyway, the indicator 4.2 should be stated and defined more clearly.
Outcome 5: Revitalized management capacity in demonstration PAs in affected areas.	5.1: Experience and lessons in emergency earthquake response measures for biodiversity conservation developed. 5.2 Selected priority actions implemented in the 2 identified nature reserves.	The phrase 'Priority Action' used in the indicator 5.2 seems too broad, thus not knowing what priority action will be implemented to revitalize the management capacity in PA. Therefore the indicator is not very specific and appropriate though professionals may understand what the priority actions mean in the context of nature conservation.

The assumptions and risks at objective and outcome levels have been set up in the Project Document (**Annex 7:** Strategic Results Framework). During the Project formulation, the external factors which may jeopardize the project have been identified and assessed through a participatory brainstorm and draft proposal meetings joined by relevant stakeholders, especially local governmental officials and local PA managers. For example, the two assumptions at objective level-'Biodiversity conservation will be listed one of local governmental agenda in post-quake recovery and reconstruction' and 'Biodiversity management objectives are not fully incorporated into relevant sectoral plans' are very logical and robust to the specific objective of the Project. But it should be pointed that assumptions should be formulated as positive statements of what is expected to happen, rather than negative ones. In connection with assumptions at outcome levels, they are all clear and real, for instance, top quality experts available, practical recommendations and governmental acceptance of them, willingness of local managers and planners to consider biodiversity into their routine work, stability of trained persons, effective coordination, and access to NRs etc. However, the evaluator would like to suggest that environmental risks resulting from secondary disasters, for example, landslides, slope collapses as well as rock and mud slides etc., may be an important assumption to the Project implementation and its results sustainability.

3.3 Implementing Institutions Capacity and Stakeholder Involvement

The Project Document was co-signed by MoF, MEP and UNDP. The FECO under MEP was designated as national executing agency (as stated in the agreement between the FECO under MEP and SCEPB), responsible for management of the GEF Project funds, for coordination at national level among UNDP CO, MoF, the line departments within MEP, other Ministries/national agencies concerned, and international organizations and NGOs, as well as for overall guidance, supervision and review in the course of the Project implementation. As is standard practice for UNDP/GEF projects, a National Project Director (NPD) was appointed to be responsible for the mentioned-above affairs.

SCEPB took responsibility for the implementation and daily management of the Project, and for coordination at local level. The FECO under SCEPB has in practice executed implementation of the Project under the leadership of SCEPB.

The FECO under MEP has very strong capacity in executing multilateral, bilateral and other international projects, a diversity of experience for over 30 years and various resources available to a project management. The FECO under SCEPB has been implementing international projects from a variety of sources for years and is completely qualified to be responsible for the Project implementation.

During the project formulation, a stakeholder analysis has been systematically made, with the main stakeholders and their roles in the Project identified.

Line Ministries/Agencies at national level: The MEP is a lead agency regarding biodiversity conservation, nature reserve supervision and CBD implementation in China; The State Forestry Administration (SFA) is responsible for the management of most nature reserves in China.

Line Governmental Sectors at the level of Sichuan Province: SCEPB and Sichuan Forestry Bureau (SCFB) are among the most relevant target groups. Others related to the Project also include the production sectors in the agriculture, mining, construction, transportation, and tourism;

International NGOs: They particularly include TNC, WWF, CI, and TMI, who have all contributed to the design and review of the Project. TNC has collaborated with SCEPB in

development of Sichuan BSAP supported by the TNC/Government of China (GoC) and Chinese Blueprint Project and the WWF have been conducting a Giant Panda Protection Programme in the Project area. CI is implementing a Critical Ecosystem Partnership Fund (CEPF) initiative in southwest China to support the conservation of biodiversity in this area including Sichuan Province, while the TMI is actively promoting environmentally friendly building materials to post-quake reconstruction in China. The activities carried out by above organizations in the period of the Project formulation are identified as co-financing (almost in kind) to this Project.

Bilateral/Multilateral Agencies: European Union (EU), through execution of the UNDP, funded a EU-China Biodiversity Programme (ECBP) (2005-2011), which contained 18 local field projects across China including in Sichuan. There were six out of them which have been affected by the earthquake and thus an adaptive management is needed for the changed situations. A rapid assessment activity undertaken by UNDP which executed the ECBP in the context of the earthquake has been confirmed as co-financing to this Project.

Research Institutes: They include the CAS, Nanjing Institute of Environmental Sciences of MEP, SCAES and SCCSEM, which provided technical support for the Project implementation.

Local Communities: They are particularly those surrounding nature reserves and those involved in migration due to the earthquake.

The Project design process involved consultation with the key stakeholder groups. For example, consultations had been undertaken for this Project preparation with representatives of above stakeholders through a series of site visits to the affected area, interviews with national and local partners, and through roundtable meetings in affected area and at the national level in Beijing. Such consultations and communication each other continued during the Project's implementation. In summary, the Project in the period of its identification made a detailed analysis of the characteristics, problems, needs, interests and potentials of the stakeholders related to it, thus offering an opportunity to encourage the interested individuals and groups to participate in the Project from its outset and to use the outputs delivered by it.

3.4 Relevance to the national, UNDP and GEF strategic objectives

3.4.1 Relevance to national priority needs and strategic objectives

As indicated in the Project Document, it is consistent with the priorities China places on reconstruction in Sichuan in the aftermath of the devastating earthquake and aftershocks. On May 28, 2008, the Wenchuan Earthquake Reconstruction Planning Group initiated the planning process for reconstruction. All relevant sectors began with survey and assessment of losses from the disaster and then developed recovery and reconstruction plans. The MEP was tasked with undertaking a biodiversity impact assessment in the affected areas. This project is, accordingly, a top priority of the MEP and SCEPB.

The Project contributes to the following three themes of the CBPF which was designed as an "Umbrella Programme" to support conservation efforts under one programmatic approach:

Theme 2: 'Mainstreaming biodiversity into socio-economic sectors, plans and investment decision-making';

Theme 3: 'Investing and managing effectively in reducing biodiversity loss in protected areas'; and

Theme 4: 'Investing and managing effectively in reducing biodiversity loss outside protected areas'.

The Project continues to contribute strongly to the strategy for biodiversity conservation and nature reserve management developed by the MEP in recent years and also aligns with China's 12th five-year ESDP, which emphasizes the importance of biodiversity conservation to support sustainable development.

The national strategic context for biodiversity conservation has been further strengthened since project design. The updated CBSAP issued by the State Council of China in September 2011 emphasizes in its strategic tasks that integration of biodiversity into economic and social development plan should be piloted at national and local levels. It highlights the importance of strengthening capacity building to effectively manage nature reserve, especially its conservation facilities, establishing field monitoring system and information management system. In addition it stresses the importance of surveying and assessing of biodiversity resources and their threats.

3.4.2 Relevance to UNDP Strategic Objectives

This Project was designed as a short-term emergency measure. In global terms, it will generate significant environmental benefits by mainstreaming biodiversity consideration into government reconstruction master plans, which ensures that reconstruction will not increase pressures on globally significant biodiversity from infrastructure or new settlements in sensitive areas. In development of the Project, national and local formulators have recognized the necessity in relevance and contribution to UNDP strategic objective.

Within the 2006 -2010 UNDP Country Programme for the Peoples Republic of China, the Project contributed to the Programme Outcome 7: 'Conservation and sustainable use of biodiversity is more effective', and specifically to

Output 7.2: National and local biodiversity action plans updated and mainstreamed into the national and local five-year plan;

Output 7.3: Capacity of civil society organizations (CSOs) and communities to participate in biodiversity conservation activities strengthened; and

Output 7.5: Capacity to analyze and manage risk at the national and selected communities strengthened.

In the period of development of the 12th five-year ESDP (2011-2015), The Chinese Government and the United Nations developed a new UNDAF framework in 2011 to guide the UN-China partnership over the coming five years. The 2011-2015 UNDAF focuses the work of the UN in China on three overall outcome areas and thirteen specific Outcomes:

UNDAF Outcome Area 1: 'Government and other stakeholders ensure environmental sustainability address climate change, and promote a green, low carbon economy';

UNDAF Outcome Area 2: 'The poorest and most vulnerable increasingly participate in and benefit more equitably from China's social and economic development'; and

UNDAF Outcome Area 3: 'China's enhanced participation in the global community brings wider mutual benefits'.

The Project continued to contribute to and align with to the outcome 1.2 under Outcome Area 1 of the updated Framework, which stated that 'Policy and implementation mechanisms to manage natural resources are strengthened, with special attention to poor and vulnerable groups' and in particular to the output under outcome 1.2, which stated that 'Government capacity to conserve biodiversity and ecosystems is enhanced, and

communities are empowered to increasingly benefit from the development of eco-based livelihood resources'. Additionally, the Project is also relevant to the outcome 1.5, which stated that 'The impact of disasters on vulnerable groups is mitigated through enhanced disaster risk reduction and better preparedness and response measures' and to its two outputs which stated that 'The rights of the most vulnerable are protected during response to and recovery from disasters' and 'Institutional policies and capacities for disaster preparedness, response, and management are strengthened'

Strategic assessment as part of the development of the 2011 -1015 UNDAF pointed to the UN's comparative advantage in it's 'ability to bring to China the best of global experience and expertise', 'by helping pilot innovative approaches', and 'helping in raising awareness of biodiversity and ecosystem conservation issues, and facilitating the conservation of ecosystem-based livelihood resources'.

3.4.3 Relevance to GEF Strategic Objectives

The Project continues to support the GEF 5 biodiversity strategy, the objective of which is to support the conservation and sustainable use of biodiversity and the maintenance of ecosystem goods and services. The GEF 5 biodiversity strategy has five objectives, two out of which are relevant to the Project: 'To improve the sustainability of protected area systems' and 'To mainstream biodiversity conservation and sustainable use into production landscapes/ seascapes and sectors'. The Project continues to contribute to the two strategic areas.

At the stage of the Project design, its document has specifically identified the two aspects of consistence with GEF Strategic Priority (SP) and Strategic Objective (SO): the SP 3 under SO1-'Strengthening Terrestrial Protected Area Networks' to which the Project contributes through plan and implementation of the selected priority actions in the nature reserves suffered from the earthquake, and the SP 4 under SO 2-'Strengthening the Policy and Regulatory Framework for Mainstreaming Biodiversity', to which the Project contributes in a way that policy recommendation has been made for integration of mainstreaming biodiversity management into reconstruction plans and priorities.

Additionally, the Project also met the operational criteria of the SP for short term response activities by following four aspects:

(1) The GoC's commitment to ensuring that biodiversity management considerations are taken into account in reconstruction plans and investments has been executed expeditiously;

(2) The Project reduced future threat abatement costs by taking preventive action to avoid damage from improper placement of infrastructure or settlements in ecologically sensitive areas, and by addressing the threats to biodiversity.

(3) The severity of the earthquake and its direct and secondary effects has placed huge pressure on biodiversity. The Project reduced the risks which globally threatened species and their major habitats will be destroyed.

(4) The Project had a demonstration value and provided an excellent example of how to integrate disaster relief and reconstruction efforts in biodiversity hotspots with biodiversity management objectives, plans and programmes.

3.4.4 Relevance to other interventions

Outcome 1 was implemented in close coordination with the ongoing initiatives of the provincial management authorities, the CAS, and international NGOs such as WWF, CI and TNC. Outcome 2 and 3 were directly fed into the government reconstruction process which

was coordinated by the NDRC.

Six projects under EU-China Biodiversity Programme are managed by UNDP. UNDP ensured strong coordination between these initiatives. The SCEPB and Sichuan Province Forestry Bureau (SCFB) were implementing partners of all ongoing projects of TNC, WWF and CI, providing for easy communication and coordination. The Mountain Institute's efforts to provide environmentally friendly building materials to the affected areas have been tied into project activities. As far as the donor community is concerned, the UN system in China has established a regular information sharing and coordination mechanism for earthquake relief work within the UN system and between the UN system and donor community. This coordination channel has been utilized to ensure the coherence of planned activities undertaken by other international partners.

In addition, The Project has relevance in objectives and activity to the completed and ongoing biodiversity-related projects in Sichuan province, including GEF project-Integrated Ecosystem Management; Sino-Norway project-Biodiversity and Climate Change; National 973 Programme-Study on Impacts of Wenchuan Earthquake on the Great Panda and its Habitats; MEP-funded project-Development of Biodiversity Database at Species Level; NDRC projects- (a) Capacity Building for Great Panda Habitat Rehabilitation, Conservation and Management in Sichuan, and (b) Natural Vegetation Rehabilitation in the Earthquake-affected Areas.

4 PROJECT IMPLEMENTATION

Summary Rating- Implementation approach	Satisfactory

4.1 Management Arrangement

The Project entered officially into its implementation stage after the kick-off meeting held on September 4, 2009. It was executed by UNDP CO at international level and by The FECO under MEP at national level. The FECO under SCEPB was responsible for the Project implementation. Institutional/mechanism arrangements for Project management and implementation were executed in line with the management consideration established during its design.

A Project Management Office (PMO) was established on July 21, 2008 within the FECO under SCEPB, which acted as the Project Coordinator and by which information communication on the Project was maintained between central and the provincial government. The PMO was staffed with a project director, a project manager, a technical assistant, an administrative/financial officer. The Project director is also director of the FECO under SCEPB, thus having a strong ability in leadership, organization and coordination of the Project implementation. The Project manager is a woman scientist from a local institute who has good experience in project operation, staff recruitment and information dissemination. The PMO team has been stable and appears a sense of accountability to the Project which is an emergency action in the context of the devastating earthquake.

According to the UNDP National Project Management Manual, a rule for the Project management was formulated and used in daily management practice.

A Project Coordination Group (PCG), consisting of 2 provincial governmental sectors and UNDP, together with NGOs as observers, was created to ensure that the Project outcomes

can be used and fed into the reconstruction mater plan and reconstruction actions undertaken by relevant sectors, particularly biodiversity conservation objectives.

In addition, the PCG was also responsible for overseeing the Project operation, providing policy guidance, and reviewing implementation progress. The coordination group model has been a usual mechanism in the context of China to bring all stakeholders together for completion of a project/important event, which is very effective and efficient in terms of Chinese administrative structure. Though the PCG members is different in governmental sectors from those described in the Project Document, the evaluator thinks that it has included all relevant functional departments within SCEPA and the most crucial SCFB which has been responsible for development and management of nature reserves and wildlife within its functions. Also, The PCG was chaired by a deputy director-general of SCEPA who have an ability and resource enough to coordinate the Project with other governmental sectors. The fact the Project was smoothly implemented and its planed outputs were timely and effectively delivered has shown the effectiveness of the PCG.

A Project Review Team (PRT) which contained 17 experts from local academic institutes, universities and NGOs was established to provide technical support for the Project and review quality of its outputs. The PRT was headed by a Chief Technical Advisor (CTA) who has taken main responsibility for overall technical guidance to the PMO and the sub-contractors during the Project implementation and for coordinating the PRT members to offer necessary technical services for all the direct participants and stakeholders of the Project. The PRT members were recruited in fair and transparent way and have high-level expertise in the field of ecology, conservation biology, planning development and community-based conservation.

Furthermore, a Procurement Review Group (PRG) was also set up to be responsible for the things related to the equipment bought through the Project.

UNDP CO, in partnership with MoF and MEP, co-promoted the Project formation at GEF, was responsible for ensuring proper use of GEF funds and has coordinated in providing its overall strategic guidance. It also provided an advisory, monitoring, review and oversight role as the Project's Executing Agency and has worked consistently with the PMO in review of quarterly monitoring reports, quarterly progress reports, and in modifying the output indicators at the Project inception. In addition, UNDP CO Director and Project Manager visited the field sites during the Project implementation and reviewed the progress and results achieved by the Project, as well as provided constructive comments for further improving the Project implementation.. The UNDP CO Director highly praised Chinese governmental efforts in the earthquake relief, positively valued the existing outputs of the Project, and mentioned that the experience gained and lessons learnt from China would have demonstration roles to other countries in earthquake relief and reconstruction.

4.2 Stakeholder Participation

During the Project implementation, its core stakeholders and/or implementers are the local governmental sectors at the provincial level (i.e. SCEPB and SCFB) and local academic institutions (i.e. institutes and universities) which have signed subcontracts with the PMO to complete most activities to be undertaken under each outcome, shown in Table 3.

Research Center for Eco-Environmental Sciences of CAS, Sichuan Province Nature Resources Science Academy, Xihuan Normal University, and Landscape Design Company of Sichuan Agricultural University have participated in the activities related to survey and assessment of biodiversity in the earthquake-affected areas, also including the local community livelihoods. Sichuan Province Forestry Science Academy, Forestry Exploration

and Design Institute of Sichuan Province and Sichuan Normal University were involved in development of rehabilitation framework for nature reserves in the earthquake-affected areas.

Table 3: Core stakeholders and/or implementers of the Project

Stakeholders	Activities of the Project
Institute of Mountain Hazards and Environment, CAS	Survey and risk assessment of biodiversity in the earthquake-affected areas.
Institute of Biological sciences, CAS	Study on ecological function regionalization.
Sichuan Provincial Academy of Environmental Sciences	(1) Development of ecological rehabilitation and reconstruction plan in the earthquake-affected areas; (2) Update of Sichuan BSAP; (3) Development of plan for management capability revitalization in the selected nature reserves and its implementation.
Ecological Division of Sichuan Province Environmental Protection Bureau	(1) Publicity and training on biodiversity in the earthquake-affected areas; (2) Update of Sichuan BSAP; (3) Establishment of ecological monitoring stations; (4) Procurement of monitoring equipment in the selected sites; (5) Experience and lessons synthesis of the Project.
Sichuan Province Forestry Bureau	Update of Sichuan BSAP.
Sichuan Province Wildlife Survey and Conservation Station under SCFB	Development of rehabilitation framework for nature reserves in the earthquake-affected areas.
Central Station for Environmental Monitoring of Sichuan Province , including its two branches at Dujiangyan and Mianyang Cities	Ecological monitoring and assessment of biodiversity in the earthquake-affected areas.
College of Life Science, Sichuan University	Publicity and training on biodiversity in the earthquake-affected areas.
Sichuan Province Academy of Social Sciences	Publicity and training on biodiversity in the earthquake-affected areas.

Furthermore, the Project have been technically supported from the International and local NGOs, such as WWF, TNC, TMI and Shan Shui Centre for Nature and Society (Shan Shui).

In addition, the staff and farmers from local nature and communities in the Project areas have supported and taken part in its activities. UNDP CO, PCG members and PRT members have been involved in the project implementation within their responsibility as described in the Section 4.1-Management Arrangement.

As a whole, the stakeholder participation of the Project mainly focused on a relatively high level though considering some grass-root communities and nature reserves. The evaluator thinks that this is determined by the Project itself in nature which is approved by GEF as an urgent action in response to the rehabilitation and reconstruction immediately after the earthquake. The urgent actions, such as various plans development, strategy formulation, field survey and destruction assessment, monitoring station establishment and equipment procurement etc., have to be led, organized, coordinated, implemented and/or participated in by the local government sectors and professional agencies in the context of Chinese situation. An important role and an indispensible part have been played by the International and local NGOs which have established a good working relation with the local governments and grass-root communities and have conducted conservation activities using other fund sources before the earthquake.

4.3 Monitoring and Evaluation

Summary Rating	Satisfactory
Monitoring and Evaluation Plan Design	Satisfactory
Implementation of Monitoring and Evaluation	Satisfactory

4.3.1 Monitoring and evaluation plan design

The Project Document sets out the standard UNDP / GEF monitoring and evaluation procedures, a plan and an overall budget for key monitoring and evaluation activities, as shown in Table 4.

Table 4: Indicative Monitoring and Evaluation Work plan and corresponding Budget

Type of M&E activity	Output	Responsible Parties	Budget US$	Time frame
Inception meeting	Inception Report	PMO UNDP CO UNDP-GEF RCU	2,000	Within one month after project start-up
Quarterly progress monitoring	Quarterly Progress Reports	PMO UNDP CO	None	Quarterly
Tripartite Review	Annual Project Report	PMO UNDP-CO UNDP-GEF RCU	2,000	at the end of the first calendar year
Terminal project review/Project implementation review (PIR)	Terminal Report/PIR	PMO UNDP CO UNDP-GEF RCU	2,000	Once at the end of the project
Project Audit	Audit Report	PMO UNDP-CO	3,000	First quarter of each year
Independent Terminal Evaluation	Terminal Evaluation Report	PMO UNDP CO UNDP-GEF RCU	5,000	At the end of project
TOTAL indicative cost , excluding project team staff's costs			14,000	

Inception Report (IR): A draft Project Inception Report is prepared and presented at the Inception Workshop (IW) and finalized following comments from IW participants. The Report includes a detailed Annual Work Plan (AWP) presenting activities, time-frames, indicators and budgets, also monitoring and evaluation requirements to effectively measure the Project performance.

Quarterly Progress Reports (QPR): Main updates in the Project progress to be outlined and provided quarterly to the UNDP CO.

Terminal Tripartite Review (TTR): The terminal tripartite review is to be held. The Terminal Report is submitted to UNDP-CO and UNDP-GEF RCU. The 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 objectives.

Project Implementation Review (PIR): The PIR is an annual monitoring process mandated by the GEF, becomes an essential management and monitoring tool for the Project managers, and offers an opportunity for extracting lessons from the Projects. A Project Implementation Report must be completed by the project execution partner of the Project and should then be discussed in the Annual Progress Review Meeting.

Project Audit: The Audit is conducted by the legally recognized auditor of the government,

or by a commercial auditor engaged by the Government.

Independent Evaluation: The project is subjected to independent external evaluation. The Terms of Reference for this evaluation is prepared by the UNDP CO based on guidance from the UNDP-GEF RCU.

4.3.2 Indicators at outcome level

Before the official initiation of the Project, a workshop was held on March 31, 2009 to revise and refine the indicator at outcome level. A total of 8 outcome indicators were improved according to the inputs from the stakeholders attending the workshop. Overall, the indicators at outcome level are relatively "SMART" and can be used to monitoring and evaluation (M&E) of the Project.

4.3.3 Monitoring and evaluation plan implementation

The Project inception meeting was held in Chengdu city on April 2, 2009, attended by the officials from the MEP, MoF, UNDP, SCEPB, the PMO staff and the experts of the partners. The Meeting discussed and made more clear, inter alia, the objective, outcomes, outputs, activities, and annual work plan of the Project. The first annual work plan of the Project has formed a basic framework for implementation of its monitoring and evaluation plan.

The PMO of the Project have submitted on a quarterly basis to UNDP CO the four Quarterly Progress Reports to record the project progress from October 2009 to September 2010 and have also submitted the PIR Report which was reviewed by the PRT at the annual meeting. During the project implementation, its Logframe has been used as a tool to monitor the achievement of its indicators established at outcome and output levels and track the progress towards its objective. The PRT has assisted the PMO in supervising and monitoring the activities conducted by all the subcontractors according to timeframe and indicators of the Project and reviewed the quality of their products through formal review meeting attended by the external experts and officials with different expertise and experience. The PMO staff often visited relevant subcontractors and field sites to investigate the progress of the project activities and achievements of their outputs and at the same time helped to identify and addressed the issues faced by subcontractors.

In addition, the PMO have collected and well documented all implementation information such as the dates, locations, contents, participants, results, difficulties, meaningful photos and stories relevant to all the activities. The information and data have been used for development/update of work plan at next quarter/year. When the evaluator asked to look at the documents, the staffs were happy to present them. Overall, the evaluator thinks that M & E plan of the Project has been developed and effectively implemented, consequently ensuring that its outputs can be delivered and achievement of its outcomes and specific objectives can be realized at its end.

4.4 Country Ownership

As regard with the country ownership, the relevance to national and local developmental priorities and local urgent needs in the filed of biodiversity conservation in the context of the earthquake has been clearly reflected in the Project design and implementation which are described and assessed in previous parts of the Report. Stakeholder's participation of the Project and the consideration of the their needs/concerns have also been are described and assessed in previous parts of the Report. The achievements from the Project have been owned by local stakeholders and some have been used (for more information about this, also see the effectiveness of Section 5- Project Results of the Report).

4.5 Financial planning and Management

As recorded in the Project Document, its total budget was US$ US $2,835,200, including US$ 909,000 of GEF funds and US $ 1,926,200 of co-financing (Table 5).

Table 5: The Project Budget of GEF Funds and Co-financing

Budget	US$
Total budget	**2,835,200**
GEF	**909,000**
Co-financing in total	**1,926,200**
- China Government	**1,550,000 (in kind)**
- UNDP	**90,000 (in kind)**
- WWF China:	**100,000 (in kind)+50,000 (in cash)**
- TNC	**106,200 (in kind)**
- Shan Shui	**20,000 (in kind)**
- TMI	**10,000 (in kind)**

As of July 2011, US$876,732 of GEF funds have been spent and US$1,926,200 of co-financing, accounting for 96.45 % and 99% of their planed budget, respectively, (Table 6). In connection with the co-financing, WWF provided US$30,600 in cash for the Project, less than its original budget of US$ 50,000. According to the official document provided to the evaluator, 1.55 millions of co-financing from China's government has been used in buying/providing vehicles and equipment, building institutional capacity, and developing human resources for ecological rehabilitation and reconstruction in the earthquake-affected areas. The co-financing expenditures from other sources specified in the Project Document have been mainly used for its technical and management support.

Table 6: The Actual Expenditure by Outcome and Year Unit: RBM

	Outcome 1	Outcome 2	Outcome 3	Outcome 4	Outcome 5	Total
Year 2009						
Budget	578,850.00	851,250.00	2,077,050.00	599,280.00	1,770,600.00	5,877,030.00
Expenditure	206,760.00	256,989.00	109,642.50	271,666.50	81,840.00	926,898.00
B/E, %	35.72	30.19	5.28	45.33	4.62	15.77
Y ear 2010						
Budget	359,815.98	574,554.61	1,901,115.91	316,933.60	1,631,840.00	4,784,260.10
Expenditure	262,430.00	439,496.00	1,876,090.00	214,562.00	1,588,890.00	4,381,468.00
B/E, %	72.93	76.49	98.68	67.70	97.37	91.58
Y 2011						
Budget	103,908.38	145,867.28	52,590.79	106,398.24	102,080.00	510,844.69
Expenditure	102,220.00	137,100.00	48,860.00	104,588.00	84,120.00	476,888.00
B/E, %	98.38	93.99	92.91	98.30	82.41	93.35
Total E of Y09-11	571,410.00	833,585.00	2,034,592.50	590,816.50	1,754,850.00	5,785,254.00 876732.30 (US$)
TE/GEF, %						96.45

The Project has Leveraged 1 million Euro of contribution from Italian Environment, Land and Oceanic Ministry, which was used to buy environmental monitoring vehicles and equipments and associated capacity building.

Financial audit of the Project was done for the period 1 January 2010 to 31 December 2010 by Audit Service Center of China National Audit Office for Foreign Loan and Assistance Projects. The audit concluded that 'The UNDP Statement of Expenditure - Combined Delivery Report (CDR) presents fairly (unqualified opinion), in all material respects the expenditure of US$676,336.26 (US$676,336.26 in the Government Disbursement column and US$0.00 direct payments in the UNDP Disbursement column) incurred by the project and audited by us for the period 1 January 2010 to 31 December 2010 in accordance with UNDP accounting requirements'.

However, the Audit also observed following minor shortcomings: 'When UNDP China Office compiled the CDR for the year of 2010, the local travel expenses of RMB 39,761.40 yuan

under budget number 71600 in the Funding Authorization and Certificate of Expenditures submitted by FECO were accounted on number 71605-Travel Tickets-International and 71615-Daily Subsistence Allowance-International of the Government Disbursement column in the CDR by the UNDP China Office. The amount listed in total was US$5,847.38. This affected the authenticity and accuracy of the classification for the CDR. and made recommended for its improvement'.

The Audit recommended that 'UNDP China Office should obtain more detailed information of project expenditures, check and confirm financial information presented in the Funding Authorization and Certificate of Expenditures submitted by FECO before compiling the CDR, to ensure the authenticity and accuracy of activities and amount presented in the CDR. UNDP China Office has accepted the audit recommendation'.

According to the audit conclusions, the evaluator believes that the project funds have been used in accordance with the legal/contractual basis. The PMO provided for adequate financial management of the Project and for a reasonable prevention and detection of errors, irregularities and fraud. The Project financial operation was satisfactory and in agreement with its legal/contractual basis.

5 PROJECT RESULTS

As defined in UNDP Evaluation Guidance For GEF-Financed Projects, A 'result' is defined as a describable or measurable development change resulting from a cause-and-effect relationship. In GEF terms, results include direct project outputs, short- to medium-term outcomes, and longer term impact including global environmental benefits, replication effects, and other local effects.

This section reviews the Project's achievements under each of the 5 main component Outcomes through their component outputs and implementation approach, the progress towards achieving the planned specific objective and the contributions to the development objective. Each outcome is evaluated according to its 'relevance', 'effectiveness' and 'efficiency'.

5.1 Attainment of the Project Objectives

As described in previous part, the Project aims to 'mainstream biodiversity in the post-quake recovery and reconstruction process and strengthen protected area systems with demonstrations in the quake-hit regions of Sichuan Province'. The implementation approaches adopted have ensured the attainment of the Project specific objective which has also been verified by its outputs and its effects. A participatory approach has been used for information collection, plan development/updating, institutional capacity building, training and publicity, and site demonstration. For example, almost the stakeholders related to biodiversity have been invited to be involved in development/update of the three important plans: "Reconstruction Framework for Protected Area", "Ecological Rehabilitation Plan" and "Sichuan BSAP". The local academic experts have worked on filed survey with communities. The local officials, nature reserve mangers and farmers have participated in training and publicity events. The staffs from the selected nature reserves have been consulted with equipment procurement and management capability building. Through full participation in the Project implementation, the awareness of all the stakeholders has been raised for mainstreaming biodiversity in the post-quake recovery and reconstruction process. Furthermore, the many elements of three important plans, especially biodiversity conservation objectives, have been incorporated into the "Post-quake Recovery and reconstruction in Sichuan" and simultaneously implemented

with other actions in the 30 cities/counties where the earthquake hit. For example, "Reconstruction Framework for Protected Area" was early adopted by SCEPB in August 2008, but the Project led to its updated version that ensured that reconstruction efforts have been made across all relevant governmental sectors in the earthquake areas in a biodiversity-friendly way from 2008 through 2015. Without the Project intervention, biodiversity conservation could not be taken as a priority in the process of the reconstruction. Also, the Project contributed to additional investment of another GEF project-Sustainable Forestry Development which is being implemented by SCFB in Sichuan province and additional budget was mainly used fro the NR management in the earthquake areas. As to the Sichuan BSAP which itself is a product of mainstreaming biodiversity, some examples of implementing it will be seem in 5.2.4 Evaluation outcome 4-Effectiveness of the report.

Through the Project, the PMO staff said, all construction activities which may pose a risk on ecological environment and biodiversity have to consult with SCEPB and make environment impact assessment as necessary. The mainstreaming biodiversity is a long-term process and varies in the extent to which it achieved according to different standards. Against the five indicators set up for the objective, the evaluator considers that the Project have achieved its specific objective (for more evidence, also see Section 5.2-Evaluation Results).

The Project has contributed to its developmental objective- 'conserve critical ecosystems and their associated threatened and endangered species in the 2008 quake affected region in China and mitigate the loss of biodiversity occurring as a result of the earthquake'. Five outcomes achieved by the Project have supported the developmental objective at information, policy, capability and awareness levels.

5.2 Evaluation Outcomes–achievements, relevance, effectiveness and efficiency

5.2.1 Evaluation outcome 1

Summary Rating	Highly Satisfactory
Relevance Rating	Highly Satisfactory
Effectiveness Rating	Highly Satisfactory
Efficiency	Highly Satisfactory

(1) Statement of Outcome and Indicators

In the Project document, Outcome 1 was stated as 'Knowledge and understanding improved and information gaps filled on the earthquake induced impacts and post-quake ecological risks of biodiversity in affected areas'. Following two indicators have been developed to indicate their achievement:

> **Indicator1.1:** Earthquake impact on habitats of 10 critical endangered species assessed and counterpart measures proposed in project area.
> **Baseline:** Very limited knowledge on the related impact to endangered species on the ground in the affected area.
> **Target:** Adequate knowledge acquired on at least 10 critical species.
>
> **Indicator1.2:** Losses of all NNR in projected area taken stock of and threats from communities inside and in close vicinity of two national nature reserves and opportunities for community livelihoods proposed.
> **Baseline:** None.
> **Target:** All national nature reserve (NNR) losses identified.

(2) Overview of output delivery

Under outcome 1, only one output needed to be delivered by the Project during its implementation. At the end of the Project, it has produced following products and services which have been delivered to relevant target groups.

- A workshop on methodology for biodiversity survey and risk assessment performed in disaster areas was held on July 10, 2009, with attendance of more than 50 experts from 10 academic institutes and NGOs.

- The destruction of the earthquake to the habitats where key species live was identified and assessed in 2008-2009, with a scientific survey and assessment report delivered. The ten species surveyed included as follows: *Batrachuperus tibetanusi* (no suitable habitats destroyed by the earthquake), *Batrachuperus pinchonii* (40% of suitable habitats destroyed, that is a percentage of the habitat destroyed to the original), *Amolops mantzorum* (41.2% destroyed), *Japalura zhaoermii* (20-30% reduced), *Elaphe perlacea* (less than 5% destroyed), *Gloydius brevicaudus* (a very small part destroyed), *Chrysolophus pictus* (3.16% destroyed), *Lophophorus lhuysii* (less than 1% destroyed), *Ailuiopodidae melanoleuca* (Great Panda, 3.23% reduced), and *Budorcas taxicolor* (a very small part destroyed), which all are endangered and have been protected at national and local levels. On the basis of the survey, risks of their survival and development were analyzed and the strategies corresponding to each species were developed.

- Loss/destruction occurred in the eight national NRs, 7 out of which have focused on Great Panda conservation, was investigated and assessed in terms of the natural ecosystem and the conservation facilities/devices, such as buildings, rescue bases, road, water and electricity supply system, vehicles and computers etc. a total of 52,858.6 hectares of natural ecosystem with forest and non-forest were destructed by the earthquake, accounting for 10.74% the size of all 8 NRs surveyed. The direct economic loss resulting from the destruction of facilities/devices was estimated at US$ 101 million. Recommendations on recovery and rehabilitation were made for the national NRs that were destructed.

- 19 local communities/villages surrounding the 8 NNRs located in 7 counties were investigated through a selection of 89 families as sample, including 40 men, 56 women, 17 village leaders and 10 nature reserve managers. The investigation identified the basic information related to livelihood resource, key issues faced, and main needs after the earthquake. Through a detailed assessment, a series of practical measures were put forward to improve local farmer's livelihood.

- The mangers and professionals from 12 local NRs were trained in connection with rapid environmental assessment methodology and community assessment for better-informed decision-making.

(3) Evaluation and Rating of Relevance, Effectiveness and Efficiency

A. Relevance

In Sichuan province, all endangered species of plants and animals protected at state and local levels have been in documentation which supports the decision-making process and actions for biodiversity conservation. However, after the devastating earthquake, the information for the species populations and their habitats have to be reconfirmed and/or re-collected to serve for the integrated rehabilitation and reconstruction plan in a timely way. A selection of ten endangered species was used as a representative sample to rapidly obtain basic information and data related to the whole disaster area, which are just in need

of the integration of biodiversity conservation objectives into reconstruction actions. Again, survey and assessment of the species are also very helpful to identify the priority strategies and actions taken to increase the species population and to rehabilitate their habitats destroyed in the earthquake. This is consistent with the requirements for the endangered species at national and provincial levels and has been emphasized by the national regulations and policies regarding biodiversity conservation.

Establishment and management of NR is an important means to conserve biodiversity at ecosystem, species and genetic levels in in-situ way. Sichuan province has 36 NRs in the earthquake area, with an area of 149,313 hectares, of which there are 32 NRs affected in the earthquake. The SCEPB and SCFB which have managed their NRs under the "China Nature Reserve Regulation" needed to know information on the extent to which the NRs suffered from the destruction of the earthquake, including economic loss. According to the information, they can develop NR capacity building plan and further implement conservation actions in the process of rehabilitation and reconstruction. The survey and assessment for NRs are among the most priority needs of the province at that time and the first step to develop post-quake management capability framework (Outcome 5).

Livelihood is the most concern of the local communities in the course of the reconstruction. But what the local farmers need and the issues they faced in sustaining and improving livelihood are very unclear before conducting the investigation of community livelihood through the project, especially the information on reduction in crop-planting, ecological tourism, husbandry and business, and farmland, insufficient money to buy new house, poor environmental and hygiene conditions, poor transportation and communication, risks resulting from illegally picking up plants and wild herbs in NRs, and ecological impacts of reconstruction within the NRs etc. Therefore, the survey and analysis conducted to the communities surrounding the NRs did meet the local governmental needs for the basic information which will be used to make a sound decision-making for the coming reconstruction.

After the earthquake, many sites extremely destructed have to be surveyed and assessed and thus need more participation of the local technical staff. Therefore the Project conducted training activities for the nature reserve's managers and professionals in terms of field survey and assessment methodology, which is very necessary and useful to improve their knowledge and skills in biodiversity conservation.

B. Effectiveness

All survey and assessment activities focusing on the endangered species and the national nature reserves ended with a scientific report, most information and data of which have be used to development of the plans, policies and action recommendations for biodiversity conservation in the course of rehabilitation and reconstruction. In particular, they have supported the achievement of some elements in outcome 2, 3, 4 and 5. including, for example, ecological function regionalization plan and ecological rehabilitation plan (outcome 2), selection of monitoring sites for biodiversity in earthquake areas (outcome 3), reconstruction framework for nature reserve and updated Sichuan BSAP (outcome 4), and plan for management capability building of nature reserve (outcome 5). Relevant training activities enabled the local managers and professionals to conduct field survey and assessment. Their knowledge of impacts of the earthquake on the endangered species in the affected areas has an obvious increase which improved in turn a real effectiveness in their work. In summary, the two indicators set out in the Project Document have be completely achieved and relevant knowledge has been improved and information gaps have been filled on the earthquake induced impacts and post-quake ecological risks to

biodiversity in affected areas. Additionally the Project also increased institutional/individual capacity to perform field survey and assessment in the context of a severe disaster.

C. Efficiency

There were 16 experts from 10 academic institutes and universities who have participated in collection and analysis of background information on impacts/risks of the earthquake on biodiversity. They completed all field surveys which were involved in 30 counties through a detailed design and scientific methods such as satellite image interpretation, GIS, documentation review and questionnaire. The achievement of the outcome 1 just spent about one year and thus time is very limited. This showed that the selected experts were highly qualified for the surveys and their work was also very efficient. SCEPB, 8 local NRs administrations and famous universities from other provinces supported the collection and analysis of the basic information and data in the special occasion. The local farmers also actively participated in and supported the investigation on their livelihood status and needs, which saved a lot of time. Additionally, improved knowledge and skills of the local technical staff through the training activities have been turned into their work efficiency.

In financial resource, Outcome 1 spent only 10.47% of total expenditure of the Project. As we know, field survey is time-and money-consuming, in particular for the environmental conditions of the Project. Hence, the achievement of the outcome 1 is very low cost and highly efficient.

On the basis of above evaluation, the outcome 1 is rated as Highly Satisfactory for the relevance, effectiveness and efficiency.

5.2.2 Evaluation outcome 2

Summary Rating	Satisfactory
Relevance Rating	Highly Satisfactory
Effectiveness Rating	Satisfactory
Efficiency	Satisfactory

(1) Statement of Outcome and Indicators

Outcome 2 was intended to achieve 'recovery and reconstruction plans in project areas incorporate biodiversity conservation objectives'. Five indicators have been developed to indicate their achievement:

Indicator 2.1: Recommendations on establishment of ecological function conservation areas are proposed;
Baseline: None.
Target: It is indicated by indicator 2.1.
Indicator 2.2: Sichuan earthquake ecological rehabilitation plan prepared and improved;
Baseline: None.
Target: It is indicated by indicator 2.2.
Indicator 2.3: User's guide for biodiversity friendly recovery and reconstruction practices prepared and printed for distribution;
Baseline: None.
Target: It is indicated by indicator 2.3.
Indicator 2.4: Increased awareness of biodiversity significance of earthquake hit areas improved among decision makers, planners and the public;
Baseline: None.
Target: It is indicated by indicator 2.4.
Indicator 2.5: Hand-on trainings to 50 planners, 200 managers on integrating biodiversity into recovery and reconstruction operations.
Baseline: None.
Target: It is indicated by indicator 2.5.

(2) Overview of output delivery

- A research report on 'Ecological Function Regionalization in the Wenchuan Earthquake Worst-hit Area of Sichuan Province' was developed, which defined and mapped 9 zones with a featured ecological function each and 4 zones with different level of importance to conservation. The report was been disseminated, reviewed and consulted at the workshop on "Ecological Function Conservation Area and Application of the Concept in Reconstruction Efforts", held in October 22, 2009 and attended by 31 provincial governmental officials and experts from SCEBP, SCFB, Sichuan Development and Reform Commission (SCDRC) and PRT of the Project.

- The draft 'Ecological Rehabilitation Plan in Sichuan Earthquake Areas' was assessed and updated using the results from output 1 and output 2.1, which has been refined through a special workshop. The revised Ecological Rehabilitation Plan is now more compatible with other plans and gives an emphasis on reduction of impact on biodiversity from the earthquake-induced damages and human activities.

- To highlight biodiversity conservation in the course of rehabilitation and reconstruction, the PMO organized local experts to develop publicity materials in this regard for campaigns and outreaches, such as 'Technical Guideline for Biodiversity Conservation for Rehabilitation and reconstruction' which has been translated into English, 'Publicity Manual for Community-based Biodiversity Conservation Following the Earthquake', 'Guideline for Rehabilitation and Reconstruction of Ecological Village' and 'Training Material on Biodiversity Conservation in Earthquake Areas'. The publicity materials were professionally designed, written in an easily-understood way, and disseminated to the communities in the disaster areas.

- The investigation for needs of biodiversity awareness-raising using questionnaire was conducted three times in March to April, 2010 at five local communities where the earthquake occurred and a series of campaigns to understand value and significance of biodiversity were launched at six communities from March to July, 2010. Four field training activities were carried out at four communities to increase the local farmer's awareness for biodiversity conservation and to understand its linkage with local economic development. Additionally, training on biodiversity knowledge was conducted for local governmental decision-maker and planners two times, with over 40 participants each time.

- The PMO organized CCTV-News team to interview with the officials and general public from Baoxing County and make a film focusing on 'Sichuan Province Biodiversity Strategy and Action Plan', which was on at CCTV-News Channel on May 22, 2010, an International Biodiversity Day.

(3) Evaluation and Rating of Relevance, Effectiveness and Efficiency

A. Relevance

Ecological Function Regionalization is a very useful tool to coordinated economic development and biodiversity conservation for a local government. As early as in August 2008, The MEP officially issued a document on National Ecological Function Regionalization, which is an important means for implementing ecological protection actions and also important basis for guiding industry layout and natural resource development. The 'Ecological Function Regionalization Plan in the Wenchuan Earthquake Worst-hit Area of Sichuan Province' is closely relevant to the national document in this regard and is a good

example/good practice of implementing the national document at local level. It will strongly guide consideration of biodiversity conservation with reconstruction efforts after the earthquake. Establishment of eco-compensation mechanism in the earthquake areas proposed in the 'Ecological Function Regionalization Plan' is a just central issue to combine local livelihood improvement with its natural resource conservation. The Plan meets the requirements for the local governmental actions taken to implement biodiversity conservation according to the national BSAP and Sichuan BSAP. It also facilitates biodiversity conservation to define selection of the sites in the implementation of 'Sichuan Province Rehabilitation and Reconstruction Master Plan after Earthquake'.

'Ecological Rehabilitation Plan in Sichuan Earthquake Areas' has formed an integral component of 'Sichuan Province Rehabilitation and Reconstruction Master Plan after Earthquake' and thus is a priority need SCEPB is intended to meet for conserving biodiversity in the areas where the earthquake hit. The 'Ecological Rehabilitation Plan' is compatible with the 'National Ecological and Environmental Project Strategy' issued by the MEP in the period of the 11th five-year and also supports the implementation of 'Rehabilitation and Reconstruction Regulation for Wenchuan Earthquake' issued by Chinese State Council (No. 526). The development and implementation of the 'Ecological Rehabilitation Plan' reflect needs of different stakeholders, in particular, environmental groups and some communities which rely heavily on local biodiversity resources for their livelihoods.

Various training activities and campaigns for biodiversity awareness-raising are very necessary to the local officials and general public, who need to keep biodiversity conservation in mind in the process of the post-quake rehabilitation and reconstruction. These publicity actions are also consistent with the national and local strategy for 'strengthening publicity and education on biodiversity conservation and raising awareness of local officials and public'.

B. Effectiveness

'Ecological Function Regionalization Plan' defines space patterns of biodiversity conservation and post-quake reconstruction. It has been officially accepted by the SCEPB. The innovative methods, conclusions and recommendations within it have been used to update 'Ecological Rehabilitation Plan in Sichuan Earthquake Areas' and planed to scale up by SCEPB in other counties/cities outside the Project areas. For example, the assessment and planning methodology will be used in the development of 'Space Distribution in Ecological Function Areas and Nature Reserve Plan in Sichuan Province' which will be initiated 2012.

SCEPB has adopted the 'Ecological Rehabilitation Plan', which has played a guiding role in reconstruction efforts made by all line sectors under Sichuan Government, thus achieving mainstream of biodiversity conservation objectives into relevant sector's plans and their implementation actions. The Plan as an official document also mobilized all stakeholders concerned to actively support and/or participate in its implementation as one of their annual key tasks. According to the Plan, under the leadership of Sichuan provincial government, relevant policies and mechanisms have been established to coordinate the all stakeholder's actions and define their responsibilities in biodiversity conservation in the process of the post-quake reconstruction. Through involvement in the development of the Plan, Institutional capacity of relevant sectors to implementing biodiversity conservation actions has a great improvement. For example, the sectors of agricultural, land, water conservation, forestry and meteorology have further strengthened their capability building in ecological rehabilitation. What is more important is that the Plan has attracted the

central and local fiscal budgets to support its implementation. For instance, the central government will financially give a full support for rehabilitation of National NRs which were destructed by the earthquake and some important ecological function conservation areas, while local government and central government will co-fund rehabilitation of the NRs at provincial and county levels by ratio of 2 to 3.

The training events for the local officials have improved their awareness of biodiversity conservation and facilitated translation of mainstreaming biodiversity concept into their actions. The training and outreach conducted at community level have led to obvious reduction in illegal activities within the NRs, such as cutting tree, hunting and picking up herbs etc. In addition, those campaigns have helped the grass-root people suffered from the earthquake to create confidence in life through communication each other at the training places.

C. Efficiency

In China's current situation, a provincial sector's plan often spends about two year or even more from preparation through review, accept, approval to issuance. But development of 'Ecological Function Regionalization Plan' just spent half a year and was accepted by SCEPB soon after consultation with relevant sectors. This is mainly the reason that expertise was be used in efficient manner and the PMO can organized and coordinated the local senior human resources to work on it in a very limited timeframe.

In connection with update of the 'Ecological Rehabilitation Plan', it is very efficient. Ecological protection, including biodiversity conservation, is a non-profitable business and thus industry sectors often tend to low protection objectives that are established. Apart from this, even between the whole resource management sectors often occurs competition with each other for the rights to manage a sort of natural resource. So an ecological/environmental plan led by national or local environmental sector also needs a long time to consult with other sectors. However, The 'Ecological Rehabilitation Plan' was revised in very short time and was accepted by other sectors (i.e. its strategic objectives and priority actions can be incorporated into the Rehabilitation and Reconstruction Master Plan). This indicates that mutual support of different stakeholders is a key factor to efficiently undertake the Project activities. Of course, that the outcome 2 was achieved efficiently is closely related to other important factors: one is that under the Chinese situation, some elements of the Project have been regards as political tasks which must be completed in the required timeframe; the other is that the Project is an emergency action in the special context of the earthquake.

During the reconstruction following the earthquake, a participatory approach was used to identify needs of the local farmers in biodiversity conservation and livelihood improvement. This has increased the efficiency of training and outreach activities and fully utilized the local human resources in maximum way. Furthermore, Through CCTV-news, impact of biodiversity publicity can be spread to all the earthquake hit areas, thus saving time and physical resources.

At the end of the Project, the expenditure of the outcome 2 accounted for 14.41 % of total expenditure. The figure, the evaluator thinks, is reasonable.

As a whole, the evaluator considers the achievements under Outcome 2 to be highly satisfactory in terms of its relevance and also satisfactory in its effectiveness and efficiency.

5.2.3 Evaluation outcome 3

Summary Rating	Satisfactory

Relevance Rating	Satisfactory
Effectiveness Rating	Satisfactory
Efficiency	Satisfactory

(1) Statement of Outcome and Indicator

Outcome 3 focuses on the 'Improved monitoring capacity with biodiversity concerns in the process of disaster relief, and post quake recovery and reconstruction'. The Project document set the following indicators to check its achievements.

> **Indicator 3.1:** Draft technical guidelines for ecological monitoring in earthquake hit areas developed to guide establishment of monitoring stations;
> **Baseline:** None.
> **Target:** It is indicated by indicator 3.1.
>
> **Indicator 3.2:** Two demonstration ecological monitoring stations in operation producing the first monitoring report in June 2009.
> **Baseline:** None.
> **Target:** It is indicated by indicator 3.2.

(2) Overview of output delivery

- A draft 'Technical Guideline for Ecological and Environmental Monitoring and Assessment in the Earthquake Areas' was developed to monitor the changes in terrestrial plant communities, aquatic organisms, water quality and important species habitats. The Draft has been further consulted and discussed at a workshop held on August 5, 2009. It has been finalized and accepted by the SCEPA.

- Two ecological monitoring stations were established at Dujiangyan city and Mianyang city, furnished with instrument and device costing US$ 260,000, which have been used to conduct field monitoring at the key areas within national nature reserves. Sichuan Province Central Station for Environmental Monitoring organized a training course and made a filed demonstration for the 33 technical staff who implemented the field monitoring activities. The course focused mainly on general plant ecology and terrestrial ecosystem theory, and the investigation methods involving plant community, aquatic organism, regional environmental quality assessment and lake eutrophication.

- The Project provided 19 nature reserves with 7 computers, 19 cameras, 12 fax machines and 15 video cameras. In addition, The 14 field vehicles were offered by the Project through a generous contribution of about Euro 1 million from Italian Ministry of Environment, Land and Ocean.

(3) Evaluation and Rating of Relevance, Effectiveness and Efficiency

A. Relevance

The output – 'Technical Guideline for Ecological and Environmental Monitoring and Assessment in the Earthquake Areas' met the local needs to identify the changes in environmental conditions after the earthquake, especially in natural vegetation which is habitat of the Great Panda and in endangered species population. In the past, a 'National Ecological Monitoring and Assessment Norm' was issued, but the Norm mainly orients to general ecological backgrounds and the whole country, rather than to Sichuan environmental conditions which have been changed by earthquake. It is, therefore,

necessary to develop a technical guideline for monitoring and assessment in the context of the earthquake. Furthermore, the output is also consistent with the national action which is being implemented: 'Implementation of Biodiversity Monitoring at Provincial Level required by the MEP'. The environmental monitoring stations at city/county levels have been expecting to implement ecological monitoring for biodiversity in terrestrial and aquatic ecosystems. But there is no practical technical guideline which can be suitable for their qualifications. Hence, the Technical Guideline just filled in a gap in this regard.

The technical guideline is one thing, but implementation of specific monitoring activities is another thing in line with it. Establishment of ecological monitoring station or Addition of ecological monitoring elements to the existing environmental monitoring stations is the first step to implement ecological monitoring, in particular for biodiversity. Through the Project, the instrument and device necessary to monitoring the key species population and aquatic biodiversity were provided, which met the basic needs of the two pilot stations at Dujiangyan city and Mianyang city in this aspect. During the site visit, Mr. Wu, deputy director of Dujiangyan City Environmental Monitoring Station of Sichuan Province, said to the evaluator that 'the monitoring instrument and device are just what their Station has been wanting to buy for implementation of national ecological monitoring action and they have put the instrument into use in monitoring aquatic biodiversity and aquatic pollutants in the earthquake hit areas'. In addition, the technical training courses related to ecological monitoring, organized by the Project also met the needs of local technical persons to implement ecological monitoring.

B. Effectiveness

Following the development of the Technical Guideline mentioned-above, a detailed monitoring scheme was formulated to guide its implementation in the two pilot stations. For example, Dujiangyan Monitoring Station conducted following monitoring activities and collected first-hand ecological data which supported implementation of the Ecological Rehabilitation Plan: 28 plant populations was surveyed using quadrat method; The species and their population density of phytoplankton and zooplankton were identified; Water quality in ten sites and water eutrophication in three sites where earthquake occurred were monitored. In Mianyang Monitoring Station, similar monitoring activities have been performed to support local governmental decision-making about ecological rehabilitation. Additionally, access of general public to the water quality data produced by the Project removed worry about safety for local drinking water sources.

The CTA of the Project said that Sichuan Environmental Monitoring Central Station, in collaboration with National Environmental Monitoring Station based in Beijing, has used the Technical Guideline to co-complete a task – 'Assessment of Ecological and Environmental Impacts resulting from May 12 Wenchuan Earthquake' and submitted resulting important information and data in the official report to the MEP and Chinese State Council which gave high recognition to the task.

In connection to the capacity improvement, Mr. Wu said that the Project has updated their technology and equipment, expanded coverage of field monitoring, improved their expertise and skills in ecological monitoring, and facilitated a cooperation project with a local university. He also gave some examples to illustrate their improvement in capacity building. For example, before the Project, the chlorophyll A was measured using a traditional instrument which needs a complex operation procedure, thus time-consuming. However, the new instrument provided by the Project is very convenient to determine the content of the chlorophyll A, leading to an obvious increase in work efficiency. Also, through the Project, They have now ability to implement basic ecological monitoring

activities, especially in planktons, required by Sichuan Environmental Monitoring Central Station.

Finally, what needs to be mentioned here is that the Technical Guideline, in particular its monitoring methods and indicators, have been used in the Yushu region of Gansu Province, north-western China, where another destructive earthquake hit after Wenchuan earthquake. But the Technical Guideline has not so far issued officially, thus having a room to be improved.

C. Efficiency

In formulating the Technical Guideline, the PMO was fully dependent on local expertise and professionals who have both experience in filed ecological monitoring and are familiar with local environmental features. This approach not only saved time and fund, but also encouraged local participation in the Project. Sichuan Environmental Monitoring Central Station timely supported and technically guided the monitoring activities undertook in the two pilot monitoring stations. The instrument bought through the project is suitable for the city-level monitoring stations in their cost, use and specification.

For the outcome 3 cost, its expenditure at the end of the Project made up 35.17% of total expenditure, among which the instrument accounted for 29.99%.

According to above evaluation, the outcome 3 can get a rating of Satisfactory in Relevance, Effectiveness and Efficiency.

5.2.4 Evaluation outcome 4

Summary Rating	Satisfactory
Relevance Rating	Highly Satisfactory
Effectiveness Rating	Satisfactory
Efficiency	Satisfactory

(1) Statement of Outcome and Indicator

Outcome 4 aims at 'Development of PA reconstruction framework with prioritized actions for investment by government and national and international communities'. Following two indicators under the outcome 4 were established in the Project Document.

> **Indicator 4.1:** PA system reconstruction framework with prioritized actions in consultation with government and international communities developed and approved by relevant agencies;
> **Baseline:** None.
> **Target:** It is indicated by indicator 4.1.
>
> **Indicator 4.2:** Sichuan biodiversity strategy and action plan taking into consideration of earthquake is adopted by provincial government agencies.
> **Baseline:** None.
> **Target:** It is indicated by indicator 4.2.

(2) Overview of output delivery

- A workshop was held on July 29, 2009 to discuss the development of the 'Reconstruction Framework with Prioritized Actions for the Destructed Protected Areas' which has now been formulated with 9 priority actions and 28 engineering projects which needs about US$ 9.2 millions of investment.

- The Draft 'Sichuan BSAP' was reviewed against the context of the earthquake and its weakness was identified at three aspects: no information was included for destruction of the earthquake, the resolution of Landsat TM image used was not high, and the information from the third time survey for Great Panda was not considered. The Sichuan BSAP has now been updated, with a strategic objective, 9 specific objectives, 57 actions and 66 priority projects. After consulted through a special workshop which was attended by the officials from Sichuan provincial government, SCEPA, SCFA and the experts from local institutes and TNC. It was officially adopted and co-released by SCEPA and SCFA in December, 2011.

(3) Evaluation and Rating of Relevance, Effectiveness and Efficiency

A. Relevance

Sichuan Provincial Government stressed in its 'Ecological Rehabilitation and Environmental Protection Plan in Coming Five Years (2011-2015)' that establishment of nature reserves and conservation of wild species must be strengthened and rehabilitation of endangered species habitats must be speeded up. Development of the 'Reconstruction Framework for Protected Areas' supported by the Project is consistent with the requirements of the 'Ecological Rehabilitation and Environmental Protection Plan in Coming Five Years (2011-2015)' and also a concrete action how to implement it. SCEPB officially issued in 2010 a 'Sectoral Plan for Nature Conservation(2011-2015)', which stated that 'an ecological rehabilitation scheme should be developed and implemented to restore the ecosystem functions destructed by the May 12 Wenchuan Earthquake and the NRs destroyed in the earthquake should be rehabilitated in a normalized manner'. In earthquake regions, 32 out of 36 NRs were affected in terms of endangered species (for example Great Panda) and ecosystems (such as forest and wetland ecosystems) which provide a diversity of ecological services for the local farmer's livelihood. Their rehabilitation should keep in same step with other reconstruction actions. Therefore development of the Reconstruction Framework for Protected Areas is among the most urgent needs. The Framework adopted will further support achievement of the objectives of the SCEPA and SCFB Sectoral Plans.

The BSAP is a guiding document for biodiversity conservation at national and provincial levels and also a mandatory action of a Party to the CBD for its implementation. After the national BASP was updated and issued by Chinese State Council in 2010, the MEP required that all the EPBs at provincial level should formulated/updated their BSAP suitable to local social, economic and environmental situations and consistent with strategic objectives of the national BSAP. In the context of the earthquake, the updated Sichuan BSAP can better harmonized biodiversity conservation with local economic development. In Sichuan province, there are at least following constraints and/or issues about biodiversity to be addressed. Firstly, future development will put more pressure on local biodiversity and its conservation has been mainly supported from central fiscal funds; Secondly, local biodiversity concentrates in the northwest of this province where the poorest population live; Thirdly, there are 55 of the whole 56 minorities in Sichuan who often pick up wild herbs and have a tradition of using 'slash-and-burn' farming method which have an impact on local biodiversity. Therefore, it is necessary to create a holistic framework to address the relationship among the conservation and development at strategic level. The updated BSAP is very appropriate for realization of the strategic objectives to harmonize conservation with local economic development.

B. Effectiveness

The 'Reconstruction Framework for Protected Areas' identified the gaps and weakness in 'Ecological Rehabilitation and Environmental Protection Plan in Coming Five Years

(2011-2015)' in terms of NR component. This Framework has provided direct guidance to rehabilitation actions conducted in the 32 NRs affected by the earthquake. In practical terms, It included the following nine priority actions which have been or are being implemented in post-quake reconstruction: (1) Submission to the competent sectors of the NR rehabilitation and reconstruction progress; (2) Development of technical guideline for vegetation restoration and rehabilitation in Great Panda habitats; (3) Formulation of species habitats restoration scheme; (4) Development of monitoring and assessment system for impacts of reconstruction engineering on NRs; (5) Research into Great Panda population restoration and naturalization engineering; (6) Development of plan for establishment, extension and rebuilding of NRs; (7) Establishment of emergence system for NRs; (8) Community-based publicity and education capability building for environmental protection; and (9) Long-term research into NR rehabilitation. Additionally, the Framework also identified the specific projects for each of 28 the destructed NRs. These priority actions have been budgeted at about US$ 2.63 million, among which US$ 1.72 has been confirmed from national and local fiscal budgets. Overall, the Framework has facilitated and promoted the participation and investment in the priority rehabilitation actions of the NRs after the earthquake.

The updated BSAP has been approved by Sichuan Province Government and co-issued by the SCEPA and SCFB. The 66 priority projects were identified and the organizers responsible for their implementation in future five years (2011-2015) have also been designated. In particular, some projects related to the earthquake have been or are being implemented, for example, monitoring and conservation of Great Panda population and its habitats and impact of climate change on biodiversity in Sichuan Province. Through updating the BSAP, all relevant governmental sectors and other stakeholders have convinced of the implication of mainstreaming biodiversity conservation into local development process. For example, biodiversity indicators have been integrated into the performance evaluation system of green city construction which is undertaken by construction sector. The some priority projects of the BSAP have been planed and budgeted as annual work tasks to be executed by relevant sectors in the following years. Furthermore, the BASP provides a reference framework for application for international and national projects in the field of biodiversity and also an official document for involvement of the private industries and NGOs in local conservation actions. Finally, the requirements for supervision, monitoring and evaluation on implementation performance of the BASP have been stated, which does not presented in the BSAP in other provinces.

C. Efficiency

The participatory approach of relevant stakeholders is a determinant of successful development of the Framework and the BSAP in limited timeframe. SCFB led the development of the Framework, with participation and consultation from 5 other governmental sectors, 6 academic institutes and universities, and 36 local nature reserve administrations. SCEPB was responsible for the update of the BASP, in consultation with over 10 the line sectors and with technical support of many local experts. Additionally, Experience and lessons from development of the national BASP were used to the organization, coordination and design in the process of the Sichuan BSAP.

In financial resource used, the outcome 4 spent only 10.21% of total expenditure. The evaluator considers that it has been achieved in cost-effective manner against its outputs.

On the basis of above evaluation, the outcome 4 is rated as Highly Satisfactory in Relevance, Satisfactory in Effectiveness in main consideration of a limited implementation of the two outputs during the Project, and Satisfactory in efficiency.

5.2.5 Evaluation outcome 5

Summary Rating	Satisfactory
Relevance Rating	Highly Satisfactory
Effectiveness Rating	Satisfactory
Efficiency	Satisfactory

(1) Statement of Outcome and Indicator

Outcome 5 is to achieve 'Revitalized management capacity in demonstration PAs in affected areas'. It sets the following indicators.

> **Indicator 5.1:** Experience and lessons in emergency earthquake response measures for biodiversity conservation developed;
> **Baseline:** None.
> **Target:** It is indicated by indicator 5.1.
>
> **Indicator 5.2:** Selected priority actions implemented in the 2 identified nature reserves.
> **Baseline:** Demonstration model in place.
> **Target:** It is indicated by indicator 5.2.

(2) Overview of output delivery

- Two national nature reserves (Tangjiahe NR and Siguliangsha NR) from 36 ones which were affected by the earthquake were selected as demonstration sites for revitalization of their management capacity, in consultation with local SCEPA and SCFB which are responsible for management of the nature reserves within their function. Based of an analysis for destruction in the two nature reserves, a plan for revitalization of their management capacity was formulated, including 10 priority actions. In the late period of the Project, some elements of the Plan have been implemented. For example, the two field conservation stations located within Tangjiahe NR were equipped with US$ 120,000 (which was contributed by GEF fund of the Project) of instrument used for field monitoring and laboratory experiment. The two stations have employed the instrument to survey, observe and monitor the changes in populations of the key plants and animals, especially takins and in ecological functions of the mountainous wetlands and barrier lakes. A similar field monitoring, sampling and lab analysis have also been carried out in two sites within Siguliangsha NR.

- The Shashui Conservation Center, in collaboration with above NR administration and its local governments, set up a Community-based Reconstruction Center for Ecological Civilization at five villages each, which was offered with electricity-generator, TV set, DVD and books for cultural activities of local farmers. And more the Centers also organized local villagers to receive training courses on practical production skills, including kivi fruit tree planting and disease prevention, conservation capacity building and ecological protection, walnut planting and rural tourism, epidemic prevention and earthquake prevention, rural rapid appraisal methodology, and Chinese herb planting etc.

- A volunteer patrolling team, composed of more than 30 villagers, were established to conduct some field survey and monitoring in the earthquake-destructed areas.

- Under the support of The Mountain Institute, energy-saving brick making machines were bought for two counties, helping train relevant persons with the technology how to

make brick with these machines. Additionally, 5,000 flyers and brochures were released to 30 counties in the Project areas.

- Experience and lessons on emergency earthquake response measures for biodiversity conservation were synthesized during the Project implementation. The PMO used questionnaires (about 340 copies) released in 17 sites to collect the individual information on disaster prevention. The brochure and booklets about the experience and lessons were designed, produced and delivered to local relevant villages. A meeting participated by over 20 environmental protection bureaux at city/county level in earthquake hit areas was held at Chengdu city to share the experience and lessons on emergency earthquake response measures for biodiversity conservation.

(3) Evaluation and Rating of Relevance, Effectiveness and Efficiency

A. Relevance

The outcome 5 is logically relevant to one component of the outcome 4. That is how to restore capabilities of the destructed NRs in biodiversity conservation and management according to the 'Reconstruction Framework for Protected Areas' developed under outcome 4. Under the outcome 5, an approach how to meet the needs of the individual nature reserves for their capability-building should be demonstrated. After the earthquake, the information on the NR destruction need to be identified, the instrument and facilities for monitoring and conservation need to be in place, and the staff's knowledge and skills responding to the disaster need to be improved. Therefore the outcome 5 is closely related to the priority needs in reconstruction of the NR.

Community-based Reconstruction Centers for Ecological Civilization are relevant to urgent requirements by the local governments for pacifying local farmers and improving their knowledge and practical skills to expand livelihood means.

Synthesis of the experience gained and lessons learnt from the Project met the needs of local governmental decision-makers and relevant organizations who will replicate and scale up the best/good practices in other sites in the similar disasters. On the other hand it is also a necessary process of an international project closure.

B. Effectiveness

The effectiveness of the outcome 5 mainly is showed in the three aspects: Firstly, the demonstrated plan for management capability revitalization in two selected nature reserve provided a good example for other nature reserves to conduct such revitalization. The deputy-director of Tangjiahe NR told the evaluator that 'it is very effective for the Plan for management capability revitalization to direct them to implement the Nature Reserve Reconstruction Framework produced by outcome 4, especially in selection of the instrument specification'. The Plan for management capability revitalization also formed an operational document of the demonstrated NRs in the field of management capability revitalization. The PMO said that the 32 destructed NRs have almost revitalized their capability in management and monitoring in line with the good practice developed in the two pilot sites of the Project.

Secondly, the instrument bought by the Project has been used for field monitoring and lab experiments and for collecting the first-hand data for SCEPA and SCFB in biodiversity conservation after the earthquake. For example, the deputy-director of Tangjiahe Nature Reserve said to the evaluator that 'they employed 40 infrared-cameras offered by the Project to monitor the endangered species such as golden monkeys, takins, black bears and wild pigs etc. and thus knew the preliminary information on their population size and

behaviour, which have served as important evidence for their conservation measures. He also said that they have established a good friendship with local farmers through the Project, invited them to participate in the patrolling activities within their nature reserve, and paid them for livelihood improvement. Furthermore, the training activities for NR's staff have increased their operational skills for the new instrument and updated knowledge about monitoring and survey methodology.

Thirdly, the training courses given in Community-based Reconstruction Centres for Ecological Civilization helped the local farmers to learn new knowledge and technology about farming, production, increased their family incomes, and raised their awareness of biodiversity conservation. Taking Guanba Village in Pingwu county of the Sichuan province as example, following the training, the local farmer have voluntarily conserved honey plants through formulation of village rule, so that the honey production increased from 3,000-3,500 kg to 9,000 to150,000 kg to date and the price went up from RMB 16-24/kg to RMB 40-50/kg due to organic products.

The energy-saving brick making machines have somewhat contributed to the local farmer's house reconstruction and were warmly welcome by them.

C. Efficiency

To achieve the outcome 5, a clear implementation strategy was formulated, namely identifying and analysing the gaps of information through filed survey and on-site visits, and individual interviews, drafting the plan for revitalization of NR in management capability by local experts and extensive consultation with the local NRs, identifying urgent needs in technical support and equipment, and finally implementing the Revitalization Plan in the selected NRs. Under the coordination of SCEPA and SCFB, relevant sectors and individuals were mobilized to be involved in the activities under outcome 5, especially local farmers organized to voluntarily conduct filed patrolling for conservation of the endangered species. This is an appropriate and also efficient way to implement outcome 5 in the context of the earthquake. The staff in the two selected nature reserves have actively supported the Project even though they are managed by different local governments (SCEPA and FB), resulting in delivery of all outputs under outcome 5 in the period of the Project.

It is here mentioned that Community-based Reconstruction Centre for Ecological Civilization established in the villages has increased the efficiency of various training activities for different purpose and attracted participation of more local farmers in one place and one time.

30.33 % of the total expenditure has been used for the achievement of the outcome 5, among which the instrument accounted for 26.05%. Additionally, procurement for the equipment has been strictly reviewed and completed in the period of the Project.

According to above evaluation, the outcome 5 can get a rating of Highly Satisfactory in Relevance, Satisfactory in Effectiveness and Satisfactory in Efficiency.

6 SUSTAINABILITY AND REPLICATION

Summary Rating	Likely/Moderately Likely
Financial aspects	Likely
Socio-political aspects	Likely
Institutional aspects	Likely

6.1 Financial Aspects

The conservation of key ecosystems and endangered species has been a focus in the field of natural protection and gained financial support from the central and local governments in past five years. Recently, Ecological protection component in Sichuan province has been separately planed and budgeted from its comprehensive economic and social development plan. According to the updated Sichuan BASP, in the period of 12th five-year (2011-2015), RMB 1.1 billion (according to current rate, US$ 1 = RMB 6.35 or so) has been budgeted for capacity rehabilitation and ecological rehabilitation of NRs in the earthquake-hit areas, RMB 6 million for long-term monitoring of and research into biodiversity status in the hard earthquake-hit areas, RMB 0.5 billion for rehabilitation of existing or potential habitats of Great Panda destructed by the earthquake, RMB 5 million for vegetation rehabilitation and effective monitoring for Great Panda, and RMB 1.5 million for publicity and education for biodiversity conservation. SCDRC will appropriate RMB 1.5 million to conduct a demonstration project for rural alternative livelihood in key biodiversity areas in the coming two years.

SCEPB have established a special fund (about RMB 5.6 million) in 2012 to support establishment and management of the NRs, establishment of protected areas for endemic species and study for ecological function conservation areas in the key regions. SCFB, a key governmental sector in biodiversity conservation, has financially supported more than 20 NRs management and wildlife conservation, and will in next two years have RMB 1.8 millions of budget through State Forestry Administration to carry out the Great Panda survey fourth time and RMB 7.5 million to naturalize Great Panda and establish corridor for it.

In addition, some international and local NGOs have worked in Sichuan province with local governments and communities for biodiversity conservation and each year provide some funds through projects.

As with equipments bought by the Project, the interviewers in the Dujiangyan monitoring station and Tanjiahe NR told to the evaluator that 10% of special fund for equipment procurement have to be used for maintenance of the existing equipment and device.

As a whole, the sustainability of all outcomes achieved by the Project will without doubt be very likely in the dimension of finance and thus is rated as Likely (L).

6.2 Socio-political Aspects

During the past five years, The MEP has worked on the mainstreaming of biodiversity conservation into the national development process and started to initiate and support the important action at provincial level. The national BSAP has been issued by Chinese State Council to all conservation-related central line ministries/administrations and all provincial governments. SCEPB and SCFA have also formulated and issued Sichuan BSAP, the priority actions and projects of which have been integrated into relevant sector's development/environmental protection plans. From the prospective of Chinese political and economic situation, Chinese economy in the period 2006-2010 grew at the rate of more than 9% and has be predicted to keep a stable and healthy growth in next five years (2011-2015). Chinese political environment is stable and has benefited its people for years. Sichuan economic development in past five years has proved to be a basis for its continuous biodiversity conservation. Therefore, the many elements in the various plans and

frameworks produced by the Project will no doubt be translated into biodiversity conservation actions after the Project ends.

The Project has increased awareness and knowledge of all stakeholders on biodiversity conservation. They also realized that outcomes of the Project have reflected their priority needs and be owned by them. Under the impact of the Project, local governmental sectors, academic institutions, NGOs and some communities said to evaluator that they will continue to conserve their biodiversity for sustainable economic development and use the products from the Project. For example, SCEPB and SCFB has applied ecological function regionalization methodology developed by the Project in other regions of the province; Local institutes and universities are assisting local governmental sectors related to biodiversity conservation to scale up results of the project; NGOs has provided and will continue to provide technical services in publicity and education on biodiversity, especially at community level; The local communities which are engaged in development of tourism and organic farming products and has benefited from the Project will voluntarily support the efforts of biodiversity conservation led by local governments.

In summary, Chinese political environment and social impacts of the project will be likely to make the Project outcomes sustainable. The Project is rated as Likely in sustainability of socio-political aspects.

6.3 Institutional Aspects

At legal level, Sichuan government will formulate "Regulation on Biodiversity Conservation and Management in Sichuan" to implement the Sichuan BSAP and the other Plans developed by the Project and accepted by relevant governmental sectors. It decided to formulated "Management Regulation on Key Ecological Function Conservation Areas in Sichuan" to strengthen management on biodiversity protected areas. At community level, village rule in the earthquake areas has been formulated to limit illegal activities unfavourable to local biodiversity.

In the part of mechanism innovation, Sichuan government will, during the 12th five-year (2011-2015), establish a inter-sector meeting to organize and coordinate all efforts among relevant sectors in the field of biodiversity conservation, especially coordination among SCEPA, SCFB, Agricultural Bureau, Husbandry Bureau, Land Bureau and Construction Bureau. Furthermore, Sichuan government has urged to list some results from the Project into relevant sector's annual work plan for implementation. In addition, a Biodiversity Conservation Expert Committee will also be set up very soon to provide technical consultation for biodiversity conservation in Sichuan.

The existing entity networks in environmental monitoring and NR management have been in place and will continue to play a key role in ecological monitoring and survey according to the 'Technical Guideline for Ecological and Environmental Monitoring and Assessment in the Earthquake Areas' and the 'Reconstruction Framework for Protected Areas' developed by the Project. Furthermore, the instrument provided by Project can also be used in biodiversity conservation. Overall, legal environments, mechanisms and institutional capacity will all strongly support sustainability of the Project outcomes in institutional aspects which can be rated as Likely (L).

6.4 Environmental Aspects

Sichuan is a region where earthquake, landslide and debris flow often occur. The Wenchuan Earthquake has caused lots of secondary geological disasters which has severely threatened the local biodiversity, particularly forestry ecosystem and wildlife within it. The earthquake-induced secondary impacts will still exist in the long run.

The earthquake brought about the wholesale destruction of infrastructure and buildings and the reconstruction actions after the earthquake may exert high pressure on the local biodiversity. By and large, there are moderate risks that affect the environmental sustainability of the Project outcomes, especially effective implementation of various plans and filed monitoring and survey. The project is rated as Moderately Likely (ML) in the sustainability of environmental Aspects.

6.5 Replication

The Project was implemented in its areas and no sites beyond them replicated its activities during its implementation. However, the PMO staff and the CTA said that some good practices for filed monitoring have been used in Yushu prefecture of Gansu province where another earthquake happed. In addition, the Manager interviewed by the evaluator said that other over 20 NRs which were destructed by the earthquake have conducted the activities focusing on management capacity revitalization on the basis of the two pilot NRs. Here the evaluator would like to mention that the approach to integrate conservation component into reconstruction plan in the context of natural disaster as early as possible is replicable.

7 LESSONS LEARNED

(1) High concern over and perception of biodiversity from governments, academic institutions and NGOs is a basis for successful formulation and implementation of the Project. Sichuan province has rich biodiversity and in past 10 years its relevant sectors, in collaboration with international and national organizations/institutions have been working on conservation issues, thus accumulating assets of information, expertise, partner network and experience in the field of biodiversity. It is due to the long-term conservation practice and high attention to biodiversity that immediately after the earthquake, local government can think of and has ability to implement biodiversity conservation while undertaking reconstruction.

(2) In the context of the earthquake, the Project strategy was designed well using participatory approach, particularly precise establishment of its objective of integrating biodiversity conservation into reconstruction process after the earthquake. For example, at the stage of formulation of the Project, local government held workshops participated by relevant stakeholders to discuss its priority needs, activities and implementation approaches, as well as consulted with international and local experts in terms of selection of the representative ecosystems and species to be surveyed.

(3) Effective leadership and organization, together with mutual support of stakeholders at international, central, local and community levels, is the most pivotal factor for achievement of the project outcomes. For example, under united leadership of SCEPB, the PCG, the PMO, the PRT and the procurement group have effectively operated during the Project implementation and all stakeholders concerned, in particular at local governmental level, have been mobilized to serve for the Project in human, financial and material resources. Through full participation and institutionalised management, the information and outputs resulted from the Project can be timely shared and applied.

(4) Full dependence on local experts who have a good understanding of local legal status, policy background and environmental conditions facilitated implementation of the Project activities in very limited timeframe and funds. For instance, local experts provided lots of background information used to compare the changes in ecosystem and species before and after the earthquake and conducted filed surveys and visits in the earthquake areas.

Furthermore they also contributed innovative ideas to development of the policy recommendations and the plans.

(5) Training provided by the MEP and UNDP in terms of administrative and financial management of GEF-funded project has no doubt improved the effectiveness and efficiency of the PMO. For example, the PMO has learnt a lot and benefited from the guide of UNDP CO in writing progress reports and financial reports of the Project.

(6) In the future, more attention needs to be given for tracking and identification of impacts of the Project results and their replications. Due to very limited duration of the Project, the PMO put less time and energy on the collection of information on impacts produced by the Project. The SCEPB has been aware of this and expressed to emphasize the changes by follow-up implementation of the plans developed the Project .

8 RECOMMENDATIONS

The following recommendations are intended to guide local governments and other key stakeholders on approaches and actions that will help to strengthen the likelihood of achieving sustainable impact.

(1) The Project has produced several very important Plans/Framework, such as the 'Ecological Rehabilitation Plan', 'Reconstruction Framework for Nature Reserve' and 'Sichuan BSAP' etc., which have a long-term guiding role to biodiversity conservation in the earthquake-hit areas. It is suggested that Sichuan provincial government should organize biodiversity-related sectors to further strengthen capacity building at legal and institutional levels (for example, local biodiversity management regulation and cross-sector enforcement group for biodiversity conservation) and develop a detailed annual budget scheme/plan to implement them in a coordinated manner. Furthermore an inter-sector coordinating mechanism , like inter-sector meeting for biodiversity conservation, should be established as soon as possible to coordinate the efforts made by multi-sectors which are involved in biodiversity conservation.

(2) Biodiversity conservation has formed an integral part of relevant governmental sector's routine work. It is suggested that a performance assessment in the field of biodiversity conservation should be integrated into the whole governmental sector assessment framework.

(3) Reconstruction actions may pose a high risk on local biodiversity in poor mountainous areas. It is suggested that innovative approaches need to be developed and demonstrated to combine biodiversity conservation with livelihood improvement of local farmers. In particular, the experience/model from Pingwu County where local farmers achieved an increase in honey production and a remarkable improvement in product quality bee through conserving local wild honey plants should be summarized and further expanded to other areas.

(4) The secondary disasters induced by the earthquake may severely threaten the biodiversity in the earthquake-hit areas. It is suggested that continuous monitoring and survey in the earthquake-hit areas should be performed to identify the changes of key ecosystems and endangered species using the 'Technical Guideline for Ecological and Environmental Monitoring and Assessment in the Earthquake Areas'.

(5) The conservation awareness of mountainous farmers has still much room to be raised and they have a strong expectation to increase family income and improve life quality. It is suggested that combination of biodiversity publicity with training courses in production

technology should continue to be performed using the training material developed by the Project.

APPENDICES

Annex 1: Terms of Reference for Terminal Evaluation

UNDP/GEF Emergency Biodiversity Conservation Measures for Recovery and Reconstruction in Response to Wenchuan Earthquake in Sichuan Province

PROJECT SUMMARY

Project Title: Emergency Biodiversity Conservation Measures for Recover and Reconstruction in Response to Wenchuan Earthquake in Sichuan Province (Sichuan Earthquake Project)

GEF Project ID: PIMS 4187

UNDP Project ID: 00062480

Focal Area: Biodiversity Conservation, Short-Term Response Project

GEF Strategic Priority: Biodiversity Conservation

Country: China

Duration: 2009-2010

Implementing Agencies: UNDP

National Executing Agency: Ministry of Environmental Protection (MEP)

Background

A catastrophic earthquake with a magnitude of 8.0 Richter scale hit Southwestern China on May 12, 2008, following with 193 major aftershocks in magnitude above 4 Richter scale as of June 2. The quake affected areas reached 440,000 square kilometers in total, and the population 45.61 millions. The earthquake hit region of southwestern China lies in the upper reaches of Yangtze River Basin, one of 25 global biodiversity hotspot identified by Conservation International, and one of the WWF's Global 200 eco-regions. The earthquake has caused massive environmental damage and vegetation destruction as well due to landslides, blockage of rivers and streams and land subsidence which posed threats on biodiversity from three dimensions: (1) direct impact of earthquake resulted in habitat loss and fragmentation, individual death of wildlife, and conservation infrastructure and facilities damage etc. (2) threats posed by secondary (earthquake induced) environment risks, including sharply reduced food supply for wildlife due to loss of vegetation, and the death caused by underground water environment changing, species migration due to loss of habitats, etc. (3) potential threats posed by disaster relief measures and other human activities in the process of affected area reconstruction. This medium-size project was developed in a short space of time to respond to the emergency.

UNDP/GEF Project aimed to complement the efforts by the Government of China, the local government and communities and their partners by ensuring that environmentally sound and biodiversity-friendly approaches are adopted into recovery and reconstruction efforts particularly in the Wenchuan area. The overall project goal is to conserve critical ecosystems and their associated threatened and endangered species in the quake region and mitigate the loss of biodiversity occurring as a result of the earthquake. The project objective is to

mainstream biodiversity in the post-quake recovery and reconstruction process and strengthen protected area system with demonstrations in the quake-hit regions of Sichuan Province.

Three components and associated outcomes of the Project include:

***Component 1*: Rapid assessment of earthquake induced impacts and post quake ecological risks on critical ecosystems in affected areas.**

- ✓ ***Outcome 1***: Knowledge and understanding improved and information gaps filled on the earthquake induced impacts and post-quake ecological risks on biodiversity in affected areas.

***Component 2:* Mainstreaming biodiversity into post-disaster recovery and reconstruction process in affected area.**

- ✓ ***Outcome 2***: Recovery and reconstruction plans in project areas incorporate biodiversity conservation objectives
- ✓ ***Outcome 3***: Improved monitoring capacity with biodiversity concerns in the process of disaster relief, and post quake recovery and reconstruction

***Component 3:* Planning, Prioritization and Budgeting Framework to achieve strengthened PA management.**

- ✓ ***Outcome 4***: Development of PA reconstruction framework with prioritized actions for investment by government and national and international communities
- ✓ ***Outcome 5***: Revitalized management capacity in demonstration PAs in affected areas

Description of Responsibilities

Purposes of the Evaluation:

- To review development and policy environment relating to biodiversity conservation over the life of Sichuan Earthquake Project, commenting on how these might have affected project performance and assess the extent to which the project remained relevant to the needs of its targets.
- To perform final assessment of the extent to which Sichuan Earthquake Project has successfully accomplished its objectives in terms of activities, outputs and outcomes as defined in the agreed Project Document (log frame), and assess the likelihood of achieving them upon project completion in 2011.
- To identify implementing agency's institutional strengths and weaknesses;
- To evaluate the impacts and sustainability of project outcomes.

Scope of Services:

Under the supervision of UNDP CO in consultation with Implementing Partner of Sichuan Earthquake Project, the final evaluation team will accomplish the following tasks:

Project design and its relevance in relation to:

- Development priorities at the national level.
- Stakeholders – assess if the specific needs were met.
- Country ownership / drivenness – participation and commitments of government, local authorities, public services, private sector and communities.

Performance - look at the progress that has been made by the project relative to the

achievement of its objective and outcomes:

- Effectiveness - extent to which the project has achieved its objectives and the desired outcomes, and the overall contribution of the project to national strategic objectives.
- Efficiency - assess efficiency against overall impact of the project for better projection of achievements and benefits resulting from project resources, including an assessment of the different implementation modalities and the cost effectiveness of the utilisation of GEF resources and actual co-financing for the achievement of project results.

Timeliness of results：

Management arrangements focused on project implementation:

- General implementation and management - evaluate the adequacy of the project, implementation structure, including the effectiveness of the National Steering Committee and partnership strategy and stakeholder involvement from the aspect of compliance to UNDP/GEF requirements and also from the perspective of "good practice model" that could be used for replication.
- Financial accountability – extent to which the sound financial management has been an integral part of achieving project results, with particular reference to adequate reporting, identification of problems and adjustment of activities, budgets and inputs.

Monitoring and evaluation on project level – assess the adoption of the monitoring and evaluation system during the project implementation and for its sustainable development , focusing to relevance of the performance indicators, that are:

- Timeliness and quality of inputs.
- Timeliness and cost-effectiveness of activities undertaken.
- Ability of the project to utilize efficiently the inputs available to it.
- Quality and quantity of outputs produced.
- Achievement of immediate objectives.
- Factors that have facilitated or deterred the achievement of project objectives.

Project impact:

To determine the extent to which the project objectives are expected to be achieved and what are the short-term and long-term impact of the project, including efficiency of the project, cost-effectiveness of the project, impact on MPA management in China, generation of income to local communities, replication and dissemination of project results within and outside project areas; awareness raised of marine biodiversity by the public and decision makers.

Replication:

To analyze replication potential of the project best practices in country and in the region, and present recommendations and lessons of broader applicability for follow-up and future support of UNDP and/or the Government, highlighting the best and worst practices in addressing issues relating to the evaluation scope.

Sustainability of project outcomes:

To analyze the risks and assumptions that are likely to affect the persistence of the project outcomes, including financial resources, socio-political, institutional and environmental risks.

- Recommendations and lessons learnt.
- Success stories.
- Problems in project implementation.
- Lessons learnt.
- Recommendations.

The Requested Services and Activities:

The Terminal Evaluator will use the information generated by driven including baseline and information generated by the M&E framework, and seek the necessary contextual information to assess the significance and relevance of the results. The final evaluation will use the strategic priorities of biodiversity portfolio in GEF Phase IV as benchmark for evaluation.

In order to carry out the evaluation tasks, the Terminal Evaluator will carry out the following activities during the assignment period:

- Review of background material and preparation of a tentative evaluation plan to be agreed with UNDP CO and Terminal Evaluator.
- Desk review of documents provided by UNDP CO attached to this TOR;.

Interviews and discussions with relevant stakeholders including:

- PMO
- UNDP CO
- Private sector representatives
- Local Project Steering Committee members of the project sites
- Local beneficiaries
- Subcontractors
- Field visits to the demonstration sites.
- Preparation and finalisation of evaluation report by incorporating any additional comments from the UNDP CO, MEP and PMO.

Outputs:

The Terminal Evaluator is expected to deliver the following outputs:

An evaluation report presenting evaluation results of the project and recommendations. The report should be submitted to UNDP CO and PMO within 15 days from the date when the consultants are contracted. The documents should be submitted in electronic format. Presentation of findings to UNDP CO and PMO key stakeholders in a wrap-up meeting in UNDP CO. The findings of the evaluation will be used by Ministry of Finance as the GEF Focal Point in China, PMO as the implementing partner and UNDP to conclude the project.

Duration of the Contracts:

15 working days, including travel time required. The consultant will travel to Sichuan .The consultant will meet with government officials, project participants, and other stakeholders in order to evaluate the project implementation and impact. The travel schedule and logistics will be developed by PMO.

Competencies

The Terminal Evaluator is expected to have relevant academic qualification and evaluation experiences, and has as many as possible the following qualifications:

- Good communications and writing skills in English.
- Knowledge of biodiversity management, natural resources co-management, integrated planning, etc.
- Knowledge of GEF projects and project requirements.
- Professional experiences in working in China and with Chinese counterparts.

Qualifications

Education:

- Master's degree on environmental science or related areas;

Experience:

- At least five years of evaluation experiences;
- Project development, implementation and evaluation experience;
- Familiarity with natural resources management in particular marine and coastal biodiversity policies;
- Expertise in economic and social development issues;

Annex 2: Evaluation Itinerary

Date/time	Activity	Paticipants
Dec 12, 2011 18:15	Arrival at Chengdu City	PMO
Dec 13, 2011 9:30-17:30	(1) Briefing with PMO (2) Presentation of the project progress by PMO (3) Check the project outputs (4) Discussion and interaction	(1) PMO staff (2) Evaluator
Dec 14, 2011 9:00-17:00	(1) Introduction of subcontractors and relevant stakehloders about their achievements (2) Discussion and interaction (3) Check the project outputs	(1) PMO staff (2) Subcontractors (3) Stakehloders (4) Evaluator
Dec 15, 2011 9:30-16:00	(1) Visit Dujiangyan pilot site and interview with its staff (2) Check the equipment in use	(1) PMO staff (2) Dujiangyan station staff (3) Evaluator
Dec 16, 2011 9:00-19:00	(1) Visit Tangjiahe national NR and interview with its staff (2) Check the equipment in use (3) Return to Chengdu	(1) PMO staff (2) Tangjiahe national NR staff (3) Evaluator
Dec 17, 2011	Leave from Chengdu	Evaluator

Annex 3: Documents Consulted by the Evaluator

1. Project Document, 6, 2008, (in English).
2. Agreements with the FECO under MEP and the subcontractors , 2009, (in English).
3. Annual Work Plans of the Project (2009-2011), (in English).
4. Project Inception Report, 2009, (in Chinese).
5. Quarterly/Annual Progress Report (APR, 2009-2011), (in English).
6. Financial Audit Report, 2010 (in English and Chinese).
7. 12 copies of the Technical Reports of the Project, 2011 (in Chinese).
8. Publicity and Training Materials, 2011 (in Chinese).
9. Summary Report of the Project, 2011 (in Chinese).
10. Updated Biodiversity Strategy and Action Plan issued by the State Council of China, 9, 2011, (in Chinese).
11. National Economic and Social Development Plan of China (2006-2010 and 2011-2015), (in Chinese).
12. The Government of China and the United Nations developed a new UNDAF framework in 2011, (in English).
13. UNDP Evaluation Guidance for GEF-Financed Projects (Version for External Evaluators), March 17th, 2011).

Annex 4: Information on the Evaluator

Prof and Dr Wang Changyong (China)

Nanjing Institute of Environmental Sciences, MEP of China

Dr Wang has 20-year of research and consultant experience in the conservation and management of biodiversity and in the risk assessment and risk management of genetically modified organisms. Since 1990, he has led and participated in implementation of 30 international (GEF, UNDP, IUCN, WB, Rockefeller Foundation, Greenpeace and Bilateral) and national research projects, also including development of international project concept papers and proposals. He has published 30 academic articles and books, won one national prize and two ones at ministry level in environmental science and technology and is familiar with the policies, procedures and criteria of evaluation for GEF projects. In past several years, his consultant work mainly includes:

- National consultant: for China Biodiversity Partnership Framework Project, funded by UNDP/GEF.
- National consultant: for Quality Review of Technical Documents/Products of EU-China Biodiversity Programme Field Projects: a total of 16 project research/demonstration reports were reviewed on governance reform, strategy and plan, environmental economics, ecosystem service payment, protected areas, and conservation biology in the field of biodiversity conservation and management.
- Independent final evaluator: for eight international field projects, funded by EU/UNDP and GEF/UNDP:
  - Sustainable Agro-biodiversity Management in the Mountain Areas of Southern China.
  - Mainstreaming Biodiversity Conservation and Capacity Building in Chongqing Municipality.
  - Integrated Biodiversity Conservation in the Headwaters of the Huaihe River Basin.
  - Biodiversity Conservation and Sustainable Natural Resource Use in the Chang Tang Region of Tibet.
  - Integrated Management of Wetlands in Ruoergai Plateau and Altai Mountains to Support Biodiversity Conservation and Sustainable Development.
  - Community-Based Conservation in Qinghai and Sichuan.
  - Biodiversity Conservation and Sustainable Management of the Hulunbeier Grasslands.
  - Governance, Capacity and Social Responsibilities in Wetland Biodiversity Conservation in Anqing, Anhui Province.
  - The Conservation and Sustainable Utilization of Wild Relatives of Crops.

After he graduated from Nanjing University with BS in Botany, MS and Ph.D in Ecology, Dr Wang has been working with Nanjing Institute of Environmental Sciences under Ministry of Environmental Protection of China. He has extensive knowledge in biology, ecology, conservation biology and environmental science, especially the solid expertise in policy and planning development, impact assessment, data management and monitoring in the field of biodiversity and biosafety. He is now member of Chinese Society of Ecology and Chinese Society of Environment, visited many countries for academic communication and professional training, and seconded as a China Project Officer to IUCN-Asia Regional Office in Bangkok.

Annex 5: People Consulted during the TE

Staff of the PMO based in Chengdu city, Sichuan Province

Name	Gender	Position /Title	Organization	Roles in the Project	Telephone
Li Lin	M	Director	Foreign Economic Cooperation Office of Sichuan Province Environmental Protection Agency	Leadership, organization and coordination	028-85220819
Qin Yueyue	F	Deputy Director	Foreign Economic Cooperation Office of Sichuan Province Environmental Protection Agency	Leadership, organization and coordination	18080046665
Xupei	F	Manager/Associate Prof.	Institute of Mountain Hazards and Environment, Chinese Academy of Sciences	Project implementation	13981905591
Ding Liming	M	Chief Financial Officer	Foreign Economic Cooperation Office of Sichuan Province Environmental Protection Agency	Financial management	15928626919
Wang Yukuan	M	CTA/Prof.	Institute of Mountain Hazards and Environment, Chinese Academy of Sciences	Chief Technical Advisor	13699046390
Ling juan	F	Coordinator	Foreign Economic Cooperation Office of Sichuan Province Environmental Protection Agency	Administrative Assistant	15202843622

Stakeholders and partners from local government and academic institutions

Name	Gender	Position /Title	Organization	Roles in the Project	Telephone
Zhang Qiujing	F	Director/Senior Engineer	Central Station for Environmental Monitoring of Sichuan Province	Ecological monitoring and assessment in the earthquake hit areas	13056694058
Wang Qingan	M	Prof.	Sichuan Province Academy of Environmental Sciences	Update of Sichuan Province BASP	13668212246
Ran Janghong	M	Prof.	Sichuan University	Material development for training and publicity	13308026600
Li Shengzhi	M	Associate Prof.	Sichuan Province Academy of Social Sciences	Biodiversity campaigns for local communities	13308200678
Hu Hai	M	Forestry Engineer	Sichuan Province Wildlife Conservation Station	Development of reconstruction planning for the PA in the earthquake hit areas	028-85220819
Wan Nian	F	Director	Ecological Division of Sichuan Province Environmental Protection Agency	Inter-sectoral coordination	13086616598

Staff from Dujangyan City Environmental Monitoring Station and Tangjiahe National Nature Reserve

Name	Gender	Position /Title	Organization	Roles in the Project	Telephone
Wu Wei	M	Deputy Director	Dujangyan City Environmental Monitoring Station of Sichuan Province	Equipment recipient and environmental monitoring	15928041906
Hu Lina	F	Technician	Dujangyan City Environmental Monitoring Station of Sichuan Province	Equipment management	13982165626
Shen liming	M	Deputy Director	Tangjiahe National Nature Reserve of Sichuan Province	Equipment recipient and environmental monitoring	13518335523
Chen Wanli	M	Division Chief	Tangjiahe National Nature Reserve of Sichuan Province	environmental monitoring	15883564478

Annex 6: Questions to Guide Visit and Interviews

SECTION OF THE REPORT	QUESTIONS	SOURCES OF INFO.
EVALUATION PURPOSE		
	1. What is main reason for the re-evaluating the Project? 2. What aspects need to be improved in this evaluation?	PMO CTA UNDP (interview by phone)
PROJECT CONCEPT AND FORMULATION		
Origin of the Project	1. P lease brief the origin of the Project 2. Why to develop the Project in terms of biodiversity conservation in the context of the earthquake? 3. Why does the Project delay one year?	PMO CTA
Stakeholder Involvement and Country Ownership	1. Which stakeholders have participated in the Project proposal development and how to do? 2. What are their priority needs in post-quake recovery and reconstruction? 3. Whether and how are the Project objectives consistent with national/local policies, regulations, plans and actions, even international commitment during 11th and 12th five-year ESDP, Please give some examples? 4. What are the most concerns at community level in the earthquake areas? 5. Who are the target group and beneficiaries of the Project? 6. Are the stakeholders, especially target group satisfactory with the outcomes achieved by the Project?	PMO Stakeholder Groups
Relevance to other Interventions	1. What projects, programmes and initiatives implemented at international, national and local levels the Project is closely related to in the past five years and at the present time? Please give their titles, objectives, and fund amount etc?	PMO Stakeholder Groups
PROJECT IMPLEMENTATION		
Management arrangement	1. Please briefly talk about the Project management structure and main roles of each components in the Project implementation? 2. How is the CAT produced and what is his/her main responsibilities in the Project implementation? 3. What about the stability of the PMO member during the Project and how to recruit new members? 4. How good are the working relationship within the PMO and with UNDP CO and other stakeholders? 5. Are there key issues about the Project coordination and how to address them? Please give some examples to explain? 6. Why did the former Project manager quit? 7. How did the Project Coordination Group coordinate its implementation and what are the issues in implementation and how to deal with them? Please give some examples.	PMO Project Manager CTA Stakeholder Groups
Stakeholder Participation	1. How many and how did stakeholders participate in the Project implementation? 2. Please talk about the local ownership of the Project in terms of the stakeholders?	PMO Stakeholder Groups
M&E and Adaptive Management	1. Whether has the Logframe been often used for a tool of M&E during the Project? 2. Were the indicator at outcome levels adaptively revised and how to do and whether to get approval from UNDP CO in this regard?	PMO

SECTION OF THE REPORT	QUESTIONS	SOURCES OF INFO.
	3. Whether are the assumptions made in the Project Document still true? And Are there a killer risks during the Project implementation? 4. Talk about the WAP and APR/QPR and what are roles in developing them? Who did review and approve them? What are the contribution of them to 5. Was the M&E Plan make and how to implement it? 6. How did M&E findings contribute to WAP and adaptive management? 7. Please talk about the mechanism by which information can be disseminated and accessed and please give some examples?	
Financing Plan and Management	1. Please fill in the tables about budget and expenditure of the Project? 2. Was the Project audited in financial aspects? If Yes, please give me the findings and conclusions of the audit? 3. Please talk about the detailed use of co-financing stated in the Project Document, especially the support from local sources in kind? 4. Please tell me about the extent to which the Project leverage other sources to support its implementation? 5. Was financial management rule formulated to institutionalize the financial management process? And Were relevant persons trained with financial management knowledge of international project?	The Financial Officer
PROJECT RESULTS		
Outcome 1	1. Please explain what have been done for the Activity 1.1.1? 2. How many were communities interviewed and investigated for the Activity 1.1.2? What are key issues to be addressed in post-quake reconstruction (please talk about 3-5 issues) and what about recommendation for them? 3. Please talk about the details of the trainings for the Activity 1.1.4 and what are their purposes? 4. What does mean by "destruction in management capability for NRs"? Please create example for it? 5. Please talk about the changes brought out the achievement of the Outcome 1? Any changes with examples?	PMO Subcontractors
Outcome 2	1. For what is the "Ecological Function Regionalization" for Activity Output 2.1 in the Project? 2. Did the "Ecological Rehabilitation Plan" developed or updated for the Output 2.2 by the Project? 3. How many copies of publicity materials have released for Output 2.3? to who and how many? 4. Please talk about the changes brought out the achievement of the Outcome 2? Any changes with examples?	PMO Subcontractors
Outcome 3	1. Why to set up ecological monitoring station and what activities have been undertaken during the project implementation and what contributions to post-quake reconstruction actions. 2. Please show me the equipment and device bought by the Project? 3. Can your staff use the equipment to conduct the monitoring in the earthquake hit areas? And Are there any difficulties in this regards? 4. How to financially maintain of the equipment at the end of the Project? 5. Do you benefit from the technical guideline for ecological monitoring? Please give some examples? 6. Please talk about the changes brought out the achievement of the Outcome 3? Any changes with examples?	PMO Subcontractors Pilot site staff
Outcome 4	1. How many did stakeholders participate in update of the Sicuhan BSAP and when will it be issued, and have	PMO

SECTION OF THE REPORT	QUESTIONS	SOURCES OF INFO.
	the priority actions been incorporated into relevant sector's annual work plans and budgeted? 2. Have the Reconstruction Framework for NRs been integrated into the "Post-quake Recovery and Reconstruction Master Plan" and implemented? 3. Please talk about the changes brought out the achievement of the Outcome 4? Any changes with examples?	Stakeholder Groups
Outcome 5	1. Have what equipment provided for your NR from the project and what activities carried out using them and what contributions of the information and data collected to the local biodiversity conservation? 2. How to financially maintain of the equipment at the end of the Project? 3. Please talk about the changes brought out the achievement of the Outcome 4? Any changes with examples?	PMO Stakeholder Groups Pilot site staff
SUSTAINABILITY AND REPLICATION	1. Have the good practices and products from the Project been replicated the outside the Project areas? 2. Please talk about sustainability of the Project outcomes after its completion in terms of financial, social-political, institutional and environmental aspects? 3. Do you have any recommendations about the Project?, including to UNDP CO and GEF?	PMO Stakeholder Groups

Annex 7: Strategic Results Framework of the Project

Project Strategy	Objectively Verifiable Indicators(OVI)				
Goal	The overall goal of the project is to conserve critical ecosystems and their associated threatened and endangered species in the quake-hit region and mitigate the loss of biodiversity as a result of the earthquake				
	Objective Verifiable Indicator (OVI)	Baseline	Target	Sources of Verification	Risks and Assumptions
The project objective is to mainstream biodiversity in the post-quake recovery and reconstruction process and strengthen protected area system with demonstrations in the quake-hit regions of Sichuan Province	1.proper application of biodiversity friendly practices demonstrated in earthquake recovery and reconstruction operations in 2 quake-affected counties by the mid-term of the project and in 29 quake-affected counties at the end of the project; 2. at least 134,000 hectares of Giant Panda habitats (including 34,000 hectares of destroyed habitats) are included in the ecological rehabilitation plan of the master plan for reconstruction; 3, at the end of project, patrolling and monitoring capacity of 2 protected areas will be resumed providing first-hand data on population and habitats of 10 critical endangered species;	Biodiversity friendly recovery and reconstruction practices are not properly applied in operations Rehabilitation of damaged and affected panda habitats assessed but is not included in the ecological rehabilitation plan;	See OVI column	Technical reports delivered by the project; Related plans published by government; Monitoring and assessment report on biodiversity published quarterly.	Biodiversity conservation being listed as one of factors in government agenda for post-quake recovery and reconstruction. Biodiversity management objectives are not fully incorporated in the related sectoral plans and projects due to time constrains. (Risk level: medium)

	4. knowledge and best practices from biodiversity response measures within the Wenchuan earthquake synthesized for replication in other earthquake affected areas in Wenchuan and elsewhere in the world; 5, relief efforts of 80% of agencies and organizations in relation to biodiversity conservation in quake-affected areas are coordinated.	Relief efforts of stakeholders in PAs of quake-affected areas are poorly coordinated Patrolling and monitoring are not regularly conducted in PAs. No knowledge product in China related with biodiversity rehabilitation from earthquake.			
Component 1: Rapid assessment of earthquake induced impacts on critical habitats in affected areas					
Outcome1: knowledge and understanding improved and information gaps filled on the earthquake induced impacts and post-quake ecological risks of biodiversity in affected areas	1.1 Earthquake impact on habitats of 10 critical endangered species assessed and counterpart measures proposed in project area. 1.2 losses of all NNR in projected area taken stock of and threats from communities inside and in close vicinity of two national nature reserves and opportunities for community livelihoods proposed.	Very limited knowledge on the related impact to endangered species on the ground in the affected area.	Adequate knowledge acquired on at least 10 critical species. All NNR losses identified	Related workshops minutes Investigation reports; Related technical reports.	Top quality experts are available and their time input can be ensured. Recommendations and options are practical with the post disaster situation.
Output 1.1 Survey and impact assessment of breeding success of critical endangered species, damage to habitats, infrastructure loss of all NNRs, and local threats from communities; Activity 1.1.1 biodiversity assessment in applying the long-held participatory method in natural reserve and community research and decision making to coordinate the relationships among government agencies, technical departments and the communities.(TMI)					

Activity 1.1.2 community assessment in Longxi-hongkou Nature Reserve together with the reserve to identify pilot communities for green reconstruction (WWF China) Activity 1.1.3 assessment of the impact of the earthquake on panda habits and the ecosystems in the habitats with remote sensing technology (WWF China) Activity 1.1.4 trainings to Sichuan nature reserve staff in conducting rapid environmental assessment and community assessment for better-informed decision-making (WWF China) Activity 1.1.5 assessment of earthquake impact on vegetation, forest, panda nature reserves and forests;(UNDP) Activity 1.1.6 planning workshop on PA and social-economic impact assessment and gap identification;(GEF) Activity 1.1.7 on the ground assessment of identified gaps in habitats, species and PA infrastructure in two selected nature reserves; (GEF) Activity 1.1.8 livelihood of communities and impact on ecosystems in project area in communities of the two selected nature reserves; (GEF)					
Component 2: mainstreaming biodiversity into post-disaster recovery and reconstruction process in affected areas					
Outcome 2: recovery and reconstruction plans in project areas incorporate biodiversity conservation objectives	2.1 recommendations on establishment of ecological function conservation areas are proposed; 2.2 Sichuan earthquake ecological rehabilitation plan prepared and improved; 2.3 user's guide for biodiversity friendly recovery and reconstruction practices prepared and printed for distribution; 2.4 Increased awareness of biodiversity significance of earthquake hit areas improved among decision makers, planners and the public; 2.5 hand-on trainings to 50 planners, 200 managers on integrating biodiversity into recovery and reconstruction operations	None	See OVI column	Related joint meeting minutes; Published user guide; quarterly progress reports; News reporting and talks shows Biodiversity brochures and pamphlets	Top quality experts are available and their time input can be ensured. Recommendations and options are practical with the post disaster situation. Managers and planners are willingness to consider biodiversity into their practical work

Output 2.1study of creating ecological function conservation areas in earthquake affected areas;
Activity 2.1.1 analysis and assessment of ecological functions conservation areas in earthquake affected areas;(GEF)
Activity 2.1.2 consultation workshop on the EFCA and associated implication to reconstruction operations; (GEF)

Output 2.2 preparation of ecological rehabilitation plan in Sichuan earthquake areas
Activity 2.2.1 assessment of the current ecological rehabilitation plan; (GEF)
Activity 2.2.2 consultation meeting and refinement of the rehabilitation plan;(GEF)

Output 2.3 preparation, printing and distribution of user's guide for biodiversity friendly recovery and reconstruction practices
Activity 2.3.1 reader identification and consultation;(GEF)
Activity 2.3.2 design, printing and distribution of the user's guide;(GEF)
Activity 2.3.3 translation, printing and distribution to key partners and stakeholders Green Reconstruction Policy Guidelines for Post-Tsunami reconstruction, and the Green Building Materials Booklet(WWF)

Output 2.4 awareness raising of biodiversity significance of earthquake areas among decision makers and the public
Activity 2.3.1 identification of target audience, knowledge gaps and means of communication for increased understanding of biodiversity values in project areas;
Activity 2.3.2 PSA development towards targeted audience (GEF)
Activity 2.3.3 talk shows and expert interviews to promote biodiversity friendly practices; (GEF)
Activity 2.3.4 a series of outreach activities in communities for increased understanding of biodiversity values; (GEF)

Output 2.5.capacity building of planners, managers of reconstruction operations and workers in application of biodiversity friendly practices and techniques;
Activity 2.5.1 a series of o- the-job training of biodiversity friendly techniques; (GEF)

Outcome 3. Improved monitoring capacity with biodiversity concerns in the process of disaster relief, and post quake recovery and reconstruction	3.1 draft technical guidelines for ecological monitoring in earthquake hit areas developed to guide establishment of monitoring stations 3.2 two demonstration ecological monitoring stations in operation producing the first monitoring report in June 2009;	None	See OVI column	Technical guidelines; Related Equipment purchased and installed; 10 staff being trained for the monitoring system; assessment reports	Sichuan provincial government places high importance to biodiversity considerations in reconstruction process Sustainable financial support for the monitoring system; Stability of trained staff working for the system
Output 3.1 development of ecological monitoring technical guidelines Activity 3.1.1 designing and preparation of the ecological monitoring technical guidelines (GEF) Activity 3.1.2 consultation meeting on draft guidelines (GEF) Output 3.2: to establish and operationalize up to two monitoring stations Activity 3.2.1 procurement of computers, cameras and video cameras, to at least 12 nature reserves in Sichuan, Gansu, and Shaanxi for them to resume their regular work. (WWF) Activity 3.2.2 restoration of Dapin Protection Station in Baishuihe Nature Reserve with the support from the administrative body of the nature reserve (WWF) Activity 3.2.3 support to operation of environmental monitoring stations with vehicles, equipment and other premises; (GOV) Activity 3.2.3 procurement of goods and equipment to two identified ecological monitoring stations; (GEF) Activity 3.2.4 training in the monitoring activities with the newly developed technical guidelines (GEF) Activity 3.2.4 production of monitoring report (GEF)					
Component 3: planning, prioritization and budgeting framework to achieve strengthened PA management					

Outcome 4: Development of PA reconstruction framework with prioritized actions for investment by government and national and international communities	4.1 PA system reconstruction framework with prioritized actions in consultation with government and international communities developed and approved by relevant agencies 4.2 Sichuan biodiversity strategy and action plan taking into consideration of earthquake is adopted by provincial government agencies	None	See OVI column	Reformulated BSAP in Sichuan Province; Related project technical deliveries; Related meeting minutes.	High level coordination and commitment among government and international communities
Output 4.1 Developing reconstruction plan of PA system with prioritized actions for investment by government and national and international communities; Activity 4.2.1consultation meetings on scope, methodologies, prioritization and budgeting of the PA reconstruction framework (GEF) Activity 4.2.2 technical input to framework planning (GEF) Output 4.2 updating draft biodiversity strategy and action plan Activity 4.1.1 stocking taking of existing information about biodiversity in the project areas and gap analysis (GEF) Activity 4.1.2 data collection, analysis and updating existing draft provincial strategy and action plan (GEF) Activity 4.1.3 stakeholder consultation for finalizing BSAP (GEF)					
Outcome 5: Revitalized management capacity in demonstration PAs in affected areas	5.1 experience and lessons in emergency earthquake response measures for biodiversity conservation developed ; 5.2 selected priority actions implemented in the 2 identified nature reserves.	No demonstration model in place	See OVI column	Knowledge product of response measures to earthquake Increased management effectiveness measured by individual PA scorecards; Project progress reports with field verification	Access to the nature reserves can be maintained and improved.

Output 5.1 planning and implementation of selected priority actions in 2 selected NNRs in project area.
Activity 5.1.1 supply of patented quake-proof, environmental-friendly brick-making machine, Fastblock Machine for the recovery and reconstruction of the nature reserves in the quake hit zone and surrounding areas of these nature reserves and associate technical training in application (TMI)
Activity 5.1.2 needs assessment and procurement of priority equipment and goods to resume management capacity of local EPBs (GEF)
Activity 5.1.3 to establish 5 pilot sites of community-based reconstruction centre of conservation civilization (Shan Shui)

Output 5.2 synthesizing experiences and lessons of biodiversity conservation measures in emergency situations
Activity 5.2.1 knowledge sharing workshop for biodiversity conservation objectives in earthquake disaster situations (GEF)
Activity 5.2.2 consolidating of experiences and printing of knowledge product for replication (GEF)