United Nations Environment Programme

Terminal Evaluation of the UNEP/GEF Project:

Nature Conservation and Flood Control in the Yangtze River Basin

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Contents

Abbreviations

AL	Alternative Livelihoods
CAS	Chinese Academy of Science
CCICED	China Council for International Cooperation on Environment and Development
CRAES	Chinese Research Academy of Environmental Science
ECBP	European Union – China Biodiversity Programme
EFCA	Ecosystem Function Conservation Area
EO	Evaluation Office
EPB	Environmental Protection Bureau
EU	European Union
FECO	Foreign Economic Co-operation Office (within the Ministry of Environmental Protection)
GEF IW:LEARN	GEF International Waters Learning Exchange and Resource Network
GEF	Global Environment Facility
GoC	Government of China
IEM	Integrated Ecosystem Management
IMHE	Institute of Mountain Hazards and Environment
LSC	Local Steering Committee
M&E	Monitoring and Evaluation
MEP	Ministry of Environmental Protection
MEWS	Monitoring and Early Warning System
MTE	Mid-Term Evaluation
Mu	Chinese unit of area. Approximately 660 m^2
PA	Protected Area
PDF	GEF Project Development Fund
PES	Payment for Ecosystem Services
PIR	Project Implementation Report
PMO	Project Management Office
PMU	Project Management Unit
PSC	Project Steering Committee
RBM	Yuan
ROtI	Review of Outcomes to Impacts
SAG	Scientific Advisory Group
SMART	SMART Indicators are specific, measurable, achievable, relevant, and time-bound
TE	Terminal Evaluation
TNC	The Nature Conservancy
ToR	Terms of Reference
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme

Executive Summary

1. The five year UNEP/GEF Project 'Nature Conservation and Flood Control in the Yangtze River Basin' (the GEF Yangtze Project) is almost completed and this report represents the Terminal Evaluation of the Project as required by both UNEP and the GEF.

2. The purpose of the Terminal Evaluation (TE) is to provide evidence of results to meet accountability requirements, and to promote learning, feedback, and knowledge sharing through results and lessons learned among UNEP, the GEF and their partners. The evaluation focuses on identifying lessons of operational relevance for future project formulation and implementation.

3. The TE has been undertaken by two experts through a consultative process of interviews, site visits and reviews of project documentation. A wide number of national stakeholders involved with the project have had the opportunity to explain their roles on the project, the impacts at local, regional and national levels and their recommendations / suggestions on future activities including sustaining the current activities.

4. The GEF Yangtze Project has been formulated as a need to mitigate flood events through rehabilitation and conservation of ecosystem functions, while simultaneously enhancing conservation and sustainable use of biological resources of global importance and strengthening sequestration of greenhouse gases.

5. The project had the overall objective of promoting and implementing an integrated ecosystem management (IEM) approach for the upper Yangtze River basin to: reduce sediment loads; increase catchment water retention capacity; conserve and sustainably use of biological diversity; and, decrease net greenhouse gas emission, while improving socio-economic conditions. This has been achieved through four objectives that covered both development of strategic management tools (on ecosystem assessments and monitoring and early warning) and practical demonstrations of IEM in two provinces in the Upper Yangtze River Basin.

6. The project has been implemented by UNEP and executed through the Foreign Economic Co-operation Office (FECO) of the Ministry of Environmental Protection (MEP) in the People's Republic of China.

7. The GEF Yangtze Project has been well designed and through good technical project management has delivered the expected results leading to desired and useful outputs enabling the expected outcomes to be achieved. Unusually in such a relatively short time, the project has demonstrable impacts showing ecosystem improvements, increased income in the local population and, most importantly, changes in attitude with regards to environmental management – both at the local level and regional/local environmental management level.

8. Key innovations from the project include:
    - Monitoring and assessment approaches (especially MEWS)
    - Ecosystem valuation and the move towards zoning of activities
    - IEM practices – as seen through the achievements of the two demonstration projects.
    - Visualisation and transforming environmental (and other) data into 'information' accessible to non-specialists

9. In addition, the project has achieved significant changes in attitudes: both from the local population (with hunters changing behaviour to be environment supporters) and within regional government (with a move from sector management to a more integrated approach with the adoption of IEM).

10. **Project Design:** The project has been comprehensively designed to meet a specific environmental need in China in the Upper Yangtze. The project design also met the aspirations of local, regional and national stakeholders by identifying and testing a new management approach through IEM thereby acting as a pilot for IEM/EFCA policy in China at the local level for future replication more widely.

11. **Project management and oversight:** The PMO together with the two PMUs proved to be an effective management structure to deliver this complex project. There were clear linkages encouraged by the PMO between the two 'technical objectives' (Objective 1: assessment and planning for EFCAs and Objective 2: MEWS) and the demonstration projects. The PMO/PMUs also facilitated good exchanges between the two demonstration sites. An example of this has been the use of the MEWS to assist with planning and assessment for the management activities at the demonstration sites. The work of the project was significantly enhanced by the scientific and technical guidance provided by the SAG. Two main levels of oversight were provided by the Project Steering Committee and two Local Steering Committees.

12. **Ecosystem function assessment and MEWS tools:** These two technical outcomes have been significant in assisting environmental planning within regional administrations to adopt the principles of IEM. The development of an ecosystem function assessment tools and methods for the Upper Yangtze has been an important advancement in ecosystem management in the region. Through a series of technical reports and visualisation tools, it has enabled environmental management to be based on the relative importance of the ecosystem and for spatial planning to be based on these results. The MEWS has become the basis for further monitoring and assessment and the extension of the system to incorporate pollution sources has already occurred in Sichuan EPB – demonstrating the local need and perceived benefit of the system.

13. **The demonstration sites:** The PMO, SAG and PSC identified important distinctions between the two demonstration sites which enabled the testing of more approaches relating to IEM than was anticipated in the project documents. The Laojunshan site was more focused at the township and geographical level whereas the Baoxing addressed a county level approach to implementing IEM. Both demonstration projects have proved very successful in meeting their objectives and have provided clear evidence of impacts in the form of improved economic conditions for the local

populations, clear improvements to the ecosystem status and changes in attitude at both the local population and the administration levels.

14. **Replication and sustainability:** The project has achieved considerable progress (as indicated in the above sections) on sustaining actions (this is especially clear at the local village level where through the project's actions there are measurable improvements in the economic conditions and recognition of the importance of the ecosystem). At the government level there are also clear signs of sustaining and replication (planned and in-progress) of IEM approaches developed and tested by this project.

15. Overall the key lesson has been the importance that all stakeholders in the project – from regional policy and management administrations to local farmers and villagers – understood the reasoning behind the project and saw early and direct benefits to their work / environment / economy as a result of the project's activities.

16. **Future activities:** This project has made significant progress on improving the awareness and appreciation of ecosystem functions and value through technical developments (Outcomes 1 and 2) and through the two demonstration projects. It has also developed an implementation approach that is well regarded by the local communities and administrations. The IEM approach and the method of implementation through demonstration projects would benefit from further activities to integrate water management more into the IEM methodology. In particular, to address more holistic catchment management and especially nutrient management from rural communities/agriculture into a future GEF project supported by the International Waters and Biodiversity focal areas. Such an extension of the work could address pressing issues in China (and by sharing experiences within transboundary basins with neighbouring countries) of the over dependence of nitrogen fertilisers and inadequate management of human and animal waste, and the impacts these have on rivers, lakes and the coastal waters. Through a project aimed at maintaining aquatic ecosystem services and/or ecosystem resource management, better management responses could be integrated into the overall IEM implementation that addressed key issues leading to degradation of the aquatic habitat. Coupled with extending the current demonstration activities to improved farm-based nutrient management and further work on recycling nutrients (and the production of biogas) could help demonstrate sustainable approaches with global benefits (including the reduction of the growth of hypoxic coastal regions) and replication potential.

17. The following recommendations are made by the TE team:
    - **Recommendation 1: Increasing communications and dissemination between different GEF focal area projects**: The GEF Yangtze project has achieved its main objective and delivered many practical lessons and benefits at multiple levels within stakeholder organisations in the region. The project has also achieved demonstrable impacts. There is an important need to share this within the wider GEF community to benefit from this project's activities. For example, the results of this project would be very relevant to the GEF International Waters portfolio of projects. **The TE recommends: that UNEP** requests the GEF to develop a mechanism to share project results between GEF Focal Areas. At present there is no routine approach to disseminating such valuable project results across multiple GEF focal areas. The GEF IW:LEARN project (International Waters Learning Exchange and

Resource Network www.iwlearn.net) serves as a good example as a mechanism to share project information within the GEF International Waters portfolio

- **Recommendation 2: Further Project Development**: FECO/MEP have made significant progress on environmental management within the Upper Yangtze and generated important support from a wide range of stakeholders for the execution of this project. FECO/MEP should take the lead with UNEP in developing a future project that capitalises on the lessons and achievements and extends the work to encompass river basin management needs – including the issues of excess nutrients within basins. Such a follow-on project, building on the experiences developed in applying IEM, should also consider broader issues, including aquatic ecosystem services and the potential ecosystem impacts from increasing hydro-power schemes that may (for example through loss of sediment transport, flood risk, fish movement, etc.) have detrimental environmental impacts. **The TE Recommends:** the UNEP, in partnership with FECO/MEP should develop a new project building on the lessons and experiences from this project by including more river basin management (involving aquatic ecosystem management) within the concept of IEM that will also address issues of global concern including the use of excess nutrients (fertilisers) and their impacts.

- **Recommendation 3: Increasing Awareness of the Project's Achievements:** The projects experiences are significantly important and should be widely publicised. To-date the project has achieved considerable public awareness of the successes within the Upper Yangtze and through national TV and publications in China. However the lessons and achievements need to reach a wider audience to ensure projects/countries facing similar issues can benefit from the experiences. The project website needs to be brought up-to-date with a comprehensive set of project data demonstrating the successes. **The TE Recommends:** that UNEP strongly encourages the PMO to update (and maintain post-project) the website (in both Chinese and English) as part of the project closure.

Summary of Terminal Evaluation Ratings

Criterion	**Rating**
Attainment of project objectives and results	Highly Satisfactory
Sustainability of project outcomes	Likely
Catalytic role & Replication	Highly Satisfactory
Stakeholders involvement	Satisfactory
Country ownership / drivenness	Satisfactory
Achievement of outputs and activities	Highly Satisfactory
Preparation and readiness	Satisfactory
Implementation approach	Satisfactory
Financial planning and management	Moderately Satisfactory
Monitoring and Evaluation	Satisfactory
UNEP Supervision and backstopping	Satisfactory
Overall	**Satisfactory**

I Evaluation Background

18. This report is the Terminal Evaluation of the UNEP/GEF '*Nature Conservation and Flood Control in the Yangtze River Basin'* (The Yangtze Project). This Terminal Evaluation (TE), conducted towards the end of the project implementation, is in-line with the UNEP Evaluation Policy[1], the UNEP Evaluation Manual[2] and the Guidelines for GEF Agencies in Conducting Terminal Evaluations[3].

19. The purpose of the TE is: (i) to provide evidence of results to meet accountability requirements, and (ii) to promote learning, feedback, and knowledge sharing through results and lessons learned among UNEP, the GEF and their partners. The evaluation focuses on identifying lessons of operational relevance for future project formulation and implementation. This objective differs from a mid-term evaluation where the focus is more on corrective actions for the project execution and guidance to the completion of the project.

A Context

20. The Yangtze River is the largest river in China, with length of 6,300 km, drainage area of 1.8 million km^2 and more than 400 million people, one third of the total population of China, living in its river basin area. The basin is the economic centre of China, and one of the most developed areas in terms of agriculture, fishery, industry, and transportation. However, the River and its basin also support very rich biodiversity comprised, among others, of several endangered species, such as the giant panda (*Ailuropoda melanoleuca*) and formerly the Yangtze River Dolphin (*Lipotes vexillifer*), which after the project formulation has, however, been declared as extinct. In addition various protected migratory birds are dependent on the wetlands within the Yangtze for their seasonal habitats.

21. Despite the global importance of natural ecosystems in the upper and middle reaches of the Yangtze River, the area has suffered from serious degradation over decades created by expanding human activities even in protected areas. There has been a sharp decline in water retention capacity of forests and grasslands due to deforestation and over-grazing, decrease in water storage capacity in the middle and lower reaches of the Yangtze River due to loss of lakes and wetlands, and siltation of the rivers. The gravity of the problem has been such that it has affected not only the aquatic biodiversity associated with the river system, but local water use, fishery and even safety of the local inhabitants.

22. The environmental degradation and the decline of key ecosystem functions of the Yangtze River area can, at least partly, be connected to the 1998 floods which caused severe damage to human life, property and environment. Following the floods, the Government of China formulated a set of guiding principles for flood control and damage, including logging bans, re-conversion of cleared

[1] http://www.unep.org/eou/StandardsPolicyandPractices/UNEPEvaluationPolicy/tabid/3050/language/en-US/Default.aspx
[2] http://www.unep.org/eou/StandardsPolicyandPractices/UNEPEvaluationManual/tabid/2314/language/en-US/Default.aspx
[3] http://www.thegef.org/gef/sites/thegef.org/files/documents/TE_guidelines7-31.pdf

lands to forests, prohibition on steep slope cultivation, re-conversion of wetlands and relocation of populations living in vulnerable areas.

23. As part of its efforts to reduce floods in the Yangtze River basin, the Government of China (GoC) is implementing a series of soil and vegetation conservation programs in the upper Yangtze River basin. In an effort to further increase the benefits of these measures, the GoC plans to implement an Ecosystem Function Conservation Areas (EFCAs) program that will not only increase water retention capacity and reduce sediment loads, but will also provide global benefits in biodiversity, carbon sequestration, sustainable land management and Integrated Ecosystem Management (IEM) in the upper Yangtze River basin. The GoC is interested in participatory IEM as a sustainable mechanism to help reduce poverty and balance the various environmental benefits and costs.

24. The project uses the incremental cost approach to help the GoC set up a system of EFCAs with multiple environmental benefits in the upper basin of the Yangtze River. The main objectives include: (i) To complement national efforts to design a system of EFCAs ensuring the protection of global environmental values; (ii) To establish a management-oriented monitoring and early warning system to detect gains and losses of ecosystem functions in EFCAs and protected areas; and (iii) To help establish two demonstration sites showing how EFCAs can actually work and interact with the monitoring and early warning system. The two demonstration sites will also show how to alleviate poverty, increase water retention capacity and reduce sediment loads, coordinate sector programs, protect biodiversity, and increase carbon gains in an integrated manner. The GoC will replicate project results throughout the upper basin of the Yangtze River in the future, based on the results of the demonstration activities.

25. The project was developed based on UNEP's support for the Government of China in addressing the underlying environmental causes of floods.

B The Project

26. The overall context in which the project has been formulated is a need to mitigate flood events through rehabilitation and conservation of ecosystem functions, while simultaneously enhancing conservation and sustainable use of biological resources of global importance and strengthening sequestration of greenhouse gases. The project has developed methodologies to promote sustainable use of natural resources in areas critical to global environment conservation and flood control, as well as develop methodologies to promote rehabilitation and conservation of ecosystem functions in degraded protected areas where the globally significant environment is at stake. The project has strengthen capacity of the central as well as local government bodies concerned to enable them to apply developed methodologies to the region as a whole in a flexible and sustainable manner. Emphasis has been placed upon sustainability of the project by fully taking into account socio-economic needs of local populations.

27. The project long term goal is "*to reduce flood impacts by conserving and enhancing ecosystem functions in the Yangtze River basin*".

28. The project objective is "*to promote and implement an integrated ecosystem management approach for the upper Yangtze River basin to reduce sediment loads, increase catchment water retention capacity, conserve and sustainably use biological diversity, and decrease net Greenhouse Gas emission, while improving socio-economic conditions*".

Project Activities

29. The GEF Yangtze Project (GEF ID 1353) was approved in June 2005 with an actual start date of January 2006. The original completion date of the project was October 2010. Following the recommendations of the 3rd Project Steering Committee (29th November 2009), the project completion date was extended to August 2011. During the TE mission the PMO informed the TE experts that the final PSC meeting was scheduled for November 2011 with an expected project end date a few months later[4].

30. The project aimed at reaching the following four **outcomes**:

- **Outcome 1:** Fully developed institutional mechanism for assessment of ecosystem functions and planning for Ecosystem Function Conservation Areas (EFCAs) in the upper Yangtze basin;
- **Outcome 2:** Established ecosystem function-based Monitoring and Early Warning System (MEWS) in the upper Yangtze basin;
- **Outcome 3:** Demonstrated efficiency and effectiveness in achieving global environmental benefits and local environmental and socio-economic benefits by taking an integrated ecosystem management approach in the Baoxing demonstration site;
- **Outcome 4:** Demonstrated efficiency and effectiveness in achieving global environmental benefits and local environmental and socio-economic benefits by taking an integrated ecosystem management approach in the Laojunshan demonstration site.

31. These four outcomes (or components) have involved over 20 distinct activities with inter-linkages between the activities.

Outcome 1: Institutional Mechanism and Assessment

- Activity 1.1. Assess ecosystem functions relevant to nature conservation and flood control
- Activity 1.2. Assess threats to, and root causes for degradation of, ecosystem functions, and economically evaluate the ecosystem functions
- Activity 1.3. Present integrated assessment of ecosystem functions
- Activity 1.4. Recommend new Ecosystem Function Conservation Areas
- Activity 1.5. Disseminate and initiate replication of results

[4] During the revisions to this TE Report, the UNEP Task Manager reported that the Project held a final PSC (22-23 December 2011) in which it was agreed that the project would be operationally closed on the 30th December 2011.

Outcome 2: MEWS

- Activity 2.1 Establish technical capacities for Monitoring and Early Warning System (MEWS) in the upper basin
- Activity 2.2 Establish capacities for MEWS at the Baoxing and Laojunshan demonstration sites
- Activity 2.3. Report on Ecosystem function monitoring at the demonstration sites for years 4 and 5, and initiate replication of the demo-level MEWS

Outcome 3: Baoxing demonstration

- Activity 3.1.Establish an institutional framework for IEM at the Baoxing demonstration site
- Activity 3.2. Develop a participatory IEM plan for public acceptance, and strengthen rules and regulatory framework
- Activity 3.3. Mainstream existing sector programs, including forest management and quarry operations
- Activity 3.4. Strengthen Protected Areas (PAs) and establishment of buffer zones and corridors
- Activity 3.5 Design and provide Alternative livelihoods (AL) around PAs and other key areas
- Activity 3.6. Conduct public awareness, and disseminate the demonstration values

Outcome 4: Laojunshan demonstration

- Activity 4.1.Establish an institutional framework for IEM at the Laojunshan demonstration site
- Activity 4.2. Develop a participatory IEM plan for public acceptance and strengthen rules and regulatory frameworks
- Activity 4.3. Mainstream existing sector programs, including forestry and energy programs
- Activity 4.4. Establish New Protected Areas (PAs)
- Activity 4.5 Design and provide livelihoods (AL) around PAs and key areas
- Activity 4.6. Improve public awareness and disseminate EFCA demonstration values.

Project Financing

32. The Project Document identified the GEF Grant as 4 M USD (with 0.35 M USD allocated to the Project Development Fund (PDF) stage). The planned co-financing (GoC, UNEP and TNC) was estimated at 22.95 M USD. At the end of the project the total co-financing had exceeded 30 M USD – a significant increase on the planned level.

Executing Arrangements

33. The GEF Yangtze Project has been **implemented** by UNEP and **executed** by the Ministry of Environmental Protection (MEP), formerly the State Environmental Protection Administration (SEPA)

through the Foreign Economic Co-operation Office (FECO). A Project Management Office (PMO) was established within FECO to provide direct project management. The PMO was directly responsible for the work undertaken through sub-contracted technical institutes, involved in the delivery of the planned outcomes, and through local Project Management Units (PMUs) for the execution of the two demonstration projects.

34. The project supervision was through a Project Steering Committee (PSC) including MEP and related ministries that provided oversight and acted as an 'Inter-ministerial Committee' for the project. Technical input was from the Scientific Advisory Group (SAG). At the local / regional level, the PMUs were supervised by a Local Steering Committee (LSC) drawn from different divisions of the Environmental Protection Bureau and other local stakeholders.

35. The main project partners included The Nature Conservancy (TNC a co-financer) the Chinese Research Academy of Environmental Science (CRAES), and the Chengdu Institute of Mountain Hazards and Environment (IMHE under the Chinese Academy of Science). In addition, other academic institutes as well as local and regional stakeholders played an important role in the successful execution of this project.

Relevance to GEF Strategic Priorities

36. As identified in the Project Document, the two GEF 3 priorities for Operational Programme 12 are BD-1. CB-1, and IEM-1. Following GEF-4 guidelines, the project is supporting the IW Strategic Objective 2 (SO-2) focusing on Strategic Programme 3 (SP-3):

- BD-1 (Catalyzing Sustainability of Protected Areas) and CB-1 (Enabling Activities): In Yunnan, Lashihai Nature Reserve staff and local villages have been trained on biodiversity conservation knowledge, and Chongjiang River Area of the demo-site has been included into the new Laojunshan National Park development plan and approved at Yunnan provincial level. In Sichuan, Fengtongzai National Nature Reserve is covered by the Project.

- IEM-1 (Integrated Approach to Ecosystem Management): IEM plans for Laojunshan and Baoxing were formulated and the management mechanism was established based on IEM approach to monitor the nature resources utilization and economic development.

- SO-2 (catalyze transboundary action addressing water concerns), Strategic Programme 3 (Balancing overuse and conflicting uses of water resources in surface and groundwater basins that are transboundary in nature): The GoC gave high priority to rehabilitation and conservation of natural ecosystems in the upper and middle basins of the Yangtze River. Nature conservation in this region has never received as much attention and support as it does today, with planned investment of $9.29 billion in the next five years in the upper Yangtze River basin. These resources, paying for rehabilitation and restoration measures, will be sector-based and led by the various ministries. Part of these rehabilitation and restoration efforts form the baseline of investments that this project will build upon to achieve global environmental benefits.

C Evaluation objectives, scope and methodology

37. This Terminal Evaluation has been addressed in accordance with the Terms of Reference (ToR) for this assignment (Annex 1) involving two consultants under the guidance of the UNEP EO and the support of the UNEP Office for Asia and Pacific Region (Bangkok).

38. The TE is designed to address specific questions associated with the outcomes and the execution of the project, specifically:

- Has the project succeeded in developing methodologies to promote sustainable use of natural resources in areas critical to global environment conservation and flood control?
- Has the project succeeded in developing methodologies to promote rehabilitation and conservation of ecosystem functions in degraded protected areas where the globally significant environment is at stake?
- To what extent has the project strengthened capacity of the central as well as local government bodies concerned, to enable them to apply developed methodologies to the region as a whole in a flexible and sustainable manner?
- Did the project succeed in responding to the socio-economic needs of the people living in Yangtze River basin area?
- Was the site selection for the demonstration projects the best possible and were valuable and applicable lessons drawn, which are likely to be applied in integrated management of future EFCAs and protected areas? Is the approach used by the project replicable?

39. These questions were supplemented by a detailed interview questionnaire which was used by the TE team to guide the information gathering at the stakeholders' meetings (Annex 5). The evaluation combined information from desk-reviews and interviews during a mission to the PMO and selected demonstration locations. The key stakeholders identified by the PMO in consultation with the TE team included:

- FECO as the Project Executing Agency with the Deputy General as the Project Director
- MEP
- Yunnan Provincial EPB
- Sichuan Provincial EPB
- Lijaing Prefectural Administration Office EPB
- Baoxing County Government
- Baoxing Prefectural Administration Office EPB
- Chinese Research Academy of Environmental Science
- Chengdu Institute of Mountain Hazards and Environment
- Chinese Academy of Science
- TNC (Yunnan Representative Office)
- Local Stakeholders in Laojunshan demonstration area
- Local Stakeholders in Baoxing demonstration area
- UNEP Beijing Office

- UNDP Beijing Office

40. A full list of the documents reviewed and the persons met during the mission (19th September – 30th September 2011) are given in Annex 3 and 4 respectively. A very detailed and comprehensive mission was designed by the PMO with approval of the UNEP EO. The mission programme is included in Annex 2.

Evaluation Principles

41. The key underlying principle for the evaluation has been to understand the process that delivered the project and to identify examples of practices and experiences that are beneficial to be highlighted for replications or future similar projects.

42. The TE attempts to provide answers to the following basic issues of project execution:

- Did the project achieve its objectives? (= the results)
- Did it do it well? (= implementation process)
- Are the results likely to be sustainable (= impacts and sustainability)

43. These basic questions are evaluated through four categories of detailed assessment. These are rated according to UNEP and GEF guidance using a six point scale (Highly Satisfactory, Satisfactory, Moderately Satisfactory, Moderately Unsatisfactory, Unsatisfactory and Highly Unsatisfactory) or, for sustainability criteria, a six point scale (Highly Likely, Likely, Moderately Likely, Moderately Unlikely, Unlikely and Highly Unlikely) in-line with the guidance provided in the TE ToR (Annex 1 of this report). These include:

(1) Attainment of objectives and planned results, which comprises the assessment of outputs achieved, relevance, effectiveness and efficiency and the review of outcomes towards impacts;
(2) Sustainability and catalytic role, which focuses on financial, socio-political, institutional and ecological factors conditioning sustainability of project outcomes, and also assesses efforts and achievements in terms of replication and up-scaling of project lessons and good practices;
(3) Processes affecting attainment of project results, which covers project preparation and readiness, implementation approach and management, stakeholder participation and public awareness, country ownership/driven-ness, project finance, UNEP supervision and backstopping, and project monitoring and evaluation systems; and
(4) Complementarity with the UNEP Strategies and programmes, which describes linkages to UNEP's Expected Accomplishments, project contributions in line with the Bali Strategic Plan, mainstreaming of gender and South-South Cooperation.

II Project Performance and Impact

A Attainment of Objectives and Planned Results

44. The GEF Yangtze Project has delivered its planned results and met the expected objectives. The project has achieved a high level of local and political commitment to ecosystem protection and management with clear signs of impacts and routes to sustainability. Despite the slow disbursement of GEF funds the project is rated as **Highly Satisfactory** with regards to attainment of Objectives and Planned Results

Achievement of Outputs and Activities

45. The GEF Yangtze Project has effectively executed the planned activities and achieved the desired outputs. Through a significant increase in co-financing the project has also delivered additional outputs to the benefit of the IEM approach in the region. The project is rated as **Highly Satisfactory** with regards to Achievement of Outputs and Results.

46. Through the good design of the project coupled with good project management supplemented with scientific advice from the SAG the project has clearly delivered the activities and results expected. It is also clear from the TE mission interviews that the results are considered to be highly relevant to stakeholders at National, Regional and Local levels.

47. The project's blend of scientific innovation in ecosystem assessments combined with a very effective means of visualisation of complex data has also contributed to ensuring that the results met the needs and comprehension of diverse stakeholders. Through the assessment of environmental status and threats of distinct ecosystem functions (soil retention, water retention, biodiversity and carbon-sequestration) in the Upper Yangtze with an assessment of socio-economic conditions has enabled an integrated assessment to be achieved that is of use by government leaders and which also provides a better understanding by the local communities of the value of the ecosystem in the region.

48. The project has achieved clear impacts through the activities undertaken. This is more than 'just' reports – which themselves are highly appreciated – but extends to real improvements in socio-economic conditions of local inhabitants and environmental benefits (such as reduced wood cutting for fuel, reduced untreated wastewater, improved habitats, reduced CO_2 emissions and enhanced carbon storage through land-use changes and protection).

49. The following summarises the key achievements from the project's activities.

Outcome 1: Assessments

- The project supported the establishment of ecosystem function assessment, including soil water retention capacity and an innovative index and models for quantitative calculating

ecosystem carbon sequestration, ecological service value, ecosystem function degradation and threats assessment. It also embedded these related elements into the integrated ecosystem function assessment system through interactive exploring between academic research and practical application at the upper Yangtze River basin. A series of thematic and integrated reports and databases were produced through the assessment system. The approaches and database will provide the baseline assessment method and data for the catchment, and will promote the development of ecological compensation leading to a solid basis for decision making and implementing appropriate measures.

- The project has assisted with developing proposals for EFCAs in the Upper Yangtze River Basin (formal approvalby Boxing County administration is pending). The EFCA assessment system was tested and supported the IEM practice in Baoxing County.
- Additional outputs (see table 1 below) were developed, including an EFCA systematic and simplified tool with three-dimension visualisation and user-friendly interface.

Outcome 2: MEWS

- The MEWS team worked closely with the EFCA assessment team in sharing the tools, indicators and models. To facilitate sustainability and national replication the system was based on SuperMap (Chinese developed GIS software).
- The MEWS and IEM information system have been applied to the IEM practices at the two demonstration sites assessing the impact monitoring through comparison of the baseline (2005) and the status in 2010. As a key component of MEWS, a social-economic survey was convened by Renmin University of China to better understand the social-economic results from IEM practice.
- An output of the MEWS development has been the development of a visualisation tool of IEM practices at the local level. This was applied to the two demonstration sites with over 200 people being trained in the use of the visualisation tool to assist with local awareness and planning.
- The MEWS and IEM information system embedded the IEM elements in response to local context and into other thematic plans and comprehensive development plans.
- MEWS system has been replicated to Qinghai province, Jinggangshan City, Ruoergai Wetland, Luguhu Lake and Chenghai Lake in Yunnan Province already, and is planed to be further replicated to another 7 lakes in Yunnan Province. The GoC is planning a further input of 1.8 billion RMB for the Ecosystem Monitoring for Disaster Prone Counties which will use the MEWS methodology developed by this project.

Outcome 3: Baoxing demonstration project

- Three levels of the LSC (at the provincial, municipal and county levels) were established for better coordinating of IEM plans and project implementation. In particular, the Baoxing IEM committee was led by the County Governor and its members included 9 sectors of the county government (the EPB, forestry bureau, land use bureau, planning commission and the Fongtongzai National Nature Reserve etc.). Cross-sectoral co-ordination at Baoxing County was established for mainstreaming IEM planning and implementation.
- IEM concepts and approaches were mainstreamed into the county-level five-year comprehensive development plans; and the PMU played as the leading coordinating agency

to develop the plan. The Baoxing County IEM Plan (administrative base) was developed through more than three years of practice and approved by the provincial LSC in 2011. Through the introduction of IEM to Baoxing County the concepts of "Scientific Planning, In-depth Development, Integrated Utilization, Intensive Management and Group Development" were developed to guide the development of marble and other mining activities in Baoxing.

- County-based administrative IEM practices also included alternative livelihoods, alternative energy, eco-tourism, participatory management, capacity development, awareness raising and using MEWS and management information system in line with local context. All the above-noted IEM efforts produced significant outputs, and these were reported (as approximate figures) to the TE mission team, including:
    - **Alternative plantation**: Since 2005, more than 15,000 fruit trees (34.5 thousands Mu), such as walnuts, loquat and pear have been planted. An additional 20,000 Mu of Chinese herbs have been planted. The average income for farmers was reported during the mission as having increased to 55,000RMB/household/year.
    - **Alternative cultivation:**130,000 long-hair rabbits are bred in Fengtongzhai town ship. Beekeeping has expanded to 2000 hives with a production of honey of 10 tonnes/year.
    - **Ecotourism:** Through community ecotourism development, Yaoji Tibetan Township has secured 17,000 ha of alpine grassland.
    - **Alternative Energy:** More than 1000 biogas digesters have been installed, with gas production of 8000m^3/year, saving 17,680 tonnes coal/year or 3500 Mu forest/year, and decreasing CO_2 emission by 2000 tonnes/year.
    - **Linking of Protected Areas:** Corridors linking protected areas in Boxing county were established.
    - **Public Awareness Raising and Capacity Development**: During the passed five-year of project implementation42 public awareness activities on IEM concepts and approaches, addressing: biodiversity, policies and laws, alternative livelihood, ecosystem monitoring, eco-tourism, community-based co-management, technologies for vegetable and fruit planting. The project has released 10,000 copies of training materials; trained 500 staff, 5000 students and 22,000 farmers. The public awareness on ecological conservation practices was improved to an awareness level of 80% (based on survey data although there was no baseline information on previous awareness level available).
- As a result of the significant success of the Baoxing Model, Ya'an Municipality is planning to replicate the Baoxing IEM Model throughout the region. The Sichuan Province Government has stipulated that the IEM concept should be mainstreamed into the ecosystem development in all municipalities and counties within the province.

Outcome 4: Laojunshan demonstration project

- Similar to Baoxing's experience, cross-sectoral coordination mechanisms and sustainable IEM planning have also developed at the Laojunshan demonstration site. The Laojunshan and Lashihai IEM Plans (natural boundary including several townships) were approved by the provincial LSC in 2011 following more than three years of practical experience in Yulong

County. As part of the project, TNC Yunnan Representative Office worked on Laojunshan National Park for practical and policy development;

- The township-based IEM practices at Laojunshan demonstration site have also assisted with the township coordination and collaboration on alternative energy, eco-tourism, capacity development, awareness raising and use of the MEWS and management information system, leading to improved livelihoods as indicated by the following achievements facilitated by the project's activities and reported to the TE mission (baseline and current values collected by the project's demonstration activities):
    - Ecotourism and ecological culture were developed in Lashihai Township to alleviate livelihood issues. 1,235 villagers engaging in ecotourism, with 2,860 Yuan income per month.
    - 1488 biogas plants and 2400 high-efficiency wood ovens and solar water heaters have reduced demand for firewood by 12,889 m^3 per year (equivalent to 750 ha of forest)
    - Reduced CO_2 emissions by 181 tonnes/year through eco-hydro power plant;
    - Income for 5 villages: increased from 162 M RMB/year (2005) to 310 M RBM /year (2011)
    - Forest coverage: increased 67.8% (2005) to 74.7% (2011)
    - More than 300 ha farmland were returned to wetland in Lashihai wetland.
    - Snub-nosed monkey: increased from 80 (2005) to 290 (2011)
    - Water-birds : increased from 25,000 (2005) to 100,000 (2011)
- The project also trained more than 800 people directly and more than 10,000 indirectly. To address the wide audience for IEM practice the project has prepared information targeted at: background IEM and guidance material for governmental staff, guideline for community-based residents, and training textbook for schools, and in particularly convened environmental awareness and education activities at primary and middle schools. In particular, one NGO- Yunnan Ecological Network has been involved in the training and technical outreach on biogas installation and utilization at the community level.
- In light of the achievement and impacts from Laojunshan Demo site, a series of significant replication efforts are included for the public in the "Laojunshan IEM Rules". This includes discussions on IEM and biodiversity conservation, exhibitions on the outcomes from the biodiversity conservation in Northwest part of Yuanan Province, and the dissemination of the lessons from Laojunshan demonstration site. The IEM concepts and approaches were incorporated to Ecological Functional Zoning of Yunnan, Biodiversity Species Conservation and Utilization Plan Outline of Yunnan, Biodiversity Action Plan in Northwest Yunnan, Colourful Yunnan Ecological Conservation Plan Outline and other key provincial environmental protection plans (including: the strengthening of management of PAs; recommendations for constructing a PA for the snub-nosed the monkey; and, the use of MEWS for broader ecosystem management in National Parks via TNC). Apart from Luguhu Lake and Chenghai Lake, the IEM information system is planning to be replicated to additional seven plateau lakes of Yunnan.

Table 1 (below) summarises the planned outcomes and activities with the outputs achieved and provides a summary of the 'additional' outputs derived by the project.

Table 1 Project Outputs Summary

The following table summaries the overall outputs achieved by the project (from GEF and co-financed resources).

(All figures approximate and provided to the TE Mission)

Planned Outcomes and Activities		Achieved Outputs	Additional Outputs
Outcome 1: Fully developed institutional mechanism for assessment of ecosystem functions and planning for Ecosystem Function Conservation Areas in the upper Yangtze basin;			
1.1	Assess ecosystem functions relevant to nature conservation and flood control;	Four reports were prepared including: *Assessment report on ecosystem water self-restraint function in the upper reaches of Yangtze River; Assessment report on ecosystem soil conservation function in the upper reaches of Yangtze River; Assessment report on Bio-diversity protection function in the upper reaches of Yangtze River; Assessment report on ecosystem carbon sequestration function in the upper reaches of Yangtze River;*	Baoxing County had two additional reports including *Land Utilization Assessment Report at Baoxing County and Social and Economic Evaluation Report at Baoxing County;* *The EFCA tools were also applied to support the post-Wenchuan Earthquake*
1.2	Assess threats to, and root causes for degradation of, ecosystem functions, and economically evaluate the ecosystem functions;	Three reports were produced and released including *Assessment report on the land utilization structure change and land production in the upper reaches of Yangtze River; Economic assessment report on ecosystem function in the upper reaches of Yangtze River; Comprehensive assessment report on ecosystem function the upper reaches of Yangtze River;*	
1.3	Present integrated assessment of ecosystem functions	*One Integrated assessment report on ecosystem function in the upper reaches of Yangtze River was produced and released; One software platform on Ecosystem Service Assessment System (ESAS) was developed;*	

Planned Outcomes and Activities		Achieved Outputs	Additional Outputs
1.4	Recommend new Ecosystem Function Conservation Areas	*Assessment report on proposed for constructing new ecosystem function conservation areas in the upper reaches of Yangtze River, which provided a basis for PES development*	*Reconstruction Plan in light of biodiversity and ecosystem rapid assessment.*
1.5	Disseminate and initiate replication of results	The EFCA tools were used at Baoxing County with two additional reports including *Land Utilization Assessment Report at Baoxing County and Social and Economic Evaluation Report at Baoxing County;* The ESAS was applied to Dujiangyan Eco-City Planning and Workplan for Post Three Gorge Project; The EFCA tools were also applied to support the post-Wenchuan Earthquake Reconstruction Plan in light of biodiversity and ecosystem rapid assessment.	
Outcome 2: Established ecosystem function-based Monitoring and Early Warning System (MEWS) in the upper Yangtze basin;			
2.1	Establish technical capacities for MEWS in the upper basin	The ecosystem function monitoring and early warning system was established including four models in the field of water holding function monitoring system, soil water- holding function monitoring system, biodiversity conservation monitoring system and carbon sequestration monitoring system. Also, *the Ecosystem Functional Monitoring Report* in the Upper Yangtze River was developed and released.	Ecosystem function monitoring reports for two the demonstration sites
2.2	Establish capacities for MEWS at the Baoxing and Laojunshan demonstration sites	A series of training activities were convened to improve the MEWS capacities at the two demonstration site. Also, the simplified and friendly-interface MEWS software was developed for the practitioners at the demonstration sites.	
2.3	Report on Ecosystem function monitoring at the demonstration sites for years 4 and	The baseline of two demonstration sites was defined and the demonstration ecosystem database was established. Also, the Ecosystem Function Monitoring Reports for two demonstration sites were developed and released.	

Planned Outcomes and Activities		Achieved Outputs	Additional Outputs
	5, and initiate replication of the demo-level MEWS;		
Outcome 3: Demonstrated efficiency and effectiveness in achieving global environmental benefits and local environmental and socio-economic benefits by taking an integrated ecosystem management approach in the Baoxing demonstration site;			
3.1	Establish an institutional framework for IEM at the Baoxing demonstration site	An institutional framework was established including Sichuan Province LSC, Baoxing County Steering Group and Baoxing IEM Committee, which is led by the county governor and its members include 9 sectors of the county government, including the EPB, forestry sector, land use sector, planning sector and the Fengtongzhai national nature reserve etc.	
3.2	Develop a participatory IEM plan for public acceptance, and strengthen rules and regulatory framework	With broad participation, Baoxing County IEM Plan was elaborated and finalized by the meeting of Baoxing County Steering Group on June 2010; the plan was reviewed and approved by the Sichuan Province LSC on December 2010; finally, it was released by the County Government for implementation by the related government authorities. Also, a decision makers' survey report was elaborated for better IEM enforcement.	
3.3	Mainstream existing sector programs, including forest management and quarry operations	In-line with local context, IEM concepts and elements were incorporated into related thematic Plans, including the Action Plan for Ecological Conservation at Baoxing County; Eco-county Construction Plan; Social and Economic Development Analysis Report for Baoxing County; Baseline Report for Baoxing Demo Site; Eco-Tourism Plan for Baoxing County; Environmental Protection Plan for Baoxing County; Ecological Develop Plan for Quarry Industry at Baoxing County; Biodiversity Conservation Action Plan for Baoxing	

Planned Outcomes and Activities		Achieved Outputs	Additional Outputs
		County; Investigation Report for Policies and Regulation at Baoxing County;	
3.4	Strengthen PAs and establishment of buffer zones and corridors	The project compiled the Investigation Report on Status of PAs at Baoxing County and the Buffer Zones and Corridors Development Plan for the PAs at Baoxing County, where 8 key buffer zones and corridors were defined.	
3.5	Design and provide Alternative livelihoods (AL) around PAs and other key areas	• **Alternative plantation :** Since 2005, more than 15,000 fruit trees (34.5 thousands Mu), such as walnuts, loquat, pear, have been planted. 20,000 Mu Chinese herbs have been planted. Average income for pheasants has increased to 55,000 RMB/family/yr. • **Alternative cultivation :** 130,000 long-hair rabbits are breed in Fengtongzhai Township. Beekeeping has expanded to 2000 hives with a production of honey at 10 tons/yr • **Ecotourism :** Through community ecotourism development, Yaoji Tibetan Township has secured 850,000Mu alpine grassland. • **Alternative Energy** :More than 1000 biogas digesters have been installed, with gas production of 8000m^3/yr, saving 17,680 tons coals/yr or 3500 Mu forest/yr, and decreasing CO_2 emission by 2000 tons/yr.	
3.6	Conduct public awareness, and disseminate the demonstration values	The project carried out 42 public awareness activities on IEM concepts and approaches, biodiversity, policies and laws, alternative livelihood, ecosystem monitoring, eco-tourism, community-based co-management, improved techniques for vegetable and fruit planting; released 10,000 copies of training materials; trained 500 staff, trained 5000 students, trained 22,000 farmers; the public ecological conservation awareness was improved to a level of 80%.	
Outcome 4: Demonstrated efficiency and effectiveness in achieving global environmental benefits and local environmental and socio-economic			

Planned Outcomes and Activities		Achieved Outputs	Additional Outputs
benefits by taking an integrated ecosystem management approach in the Laojunshan demonstration site.			
4.1	Establish an institutional framework for IEM at the Laojunshan demonstration site;	The IEM institutional framework was established including Yunnan Province LSC, Lijiang Municipal and Yulong County Leading Groups. The Laojunshan Demo Site Leading Group and the PMO was consisted of 7 sectors of the county government, including EPB, Development and Innovation Commission, forestry sector, water resource bureau, agricultural bureau, land resources and tourism bureau. 8 demonstration site leading group meetings were convened for better coordinating of IEM activities and reviewing the results from IEM implementation.	
4.2	Develop a participatory IEM plan for public acceptance and strengthen rules and regulatory frameworks;	The Laojunshan IEM Plan was prepared in 2007 and approved by the Laojunshan Demo Site Consultation Meeting in June 2010. The Evaluation Report on Laojunshan Ecological Management Rule and Regulatory, the Plan on Laojunshan Ecological Management Rule and the Management Rules for IEM at Laojunshan Demonstration Site were developed and released as official government files of the Yulong County Government, which requires that IEM is incorporated into the village-level rules and regulations, cross-sectoral management and broader participation for better IEM management.	
4.3	Mainstream existing sector programs, including forestry and energy programs;	Under the coordinating mechanism and planning outputs, there were 82 forestry and energy programs implemented at the demonstration site, including converting 1140 ha cultivated land into forestry, installing 1,488 sets of biogas pools, 2,418 sets of wood-saving ovens and 1,589 sets of solar heaters, and Shitou ecological hydropower plant, etc.	
4.4	Establish New Protected Areas (PAs);	Following a series of surveys and analyses, the application for constructing Laojunshan PA was put forward to protect black snub-nosed monkeys and other important species relevant to regional biodiversity. Since 2009, the project worked with TNC on constructing a National Park at Laojunshan with IEM elements, including delivering the related proposals,	

Planned Outcomes and Activities		Achieved Outputs	Additional Outputs
		laws, rules and regulation, as well as results and changes from the IEM demonstration activities.	
4.5	Design and provide livelihoods (AL) around PAs and key areas;	**Eco-tourism economy:** the project helped the local residents at the demonstration site to increase their income through eco-tourism activities for example: riding horses and sightseeing birds. 1160 people are employed in tourism at Lashi Township (from over 400 people in 2008); more than 360,000 tourists visited the site; the income of the people in charge of the tourism reached 4,638 RMB yuan in 2010 (compared to 2,000 RMB yuan in 2008); the total income from tourism reached 3,650 RMB yuan in 2010. **Alternative planting:** in light of the traditional livelihoods and their impacts on the ecosystem, the project developed a series of alternative livelihood plans and supported their implementation, for example planting 8,281 ha fruit trees and Chinese medicine herb, and helped the local farmers to cultivate 3369 ha under more ecological favourable conditions.	
4.6	Improve public awareness and disseminate EFCA demonstration values.	Training more than 800 people directly and more than 10,000 indirectly. The project organized a series of significant replication efforts including publicising the "Laojunshan IEM Rules"; held discussions on the IEM and biodiversity conservation; exhibited the outcomes from the biodiversity conservation in Northwest part of Yunnan Province; and disseminated the lessons from Laojunshan demonstration site. The Project involved a wide range of stakeholders by developing awareness material targeted for specific users, including: the Laojunshan IEM Reading Materials for governmental staff, guidelines for community-based residents, and textbooks for schools.	

Relevance

50. Overall the GEF Yangtze Project relevance to local, regional, national and global needs and objectives is considered to be **Highly Satisfactory**.

51. The GEF Yangtze project has been developed in close co-operation between the relevant ministries, scientific / technical institutes, NGOs, regional administrations and local actors in the GoC. The project arose following devastating floods in the Yangtze basin in 1998, increasing the level of government interest, and the wish to restore lost ecosystem functions and to reduce the impacts from future floods. An important objective of the project was to strengthen the socio-economic condition of the local populations in a region of China where there are significant minority groups and low economic conditions.

52. The project has demonstrated the benefits of IEM policy at the local and regional level supporting new approaches to sustainable development through the testing of zoning for industrial activities and the development of alternative livelihoods to encourage socio-economic improvements. Linked to the development of the IEM policy, the use of the MEWS, and the assessment tools – especially the visualisation approach – has enabled local decision makers and other stakeholders to better understand the pressures on the ecosystems and to identify means to reduce them.

53. The practical application of an IEM approach at the two demonstration sites has utilised the ecosystem function assessments and the MEWS to enable clear impacts of the project's overall approach to be determined, and provided a good basis for the further replication of the approach in the Yangtze River Basin and more widely.

54. Both at the regional and national level the project has assisted with furthering the development of preliminary concepts of payment for ecosystem services (PES) and in moving the environmental management from a thematic approach to a more holistic IEM based approach.

55. The TE mission heard frequent reference to the interest taken to the Project's activities at senior levels within the GoC – including Vice Premier Li Keqiang.

56. Examples of Project Relevance:

- The Project has highlighted the importance and value of ecosystem services in the upper Yangtze in management of the environment, illustrating practical means to improve livelihoods and to protect the ecosystem.
- The project has promoted the strength of the tools and methods developed for national policy development and enforcement – for example on MEWS and EFCA assessments and through the approach to zoning.
- The assessment approach, MEWS and the data presentation, through visualisation, assisted with post-Wenchuan earthquake reconstruction in 2008 in Sichuan Province. The project has contributed to the development of these tools and these approaches are being utilised by the GoC for environmental management

- The Project work has contributed to the EU-China Biodiversity Programme (ECBP) activities by sharing the MEWS and EFCA tools with (and between) the ECBP's and TNC's activities in the national park in Yunnan and Laojunshan demonstration site;
- The activities of the project have been welcomed at the local, regional and national levels. At the local level, the support for the project activities in promoting alternative livelihoods (specifically in ecotourism and growing higher-value organic crops) has been very high among local villagers in both demonstration locations due to significant growth in income. At regional level the tools (assessment and MEWS) have been welcomed as an effective means for preparing and monitoring management plans. For example the project has assisted with achieving tangible benefits from ecotourism in the Tibetan village of Jiuluo, where the previous annual income of some families can now be achieved in just one weekend through tourism. The project's support has been to develop local IEM plans including alternative livelihoods (ecotourism) approaches.
- The introduction of an IEM policy to assist development zoning (identifying zones for specific activities within the region) has led to a reduction of environmental pollution from stone (marble) quarries, workshops and factories.
- The IEM approach with the support of the project has assisted in developing management plans for corridors between national parks and protected areas in the region, assisting in preserving the natural habitats of important species – including the Giant Panda and the snub-nosed monkey.

Effectiveness

57. Overall the GEF Yangtze project has achieved the planned outputs, objectives and outcomes and is considered to be **Highly Satisfactory**. These outputs are summarised in Table 1.
58. From a **Review of Outcomes to Impacts (ROtI)** the GEF Yangtze Project has achieved its main outputs and expected outcomes as defined in the project document and there are many examples of clear project impacts (improved livelihoods, and reduced pressure on forests through the provision of hydro-power electricity, biogas from human and animal waste, and use of fuel efficient ovens). The project has been rated as **Highly Likely** with respect to overall likelihood of impact achievement.

59. Although the PMO has experienced some difficulties in complying with the financial reporting required (see below - Financial Management and Planning) the project has achieved, and in some activities, exceeded the expected outputs (see Table 1).

60. The project benefited from significant additional co-financing contributions by stakeholders and this was reported by the PMO as assisting with maintaining the project's activities whilst the PMO/FECO resolved the financial reporting issues.

61. An assessment undertaken by the TE team of the expected 'end-of-project' goals as defined by the project logframe and reported by the PMO (PIR 2011 – draft) is presented in Annex 8. Through constructive inputs form the Scientific Advisory Group (SAG), and with PSC approval, the PMO has also extended the scope of the project. This has included identifying additional outputs reporting on the ecosystem function from the demonstration sites and by ensuring greater impact from the

Baoxing demonstration site by moving from Baoxing city IEM approach to involving the whole county of Baoxing with the support of senior regional government officials.

62. The project's success is largely based on the close alignment of the project's objectives and activities and the needs of both local/regional and national stakeholders. The project's effectiveness also benefited from the technical management of the project by the PMO and PMUs.

63. The Project was also significantly impacted by the devastating earthquake in Sichuan Province which resulted in delays of approximately 8 months in project execution due to staff being diverted to relief operations and the redirection of local budgets (and priorities of actions) to address reconstruction.

64. In accordance with the ToR, the TE team has reconstructed the logical pathways from project outputs towards impacts. The ROtI matrix and analysis providing specific examples of the impacts achieved is included in Annex 7.

65. The Project has also achieved the more important goal of changing stakeholders' behaviour which provides one route to the sustainability of the project's activities. There are clear examples of local farmers and villagers moving from a destructive past with regards to the environment to protecting /preserving the environment. This has been achieved through improved awareness of the importance and value of the ecosystem and by demonstrating the significant economic benefits of alternative livelihoods practiced at the two demonstration sites.

66. At the administration level there have also been changes in behaviour. Clearly there is a much stronger direction within China for the protection of the ecosystem, but the project has greatly assisted with tools (assessment and MEWS) supported by increased environmental awareness through training and exposure to the work of the demonstration activity etc. This has resulted in a firm belief of the importance of IEM principles to sustainable development in the region enabling IEM to be integrated into the economic development policies in the region.

67. Examples of project effectiveness:

- The project has demonstrated impacts including measurable improvements in economic conditions (ecotourism, new farmed products etc.), improved ecosystem status (numbers of birds, reduced CO_2, reduced stress on forests, etc.). These increases are summarised above in Achievement of Outcomes and Activities.
- Widening the interest in the Baoxing demonstration by moving to the county level to develop IEM plans;
- Baoxing County has incorporated the IEM concept developed by the project into the 12th five-year plan.
- The demonstration projects have proven very effective at highlighting the features and benefits of IEM (and the supporting tools of assessments and MEWS) that have encouraged, for example Ya'an City administration, to further replicate the activities and to strive to make the region the most 'ecosystem friendly and aware' region in China by 2015 with a focus on organic crop production.

68. **Examples of project impacts/behaviour change**
The following examples were provided to the TE mission from the PMO, MEWS team, local PMUs and local stakeholders. The project (through GEF funds and co-finance sources) supported (for example, providing training, awareness raising in alternative approaches to farming, developing policies and strategies, etc.) IEM planning and implementation, resulting in the following changes:

- 210,000 ha of natural reserves have been formed and water retention in the region increased. At the Baoxing demonstration sites, it is estimated that the water retention has been increased by 260,000 m^3 that will have a positive impact on floodwaters.
- In Baoxing county 110 stone working industrial operations have been suspended reducing ecosystem damage from destructive extraction techniques and pollution. The remaining industry is required to comply with both IEM-compliant mining procedures including the installation of wastewater treatment facilities;
- Significant increase in income of villages from ecotourism – in the Tibetan village of Jiuluo (Baoxing County) some villages earn in one weekend what they earned in a year before the adoption of alternative livelihoods;
- Increase of income from growing higher value crops. Moving from maize to fruits and Chinese medicine plants has seen income from 1000 RBM to 8000 RBM per Mu (approximately 660 m^2);
- In Laojunshun demonstration area, over 1400 biogas plants, 2400 efficient stoves and 1500 solar water heaters have been installed reducing demand for wood.
- 300 ha of farmland has been restored to wetlands to enhance the ecosystem value and increasing the area available for migratory birds;
- In Lashihai over 1000 villagers are engaged in ecotourism receiving 360,000 tourists per year and seeing an increase of family income to over 4,500 RBM / month.

Efficiency

69. The GEF Yangtze project has achieved the expected outcomes with an extension of about 14 months (without seeking any additional GEF funds) and will require a further extension of a few months to complete the final Project Steering Committee meeting and prepare final reports[5]. The Project Management encountered delays in financial reporting and GEF fund The project efficiency is rated **Moderately Satisfactory**.

70. The success of this project has been largely down to the strong interest and commitment by the GoC, the technical project management (both the PMO and the regional PMUs).

71. The delays in the project attributed to the earthquake are clear. Although the PMO faced delays in GEF disbursement (as a result of inadequate reporting of financial elements to UNDP/UNEP). The project benefited from considerable additional co-financing which assisted with ensuring that the project activities continued. The PMO/FECO made frequent references to these delays during the TE

[5] In the process of finalising this TE Report, the Project held a final PSC in December 2011, and the UNEP Task Manager reported that the project would be operational closed by the end of 2011.

mission (which were echoed by UNEP/UNDP officers in Beijing). However, there was no evidence that the PMO made any recommendations to either UNEP or UNDP on the best means to rectify the problems encountered by the PMO on financial reporting, nor reported the impacts on the project implementation as a result of the earthquake.

72. At the mid-term review point only about 10% of the GEF budget had been requested and transferred to the PMO (excluding the PDF), in 2011 almost 50% of the GEF budget is expected to be received by the PMO (28% by the date of the TE and 19% remaining to be reimbursed).

73. The financial management procedures (see below) that were established were appropriate at the design of the project. The inter-agency arrangements between UNEP and UNDP Country Office were also appropriate to facilitate the financial reporting and oversight. Towards the planned completion date (October 2010) and with the need for a project extension, there was a significant delay (15 months) for UNEP and UNDP to renegotiate and conclude a revised Memorandum of Understanding with regards to the project's expenditure verification and approval of financial reports. However, these did not impact the overall final outputs of the project.

B Sustainability and catalytic role

74. The project's success and regional/national interest in the project activities are good surrogate indicators of the likelihood of sustainability and replication. The project has also been successful in changing behaviour – a true indicator of catalytic role and again further positive signs of sustainability. MEP and FECO have indicated a strong interest and intention to replicate and enhance the results of the project in other regions in China as well as through transboundary co-operation where possible There is still a need for the PMO to develop an exit strategy that will clearly identify future steps to document sustainability and replication expectations and plans.

Socio-political sustainability

75. The support for the GEF Yangtze Project's activities from a wide range of local/regional and national stakeholders assists in ensuring that it is **Highly Likely** that the impacts of the project will be sustained and replicated.

76. The project's activities in promoting IEM principles have received support from the highest level of Government in China including Vice Premier Li Keqiang. Vice Premier Li specially gave direction that EFCA should continue to be implemented by MEP, and the National 11th Five Year Plan (2005-2010) emphasized the importance of IEFA (Important Ecological Function Area) establishment. The MEP is highly supportive to both IEM and its linkages to payment for ecosystem services as an overarching policy with regards to environmental protection and management in China. Operationally the tools that have been developed (assessments, MEWS, etc.) have proven to be beneficial to regional and local environmental management authorities and either are included or are planned to be included into regional management.

77. At the local level of the demonstration projects there has been considerable success at ensuring the socio-economic sustainability of the project's actions, as evident in the improved economic conditions of the participating villagers. During the TE Mission, many villagers made it clear that they saw clear links between protecting the environment and their income, moving from previous unsustainable approaches (forest destruction, removing birds due to crop damage, etc.) to conserving these natural assets. This fundamental change of behaviour is a good indicator of the sustainability at the local level.

78. This sustainability has been achieved through the awareness raising undertaken by the project and supported by many training exercises, with significant increases in the level of environmental awareness following the project as shown through surveys.

79. Examples of evidence of socio-political sustainability:

- High-level political support from the Vice Premier to IEM;
- Ya'an Municipality replicating the approaches from Baoxing demonstration site in other counties/
- Mainstreaming of IEM concepts in to Baoxing County through adopting a cross-sectoral coordination and collaboration through IEM addressing, alternative approaches to crops, energy, industrial development, participatory management, etc.
- Strong increase in village and farm income;

Financial sustainability

80. The GEF Yangtze project has provided a clear mechanism to improve the financial wellbeing of the local population and at this level it is **Likely** that the project results will continue to develop with a good understanding and appreciation of the ecosystem. At a Province/National level there have been significant support for IEM and the tools and the financial sustainability is rated **Likely**

81. Examples of evidence of financial sustainability:

- The State Council / MEP is planning to invest 1.8 B RMB (approximately 290 M USD) on county-level ecosystem monitoring in 2508 counties throughout China with MEWS support. Qinghai Province has already accepted and adapted the MEWS for ecological assessment in the province.
- At the local level all villagers and farmers met by the TE mission were strongly supportive of the actions undertaken to-date in moving to 'alternative livelihoods' and expressed their strong wish to continue protecting the environment and benefiting from the controlled growth of ecotourism. There is a recognition on the importance of 'controlled' tourism development to prevent (or at least mitigate) pressures from increased numbers of visitors. The TE mission was informed that the principles of IEM are included in the future activities of the villages but there was no evidence (e.g. work-plans, budgets, etc.) to support this other than the visible enthusiasm of the local population and their leaders.

Institutional sustainability

82. The involvement of state institutions, the support of MEP and the regional bodies (EPBs, regional government, town government, etc.) together with a willingness to continue the development of the IEM concept indicates that the institutional sustainability is **Likely**.

83. The project has utilised and helped to further strengthen key institutes across China, including the Chinese Academy for Research on Environmental Science, Chinese Institute of Science, Institute of Mountain Hazards and Environment and other academic institutes. For example, at the Chengdu IMHE the project provided an opportunity for the researches to see the IEM theory being put into practice through the demonstration projects and were actively involved in the data collection and evaluation. This has led greater willingness by national and local government to utilise such tools in environmental managements using the skills supported by the project and available at the IMHE. At this technical level there is a positive understanding of the importance of the monitoring and assessment methods and tools that have been developed in the Upper Yangtze Project. Together with both the SAG and the PSC experts these achievements will continue to be developed and encouraged for replication elsewhere in China. This was stressed by the senior administration in Ya'an City indicating the desire to further replicate the IEM approaches (utilising the skills and strengthened capacity acquired) to other counties in the province and the incorporation of IEM into the regional five-Year Plans.

84. The PSC and the LSC have proved to be important forums for discussing the interdisciplinary and inter-departmental aspects of ecosystem management and discussions with the TE team also indicated that these bodies would continue within the Provincial EPBs.

85. Examples of institutional sustainability:

- The IEM concept has been well received in the two demonstration regions and has been incorporated into regional / local policy statements, the development of planning schemes and for zoning activities within the EFCA region (e.g. activities associated with the mining industry in Boxing)
- The TE mission received reports that, as a result of the successes of the project, some PMU staff within the regional government structures received promotions to higher positions as a result of their work on the project. This is expected to further encourage the implementation of the IEM concept within the region;
- The use of the project MEWS and assessments in other activities/projects (e.g. EU-China Biodiversity Programme)

Environmental sustainability

86. The GEF Yangtze Project has achieved important environmental benefits at the local /regional level. With the support of IEM adopted as policy to guide the ecosystem management and given the financial resources available to regional and town administrations it is expected that the environmental sustainability is **Likely**. A potential concern is the increasing use of hydro-generated power that can have important environmental impacts.

87. The project has encouraged fundamental change in the appreciation of local authorities and people on the importance and value of the ecosystem through demonstrating the increased income that can be achieved from protecting the environment and encouraging alternative livelihoods – specifically ecotourism and growing higher-value crops, and by demonstrating the benefits of alternative fuels.

88. At the regional level the adoption of IEM as a guiding policy will continue to have important positive impacts on both industrial and domestic activities. The TE mission was informed that the IEM approach will be involved in all spatial planning activities including large infrastructure projects. There is a clear dependency in the region on hydro-generated power and while perceived to be 'green' can have significant ecosystem impacts (e.g. sedimentation, flooding, fish migration etc.) and this will be an ongoing pressure on the national and regional environment. The challenge for the regional and local promoters of IEM policy will be to ensure that the economic driver of producing additional hydroelectricity does not subvert the objectives of IEM within the region, and that planning for new hydro-schemes will comply with the IEM policy approach adopted.

89. **Evidence of environmental sustainability:**

- Further use of biogas, solar water heaters and use of hydroelectricity will continue to reduce the pressure on forests as a firewood source;
- Conversion of farm land to wetlands (supported by government incentives) will further assist both wetland dependent ecosystem and will help mitigate the potential impacts of downstream floods;
- The linking of national reserves and parks with corridors will further assist with increasing the numbers and biodiversity within the demonstration regions;
- Increasing the awareness of villagers on the importance of the local fauna – migratory birds, snub-nosed monkeys, Giant Panda, etc., leading to increased numbers. The benefits to the local population from the move from viewing some of these as 'pests' to 'assets' is also seen in the increased revenue from ecotourism;
- The introduction of IEM into regional environmental management and regulation has led to reduced pollution from the stone industry already and is understood to have delayed the further exploitation of gold and copper reserves in the regions.

Catalytic role and Replication

90. The GEF Yangtze Project has provided a number of examples of where it has played a catalytic role and replication and is rated **Highly Satisfactory**

91. Examples of catalytic role and replication:

- **Outcomes 1 and 2 (Assessments and MEWS):**
  - Effective use of the methodologies and expert teams of the Yangtze Project has led to the initiation of the "Ecological Function Assessment and Monitoring in the Disaster Prone Areas". MEP started to compile the "Ecological Function Assessment

and Supervision Management Plan at Disaster Prone Area". The outputs from the project including the ecosystem function assessment and monitoring methodologies were utilized for the Management Plan. The Management plan will cover 2,058 counties at 29 provinces in China, including the counties where the small and mid size rivers with flood control requirement are more than 200 km^2 in basin area, also the counties located at key river and suffered from the flood geographic hazards; It is noted that the ecological function monitoring methodologies including water resource retention and soil stabilization under the Monitoring for disaster prone zones are developed on the basis of the MEWS from the Yangtze Project.

  - Indicators and methodologies of ecological functions assessment are adopted by the national survey "Remote Sensing Survey of Changes in the National Environment in Ten Years (2000-2010) ".
  - The project also provided technical support to the China Council for International Cooperation on Environment and Development (CCICED) annual meeting in 2010. At the Ecological Function Service and Management Strategy in China, the thematic report from CCICED to the State Council, it is recommended to convene county-level cross-sectoral coordination integration for ecosystem management projects in light of the best practice at Baoxing.

- **Sichuan Province (Baoxing demonstration project)**
  - Release of the Sichuan Biodiversity Action Plan including planned projects in September 2011;
  - Sichuan Province Government are requiring other counties to replicate Baoxing IEM Models to other counties for ecological conservation purpose;
  - At Baoxing, IEM concepts and approaches were mainstreamed into the county development plan and thematic plans for year 2011-2015
- **Yunnan Province (Laojunshan demonstration project)**
  - IEM concepts and approaches were incorporated to Ecological Functional Zoning of Yunnan, Biodiversity Species Conservation and Utilization Plan Outline of Yunnan, Biodiversity Action Plan in Northwest Yunnan, Colourful Yunnan Ecological Conservation Plan Outline and Other key provincial environmental protection plans;
  - Apart from Luguhu Lake and Chenghai Lake, the IEM information system is planning to replicate to additional 7 plateau lakes of Yunnan;
  - As part of the project, TNC Yunnan Representative Office worked on Laojunshan National Park for practical and policy exploration;

C Processes affecting attainment of project results

Preparation and Readiness

92. The GEF Yangtze Project has been technically well designed and structured with clear outcomes and related activities to achieve the goal. The project has clear GoC support at both national and regional levels. The preparation and readiness is rated as **Satisfactory**.

93. The project was designed to meet the ecosystem management needs of the GoC and to address important local stakeholder issues leading to improved livelihoods and better local appreciation of

the environment. The project design was sufficiently clear and pragmatic enabling the expected outputs and outcomes to be achieved with clear supervision and defined inputs from key partners and advisory bodies.

94. FECO was an appropriate Executing Agency with a clear role within the MEP and previous experience of project execution. FECO provided the Project Director and housed the PMO. The local PMUs were well integrated within the local/regional EPBs. Both the PMO and PMUs provided good (and sustainable linkages) with the operational departments within the national and regional environmental management structures. The financial management arrangements were appropriate at the time of design. A series of training programmes on project financial management were provided to the PMO and PMUs by UNEP.

95. The inclusion of the Scientific Advisory Group (SAG) at the design stage of this project should be praised. The PMO (and members of the PSC) were appreciative of the technical role of the SAG in guiding the project and advising on scientific/technical issues that resulted in a number of important adjustments to the project, including:

- All models and indices developed under the EFCA assessment and MEWS utilised national derived software to assist with sustainability and replication;
- The IEM practices led to the development of an IEM information system and corresponding database that also includes baseline information;
- The MEWS needs evolved from thematic to integrated monitoring, in particular to incorporate the ecosystem service value, disaster threats and social-economic elements;
- The monitoring results presented visualized mapping for IEM decision-maker and practitioners.

96. The project has also benefited from the involvement of both the Project Steering Committee (PSC) and the two local steering committees (LSCs) to oversee the work. Both the PSC and the LSC served as a form of 'Inter-ministerial' co-ordination committees which was essential to this multi-disciplinary and multi- department/ministry project. Experts from the SAG and the PSC have visited the demonstration sites. This has proved beneficial by providing more insight into the local issues and the responses of the local stakeholders.

Implementation Approach and Adaptive Management

97. The GEF Yangtze Project implementation within the PMO/PMU structure has been significant in generating the successes of the project. The PMO has shown examples of good adaptive management (under the guidance of the SAG and the supervision of the PSC) to overcome changes in circumstances and to respond to evolving situations. The project is rated as **Satisfactory**.

98. The project was designed with a comprehensive management structure to oversee the project and to provide co-ordinate day-to-day implementation. In addition, further technical guidance was provided through the SAG. The demonstration projects were managed by local PCUs that were well integrated with the local/regional government structures providing good local support but also offering benefits of assisting with sustainability of IEM / EFCA activities post-project. Through the

national PMO (based in Beijing at the headquarters of FECO) the technical components were co-ordinated between the two main organisations undertaking the work of the MEWS and IEM activities. There was (again through the co-ordination of the PMO) good exchange of experiences and information between the two demonstration projects and between the technical components and the demonstration project. This resulted in a very well integrated project with the demonstration projects benefiting from input from the technical components and the two technical components receiving experiences and feedback on the tools they developed (for MEWS and IEM) from the practical work of the demonstration projects. A strength of the design has been the legacy of experienced staff within regional administrations that can further replicate the work (plans are already established in Baoxing province) of the project.

99. Examples of adaptive management

- Improving the linkages between the four outcomes. Additional reports were requested from Outcome 2 to report on the application of ecosystem functions from the two demonstration projects. Following early review by the SAG and the MEWS team it was recommended that further analysis and review be undertaken which was completed by the Chengdu Institute of Mountain Hazards and Environment;
- Active involvement with Stanford University has led to the adaptation of their assessment model to conditions of the Upper Yangtze and this has been incorporated into the work of the MEWS team. This was a consequence of a long-term relationship between Standford University and the Chengdu Institute of Mountain Hazards and Environment. This provided a good exchange of experiences between the two institutes providing additional 'institutional strengthening' to the Chengdu Institute of Mountain Hazards and Environment;
- The SAG recommended the integration of the models with baseline information into the MEWS/assessment tools to enable comparative assessments to be made;
- The delays in the disbursement of the GEF funds reaching the PMO and the PMUs (see Financial arrangements below) required local adjustments of the work programme to meet the funding situation and required creativity from the sub-contracted partners in seeking additional or alternative resources to ensure that the work progressed
- An important addition was the inclusion of the EFCA visualisation tool as an output by the Chengdu Institute of Mountain Hazards and Environment that enabled non experts to view the impacts of activities and to examine the status of the demonstration area status.

Stakeholder Participation and Public Awareness

100. The GEF Yangtze Project had a considerable focus on stakeholder participation and raising the awareness of all stakeholders on ecosystem issues. The Project is rated **Satisfactory** with regards to this criteria.

101. The PMO and the PMUs were highly active in raising the profile of the GEF project nationally and in promoting the goals of IEM to a wide audience. This resulted in many publications (in addition to the expected technical reports) that reached a more general audience, including an 8 minute feature on CCTV news highlighting the issues being addressed by the Baoxing demonstration site.

102. Community-based participatory approaches were used to select targeted households for alternative livelihoods and alternative energy support. The benefits of this extensive awareness raising campaigns were assessed through project surveys. For example, in Baoxing the 'awareness' of the environment by the local population reached a level >80 % (based on survey data) following the project's activities (although there was no baseline information to compare).

103. Four levels of coordination were employed on the project to ensure a wide range of stakeholders were included in the management of the project and in receiving direct information about the progress and outputs. These were: (i) the National PSC, SAG and PMO; (ii) Provincial LSC; (iii) Municipal LSC; and, (iv) County LSC and PMU. In addition there was collaboration between the MEWS and EFCA teams within and between the two demonstration sites.

104. Specific examples of stakeholder participation and public awareness raising includes:

The following summarises the examples cited by stakeholders, the PMO and PMUs indicating both stakeholder participation and activities to increase public awareness (including the dissemination of material)

- **Baoxing Demonstration site**
  - The project carried out 42 public awareness activities on IEM concepts and approaches, biodiversity, policies and laws, alternative livelihood, ecosystem monitoring, ecotourism, community-based co-management, useful technologies for vegetable and fruit planting; released 10,000 copies of training materials; trained 500 staff, trained 5,000 students, trained 22, 000 farmers; the public ecological conservation awareness was improved to 80% (based on survey data). This provided solid bases for IEM practice for ecological development within the region.
  - Compiled and released 7,000 copies of training materials including the training textbook for primary students, training materials for farmers, training material for staff; compiled and released 2,000 copies CD-ROM for primary students; printed more than 6,000 copies of project briefing materials; printed 2,000 copies of conference outcomes on the project; printed training materials on practical technologies on economic crop cultivation; procured 350 copies for training on practical technologies; developed 15 sets of educational display boards for training;

- Mass media: the Comprehensive channel of China Center TV (CCTV), the News Channel of CCTV, English Channel of CCTV reported the IEM models at Baoxing Demonstration Site under Yangtze Project; the report stated that IEM could leverage and integrate the balance between protection and development including poverty alleviation, and show the advantage for replication and adaptation in a broader range.

- **Laojunshan Demonstration site**
  - Training more than 800 people directly and more than 10,000 indirectly. The project organize a series of significant replication efforts including publicising the "Laojunshan IEM Rules", discussing the IEM and biodiversity conservation, exhibiting the outcomes from the biodiversity conservation at Northwest part of Yunnan Province, and disseminating the lessons from Laojunshan demonstration site.
  - To address the differing requirements of stakeholders the project developed material for IEM Reading Materials for governmental staff, guideline for community-based residents, and training textbook for public schools including environmental awareness and education activities at primary and middle schools.

Country Ownership and Drivenness

105. The GEF Yangtze Project is well aligned to the national agenda for environmental protection and the results from the project are already being taken note of at a senior government level. The project is rated **Satisfactory** with regards to Country Ownership and Drivenness.

106. The current programme of the MEP is identifying potential EFCAs and the project has implemented two demonstration projects that will enable the MEP to further refine their policy with regards to EFCAs and IEM.

107. The government, at national, regional and local levels were involved in the design and are actively involved in the project supervision through the PSC and LSCs. The actions of the project are already in the process of replication within the environmental management administrations and have been fully accepted at the local community level where the immediate impacts are visible in the form of improved economic conditions and awareness.

Financial Planning and Management

108. The GEF Yangtze Project has experienced difficulties in financial management. Due to the low disbursement rate, resulting from the insufficient financial reporting by the PMO to UNDP/UNEP and leading to delays in receiving the GEF funds, the project is rated as **Moderately Satisfactory** with regards to Financial Planning and Management.

109. This rating does not reflect on the financial probity of the organisations involved, but reflects the insufficient capacity at the PMO to financially report all mutually agreed, required materials to UNDP/UNEP, the complex inter-agency arrangements between UNDP and UNEP, and the inadequacy of clear and formal guidance on the expectations on the project especially procurement and recruitment issues (as referenced stated by the UNDP and UNEP officers in the Beijing Office).

110. The project implementation has been subjected to severe delays in receiving GEF grant. However, through the good co-ordination of the PMO and a strong commitment from the project partners both at national and local levels, this constraint has not significantly impacted the overall delivery of the Projects outputs. However these delays have resulted in the PMO (in particular) devoting more time to this issue than planned and this should be seen as a 'lost opportunity'.

111. UNDP China had been requested by UNEP to provide a verification of project expenditure as such capacity is not available at the UNEP Beijing Office. The issue of disbursement of GEF grant was made more complicated by all project partners having to submit a compliant financial report before an advance payment was made.

112. On two occasions FECO has requested independent audit of the project – on both occasions no issues were raised. To assist with the disbursement UNEP had agreed to use these reports as an interim measure to release advance funding while waiting for UNDP validation. The PMO has positively assisted the two PMUs with financial management providing training and in the case of Baoxing demonstration site, requesting the PMO to recruit a financial officer. In addition there have been training sessions run (at which UNDP China participated) to assist all project staff understand the requirements.

113. UNEP has provided some training and direct assistance with the demands of financial management but this has been frustrated by changes in the staffing at the PMO as reported by the Task Manager. The Task Manager also reported that initial difficulties in financial reporting had largely been overcome through additional facilitation and assistance from UNEP China Office, but UNDP China reported to the TE Team that despite the training and feedback on the financial reports the FECO/PMO were still having difficulties in complying with all the financial reporting requirements. In particular there had been a lack of supporting information to validate payment requests to consultants including the need to provide an explanation of the procurement process and providing consultant contracts along with invoices etc. UNDP China had also concerns about some inconsistencies on the methods used for travel procurement and provision of daily subsistence allowances.

114. A breakdown of the available project objectives and costs, and the co-financing by source is presented in Annex 6. The differences in the 'Project Document' figures and those used by the PMO presented in Annex 6, are explained by the PMO taking responsibility for procurement of equipment (including large items such as vehicles). The key message from Annex 6 is the 40% additional co-finance that was attracted to this project and the importance this co-financing played given the significant delays (up to 15 months) in PMO receiving the GEF funds.

UNEP Supervision and Backstopping

115. The technical assistance provided by UNEP's Task Managers was highly appreciated by the PMO and in providing assistance to addressing the issues raised on financial reporting. The UNEP Supervision and Backstopping is rated as **Satisfactory**.

116. Despite the comments made in the MTE, prepared in 2009, (that the PMO had stated that UNEP staff had not had sufficient time to supervise the project or to participate in field visits), the TE Team concluded that whilst it would be beneficial for additional time input (clearly bringing wider technical and experiences to the project) the project has delivered the expected outcomes through the planned supervision process. Throughout the project's duration there have been two UNEP Task Managers and the PMO reported that both have contributed to the success and shared the vision of this project by helping to guide the project's activities.

117. The UNDP offices in Beijingwas mainly involved in the financial reporting validation of the project before submitting finalised reports to Nairobi and did not have any significant input to the project (although the PMO did ensure that they were invited to Project Steering Committee meetings).

Monitoring and Evaluation

118. The GEF Yangtze Project was designed with an appropriate M&E system and adequate resources to enable this to be undertaken. The indicators are considered 'SMART[6]' and the project had sufficient oversight through the PSC/LSC to enable the baseline to be established and indicators refined as the project progressed. Overall the M&E is rated as **Satisfactory**.

M&E Design

119. The design of the M&E meets the expectations of the GEF and was appropriate for the implementation of the Project. The M&E plan contained SMART indicators, identified baselines (where possible), required oversight from PSC, and specified the periodic progress reports and Annual Implementation Review reports required. The design anticipated the need for both a mid-term review and this Terminal Evaluation. The M&E design is rated as **Satisfactory**.

M&E Plan Implementation

120. The project has met its objectives following an agreed extension of 14 months (October 2010 to December 2011) but will require a further short time-extension to finalise reporting and a Project Steering Committee[7]. APR reports have been prepared and provide a good overview of the progress of the project. PSC meetings were usually held on an annual basis with good participation from government stakeholders. The PMO has adopted change as recommended by the PSC and the SAG in a good 'adaptive management' approach and the project initiated a detailed revision / clarification of indicators and baselines which were presented to the PSC for approval in an appropriate manner. The M&E Plan Implementation is rated **Satisfactory**.

[6] SMART Indicators are specific, measurable, achievable, relevant, and timebound

[7] During the drafting of this report the Project held a final PSC (December 2011) and agreed that the project would be operationally closed at the end of 2011.

121. The project has undertaken the expected reporting and supervision of progress through half-yearly reports, annual project reviews and Project Steering Committee (PSC) meetings (these were held in 2007, 2008 and 2009). An exception being the failure to hold a PSC in 2010.

122. The MTE highlighted a number of concerns relating to the implementation of M&E (insufficient tracking of project progress), insufficient baseline information and the level of involvement of the local communities. Following the MTE, the M&E plan for the project was further refined resulting in a 30-page detailed operational document to assist with the final delivery of the project's activities. The project has taken action to reduce the concerns highlighted in the MTE by providing more information in the APRs, developing a baseline (and seeking PSC approval in 2009) and through the work of the demonstration sites more fully engaging local stakeholders.

123. The full list of issues raised by the MTE are presented in Annex 9 together with a summary compiled by the TE on the actions taken by the PMO. Most of the issues raised have been addressed by the project. The following indicates the key responses undertaken by the PMO to address the MTE and other issues identified from routine internal M&E activities:

- To develop a more user-friendly MEWS and IEM information system for local practitioners: **Completed**;
- Interaction and coordination between the project components should be established and operated in a cooperative and efficient manner: **Completed**;
- IEM plans for the two demonstration sites should be officially approved by the local authorities: **Initiated** but this is viewed by Project stakeholders as a longer-term activity;
- In addition to one meeting before the mid-term review, two additional international meetings have been convened with the support of the project.

124. It is expected by the ProDoc that a PSC will be held annually and despite requests from the Task Manager a PSC was not organised in 2010. The PMO reasoned that there had been sufficient meetings of the SAG (and other meetings) to oversee the technical elements of the project but the role of the PSC in overall project governance is important. This is counter to the expectations of the ProDoc and 'best practice' in GEF projects.

Budgeting for M&E activities

125. A clear breakdown of the budget for M&E activities was not available, however the project has undertaken most of the required M&E (the exception being the 2010 PSC) activities and has fulfilled the expected M&E plan so it is reasonable to assume that there was sufficient budget. The budgeting for M&E activities is therefore considered to be **Satisfactory**.

D Complementarities with the UNEP Medium Term Strategy and Programme of Work

Linkage to UNEP's Expected Accomplishments and POW 2010 – 2013

126. The Project was designed and largely implemented before the development of the UNEP's Medium-Term Strategy 2010 – 2013. However the GEF Yangtze Project addresses issues in each of the six cross-cutting priority themes identified in the Strategy.

- **Climate Change:** The project is assisting in reducing CO_2 emissions through encouraging the use of hydroelectricity and through conserving forests it is encouraging further CO_2 storage. The conservation of forests through the use of bio-gas from human and animal waste is further reducing the release of methane which has a higher climate change impact that the CO_2 that is released on combustion of the methane. In addition through Objective 1 and 2 on assessments and MEWS respectively measurable increases in carbon-sequestration in the Upper Yangtze through grasslands and forests is being achieved.
- **Disasters and Conflicts:** The project has assisted through the MEWS system with recovery following the 2008 Sichuan earthquake. The project has also supported the National action on 'Ecological Function Assessment in Disaster Prone Areas'.
- **Ecosystem Management:** The whole focus of this project has been towards this theme. In particular the development and adoption of the IEM principles is considered to be a major achievement. This is now being mainstreamed in to regional (and potential national) policy and is also guiding the development of PES approaches in China.
- **Environmental Governance:** Again through the adoption of IEM at local and regional levels the approach to environmental governance in China has evolved and is impacting all aspects of spatial planning and management, including addressing industrial practices. At the community level the project has significantly assisted in demonstrating the benefits of engaging local villagers and farmers in both protecting the environment and strengthening their own livelihoods within the principles of IEM.
- **Harmful Substances and Hazardous Waste:** The introduction of IEM to regional policy has restricted development of gold and copper mining and thereby limiting the potential releases of heavy metals (and other hazardous substances) used in the mining/extraction processing. The IEM approach has already successfully limited the stone industry activities in Baoxing County reducing both the previous destructive practices in extraction and the pollution released in processing.
- **Resource Efficiency:** By providing villagers and farmers with alternative fuels (biogas, solar heated water, hydroelectricity) the project has conserved important forests and ensured these are used efficiently.

Alignment with the Bali Strategic Plan

127. The project is closely aligned with the Bali Strategic Plan (BSP). A key main principle of the BSP includes the strengthening of national capacity on research, monitoring and assessment capacity etc.

The Project Objectives 1 and 2 (are clearly aligned to this principle with the development of policies, tools for assessment and MEWS, coupled with the extensive training undertaken at multiple levels, are important to the BSP.

South – South Co-operation

128. While the project has not had significant contact with other related projects or shared experiences outside China, considerable information has been provided within the country. It is recommended (with the support of the GEF and UNEP) that the project identifies means to further share the experiences more widely.

III Conclusions and Recommendations

A Conclusions

129. The GEF Yangtze Project has been well designed and through good project management has delivered the expected results. The project's activities have resulted in desired and useful outputs enabling the outcomes to be achieved. Unusually in such a relatively short time, the project has demonstrable impacts showing ecosystem improvements, increased income of the local population and, most importantly, changes in attitude with regards to environmental management – both at the local level and regional/local environmental management level. The overall rating of this project is **Satisfactory**.

130. The GEF Yangtze project has largely achieved its planned objective (*to promote and implement an integrated ecosystem management approach for the upper Yangtze River basin to reduce sediment loads, increase catchment water retention capacity, conserve and sustainably use biological diversity, and decrease net Greenhouse Gas emission, while improving socio-economic conditions*) and demonstrated viable means to reach the project goal (*to reduce flood impacts by conserving and enhancing ecosystem functions in the Yangtze River basin*).

131. The following conclusions can be drawn from this Terminal Evaluation:

- **Project Design:** The project has been comprehensively designed to meet a specific environmental need in China in the Upper Yangtze. The project design also met the aspirations of local, regional and national stakeholders by identifying and testing a new management approach through IEM. The design correctly identified the capacity and willingness of the local managers and populations to utilise the tools that were developed and the proof of the overall approach was clearly effective through the selection of the demonstration sites. The GEF budget and the expected co-financing were adequate and well balanced for this project. The only flaw in the design of the project was not to have better anticipated the implementation arrangements required to authorise the GEF funds that led to significant delays in the disbursements of the funds. However the financial administration approach presented in the ProDoc was considered to be appropriate at that time. Although this has caused delays in the GEF funds reaching the project it did not have an overall detrimental impact on the delivery of the final outcomes – largely due to the effective management of the PMO, the willingness of all the project partners to adopt a flexible approach, including: utilising their own resources, identifying interim measures to release funds (e.g. UNEP to authorise pre-financing on the basis of FECO audits and subject to UNDP verification at a later stage) and the provision of additional co-financing.
- **Project management and oversight:** The PMO together with the two PMUs proved to be an effective management structure to deliver this complex project. There were clear linkages encouraged by the PMO between the two 'technical objectives' (the assessment and MEWS) and the demonstration sites, and the PMUs facilitated good exchanges between the two demonstration sites. The work of the project was significantly enhanced by the scientific and technical guidance provided by the SAG. Two main levels of oversight were provided by the

PSC and the two LSCs. Again the PMO demonstrated effective co-ordination of these groups and encouraging the PSC and the SAG to visit the demonstration sites to gain better first-hand information on project activities.

- **Ecosystem assessment and MEWS tools:** These two technical outcomes have been significant in assisting environmental planning within regional administrations to adopt the principles of IEM. The development of an ecosystem function assessment tools and methods for the Upper Yangtze has been an important advancement into sustainable ecosystem management in the region. Through a series of technical reports and visualisation tools it has enabled environmental management to be based on the relative importance of the ecosystem and for spatial planning to be based on these results. The MEWS has become the basis for further monitoring and assessment and the extension of the system to incorporate pollution sources (for example) has already occurred in Sichuan EPB – demonstrating the local need and perceived benefit of the system. An important management decision taken early in the project (following input form the SAG) was to use these tools at the demonstration sites and to prepare additional reports for local stakeholders on the ecosystem function – this was a beneficial extension to the planned work. The outputs from the assessment of ecosystem function in the form of maps and 3-D images of the demonstration projects have been a powerful tool to engage the local stakeholders and to transform complex data into helpful information.
- **The demonstration sites:** The PMO, SAG and PSC identified important distinctions between the two demonstration sites which enabled the testing of more approaches related to IEM than was anticipated in the project documents. The Laojunshan site was more focused at the township and geographical level whereas the Baoxing addressed a 'county' level approach to implementing IEM. This led to the comparison of using administrative boundaries versus geographical (natural reserves, lakes etc) boundaries. The comparison between the two sites indicated that the Baoxing model potentially achieved better results and impacts due to the higher consistency from the management of a larger region and the ability to incorporate IEM into the regional administrative system (compared to operating IEM at a township level). This was further enhanced by the regional administration adopting agreed operating procedure, the strong political commitment, clear roles and responsibilities within the administration and additional resource to further assist with sustainability. This indicates the benefits of embedding the IEM context into existing administrative systems. However both demonstration projects have proved very successful in meeting their objectives and have provided clear evidence of impacts in the form of improved economic conditions for the local populations, clear improvements to the ecosystem status and changes in attitude at both the local population and the administration levels.
- **M&E:** The M&E design of the project has proved successful. The implementation of the project has effectively used appropriate mechanisms (PSC, LSC, PIRs, indicators monitoring etc.). The PSC (and at the local level, the LSC) has provided a form of inter-ministerial/inter-department co-ordination. The Project reassessed the baselines and resubmitted to the PSC in 2009 revised and elaborated indicators which were utilised in subsequent reporting (PIRs). The concept of monitoring and evaluation has been effectively applied at all levels of the project as seen by the extensive use of data collection at village level (numbers of birds, tourists, increased income etc.) and at the higher country/province level (e.g. summations on the reduced stress on forests through changes of heating / cooking fuels) indicating an

overall acceptance of the importance and benefit of such information. The failure to convene a PSC in 2010 is noted and is the only significant critical issue with regards to M&E.

- **Replication and sustainability:** The project has achieved considerable progress (as indicated in the above sections) on sustaining actions (this is especially clear at the local village level where through the project's actions there are measurable improvements in the economic conditions and recognition of the importance of the ecosystem). At the government level there are also clear signs of sustaining and replication (planned and in-progress) of IEM approaches developed and tested by this project.
- **Future activities:** This project has made significant progress on improving the awareness and appreciation of ecosystem functions and value through technical developments (Outcomes 1 and 2) and through the two demonstration projects. It has also developed an implementation approach that is well regarded by the local communities and administrations. The IEM approach and the method of implementation through demonstration projects would benefit from further activities to integrate water management more into the IEM methodology. In particular, to address more holistic catchment management and especially nutrient management from rural communities/agriculture into a future GEF project supported by the International Waters and Biodiversity focal areas. Such an extension of the work could address pressing issues in China (and by sharing experiences within transboundary basins with neighbouring countries) of the over dependence of nitrogen fertilisers and inadequate management of human and animal waste, and the impacts these have on rivers, lakes and the coastal waters. Through a project aimed at maintaining aquatic ecosystem services and/or ecosystem resource management, better management responses could be integrated into the overall IEM implementation that addressed key issues leading to degradation of the aquatic habitat. Coupled with extending the current demonstration activities to improved farm-based nutrient management and further work on recycling nutrients (and the production of biogas) could help demonstrate sustainable approaches with global benefits (including the reduction of the growth of hypoxic coastal regions) and replication potential.

132. The Terminal Assessment has rated the key criteria against the expected outputs and outcomes and provides the following summary of ratings:

Summary of Terminal Evaluation Ratings

	Criterion	Summary Assessment	Rating
A	**Attainment of project objectives and results**	The project has delivered its planned results and met the objectives expected. The project has achieved a high level of local and political commitment to ecosystem protection and management with clear signs of impacts and routes to sustainability.	**HS**

	Criterion	Summary Assessment	Rating
	Effectiveness	The project can be considered to have achieved, and in some cases, exceeded, the planned outputs, objectives and outcomes	HS
	ROtI	The project has achieved its main outputs and expected outcomes as defined in the project document and there are many examples of clear project impacts (improved livelihoods, reduced pressure on forests through the provision of hydro-power electricity, biogas from human and animal waste, fuel efficient ovens).	HL
	Relevance	The project relevance to local, regional, national and global needs and objectives. This has can be seen in the support for the development and application of the IEM and MEWS tools in the demonstration project regions, which has helped highlight the importance and value of ecosystem services in the upper Yangtze. The support for this project has been seen at high political level (deputy vice Premier) and in promoting the further use of the approach on zoning (for example) more widely in China. The project has achieved its goal through a adopting a highly participatory approach to introducing IEM that has achieved a high likelihood for sustainability and improved livelihoods while also improving ecosystem status.	HS

	Criterion	Summary Assessment	Rating
	Efficiency	The project has achieved the expected outcomes requiring an extension of a few months. However the system of financial reporting/reimbursement has caused delays to GEF funds reaching the project activities. This system (designed at the ProDoc stage) was appropriate at that time. Nonetheless this has not greatly affected the project delivery of outputs.	MS
B	**Sustainability of project outcomes**		**L**
	Financial	The project has provided a clear mechanism to improve the financial wellbeing of the local population and has gained political/institutional support at regional / national level. These are positive signs that funds will continue to be allocated to support the IEM approach.	L
	Socio-political	The support for the project's activities from a wide range of local/regional and national stakeholders have helped ensure the sustainability and likelihood of replication	HL
	Institutional framework	The involvement of state institutions, the support of MEP and the regional bodies (EPBs, regional government, town government, etc) together with a willingness to continue the development of the IEM concept indicates that the institutional framework is sustainable.	L
	Environmental	With the support of IEM adopted as policy to guide the ecosystem management and given the financial resources available to regional and town administrations it is expected that the environmental sustainability will be maintained. A future challenge will be to ensure that the IEM policies are maintained when confronted with implementation	L

	Criterion	Summary Assessment	Rating
		of large infrastructure projects with high economic importance (for example construction of hydro-electric power schemes), however local / regional support and belief in IEM is considered strong.	
C	**Catalytic role & Replication**	The project has provided a number of examples of where it has played a catalytic role and the IEM approach have been replicated.	**HS**
D	**Stakeholders involvement**	The project had a considerable focus on stakeholder participation and raising the awareness of all stakeholders on ecosystem issues.	**S**
E	**Country ownership / driven-ness**	The project is well aligned to the national agenda for environmental protection and the results from the project are already being taken note of at a senior government level.	**S**
F	**Achievement of outputs and activities**	The project has effectively executed the expected activities and achieved the desired outputs. Through a significant increase in co-financing the project has also delivered additional outputs to the benefit of the IEM approach in the region.	**HS**
G	**Preparation and readiness**	The project has been well designed and structured with clear outcomes and related activities to achieve the goal. The project has clear GoC support at both national and regional levels. The only omission was greater clarity over the financial reporting expectations and requirements between the project and UNEP.	**S**
H	**Implementation approach**	The project implementation within the PMO/PMU structure has been significant in generating the successes of the project. The PMO has shown examples of good adaptive management to overcome changes in circumstances and to respond to	**S**

	Criterion	Summary Assessment	Rating
		evolving situations. However, the PMO has encountered difficulties with the demands of complying with financial reporting requirements of the overall project.	
I	**Financial planning and management**	The project has been subject to tight financial management through FECO's role of Execution Agency. However there were significant delays in receiving GEF funds due to difficulties with the financial reporting by the PMO to UNDP/UNEP	**MS**
J	**Monitoring and Evaluation**	The project was designed with an appropriate M&E system and adequate resources to enable this to be undertaken. The indicators are considered 'SMART' and the project had sufficient oversight through the PSC/LSC to enable the baseline to be established and indicators refined as the project progressed.	**S**
	M&E Design	The design of the M&E meets the expectations of the GEF and was appropriate for the implementation of the Project. The M&E plan contained SMART indicators, identified baselines (where possible), required oversight from PSC, and specified the periodic progress reports and Annual Implementation Review reports required. The design anticipated the need for both a mid-term review and this Terminal Evaluation.	S
	M&E Plan Implementation	The project has met its objectives with only a one year time-extension (agreed by the PSC) and the need to further extend the project by a few months to complete the required reporting activities. The project obtained additional co-financing enabling additional outputs to be achieved. APR reports have been prepared	S

	Criterion	Summary Assessment	Rating
		and provide a good overview of the progress of the project. PSC meetings were usually held on an annual basis (except for 2010)with good participation from a government stakeholders. The PMO has adopted change as recommended by the PSC and the SAG in a good 'adaptive management' approach and the project initiated a detailed revision / clarification of indicators and baselines which were presented to the PSC for approval in an appropriate manner.	
	Budgeting and funding for M&E activities	A clear breakdown of the budget for M&E activities is not available, however the project has undertaken all the required M&E activities and has fulfilled the expected M&E plan so it is reasonable to assume that there was sufficient budget	S
K	**UNEP Supervision and backstopping**	The technical assistance provided by UNEP's Task Managers was highly appreciated by the PMO in addressing both technical issues and offering resolve the financial reporting. UNEP adopted a pragmatic approach to accepting FECO audited accounts of the project to enable pre-financing to occur while the financial reporting difficulties were resolved.	**S**
	Overall		**S**

HS - Highly Satisfactory, S - Satisfactory, MS - Moderately Satisfactory, MU – Moderately Unsatisfactory, U - Unsatisfactory and HU - Highly Unsatisfactory

HU – Highly Likely, L - Likely, ML - Moderately Likely, MU - Moderately Unlikely, U – Unlikely and Highly Unlikely.

B Lessons Learned

133. The following lessons have been identified:

- **Strong government support:** At all levels of government (Central, Regional and Local) the work of the project has seen strong country acceptance and political commitments. A good example was presented to the TE mission in Ya'an city with the clear statement to replicate the concepts of IEM as developed by the project in other counties. This commitment derives from clear country 'drivenness' for the project demonstrating the importance of a well defined and accepted Project Document that has led to the increased co-financing and the higher likelihood that the achievements are sustained and further replicated. This validates the effort that is required to develop a detailed project document and all supporting information.
- **Strong Project Management Office:** The PMO have effectively managed the technical delivery of this project as seen through the achievement of the outputs. The PMO has demonstrated good co-ordination of the many technical and non-technical partners and other stakeholders and in ensuring (through motivating the partners) that the work continued through alternative funding arrangements while the delays with the financial reporting were resolved. As with other successful project, the importance of a strong, dedicated and stable PMO/PMU has proven to be very important in driving this project and the importance of this to future projects is clear.
- **Project oversight:** As with all GEF/UNEP projects a PSC is a mandatory requirement. This project has also benefited from Local Steering Committees (LSC) providing additional direction at the regional and local levels. The added benefit in this project has been the inter-ministerial or inter-department role of the members of the PSC/LSC thus further ensuring other sectors were involved in the decision making process. This had the benefit of effectively mainstreaming the important GEF objective of encouraging inter-ministerial involvement in the local operation of the project. The involvement of multiple ministries (or departments) at a local / regional level further assists the sustainability of the project's activities as seen in the Boxing demonstration project and the activities in Ya'an. Encouraging further use of 'LSCs' to guide projects is seen as an innovative way to get this inter-ministerial routinely employed on projects.
- **Strong technical oversight:** The role of the SAG in technical guidance of the PSC/LSC/PMO in the projects has also demonstrated value through recommendations on adjustments to the work programme and providing validation from the scientific community of the work undertaken on the assessments of ecosystem function. This input (from national and regional institutes) clearly provides additional confidence on the validity of the outputs and conclusions reached by the project further strengthening the likelihood of sustainability and replication. The concept of strong technical or scientific input to guide the project management should be further encouraged.
- **The 'value' of demonstration activities:** The demonstration projects were well designed and (through the input of the SAG/PSC) adapted to ensure that they delivered clear 'proof of concept' of the IEM approach to both the local communities and the regional

administrations. Involvement of local stakeholders at the design stage and throughout the evolution was key to the success of these activities. In addition the involvement of local administrations will not only ensure the likelihood of sustainability and replication of the intervention but gave further encouragement to the local population on the importance of the environment. Without this 'poof' the project would have been very technically focused and would have had little impact on the local population. This clear linkage between technical tools for ecosystem assessment and monitoring coupled with very practical applications of these can assist future projects by replication of the design concept.

- **Financial Reporting of Projects:** Financial management and reporting are essential elements of good and effective project management. The Yangtze project has managed its resources well but has not sufficiently responded to the expectations of the ProDoc on financial reporting (although the situation had improved towards the end of the project). Guidance is available from UNEP on financial issues, as well as appropriate training activities, as clearly demonstrated through other UNEP/GEF projects. The PMO could have alleviated some of the delays in the GEF funds disbursement by having a dedicated financial officer within the PMO who would have been familiar with the details of the project's activities within all outcomes, understood FECO's financial system and been able to respond to all UNDP/UNEP's comments to the financial reports. Since the original design of the Project Document the financial management systems at FECO have evolved and they are currently dealing with many bilateral and multi-lateral donor projects in an efficient and effective manner. The experiences on financial management from this Project should be incorporated in any follow-on project leading to the adoption of direct financing by UNEP through FECO as the Executing Agency.
- **Overall the key lesson** has been that all stakeholders in the project – from administrations to local farmers and villagers – understood the reasoning behind the project and saw early and direct benefits to their work / environment / economy as a result of the project's activities

C Recommendations

134. **Recommendation 1: Increasing communications and dissemination between different GEF focal area projects**: The GEF Yangtze project has achieved its main objective and delivered many practical lessons and benefits at multiple levels within stakeholder organisations in the region. The project has also achieved demonstrable impacts through the project interventions. There is an important need to share this within the wider GEF community to benefit from this project's activities. For example, the results of this project would be very relevant to the GEF International Waters portfolio of projects. **The TE recommends: that UNEP** requests the GEF to develop a mechanism to share project results between GEF Focal Areas. At present there is no routine approach to disseminating such valuable project results across multiple GEF focal areas. The GEF IW:LEARN project (International Waters Learning Exchange and Resource Network www.iwlearn.net) serves as a good example as a mechanism to share project information within the GEF International Waters portfolio

135. **Recommendation 2: Further Project Development**: FECO/MEP have made significant progress on environmental management within the Upper Yangtze and generated important support from a wide range of stakeholders for the execution of this project. FECO/MEP should take the lead with UNEP in

developing a future project that capitalises on the lessons and achievements and extends the work to encompass river basin management needs – including the issues of excess nutrients within basins. Such a follow-on project, building on the experiences developed in applying IEM, should also consider broader issues, including aquatic ecosystem services and the potential ecosystem impacts from increasing hydro-power schemes that may (for example through loss of sediment transport, flood risk, fish movement, etc.) have detrimental environmental impacts. **The TE Recommends:** the UNEP, in partnership with FECO/MEP should develop a new project building on the lessons and experiences from this project by including more river basin management (involving aquatic ecosystem management) within the concept of IEM that will also address issues of global concern including the use of excess nutrients (fertilisers) and their impacts.

136. **Recommendation 3: Increasing Awareness of the Project's Achievements:** The projects experiences are significantly important and should be widely publicised. To-date the project has achieved considerable public awareness of the successes within the Upper Yangtze and through national TV and publications in China. However the lessons and achievements need to reach a wider audience to ensure projects/countries facing similar issues can benefit from the experiences. The project website needs to be brought up-to-date with a comprehensive set of project data demonstrating the successes. **The TE Recommends:** that UNEP strongly encourages the PMO to update (and maintain post-project) the website (in both Chinese and English) as part of the project closure.

List of Annexes

Annex 1 Terminal Evaluation Terms of Reference

Terminal Evaluation of the UNEP GEF project
"Nature Conservation and Flood Control in the Yangtze River Basin"

I. PROJECT BACKGROUND AND OVERVIEW

A. Project General Information[8]

AGENCY'S PROJECT ID: GF/
COUNTRY: China
PROJECT TITLE: Nature Conservation and Flood Control in the Yangtze River Basin
GEF IMPLEMENTING AGENCY: United Nations Environmental Programme
EXECUTING AGENCY(IES): Ministry of Environmental Protection (MEP) (former State Environmental Protection Administration, SEPA)
DURATION: 5 Years
GEF FOCAL AREA: Multi-focal area/OP12
GEF OPERATIONAL PROGRAM: OP12: Integrated Ecosystem Management
GEF STRATEGIC PRIORITY: CB: cross-cutting capacity building; BD: catalyzing sustainability of protected areas; mainstreaming biodiversity in production landscapes and sectors; CC; productive uses of renewable energy; SLM: capacity building
ESTIMATED STARTING DATE: February 2004
IA FEE: US $382,000

B. Project Rationale

The Yangtze River is the largest river in China, with length of 6,300 km, drainage area of 1,8 million km^2 and more than 400 million people, one third of the total population of China, living in its river basin area. The basin is the economic center of China, and one of the most developed areas in terms of agriculture, fishery, industry, and transportation. However, the River and its basin also support very rich biodiversity comprised, among others, of several endangered species, such as the giant panda (*Ailuropoda melanoleuca*) and formely the Yangtze River Dolphin (*Lipotes vexillifer*), which after the project formulation has, however, been declared as extinct. In addition various protected migratory birds are dependent on the wetlands within the Yangtze for their seasonal habitats.

Despite the global importance of natural ecosystems in the upper and middle reaches of the Yangtze River, the area has suffered from serious degradation over decades created by expanding human activities even in protected areas. There has been a sharp decline in water retention capacity of forests and grasslands due to deforestation and overgrazing, decrease in water storage capacity in the middle and lower reaches of the Yangtze River due to loss of lakes and wetlands, and siltation of the rivers. The gravity of the problem has been such that it has affected not only the aquatic biodiversity associated with the river system, but local water use, fishery and even safety of the local inhabitants.

The environmental degradation and the decline of key ecosystem functions of the Yangtze River area can, at least partly, be connected to the 1998 floods which caused severe damage to human life, property and environment. Following the floods, the Government of China formulated a set of guiding principles for flood control and damage, including logging bans, re-conversion of cleared lands to

[8] Source: Final Project Report, Project Executive Summary

forests, prohibition on steep slope cultivation, re-conversion of wetlands and relocation of populations living in vulnerable areas.
The Government of China is also implementing soil and vegetation conservation programs in the upper Yangtze River basin as part of its efforts to reduce floods. In order to add benefits and to maximize efficiency of these programmes, the Government of China plans to implement an Ecosystem Function Conservation Areas (EFCAs) program. The aim of the program is to increase water retention capacity and reduce sediment loads, as well as provide global environmental benefits in biodiversity, carbon sequestration, sustainable land management and Integrated Ecosystem Management (IEM).
The project was developed based on UNEPs support for the Government of China in addressing the underlying environmental causes of floods.

C. Project objectives, outcomes and activities

The overall context in which the project has been formulated is a need to mitigate flood events through rehabilitation and conservation of ecosystem functions, while simultaneously enhancing conservation and sustainable use of biological resources of global importance and strengthening sequestration of greenhouse gases. The project will develop methodologies to promote sustainable use of natural resources in areas critical to global environment conservation and flood control, as well as develop methodologies to promote rehabilitation and conservation of ecosystem functions in degraded protected areas where the globally significant environment is at stake. The project will also strengthen capacity of the central as well as local government bodies concerned to enable them to apply developed methodologies to the region as a whole in a flexible and sustainable manner.
Emphasis will be placed upon sustainability of the project by fully taking into account socio-economic needs of local populations. It should be stressed that this project will only initiate introduction of new conservation approaches in China, which, if proved effective, will be applied to other areas in the Yangtze basin as well as other parts of China and other Asian countries.
The project long term goal as stated in the Project Logical framework matrix is "*to reduce flood impacts by conserving and enhancing ecosystem functions in the Yangtze River basin*".
The project objective as stated in the Project Logframe matrix is "*to promote and implement an integrated ecosystem management approach for the upper Yangtze River basin to reduce sediment loads, increase catchment water retention capacity, conserve and sustainably use biological diversity, and decrease net Greenhouse Gas emission, while improving socio-economic conditions*".

The project aimed at reaching the following four **outcomes** as stated in the project Logical framework:

(i) fully developed institutional mechanism for assessment of ecosystem functions and planning for Ecosystem Function Conservation Areas in the upper Yangtze basin;
(ii) established ecosystem function-based Monitoring and Early Warning System (MEWS) in the upper Yangtze basin;
(iii) demonstrated efficiency and effectiveness in achieving global environmental benefits and local environmental and socio-economic benefits by taking an integrated ecosystem management approach in the Baoxing demonstration site;
(iv) demonstrated efficiency and effectiveness in achieving global environmental benefits and local environmental and socio-economic benefits by taking an integrated ecosystem management approach in the Laojunshan demonstration site.

The **key activities** leading to each of the four outcomes as stated in the Logical framework were:

- 1.1. Assess ecosystem functions relevant to nature conservation and flood control

- 1.2. Assess threats to, and root causes for degradation of, ecosystem functions, and economically evaluate the ecosystem functions
- 1.3. Present integrated assessment of ecosystem functions
- 1.4. Recommend new Ecosystem Function Conservation Areas
- 1.5. Disseminate and initiate replication of results

- 2.1 Establish technical capacities for MEWS in the upper basin
- 2.2 Establish capacities for MEWS at the Baoxing and Laojunshan demonstration sites
- 2.3. Report on Ecosystem function monitoring at the demonstration sites for years 4 and 5, and initiate replication of the demo-level MEWS

- 3.1.Establish an institutional framework for IEM at the Baoxing demonstration site
- 3.2. Develop a participatory IEM plan for public acceptance, and strengthen rules and regulatory framework
- 3.3. Mainstream existing sector programs, including forest management and quarry operations
- 3.4. Strengthen PAs and establishment of buffer zones and corridors
- 3.5 Design and provide Alternative livelihoods (AL) around PAs and other key areas
- 3.6. Conduct public awareness, and disseminate the demonstration values

- 4.1.Establish an institutional framework for IEM at the Laojunshan demonstration site
- 4.2. Develop a participatory IEM plan for public acceptance and strengthen rules and regulatory frameworks
- 4.3. Mainstream existing sector programs, including forestry and energy programs
- 4.4. Establish New Protected Areas (PAs)
- 4.5 Design and provide livelihoods (AL) around PAs and key areas
- 4.6. Improve public awareness and disseminate EFCA demonstration values.

D. Executing Arrangements

The project will be implemented by UNEP and executed by the State Environmental Protection Administration (SEPA) of the Government of China in collaboration with the Chinese Research Academy of Environmental Sciences and the other academic institutes. Relevant local governments in the upper and middle reaches of the Yangtze River will be involved mainly in the execution of demonstration projects.

The project established a Steering Committee chaired by the Vice-Minister of SEPA, and comprised of relevant ministries and administrations, as well as relevant provincial and local governments, GEF IAs, Asian Development Bank, and The Nature Conservancy.

E. Project Cost and Financing

The table below presents a summary of expected financing sources for the project as presented in the Project Document.

Costs and Financing (Million US $):

GEF:	-Project:	$3.65 M
	-PDF:	$0.35 M
	Subtotal G EF:	*$4.00 M*

Co-financing (PDF-B):-IA:		$0.12 M (UNEP)
	- Other International	$0.02 M (UN-HABITAT)

	- Government	$0.06 M (GOC)
Co-financing (FP) - IA		$0.25 M (UNEP)
	-Other International:	$2.49 M (TNC)
	-Government:	$20.01 M (GOC)
	Subtotal Co-financing:	*$22.95 M*

Total Project Cost: $26.95 M

Baseline: $14.70M

II. TERMS OF REFERENCE FOR THE EVALUATION

A. Objective and Scope of the Evaluation

In line with the UNEP Evaluation Policy[9], the UNEP Evaluation Manual[10] and the Guidelines for GEF Agencies in Conducting Terminal Evaluations[11], the terminal evaluation of the Project "Nature Conservation and Flood Control in the Yangtze River Basin" is undertaken at the end of the project to assess project performance (in terms of relevance, effectiveness and efficiency), and determine outcomes and impacts (actual and potential) stemming from the project, including their sustainability. The evaluation has two primary purposes: (i) to provide evidence of results to meet accountability requirements, and (ii) to promote learning, feedback, and knowledge sharing through results and lessons learned among UNEP, the GEF and their partners. Therefore, the evaluation will identify lessons of operational relevance for future project formulation and implementation. It will focus on the following sets of **key questions**, based on the project's intended outcomes, which may be expanded by the consultants as deemed appropriate:

(a) Has the project succeeded in developing methodologies to promote sustainable use of natural resources in areas critical to global environment conservation and flood control?
(b) Has the project succeeded in developing methodologies to promote rehabilitation and conservation of ecosystem functions in degraded protected areas where the globally significant environment is at stake?
(c) To what extent has the project strengthened capacity of the central as well as local government bodies concerned, to enable them to apply developed methodologies to the region as a whole in a flexible and sustainable manner?
(d) Did the project succeed in responding to the socio-economic needs of the people living in Yangtze River basin area?
(e) Was the site selection for the demonstration projects the best possible and were valuable and applicable lessons drawn, which are likely to be applied in integrated management of future EFCAs and protected areas? Is the approach used by the project replicable?

B. Overall Approach and Methods

2. The terminal evaluation of the Project "Nature Conservation and Flood Control in the Yangtze River Basin" will be conducted by a team of two independent consultants under the overall responsibility and management of the UNEP Evaluation Office (Nairobi), in consultation with the UNEP Office for Asia and the Pacific Region (Bangkok).
3. It will be an in-depth evaluation using a participatory approach whereby key stakeholders are kept informed and consulted throughout the evaluation process. Both quantitative and qualitative evaluation methods will be used to determine project achievements against the expected outputs, outcomes and impacts.
4. The findings of the evaluation will be based on the following:
   (a) A **desk review** of project documents[12] including, but not limited to:
      - Relevant background documentation, inter alia UNEP and GEF policies, strategies and programmes pertaining to the project focus area.
      - Project design documents; Annual Work Plans and Budgets or equivalent, revisions to the logical framework and project financing;
      - Project reports such as progress and financial reports; Steering Committee meeting minutes; annual Project Implementation Reviews and relevant correspondence;

[9] http://www.unep.org/eou/StandardsPolicyandPractices/UNEPEvaluationPolicy/tabid/3050/language/en-US/Default.aspx
[10] http://www.unep.org/eou/StandardsPolicyandPractices/UNEPEvaluationManual/tabid/2314/language/en-US/Default.aspx
[11] http://www.thegef.org/gef/sites/thegef.org/files/documents/TE_guidelines7-31.pdf
[12] Documents to be provided by the UNEP Task Manager are listed in Annex 5.

- Documentation related to project outputs including Half Yearly Progress Reports, Project Implementation Review Reports (annual), and financial reports
- Mid-Term Review Report

(b) **Interviews**[13] with:

- UNEP Task Manager (Bangkok) and Fund Management Officer (Nairobi)
- Foreign Economic Cooperation Office of Ministry of Environmental Protection of the People's Republic of China (FECO/MEP), as the Executing Agency; and the staff of the Project Management Office in FECO/MEP
- Ministry of Environmental Protection (MEP) of the Government of China (former SEPA), Yunnan Provincial EPB, Sichuan Provincial EPB, Lijiang EPB, Baoxing County government, Baoxing EPB
- Local communities and other relevant stakeholders
- The Chinese Research Academy of Environmental Sciences (CRAES), the Institute of Mountain Hazard and Environment of CAS, and the other relevant academic institutes involved
- The Nature Conservancy (TNC) and other country lead execution partners and other relevant partners;
- Relevant staff of UNEP (Nairobi) and GEF Secretariat

(c) **Field visits to selected demonstration project sites.** The evaluation team will visit the project management office and Chinese Research Academy of Environmental Sciences (CRAES) office (and any other possible stakeholders) in Beijing; the project management team (and any other possible stakeholders) in Chengdu; and the project demonstration sites in Baoxing and Lashihai.

C. Key Evaluation principles

5. Evaluation findings and judgements should be based on **sound evidence and analysis**, clearly documented in the evaluation report. Information will be triangulated (i.e. verified from different sources) to the extent possible, and when verification was not possible, the single source will be mentioned[14]. Analysis leading to evaluative judgements should always be clearly spelled out.

6. The evaluation will assess the project with respect to **a minimum set of evaluation criteria** grouped in four categories: (1) Attainment of objectives and planned results, which comprises the assessment of outputs achieved, relevance, effectiveness and efficiency and the review of outcomes towards impacts; (2) Sustainability and catalytic role, which focuses on financial, socio-political, institutional and ecological factors conditioning sustainability of project outcomes, and also assesses efforts and achievements in terms of replication and up-scaling of project lessons and good practices; (3) Processes affecting attainment of project results, which covers project preparation and readiness, implementation approach and management, stakeholder participation and public awareness, country ownership/driven-ness, project finance, UNEP supervision and backstopping, and project monitoring and evaluation systems; and (4) Complementarity with the UNEP Strategies and programmes, which describes linkages to UNEP's Expected Accomplishments, project contributions in line with the Bali Strategic Plan, mainstreaming of gender and South-South Cooperation. The lead consultant can add other evaluation criteria as deemed appropriate.

7. **Ratings**. All evaluation criteria will be rated, either on a six-point or a four-point scale depending on the criterion. However, complementarity of the project with the UNEP Medium Term Strategy and Programme of Work is not rated. Annex 2 provides detailed guidance on how the different criteria should be rated and how ratings should be aggregated for the different evaluation criterion categories.

8. In attempting to attribute any outcomes and impacts to the project, the evaluator should consider the difference between **what has happened with** and **what would have happened without** the project. This implies that there should be consideration of the baseline conditions and trends in relation

[13] Face-to-face or through any other appropriate means of communication

[14] Individuals should not be mentioned by name if anonymity needs to be preserved.

to the intended project outcomes and impacts. This also means that there should be plausible evidence to attribute such outcomes and impacts to the actions of the project. Sometimes, adequate information on baseline conditions and trends is lacking. In such cases this should be clearly highlighted by the evaluator, along with any simplifying assumptions that were taken to enable the evaluator to make informed judgements about project performance.

9. As this is a terminal evaluation, particular attention should be given to learning from the experience. Therefore, **the "why?" question** should be at front of the consultant's mind all through the evaluation exercise. This means that the consultant needs to go beyond the assessment of "what" the project performance was, and make a serious effort to provide a deeper understanding of "why" the performance was as it was, i.e. of processes affecting attainment of project results (criteria under category 3). This should provide the basis for the lessons that can be drawn from the project. In fact, the usefulness of the evaluation will be determined to a large extent by the capacity of the consultant to explain "why things happened" as they happened and are likely to evolve in this or that direction, which goes well beyond the mere assessment of "where things stand" today.

D. Evaluation criteria

1. Attainment of Objectives and Planned Results

10. The evaluation should assess the relevance of the project's objectives and the extent to which these were effectively and efficiently achieved or are expected to be achieved.

(a) *Achievement of Outputs and Activities:* Assess, for each component, the project's success in producing the programmed outputs, both in quantity and quality, as well as their usefulness and timeliness. Briefly explain the degree of success of the project in achieving its different outputs, cross-referencing as needed to more detailed explanations provided under Section 3 (which covers the processes affecting attainment of project objectives). The achievements under the regional and national demonstration projects will receive particular attention.

(b) *Relevance*: Assess, in retrospect, whether the project's objectives and implementation strategies were consistent with: i) National, Regional and Global environmental issues and needs; ii) the UNEP mandate, policies and strategies at the time of design and implementation; and iii) the GEF focal area, strategic priorities and the relevant operational program(s).

(c) *Effectiveness:* Appreciate to what extent the project has achieved its main objective and its outcomes. To measure achievement, use as much as appropriate the indicators for achievement of the objective and outcomes as stated in the project Logical Framework Matrix (Logframe). Briefly explain what factors affected the project's success in achieving its objectives, cross-referencing as needed to more detailed explanations provided under Section 3.

(d) *Efficiency*: Assess the cost-effectiveness and timeliness of project execution. Describe any possible cost- or time-saving measures put in place in attempting to bring the project to a successful conclusion within its programmed budget and time. In case the project has experienced delays, analyse how they have affected project execution, costs and effectiveness. Wherever possible, compare the cost and time over results ratios of the project with that of other similar projects. Give special attention to efforts by the project teams to make use of / build upon pre-existing institutions, agreements and partnerships, data sources, synergies and complementarities with other initiatives, programmes and projects etc. to increase project efficiency.

(e) *Review of Outcomes to Impacts (ROtI)*: Reconstruct the logical pathways from project outputs over achieved objectives towards impacts, taking into account performance and impact drivers, assumptions and the roles and capacities of key actors and stakeholders, using the methodology presented in the GEF Evaluation Office's ROtI Practitioner's Handbook[15] (summarized in Annex 6 of the TORs). Appreciate to what extent the project

[15] http://www.thegef.org/gef/sites/thegef.org/files/documents/Impact_Eval-Review_of_Outcomes_to_Impacts-RotI_handbook.pdf

has to date contributed, and is likely in the future to further contribute to changes in stakeholder behaviour.

2. Sustainability and catalytic role

11. **Sustainability** is understood as the probability of continued long-term project-derived results and impacts after the external project funding and assistance ends. The evaluation will identify and assess the key conditions or factors that are likely to undermine or contribute to the persistence of benefits. Some of these factors might be direct results of the project while others will include contextual circumstances or developments that are not under control of the project but that may condition sustainability of benefits. The evaluation should ascertain to what extent follow-up work has been initiated and how project results will be sustained and enhanced over time.

12. Four aspects of sustainability will be addressed:

(a) *Socio-political sustainability.* Are there any social or political factors that may influence positively or negatively the sustenance of project results and progress towards impacts? Is the level of ownership by the main national stakeholders sufficient to allow for the project results to be sustained? Are there sufficient government and stakeholder awareness, interests, commitment and incentives to execute, enforce and pursue the programmes, plans, agreements, monitoring systems etc. prepared and agreed upon under the project?

(b) *Financial resources.* To what extent are the continuation of project results and the eventual impact of the project dependent on continued financial support? What is the likelihood that adequate financial resources[16] will be or will become available to implement the programmes, plans, agreements, monitoring systems etc. prepared and agreed upon under the project? Are there any financial risks that may jeopardize sustenance of project results and onward progress towards impact?

(c) *Institutional framework.* To what extent is the sustenance of the results and onward progress towards impact dependent on issues relating to institutional frameworks and governance? How robust are the institutional achievements such as governance structures and processes, policies, sub-regional agreements, legal and accountability frameworks etc. required to sustaining project results and to lead those to impact on human behaviour and environment\l resources?

(d) *Environmental sustainability.* Are there any environmental factors, positive or negative, that can influence the future flow of project benefits? Are project there any project outputs or higher level results that are likely to affect the environment, which, in turn, might affect sustainability of project benefits?

13. **Catalytic Role and Replication**. The *catalytic role* of UNEP and the GEF is embodied in their approach of supporting the creation of an enabling environment and of investing in pilot activities which are innovative and showing how new approaches can work. UNEP and the GEF also aim to support activities that upscale new approaches to a national, regional or global level, with a view to achieve sustainable global environmental benefits. The evaluation will assess the catalytic role played by this project, namely to what extent the project has:

(a) *catalyzed behavioural changes* in terms of use and application by the relevant stakeholders of: i) technologies and approaches show-cased by the demonstration projects; ii) strategic programmes and plans developed; and iii) assessment, monitoring and management systems established at a national and sub-regional level;

(b) provided *incentives* (social, economic, market based, competencies etc.) to contribute to catalyzing changes in stakeholder behaviour;

(c) contributed to *institutional changes*. An important aspect of the catalytic role of the project is its contribution to institutional uptake or mainstreaming of project-piloted approaches in the regional and national demonstration projects;

(d) contributed to *policy changes* (on paper and in implementation of policy);

(e) contributed to sustained follow-on financing (*catalytic financing*) from Governments, the GEF or other donors;

[16] Those resources can be from multiple sources, such as the public and private sectors, income generating activities, other development projects etc.

(f) created opportunities for particular individuals or institutions ("*champions*") to catalyze change (without which the project would not have achieved all of its results).

14. *Replication*, in the context of GEF projects, is defined as lessons and experiences coming out of the project that are replicated (experiences are repeated and lessons applied in different geographic areas) or scaled up (experiences are repeated and lessons applied in the same geographic area but on a much larger scale and funded by other sources). The evaluation will assess the approach adopted by the project to promote replication effects and appreciate to what extent actual replication has already occurred or is likely to occur in the near future, with special attention to the demonstration projects conducted. What are the factors that may influence replication and scaling up of project experiences and lessons? In this particular case, the evaluation will assess how the project has made sure that plans, programmes, institutions, agreements and management systems developed are going to be put to good use in the subsequent project(s).

3. Processes affecting attainment of project results

15. **Preparation and Readiness**. Were the project's objectives and components clear, practicable and feasible within its timeframe? Were the capacities of executing agencies properly considered when the project was designed? Was the project document clear and realistic to enable effective and efficient implementation? Were the partnership arrangements properly identified and the roles and responsibilities negotiated prior to project implementation? Were counterpart resources (funding, staff, and facilities) and enabling legislation assured? Were adequate project management arrangements in place? Were lessons from other relevant projects properly incorporated in the project design? Were lessons learned and recommendations from Steering Committee meetings adequately integrated in the project approach? What factors influenced the quality-at-entry of the project design, choice of partners, allocation of financial resources etc.?

16. **Implementation Approach and Adaptive Management**. This includes an analysis of approaches used by the project, its management framework, the project's adaptation to changing conditions (adaptive management), the performance of the implementation arrangements and partnerships, relevance of changes in project design, and overall performance of project management. The evaluation will:

(a) Ascertain to what extent the project implementation mechanisms outlined in the project document have been followed and were effective in delivering project outputs and outcomes. Were pertinent adaptations made to the approaches originally proposed?

(b) Assess the role and performance of the units and committees established and the project execution arrangements at all levels;

(c) Evaluate the effectiveness and efficiency of project management and how well the management was able to adapt to changes during the life of the project;

(d) Assess the extent to which project management responded to direction and guidance provided by the Steering Committee and IA supervision recommendations;

(e) Identify administrative, operational and/or technical problems and constraints that influenced the effective implementation of the project, and how the project partners tried to overcome these problems.

17. **Stakeholder[17] Participation and Public Awareness**. The term stakeholder should be considered in the broadest sense, encompassing project partners, government institutions, private interest groups, local communities etc. The assessment will look at three related and often overlapping processes: (1) information dissemination between stakeholders, (2) consultation between stakeholders, and (3) active engagement of stakeholders in project decision making and activities. The evaluation will specifically assess:

(a) the approach(es) used to identify and engage stakeholders in project design and implementation. What were the strengths and weaknesses of these approaches with respect to the project's objectives and the stakeholders' motivations and capacities? What was the achieved degree and effectiveness of collaboration and interactions between the various project partners and stakeholders during the course of implementation of the project?

[17] Stakeholders are the individuals, groups, institutions, or other bodies that have an interest or stake in the outcome of the project. The term also applies to those potentially adversely affected by the project.

(b) the degree and effectiveness of any public awareness activities that were undertaken during the course of implementation of the project; or that are built into the assessment methods so that public awareness can be raised at the time the assessments will be conducted;
(c) how the results of the project (strategic programmes and plans, monitoring and management systems, sub-regional agreements etc.) engage the Yangtze River basin communities and their institutions in improved management and sustainable use of the natural resource base of the area.

18. The ROtI analysis should assist the consultants in identifying the key stakeholders and their respective roles, capabilities and motivations in each step of the causal pathway from activities to achievement of outputs and objectives to impact.

19. **Country Ownership and Driven-ness.** The evaluation will assess the performance of the Government of China:

(a) in how the Government has assumed responsibility for the project and provided adequate support to project execution, including the degree of cooperation received from the various contact institutions in the countries involved in the project and the timeliness of provision of counter-part funding to project activities;
(b) to what extent the political and institutional framework of the participating country has been conducive to project performance. Look, in particular, at the extent of the political commitment to enforce (sub-) regional agreements promoted under the project;
(c) to what extent the Government has promoted the participation of communities and their non-governmental organisations in the project; and
(d) how responsive the Government was to UNEP coordination and guidance and supervision.

20. **Financial Planning and Management**. Evaluation of financial planning requires assessment of the quality and effectiveness of financial planning and control of financial resources throughout the project's lifetime. The assessment will look at actual project costs by activities compared to budget (variances), financial management (including disbursement issues), and co-financing. The evaluation will:

(a) Verify the application of proper standards (clarity, transparency, audit etc.) and timeliness of financial planning, management and reporting to ensure that sufficient and timely financial resources were available to the project and its partners;
(b) Appreciate other administrative processes such as recruitment of staff, procurement of goods and services (including consultants), preparation and negotiation of cooperation agreements etc. to the extent that these might have influenced project performance;
(c) Present to what extent co-financing has materialized as expected at project approval (see Table 1). Report country co-financing to the project overall, and to support project activities at the national level in particular. The evaluation will provide a breakdown of final actual costs and co-financing for the different project components (see tables in Annex 3).
(d) Describe the resources the project has leveraged since inception and indicate how these resources are contributing to the project's ultimate objective. Leveraged resources are additional resources—beyond those committed to the project itself at the time of approval—that are mobilized later as a direct result of the project. Leveraged resources can be financial or in-kind and they may be from other donors, NGO's, foundations, governments, communities or the private sector.

21. **UNEP Supervision and Backstopping.** The purpose of supervision is to verify the quality and timeliness of project execution in terms of finances, administration and achievement of outputs and outcomes, in order to identify and recommend ways to deal with problems which arise during project execution. Such problems may be related to project management but may also involve technical/institutional substantive issues (e.g. the process leading up to the creation of the GCC) in which UNEP has a major contribution to make. The evaluators should assess the effectiveness of supervision and administrative and financial support provided by UNEP including:

(a) The adequacy of project supervision plans, inputs and processes;
(b) The emphasis given to outcome monitoring (results-based project management);

(c) The realism and candour of project reporting and ratings (i.e. are PIR ratings an accurate reflection of the project realities and risks);
(d) The quality of documentation of project supervision activities; and
(e) Financial, administrative and other fiduciary aspects of project implementation supervision.

22. **Monitoring and Evaluation**. The evaluation will include an assessment of the quality, application and effectiveness of project monitoring and evaluation plans and tools, including an assessment of risk management based on the assumptions and risks identified in the project document. The evaluation will assess how information generated by the M&E system during project implementation was used to adapt and improve project execution, achievement of outcomes and ensuring sustainability. M&E is assessed on three levels:

(a) *M&E Design*. Projects should have sound M&E plan to monitor results and track progress towards achieving project objectives. An M&E plan should include a baseline (including data, methodology, etc.), SMART indicators and data analysis systems, and evaluation studies at specific times to assess results. The time frame for various M&E activities and standards for outputs should have been specified. The evaluators should use the following questions to help assess the M&E design aspects:
    - Quality of the project logframe as a planning and monitoring instrument; analyse logframe in Project Document to report progress towards achieving project objectives;
    - SMART-ness of indicators: Are there specific indicators in the logframe for each of the project objectives? Are the indicators measurable, attainable (realistic) and relevant to the objectives? Are the indicators time-bound?
    - Adequacy of baseline information: To what extent has baseline information on performance indicators been collected and presented in a clear manner? Was the methodology for the baseline data collection explicit and reliable?
    - Arrangements for monitoring: Have the responsibilities for M&E activities been clearly defined? Were the data sources and data collection instruments appropriate? Was the frequency of various monitoring activities specified and adequate? In how far were project users involved in monitoring?
    - Arrangements for evaluation: Have specific targets been specified for project outputs? Has the desired level of achievement been specified for all indicators of objectives and outcomes? Were there adequate provisions in the legal instruments binding project partners to fully collaborate in evaluations?
    - Budgeting and funding for M&E activities: Determine whether support for M&E was adequately budgeted and was funded in a timely fashion during implementation.
(b) *M&E Plan Implementation*. The evaluation will verify that:
    - the M&E system was operational and facilitated timely tracking of results and progress towards projects objectives throughout the project implementation period;
    - annual project reports and Progress Implementation Review (PIR) reports were complete, accurate and with well justified ratings;
    - the information provided by the M&E system was used during the project to improve project performance and to adapt to changing needs;
    - projects had an M&E system in place with proper training, instruments and resources for parties responsible for M&E.

4. Complementarities with UNEP strategies and programmes

23. UNEP aims to undertake GEF funded projects that are aligned with its own strategies and programming frameworks. The evaluation should present a brief narrative on the following issues:

(a) *Linkage to UNEP's Expected Accomplishments and POW 2010-2011*. The UNEP MTS specifies desired results in six thematic focal areas. The desired results are termed Expected Accomplishments. Using the completed ROtI analysis, the evaluation should comment on whether the project makes a tangible contribution to any of the Expected

Accomplishments specified in the UNEP MTS. The magnitude and extent of any contributions and the causal linkages should be fully described. Whilst it is recognised that UNEP GEF projects designed prior to the production of the UNEP Medium Term Strategy (MTS)[18]/ Programme of Work (POW) 2010/11 would not necessarily be aligned with the Expected Accomplishments articulated in those documents, complementarities may still exist.

(b) *Alignment with the Bali Strategic Plan (BSP)*[19]. The outcomes and achievements of the project should be briefly discussed in relation to the objectives of the UNEP BSP.

(c) *Gender*. Ascertain to what extent project design, implementation and monitoring have taken into consideration: (i) possible gender inequalities in access to and the control over natural resources; (ii) specific vulnerabilities of women and children to environmental degradation or disasters; and (iii) the role of women in mitigating or adapting to environmental changes and engaging in environmental protection and rehabilitation. Appreciate whether the intervention is likely to have any lasting differential impacts on gender equality and the relationship between women and the environment. To what extent do unresolved gender inequalities affect sustainability of project benefits?

(d) *South-South Cooperation.* This is regarded as the exchange of resources, technology, and knowledge between developing countries. Briefly describe any aspects of the project that could be considered as examples of South-South Cooperation.

E. Resources and Schedule of the Evaluation

The Evaluation Team

24. For this evaluation, a team of 2 independent consultants will be contracted, preferably of mixed gender, at least one of which is from China. The evaluation team will combine the following expertise and experience:

25. **The Lead Evaluator** should not have been associated with the design and implementation of the project in a paid capacity. The evaluator will work under the overall supervision of the Chief, Evaluation Office, UNEP. The evaluator should have a Master's degree or higher in ecology, natural resource management or related field with at least 10 years of international experience in rehabilitation and conservation of natural ecosystem and their ecosystem functions, hydrology and flood control, and river basin management. The consultant should have the following minimum qualifications: (i) experience in soil erosion and river basin degradation issues; (ii) experience with management and implementation of research projects and in particular with research targeted at policy-influence and decision-making; (iii) experience with project evaluation. Knowledge of UNEP programmes and GEF activities is desirable. Knowledge of Chinese is an advantage. Fluency in oral and written English is a must.

26. **The Associate Evaluator** should not have been associated with the design and implementation of the project in a paid capacity. The evaluator will work under the overall supervision of the Chief, Evaluation Office, UNEP. The evaluator should have a Bachelor's degree or higher in ecology, natural resource management or related field with at least 5 years of international experience in rehabilitation and conservation of natural ecosystem and their ecosystem functions, hydrology and flood control, and river basin management. The consultant should have the following minimum qualifications: (i) experience in soil erosion and river basin degradation issues; (ii) familiarity with management and implementation of research projects and in particular with research targeted at policy-influence and decision-making; (iii) experience with project evaluation, (iv) familiarity with environmental policy and legislation of China. Knowledge of UNEP programmes and GEF activities is desirable. Fluency in oral and written English and Chinese is a must.

[18] http://www.unep.org/PDF/FinalMTSGCSS-X-8.pdf
[19] http://www.unep.org/GC/GC23/documents/GC23-6-add-1.pdf

27. The **Lead Evaluator** will be responsible for coordinating the data collection and analysis phase of the evaluation, and preparing the main report. (S)He will ensure that all evaluation criteria are adequately covered by the team.
28. The **Associate Evaluator** will prepare a technical working paper/draft report that will be submitted to the Lead Evaluator and to the Evaluation Office, the content of which will be agreed upon with the Lead Evaluator in consultation with EO. The Associate Evaluator is expected to contribute to selected sections of the main report as agreed with the Lead Evaluator, and provide constructive comments on the draft report prepared by the Lead Evaluator as well as contribute to the finalization of the report.
29. By undersigning the service contract with UNEP/UNON, the consultants certify that they have not been associated with the design and implementation of the project in any way which may jeopardize their independence and impartiality towards project achievements and project partner performance.

F. Evaluation Deliverables and Review Procedures

30. **The main evaluation report** should be brief (no longer than 40 pages – excluding the executive summary and annexes), to the point and written in plain English. The report will follow the annotated Table of Contents outlined in Annex 1. It must explain the purpose of the evaluation, exactly what was evaluated and the methods used (with their limitations). The report will present evidence-based and balanced findings, consequent conclusions, lessons and recommendations, which will be cross-referenced to each other. The report should be presented in a way that makes the information accessible and comprehensible. Any dissident views in response to evaluation findings will be appended in footnote or annex as appropriate.
31. **Submission of the final Terminal Evaluation report**. The final report shall be submitted by Email to:

Segbedzi Norgbey, Head
UNEP Evaluation Office
P.O. Box 30552-00100
Nairobi, Kenya
Tel.: (+254-20) 762 3387
Email: segbedzi.norgbey@unep.org

32. The Head of Evaluation will share the report with the following persons:

Maryam Niamir-Fuller, Director
UNEP/Division of GEF Coordination (DGEF)
P.O. Box 30552-00100
Nairobi, Kenya
Tel: (+254-20) 762 4686

Fax: (+254-20) 762 3158/ 4042

Email: Maryam.Niamir-Fuller@unep.org

Ampai Harakunarak, GEF IWs Task Manager
UNEP Regional Office for Asia and the Pacific
2nd Floor, Block B, UN Building
Rajdamnern Nok Avenue, Bangkok 10200 Thailand
Tel: +662 288 1977
Email: ampai.harakunarak@unep.org

Isabelle Vanderbeck, GEF IWs Task Manager
UNEP DEPI
900 17th Street, N.W., 2006 Washington D.C, USA
Tel: +(1-202) 971 1314
Email: isabelle.vanderbeck@unep.org

33. The final evaluation report will be published on the UNEP Evaluation Office web-site www.unep.org/eou and may be printed in hard copy. Subsequently, the report will be sent to the GEF Office of Evaluation for their review, appraisal and inclusion on the GEF website.
34. As per usual practice, the UNEP EO will prepare a **quality assessment** of the draft and final report, which is a tool for providing structured feedback to the Evaluators. The quality of the report will be assessed and rated against both GEF and UNEP criteria as presented in Annex 4.
35. The UNEP Evaluation Office will also prepare a **commentary** on the final evaluation report, which presents the EO ratings of the project based on a careful review of the evidence collated by the evaluation team and the internal consistency of the report. These ratings are the final ratings that the UNEP Evaluation Office will submit to the GEF Office of Evaluation.

E. Resources and Schedule of the Evaluation

36. This Terminal Evaluation will be undertaken by two independent evaluation consultants contracted by the UNEP Evaluation Office. The consultants will work under the overall supervision of the UNEP Evaluation Office and they will consult with the EO on any procedural and methodological matters related to the evaluation. It is, however, the consultants' individual responsibility to arrange for their travel, obtain documentary evidence, meetings with stakeholders, field visits, and any other logistical matters related to their assignment. The UNEP Task Manager, and regional and national project staff will provide logistical support (introductions, meetings, transport, lodging etc.) for the country visits where necessary, allowing the consultants to conduct the evaluation as efficiently and independently as possible.
37. The contract for the **Lead Evaluator** will begin on **20th June 2011** and end on **15th August 2011** (29 days spread over eight weeks; 11 days of travel to China and 18 days desk study). The Lead Evaluator will submit a draft report on **22nd July 2011** to UNEP/EO. Evaluation Office will circulate the draft to UNEP/DGEF Task Manager, and key representatives of the Executing Agencies and other stakeholders for review and comments. The project TM will forward the first draft report to any other relevant stakeholders as necessary. Stakeholders may provide feedback on any errors of fact and may highlight the significance of such errors in any conclusions and comments will be expected **within two weeks after the draft report** has been shared. Any comments or responses to the draft report will be sent to UNEP/EO for collation and the comments will be sent to the Lead Evaluator by **8th August 2011**. The Lead Evaluator will revise the draft following the comments and suggestions made by the EO after which, the consultant will submit the final report no later than **1 week** after reception of stakeholder comments by **15th August 2011.** In cases where some of the provided comments contradict the findings of the evaluation team and can, therefore, not be accommodated in the final report, the Lead Evaluator will prepare a **response to comments** which will be shared by the EO with the interested stakeholders to ensure full transparency.
38. The contract for the **Associate Evaluator** will begin on **20th June 2011** and end on **15th August 2011** (15 days spread over eight weeks; 9 days of travel to the project sites in China and 6 days desk study). The Associate Evaluator will submit a draft report on **13th July 2011** to the Lead Evaluator. The Lead Evaluator will compile the draft report and send it to the Evaluation Office for comments as explained above. The Associate Evaluator will provide her/his assistance to the Lead Evaluator in revising the report until the report has been approved as final by the Evaluation Office. Time scale for delivery of the report is as explained above.
39. Consultations will be held between the Evaluators, EO staff, the UNEP/GEF, UNEP/ROAP, and key members of the project execution team. These consultations will seek feedback on the proposed recommendations and lessons.

F. Schedule of Payment

40. The consultant shall select one of the following two contract options:

Lump-Sum Option

41. The evaluator will receive an initial payment covering the travel costs upon signature of the contract. A further 40% will be paid upon acceptance of the draft report. A final payment of 60% will be made upon satisfactory completion of work. The fee is payable under the individual Special Service Agreement (SSA) of the evaluator and is inclusive of all expenses such as travel, accommodation and incidental expenses.

Fee-only Option

42. The evaluator will receive an initial payment of 40% of the total amount due upon acceptance of the draft report. Final payment of 60% will be made upon acceptance and satisfactory completion of work. The fee is payable under the individual SSAs of the evaluator and is **NOT** inclusive of all expenses such as travel, accommodation and incidental expenses. Ticket and DSA will be paid separately.

43. In case, the evaluator cannot provide the products in accordance with the ToR, the timeframe agreed, or his products are substandard, the payment to the evaluator could be withheld, until such a time the products are modified to meet UNEP's standard. In case the evaluator fails to submit a satisfactory final product to UNEP, the product prepared by the evaluator may not constitute the evaluation report.

44. If the consultants fail to submit a satisfactory final product to UNEP in a timely manner, i.e. within one month after the end date of their contract, the Evaluation Office reserves the right to employ additional human resources to finalize the report, and to reduce the consultants' fees by an amount equal to the additional costs borne by the Evaluation Office to bring the report up to standard.

Annex 1. Annotated Table of Contents of the Main Report

Project Identification Table	An updated version of the table in I.A. of these TORs
Executive Summary	Overview of the main findings, conclusions and recommendations of the evaluation. It should encapsulate the essence of the information contained in the report to facilitate dissemination and distillation of lessons. The main points for each evaluation parameter should be presented here (with a summary ratings table), as well as the most important lessons and recommendations. Maximum 4 pages.
I. Evaluation Background	
A. Context	A. Overview of the broader institutional and country context, in relation to the project's objectives.
B. The Project	B. Presentation of the project: rationale, objectives, components, intervention areas and target groups, milestones in design, implementation and completion, implementation arrangements and main partners, financing (amounts and sources), modifications to design before or during implementation.
C. Evaluation objectives, scope and methodology	C. Presentation of the evaluation's purpose, evaluation criteria and key questions, evaluation timeframe, data collection and analysis instruments used, places visited, types of stakeholders interviewed, and limitations of the evaluation.
II. Project Performance and Impact A. Attainment of objectives and planned results B. Sustainability and catalytic role C. Processes affecting attainment of project results D. Complementarity with the UNEP Medium Term Strategy and Programme of Work	This section is organized according to the 4 categories of evaluation criteria (see section D of these TORs) and provides factual evidence relevant to the questions asked and sound analysis and interpretations of such evidence. This is the main substantive section of the report. Ratings are provided at the end of the assessment of each evaluation criterion.
III. Conclusions and Recommendations	
A. Conclusions	This section should summarize the main findings of the evaluation, told in a logical sequence from cause to effect. It is suggested to start with the positive achievements and a short explanation why these could be achieved, and, then, to present the less successful aspects of the project with a short explanation why. The conclusions section should end with the overall assessment of the project. Findings should be cross-referenced to the main text of the report (using the paragraph numbering). The overall ratings table should be inserted here (see Annex 2).

B. Lessons Learned	Lessons learned should be anchored in the main findings of the evaluation. In fact, no lessons should appear which are not based upon a conclusion of the evaluation. The number of lessons learned should be limited. Lessons learned are rooted in real project experiences, i.e. based on good practices and successes which could be replicated or derived from problems encountered and mistakes made which should be avoided in the future. Lessons learned must have the potential for wider application and use. Lessons should briefly describe the context from which they are derived and specify the contexts in which they may be useful.
C. Recommendations	As for the lessons learned, all recommendations should be anchored in the conclusions of the report, with proper cross-referencing, and their number should be limited to 3 or 4. Recommendations are actionable proposals on how to resolve concrete problems affecting the project or the sustainability of its results. They should be feasible to implement within the timeframe and resources available (including local capacities), specific in terms of who would do what and when, and set a measurable performance target. In some cases, it might be useful to propose options, and briefly analyze the pros and cons of each option.
Annexes	These may include additional material deemed relevant by the evaluator but must include: 1. Evaluation TORs 2. Evaluation program, containing the names of locations visited and the names (or functions) of people met 3. Bibliography 4. Summary co-finance information and a statement of project expenditure by activity (See annex of these TORs) 5. Details of the project's 'impact pathways' and the 'ROtI' analysis 6. Technical working paper 7. Brief CVs of the consultants TE reports will also include any formal response/ comments from the project management team and/ or the country focal point regarding the evaluation findings or conclusions as an annex to the report, however, such will be appended to the report by UNEP Evaluation Office.

Examples of UNEP GEF Terminal Evaluation Reports are available at www.unep.org/eou.

Annex 2. Evaluation ratings

The evaluation will provide individual ratings for the evaluation criteria described in section II.D. of these TORs. Some criteria contain sub-criteria which require separate ratings (i.e. sustainability and M&E). Furthermore, an aggregated rating will be provided for Relevance, effectiveness and efficiency under the category "Attainment of project objectives and results".
In the conclusions section of the report, ratings will be presented together in a table, with a brief justification cross-referenced to the findings in the main body of the report. Please note that the order of the evaluation criteria in the table will be slightly different from the order these are treated in the main report; this is to facilitate comparison and aggregation of ratings across GEF project evaluation reports.

Criterion	Summary Assessment	Rating
A. Attainment of project objectives and results		HS → HU (6-point)
1. Effectiveness		HS → HU (6-point)
2. Relevance		HS → HU (6-point)
3. Efficiency		HS → HU (6-point)
B. Sustainability of project outcomes		HL → HU (6-point)
1. Financial		HL → HU (6-point)
2. Socio-political		HL → HU (6-point)
3. Institutional framework		HL → HU (6-point)
4. Environmental		HL → HU (6-point)
C. Catalytic role		HS → HU (6-point)
D. Stakeholders involvement		HS → HU (6-point)
E. Country ownership / driven-ness		HS → HU (6-point)
F. Achievement of outputs and activities		HS → HU (6-point)
G. Preparation and readiness		HS → HU (6-point)
H. Implementation approach		HS → HU (6-point)
I. Financial planning and management		HS → HU (6-point)
J. Monitoring and Evaluation		HS → HU (6-point)
1. M&E Design		HS → HU (6-point)
2. M&E Plan Implementation		HS → HU (6-point)
3. Budgeting and funding for M&E activities		HS → HU (6-point)
K. UNEP Supervision and backstopping		HS → HU (6-point)

Most evaluation parameters - will be rated on a six-point scale as follows: Highly Satisfactory (HS); Satisfactory (S); Moderately Satisfactory (MS); Moderately Unsatisfactory (MU); Unsatisfactory (U); Highly Unsatisfactory (HU). Sustainability is rated on a four-point scale (see below).
Rating of Attainment of project objectives and results - A compound rating is given to the category based on the assessment of relevance, effectiveness and efficiency. This aggregated rating is not a simple average of the separate ratings given to the evaluation criteria, but an overall judgement by the consultants. Relevance and effectiveness, however, will be considered as critical criteria. This means that the aggregated rating for Attainment of objectives and results may not be higher than the lowest rating on either of these two criteria.
Ratings on sustainability - Each of the sub-criteria for sustainability of project outcomes will be rated as follows:

- Highly Likely (HL): There are no risks affecting this dimension of sustainability.
- Likely (L): There are minor risks that affect this dimension of sustainability.
- Moderately Likely (ML): There are moderate risks that affect this dimension of sustainability.
- Moderately Unlikely (MU): There are moderate risks that affect this dimension of sustainability.
- Unlikely (U): There are significant risks that affect this dimension of sustainability
- Highly Unlikely (HU): There are severe risks that affect this dimension of sustainability.

According to the GEF Office of Evaluation, all the dimensions of sustainability are deemed critical. Therefore, the overall rating for sustainability will not be higher than the lowest rating on the separate dimensions.

Ratings of monitoring and evaluation - The M&E system will be rated on M&E design, M&E plan implementation, and budgeting and funding for M&E activities (the latter sub-criterion is covered in the main report under M&E design) as follows:

- Highly Satisfactory (HS): There were no shortcomings in the project M&E system.
- Satisfactory(S): There were minor shortcomings in the project M&E system.
- Moderately Satisfactory (MS): There were moderate shortcomings in the project M&E system.
- Moderately Unsatisfactory (MU): There were significant shortcomings in the project M&E system.
- Unsatisfactory (U): There were major shortcomings in the project M&E system.
- Highly Unsatisfactory (HU): The Project had no M&E system.

M&E plan implementation will be considered critical for the overall assessment of the M&E system. Thus, the overall rating for M&E will not be higher than the rating on M&E plan implementation.

Annex 3. Project costs and co-financing tables

Project Costs

Component/sub-component	Estimated cost at design	Actual Cost	Expenditure ratio (actual/planned)

Co-financing

Co financing (Type/Source)	IA own Financing (mill US$)		Government (mill US$)		Other* (mill US$)		Total (mill US$)		Total Disbursed (mill US$)
	Planned	Actual	Planned	Actual	Planned	Actual	Planned	Actual	
– Grants									
– Loans									
– Credits									
– Equity investments									
– In-kind support									
– Other (*) - -									
Totals									

* This refers to contributions mobilized for the project from other multilateral agencies, bilateral development cooperation agencies, NGOs, the private sector and beneficiaries.

Annex 4. Quality Assessment of the Evaluation Report

All UNEP evaluation reports are subject to a quality assessment by the Evaluation Office. The quality assessment is used as a tool for providing structured feedback to the evaluation consultants. The quality of the draft evaluation report is assessed and rated against the following criteria:

GEF Report Quality Criteria	UNEP EO Assessment	Rating
A. Did the report present an assessment of relevant outcomes and achievement of project objectives in the context of the focal area program indicators if applicable?		
B. Was the report consistent and the evidence complete and convincing and were the ratings substantiated when used?		
C. Did the report present a sound assessment of sustainability of outcomes?		
D. Were the lessons and recommendations supported by the evidence presented?		
E. Did the report include the actual project costs (total and per activity) and actual co-financing used?		
F. Did the report include an assessment of the quality of the project M&E system and its use for project management?		
UNEP additional Report Quality Criteria		
G. Quality of the lessons: Were lessons readily applicable in other contexts? Did they suggest prescriptive action?		
H. Quality of the recommendations: Did recommendations specify the actions necessary to correct existing conditions or improve operations ('who?' 'what?' 'where?' 'when?)'. Can they be implemented? Did the recommendations specify a goal and an associated performance indicator?		
I. Was the report well written? (clear English language and grammar)		
J. Did the report structure follow EOU guidelines, were all requested Annexes included?		
K. Were all evaluation aspects specified in the TORs adequately addressed?		
L. Was the report delivered in a timely manner		

Quality = (2*(0.3*(A + B) + 0.1*(C+D+E+F))+ 0.3*(G + H) + 0.1*(I+J+K+L))/3

The Totals are rounded and converted to the scale of HS to HU

Rating system for quality of Terminal Evaluation reports: A number rating between 1 and 6 is used for each criterion: Highly Satisfactory = 6, Satisfactory = 5, Moderately Satisfactory = 4, Moderately Unsatisfactory = 3, Unsatisfactory = 2, Highly Unsatisfactory = 1.

Annex 5. Documentation list for the evaluation to be provided by the UNEP Task Manager

- Project design documents
- Project supervision plan, with associated budget
- Correspondence related to project
- Supervision mission reports
- Steering Committee meeting documents, including agendas, meeting minutes, and any summary reports
- Project progress reports, including financial reports submitted
- Cash advance requests documenting disbursements
- Annual Project Implementation Reports (PIRs)
- Management memos related to project
- Other documentation of supervision feedback on project outputs and processes (e.g. comments on draft progress reports, etc.).
- Extension documentation. Has a project extension occurred?
- Project revision documentation.
- Budget revision documentation.
- Project Terminal Report (draft if final version not available)

Annex 6. Introduction to Theory of Change / Impact pathways, the ROtI Method and the ROtI Results Score sheet

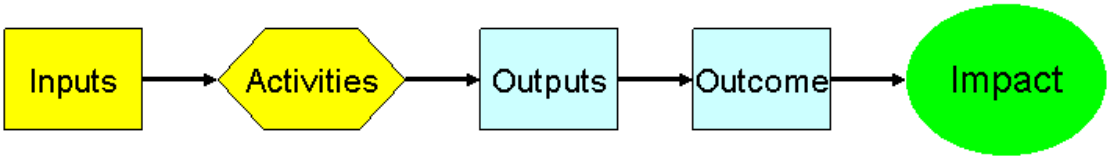
Terminal evaluations of projects are conducted at, or shortly after, project completion. At this stage it is normally possible to assess the achievement of the project's outputs. However, the possibilities for evaluation of the project's outcomes are often more limited and the feasibility of assessing project **impacts** at this time is usually severely constrained. Full impacts often accrue only after considerable time-lags, and it is common for there to be a lack of long-term baseline and monitoring information to aid their evaluation. Consequently, substantial resources are often needed to support the extensive primary field data collection required for assessing impact and there are concomitant practical difficulties because project resources are seldom available to support the assessment of such impacts when they have accrued – often several years after completion of activities and closure of the project.

Despite these difficulties, it is possible to enhance the scope and depth of information available from Terminal Evaluations on the achievement of results **through rigorous review of project progress along the pathways from outcome to impact**. Such reviews identify the sequence of conditions and factors deemed necessary for project outcomes to yield impact and assess the current status of and future prospects for results. In evaluation literature these relationships can be variously described as 'Theories of Change', Impact 'Pathways', 'Results Chains', 'Intervention logic', and 'Causal Pathways' (to name only some!).

Theory of Change (ToC) / impact pathways

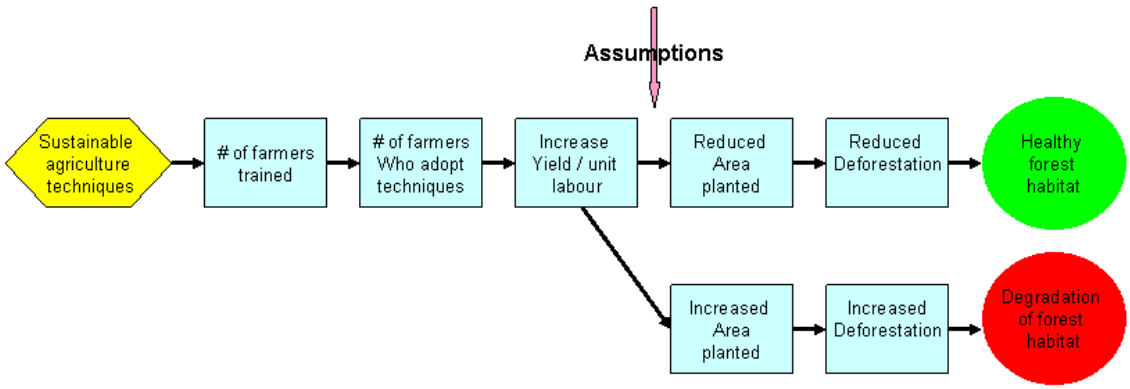
Figure 1 shows a generic impact pathway which links the standard elements of project logical frameworks in a graphical representation of causal linkages. When specified with more detail, for example including the key users of outputs, the processes (the arrows) that lead to outcomes and with details of performance indicators, analysis of impact pathways can be invaluable as a tool for both project planning and evaluation.

Figure 1. A generic results chain, which can also be termed an 'Impact Pathway' or Theory of Change.



The pathways summarise casual relationships and help identify or clarify the assumptions in the intervention logic of the project. For example, in the Figure 2 below the eventual impact depends upon the behaviour of the farmers in using the new agricultural techniques they have learnt from the training. The project design for the intervention might be based on the upper pathway assuming that the farmers can now meet their needs from more efficient management of a given area therefore reducing the need for an expansion of cultivated area and ultimately reducing pressure on nearby forest habitat, whereas the evidence gathered in the evaluation may in some locations follow the lower of the two pathways; the improved faming methods offer the possibility for increased profits and create an incentive for farmers to cultivate more land resulting in clearance or degradation of the nearby forest habitat.

Figure 2. An impact pathway / TOC for a training intervention intended to aid forest conservation.



The GEF Evaluation Office has recently developed an approach that builds on the concepts of theory of change / causal chains / impact pathways. The method is known as Review of Outcomes to Impacts (ROtI)[20] and has three distinct stages:

a. Identifying the project's intended impacts
b. Review of the project's logical framework
c. Analysis and modelling of the project's outcomes-impact pathways

The **identification of the projects intended impacts** should be possible from the 'objectives' statements specified in the official project document. The next stage is to **review the project's logical framework** to assess whether the design of the project is consistent with, and appropriate for, the delivery of the intended impact. The method requires verification of the causal logic between the different hierarchical levels of the logical framework moving 'backwards' from impacts through outcomes to the outputs; the activities level is not formally considered in the ROtI method[21]. The aim of this stage is to develop an understanding of the causal logic of the project intervention and to identify the key 'impact pathways'. In reality such process are often complex; they often involve multiple actors and decision-processes and are subject to time-lags, meaning that project impact often accrue long after the completion of project activities.

The third stage involves analysis of the 'impact pathways' that link project outcomes to impacts. The pathways are analysed in terms of the **'assumptions'** and **'impact drivers'** that underpin the processes involved in the transformation of outcomes to impacts via **intermediate states** (see Figure 3). Project outcomes are the direct intended results stemming from the outputs, and they are likely to occur either towards the end of the project or in the short term following project completion.

Intermediate states are the transitional conditions between the project's immediate outcomes and the intended impact. They are necessary conditions for the achievement of the intended impacts and there may be more than one intermediate state between the immediate project outcome and the eventual impact.

Impact drivers are defined as the significant factors that if present are expected to contribute to the realization of the intended impacts and **can be influenced** by the project / project partners & stakeholders. **Assumptions** are the significant factors that if present are expected to contribute to the realization of the intended impacts but are largely **beyond the control of the project** / project

[20] GEF Evaluation Office (2009). ROtI: Review of Outcomes to Impacts Practitioners Handbook. http://www.gefweb.org/uploadedFiles/Evaluation_Office/OPS4/Roti%20Practitioners%20Handbook%2015%20June%202009.pdf

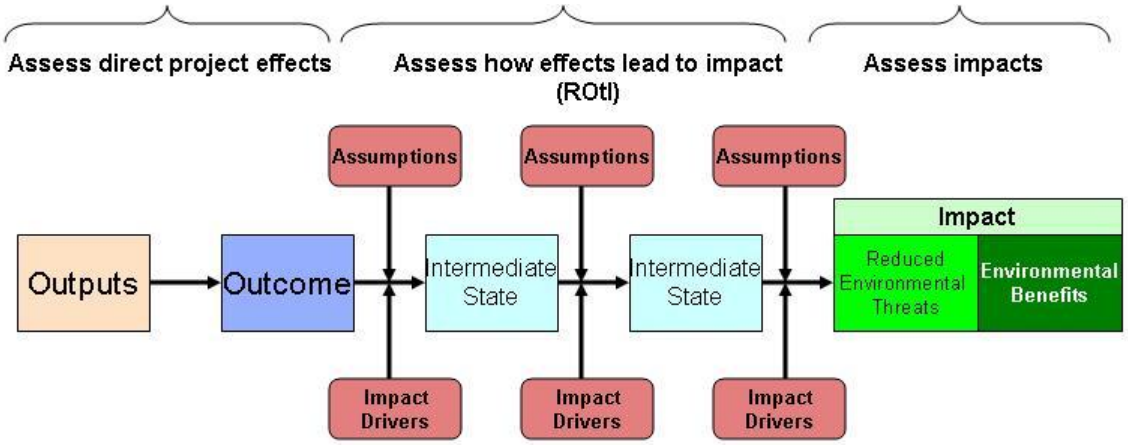
[21] Evaluation of the efficiency and effectiveness in the use of resources to generate outputs is already a major focus within UNEP Terminal Evaluations.

partners & stakeholders. The impact drivers and assumptions are ordinarily considered in Terminal Evaluations when assessing the sustainability of the project.

Since project logical frameworks do not often provide comprehensive information on the processes by which project outputs yield outcomes and eventually lead, via 'intermediate states' to impacts, the impact pathways need to be carefully examined and the following questions addressed:

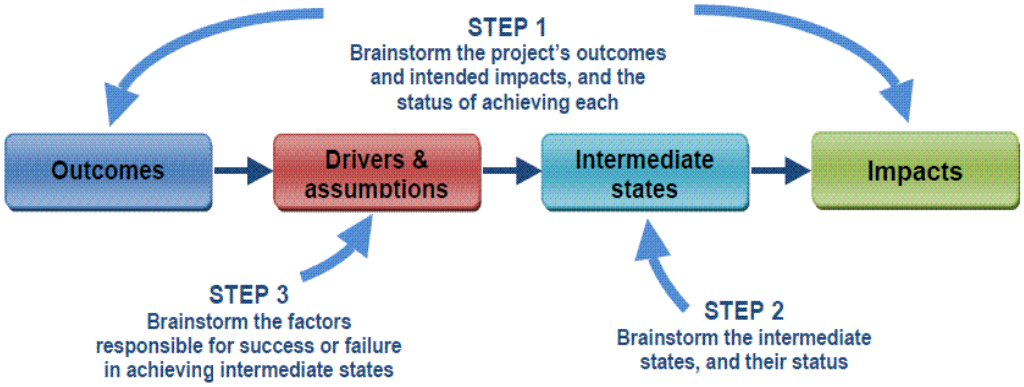
- Are there other causal pathways that would stem from the use of project outputs by other potential user groups?
- Is (each) impact pathway complete? Are there any missing intermediate states between project outcomes and impacts?
- Have the key impact drivers and assumptions been identified for each 'step' in the impact pathway.

Figure 3. A schematic 'impact pathway' showing intermediate states, assumptions and impact drivers (adapted from GEF EO 2009).



The process of identifying the impact pathways and specifying the impact drivers and assumptions can be done as a desk exercise by the evaluator or, preferably, as a group exercise, led by the evaluator with a cross-section of project stakeholders as part of an evaluation field mission or both. Ideally, the evaluator would have done a desk-based assessment of the project's theory of change and then use this understanding to facilitate a group exercise. The group exercise is best done through collective discussions to develop a visual model of the impact pathways using a card exercise. The component elements (outputs, outcomes, impact drivers, assumptions intended impacts etc.) of the impact pathways are written on individual cards and arranged and discussed as a group activity. Figure 4 below shows the suggested sequence of the group discussions needed to develop the ToC for the project.

Figure 4. Suggested sequencing of group discussions (from GEF EO 2009)



Once the theory of change model for the project is complete the evaluator can assess the design of the project intervention and collate evidence that will inform judgments on the extent and effectiveness of implementation, through the evaluation process. Performance judgments are made always noting that project contexts can change and that adaptive management is required during project implementation.

The ROtI method requires ratings for outcomes achieved by the project and the progress made towards the 'intermediate states' at the time of the evaluation. According the GEF guidance on the method; "*The rating system is intended to recognize project preparation and conceptualization that considers its own assumptions, and that seeks to remove barriers to future scaling up and out. Projects that are a part of a long-term process need not at all be "penalized" for not achieving impacts in the lifetime of the project: the system recognizes projects' forward thinking to eventual impacts, even if those impacts are eventually achieved by other partners and stakeholders, albeit with achievements based on present day, present project building blocks."* For example, a project receiving an "AA" rating appears likely to deliver impacts, while for a project receiving a "DD" this would seem unlikely, due to low achievement in outcomes and the limited likelihood of achieving the intermediate states needed for eventual impact (see Table 1).

Table 1. Rating scale for outcomes and progress towards 'intermediate states'

Outcome Rating	**Rating on progress toward Intermediate States**
D: The project's intended outcomes were not delivered	**D:** No measures taken to move towards intermediate states.
C: The project's intended outcomes were delivered, but were not designed to feed into a continuing process after project funding	C: The measures designed to move towards intermediate states have started, but have not produced results.
B: The project's intended outcomes were delivered, and were designed to feed into a continuing process, but with no prior allocation of responsibilities after project funding	B: The measures designed to move towards intermediate states have started and have produced results, which give no indication that they can progress towards the intended long term impact.
A: The project's intended outcomes were delivered, and were designed to feed into a continuing process, with specific allocation of responsibilities after project funding.	A: The measures designed to move towards intermediate states have started and have produced results, which clearly indicate that they can progress towards the intended long term impact.

Thus a project will end up with a two letter rating e.g. AB, CD, BB etc. In addition the rating is given a '+' notation if there is evidence of impacts accruing within the life of the project. The possible rating

permutations are then translated onto the usual six point rating scale used in all UNEP project evaluations in the following way.

Table 2. Shows how the ratings for 'achievement of outcomes' and 'progress towards intermediate states translate to ratings for the 'Overall likelihood of impact achievement' on a six point scale.

Highly Likely	Likely	Moderately Likely	Moderately Unlikely	Unlikely	Highly Unlikely
AA AB BA CA BB+ CB+ DA+ DB+	BB CB DA DB AC+ BC+	AC BC CC+ DC+	CC DC AD+ BD+	AD BD CD+ DD+	CD DD

In addition, projects that achieve documented changes in environmental status during the project's lifetime receive a positive impact rating, indicated by a "+". The overall likelihood of achieving impacts is shown in Table 11 below (a + score above moves the double letter rating up one space in the 6-point scale).

The ROtI method provides a basis for comparisons across projects through application of a rating system that can indicate the expected impact. However it should be noted that whilst this will provide a relative scoring for all projects assessed, it does not imply that the results from projects can necessarily be aggregated. Nevertheless, since the approach yields greater clarity in the 'results metrics' for a project, opportunities where aggregation of project results might be possible can more readily be identified.

Results rating of project entitled:							
Outputs	**Outcomes**	**Rating (D – A)**	**Intermediary**	**Rating (D – A)**	**Impact (GEBs)**	**Rating (+)**	**Overall**
1.	1.		1.		1.		
2.	2.		2.		2.		
3.	3.		3.		3.		
	Rating justification:		**Rating justification:**		**Rating justification:**		

Scoring Guidelines

The achievement of **Outputs** is largely assumed. Outputs are such concrete things as training courses held, numbers of persons trained, studies conducted, networks established, websites developed, and many others. Outputs reflect where and for what project funds were used. These were not rated: projects generally succeed in spending their funding.

Outcomes, on the other hand, are the first level of intended results stemming from the outputs. Not so much the number of persons trained; but how many persons who then demonstrated that they have gained the intended knowledge or skills. Not a study conducted; but one that could change the evolution or development of the project. Not so much a network of NGOs established; but that the network showed potential for functioning as intended. A sound outcome might be genuinely improved strategic planning in SLM stemming from workshops, training courses, and networking.

Examples

Funds were spent, outputs were produced, but nothing in terms of outcomes was achieved. People attended training courses but there is no evidence of increased capacity. A website was developed, but no one used it. (Score – D)

Outcomes achieved but are dead ends; no forward linkages to intermediary stages in the future. People attended training courses, increased their capacities, but all left for other jobs shortly after; or were not given opportunities to apply their new skills. A website was developed and was used, but achieved little or nothing of what was intended because users had no resources or incentives to apply the tools and methods proposed on the website in their job. (Score – C)

Outcomes plus implicit linkages forward. Outcomes achieved and have *implicit forward linkages* to intermediary stages and impacts. Collaboration as evidenced by meetings and decisions made among a loose network is documented that should lead to better planning. Improved capacity is in place and should lead to desired intermediate outcomes. Providing implicit linkages to intermediary stages is probably the most common case when outcomes have been achieved. (Score - B)

Outcomes plus explicit linkages forward. Outcomes have *definite and explicit forward linkages* to intermediary stages and impacts. An alternative energy project may result in solar panels installed that reduced reliance on local wood fuels, with the outcome quantified in terms of reduced C emissions. Explicit forward linkages are easy to recognize in being concrete, but are relatively uncommon. (Score A)

Intermediary stages:

The **intermediate stage** indicates achievements that lead to Global Environmental Benefits, especially if the potential for scaling up is established.

"Outcomes" scored C or D. If the outcomes above scored C or D, there is no need to continue forward to score intermediate stages given that achievement of such is then not possible.

In spite of outcomes and implicit linkages, and follow-up actions, the project dead-ends. Although outcomes achieved have *implicit forward linkages* to intermediary stages and impacts, the project dead-ends. Outcomes turn out to be insufficient to move the project towards intermediate stages and to the eventual achievement of GEBs. Collaboration as evidenced by meetings and among participants in a network never progresses further. The implicit linkage based on follow-up never materializes. Although outcomes involve, for

example, further participation and discussion, such actions do not take the project forward towards intended intermediate impacts. People have fun getting together and talking more, but nothing, based on the implicit forwards linkages, actually eventuates. **(Score = D)**

The measures designed to move towards intermediate states have started, but have not produced result, barriers and/or unmet assumptions may still exist. In spite of sound outputs and in spite of explicit forward linkages, there is limited possibility of intermediary stage achievement due to barriers not removed or unmet assumptions. This may be the fate of several policy related, capacity building, and networking projects: people work together, but fail to develop a way forward towards concrete results, or fail to successfully address inherent barriers. The project may increase ground cover and or carbon stocks, may reduce grazing or GHG emissions; and may have project level recommendations regarding scaling up; but barrier removal or the addressing of fatal assumptions means that scaling up remains limited and unlikely to be achieved at larger scales. Barriers can be policy and institutional limitations; (mis-) assumptions may have to do with markets or public – private sector relationships. **(Score = C)**

Barriers and assumptions are successfully addressed. Intermediary stage(s) planned or conceived have feasible direct and explicit forward linkages to impact achievement; barriers and assumptions are successfully addressed. The project achieves measurable intermediate impacts, and works to scale up and out, but falls well short of scaling up to global levels such that achievement of GEBs still lies in doubt. **(Score = B)**

Scaling up and out over time is possible. Measurable intermediary stage impacts achieved, scaling up to global levels and the achievement of GEBs appears to be well in reach over time. **(Score = A)**

Impact: Actual changes in environmental status

"Intermediary stages" scored B to A.

Measurable impacts achieved at a globally significant level within the project life-span. . **(Score = '+')**

Annex 7. List of Intended Additional Recipients of the Terminal Evaluation

Name	Affiliation	Email
Neeraj Negi	GEF Evaluation Office	neeraj_negi@yahoo.com
Government Officials		
Ms. Jieqing ZHANG	Director, Division of International Organizations and Conventions Department of International Cooperation Ministry of Environmental Protection 115, Xizhimennei, Nanxiaojie Beijing 100035 China	zhang.jieqing@mep.gov.cn
GEF Focal Point(s)		
Ms. Jiandi YE	Deputry Director, IFI Division III International Department Ministry of Finance San Li He St. Xichengqu Beijing – 100820 China	jdye@mof.gov.cn
Executing Agency		
Mr. Ruisheng YUE	Deputy Director-General, FECO, MEP	yue.ruisheng@mepfeco.org.cn
Mr. A Yan	Project Manager, FECO, MEP	a.yan@mepfeco.org.cn
Implementing Agency		
Maryam Niamir-Fuller	UNEP GEF Coordination Director	maryam.niamir-fuller@unep.org
Someone from DEPI Freshwater/ecosystem team (TBD)	UNEP DEPI, Nairobi	
Rodney Vorley	UNEP DEPI, Nairobi	Rodney.Vorley@unep.org

Annex 2 TE Mission programme

Itinerary of Activities of the Terminal Evaluation for GEF Yangtze Project

（20-30th September 2011）

Date	Venue	Key Interviewees	Activities
20th September ***(Tuesday)***	Beijing	National PMO	***am***: Arrival of PW ***PM:*** *Meeting with National PMO :* ● *TE team:* brief the TE goals, approaches and requirements; ● *PMO:* introduce the overall progresses, outcomes and impacts from the project;
21st September ***(Wednesday)***	Beijing	Members of PSC	Meeting with Ecological Department of Ministry of Environmental Protection, and Bureau of Science and Technology for Resource and Environment of Chinese Academy of Science (CAS);
		Experts of Project Technical Consultancy Group	Meeting with SAG members: ● Prof. He Jianbang, ● Mr. Li Yonggeng and M ● r. Rao Sheng
22nd September ***(Thursday***	Beijing	Chinese Research Academy of Environmental Sciences	Meeting with Ecological function monitoring and warning system team ● including database, systematic models, thematic graphs, research reports, monitoring findings, and presentation on ecosystem management information system for demo sites, etc.;
23rd September ***(Friday)***	Kunming	Yunnan Environmental Protection Department (YEPD), The Nature Conservancy (TNC)	***am:*** flight from Beijing to Kunming; Meeting with Yunnan Provincial Environmental Protection Department and TNC Yunnan Office: ● YEPD: Overall status of Laojunshan demo site; its in-depth impacts from Laojunshan demo site and its impacts on Yunnan Provincial Ecological Conservation Plans through IEM approaches;

			● TNC Yunnan Office: Biodiversity conservation and national park initiatives at Laojunshan; ***Night:*** flight from Kunming to Lijiang;
24th September ***(Saturday)***	Lijiang	Yulong County	Meeting at Yulong County Government: ● the overall progresses and outcomes from Laojunshan demo sites; IEM mechanism and planning at Laojunshan demo site; ● IEM for birds and economic development at Lashihai demo site; alternative livelihood development and ecological conservation planning at Laojunshan ecosystem; ● application presentation on IEM information system; ● Field visit to the Lashihai demo site, including ecological and beauty tourism, alternative energy initiatives and free talk with local villagers; ***Night:*** Flight from Lijiang to Chengdu;
25th September ***(Sunday)***	Chengdu	Chengdu Institute of Mountain Hazard and Environment (CAS)	Meeting with on ecosystem functional assessment team; ● the approaches and outcomes on ecosystem functional assessment, integrated ecosystem assessment and ecosystem service value assessment; the approaches and outcomes of EFCA planning;
26th September ***(Monday)***	Chengdu	Sichuan Provincial Environmental Protection Department	Meeting with Sichuan Provincial Environmental Protection Department: ● Overall briefing on Baoxing demo site; ● the impacts on Sichuan environmental protection and; ● IEM initiatives through the experiences of developing Baoxing demo site; ***pm:*** Ground trip to Baoxing Night: Hotel in Baoxing
27th September ***(Tuesday)***	Baoxing County	Baoxing County Government	***Am:*** Meeting at Baoxing Government: ● Baoxing County Government: overall progresses on Baoxing demo site; ● Baoxing County Development and Reform Commission: IEM planning on mineral industry development; ● Baoxing County Tourism Bureau: IEM planning on ecological tourism industry development; ● Fengtongzai Protection Area Management Bureau: biodiversity conservation and

			corridor development planning; ***PM:*** field visit to Baoxing Demo Site: ● Recycle mineral industrial zone ● Shunjiang Village on alternative planting and; ● Fengtongzai National Nature Reserve Exhibition; ***Night:*** Hotel in Baoxing
28th September ***(Wednesday)***	Baoxing County	Sichuan	***Am:*** Sightseeing the Baoxing demo site, including Tibetan traditional ecological tourism, nature ecological conservation and free talk with local villagers; ***pm:*** Ground trip to Ya'an and hotel in Chengdu ● Meeting with Vice Mayor of Ya'an Municipal Government; ● Meeting with the senior staff of Baoxing County Government;
29th September ***(Thursday)***	Beijing	Foreign Economic Cooperation Office (FECO), MEP	***am***: flight from Chengdu to Beijing; ***pm***: Debriefing meeting with National Project Director, Deputy Division Director of Division IV (FECO) and PMO Meeting with UNDP China and UNEP China on financial management and coordination
30th September ***(Friday)***	Beijing		***am***: International travel of PW

Annex 3 List of persons met

PMO/FECO:

Mr. Yuisheng Yue Deputy Director General, NPD of the Yangtze Project,

Mr. Zhidi Yu, Deputy Division Chief, FECO

Mr. Yan A, Project Manager of PMO,

Ms, Huizhi Wang, Project Technical Advisor, PMO

Ms. Yongjing Cao, Project Administrative Assistant, PMO

Mr. Yong Huang, Journalist, China Environmental News

PSC members

Ms. Xing Jing, Deputy Division Director, Ecological Function Division, Ecological Department, MEP

Dr. Hongchang Wei, Staff, Ecological Function Division, Ecological Department, MEP

Dr. Dong Niu, Deputy Director, Comprehensive Planning Division, Bureau of Science & Technology for Resource & Enviornment, CAS

Scientific Advisory Team members:

Mr. Jianbang He, Professor, Physical Geographic Information Institution, CAS

Dr. Yonggeng Li, Researcher, Botany Institution, CAS

Dr. Sheng Rao, Environmental Planning Center, MEP

Outcome 1: Ecosystem Function Assessment Outcome Team Members:

Mr. Wei Deng, Director Professor, Institute of Mountain Hazards and Environment, CAS

Mr. Yukuan Wang, Outcome Team Coordinator, Institute of Mountain Hazards and Environment, CAS

Dr. Bin Fu, Institute of Mountain Hazards and Environment, CAS

Ms. Pei Xu, Institute of Mountain Hazards and Environment, CAS

Mr. Zhaoxin Meng, Institute of Mountain Hazards and Environment, CAS

Mr. Wanzhe Zhu, Institute of Mountain Hazards and Environment, CAS

Mr. Ji Luo, Institute of Mountain Hazards and Environment, CAS

Mr. Xiongfei Cai, Institute of Mountain Hazards and Environment, CAS

Mr. Ruiyun Tian, Institute of Mountain Hazards and Environment, CAS

Mr. Yafeng Dai, Institute of Mountain Hazards and Environment, CAS

Mr. Kun Yan, Institute of Mountain Hazards and Environment, CAS

Ms. Linling Xin, Institute of Mountain Hazards and Environment, CAS

Ms. Jing Ren, Institute of Mountain Hazards and Environment, CAS

Ms. Ning Zhang, Institute of Mountain Hazards and Environment, CAS

Mr. Wei He, Sichuan Normal University;

Mr. Ping Ren, Sichuan Normal University;

Mr. Guiguo Jiang, Sichuan Normal University;

Mr. Wuxue Cheng, Sichuan Normal University;

Mr. Wende Cheng, Chengdu University of Technology;

Mr. Peihao Peng, Sichuan Normal University;

Mr. Guan Li, Sichuan Normal University;

Outcome 2: MEWS Outcome Team members:

Dr. De Su, Outcome Team Coordinator, Ecological Institute, Chinese Research Academy of Environmental Sciences

Ms. Yanhua Zhao, Ecological Institute, Chinese Research Academy of Environmental Sciences

Ms. Yuan Shi, Ecological Institute, Chinese Research Academy of Environmental Sciences

Mr. Daiqing Li, Ecological Institute, Chinese Research Academy of Environmental Sciences

Dr. Xintong Li, Professor, Geographic Science and Resource Institute, CAS

Dr. Liguang Ma, Geographic Science and Resource Institute, CAS

Dr. Yanrong Cao, Geographic Science and Resource Institute, CAS

Dr. Jian Wu, Assistant Prof., Renmin University of China

Outcome 3: Baoxing Demonstration Site (including Sichuan Province and Ya'an Municipality)

Mr. Qinjian Zhong, Deputy Director-General, Sichuan Provincial Environmental Protection Department;

Mr. Zhijun Shao, Deputy Director-General, Sichuan Provincial Environmental Protection Department;

Mr. Yuedong Li, Division Director, Ecological Division, Sichuan Provincial Environmental Protection Department;

Mr. Shuang Mao, Publicity and Education Division, Sichuan Provincial Environmental Protection Department;

Mr. Lin Li, Director, Sichuan Environmental Foreign Economic Center;

Ms.Yueyue Qin, Deputy Director, Sichuan Environmental Foreign Economic Center;

Ms. Yao Rao, Project Officer, Sichuan Environmental Foreign Economic Center;

Ms. Dan Zhou, Project Officer, Sichuan Environmental Foreign Economic Center;

Mr. Jiandong Huang, Vice Mayor, Ya'an Municipal Government;

Mr. Ziyi Zhu, Deputy Director, Ya'an Municipal Environmental Protection Bureau;

Mr. Bing Han, Party Secretary, Baoxing County Communist Party Commission;

Mr. Qiao Zheng, County Mayor, Baoxing County Government;

Mr. Wei Shuai, Deputy County Mayor, Baoxing County Government;

Mr. Xingyu Cheng, Director, Baoxing County Environmental Protection Bureau;

Ms. Mingwei Zhang, Project Manager, PMU;

Mr. Shun Jiang, Director, Baoxing Development and Reform Commission;

Mr. Lin Zuo, Deputy Director, Fengtongzai Nature Reserve Administration;

Mr. Shunjun Li, Director, Baoxing County Tourism Bureau;

Mr. Chunlin Ye, Party Secretary, Yaoji Township Party Commission;

Other 31 stakeholders from related county-level governmental agencies (county government, construction planning, land resources, tourism, forest, agriculture, education, cultural and media, water resource,), mineral industrial concentration zone, related township-level governments, related experts and PMU, as well as additional about 20 local villagers at Raoji Township and Shunjiang Village.

Luojunshan Demonstration Site (including Yunnan Province and Lijiang Municipality)

Mr. Bo Zhou, Division Director, YEPD;

Mr. Dong Yang, Deputy Sector Chief, YEPD;

Ms. Feng Zhao, Project Officer, Yunnan Environmental Project Management Center;

Mr. Xueyan Wu, Deputy Director, Yunnan Environmental Scientific Research Institute;

Ms. Yanming Yu, Chief Engineer, Yunnan Environmental Scientific Research Institute;

Mr. Yongcheng Long, Chief Advisor, TNC Yunnan Representative Office;

Ms. Yue Wang, Project Manager, TNC Yunnan Representative Office;

Mr. Yongsong Chen, Director, Yannan Ecological Network;

Ms. Shijian Yang, Professor, Yunnan Normal University;

Mr. Zhang Yang, Deputy Director, Lijiang Municipal Environmental Protection Bureau;

Ms. Ping Xiong, Sector Chief, Lijiang Municipal Environmental Protection Bureau;

Mr. Yuelong Yang, Project Officer, Lijiang Municipal Environmental Protection Bureau;

Mr. Gen Mu, Deputy Mayor, Yulong County Government;

Mr. Guozhong Zhao, Director, Yulong County Environmental Bureau;

Ms. Zhenming Zhang, Senior Engineer, Yunlong County Forestry Bureau;

Other 23 stakeholders from related county-level governmental agencies (development and reform, land resources, tourism, forest, agriculture, education, water resource, housing and construction), two demo site administrations (Laojungsha PA and Lashihai PA), related township-level governments, primary schools, as well as local villagers at Lashihai PA.

Annex 4: Documents reviewed

1. The Adjustment of Baseline Value for the Two Demo Sites and the reasons for the adjustment – November 2009;
2. Amendment to MOA between UNDP China and UNEP – November 2010;
3. Monitoring against the Logical Framework Matrix (Based on the Mid-term Review Report);
4. Minutes of Project Inception and 1st PSC Meeting - May 2006;
5. Minutes of the 2nd PSC Meeting – October 2007;
6. Minutes of the 3rd PSC Meeting – November 2009;
7. Half Yearly Progress Report – January-June 2006;
8. Half Yearly Progress Report – July-December 2006;
9. Half Yearly Progress Report – January-June 2007;
10. Half Yearly Progress Report – June-December 2006;
11. Half Yearly Progress Report – January-June 2008;
12. Half Yearly Progress Report – July-December 2009;
13. UNEP GEF PIR Fiscal Year 2007 – July 2006 – June 2007
14. UNEP GEF PIR Fiscal Year 2009 – July 2008 – June 2009
15. UNEP GEF PIR Fiscal Year 2010 – July 2009 – June 2010
16. UNEP GEF PIR Fiscal Year 2011 (Draft) – July 2010 – June 2011
17. Assessment of Ecosystem's Carbon Absorption Functions in the Upper Yangtze River Basin – September 2009;
18. Assessment of Ecosystem's Soil Conservation Functions in the Upper Yangtze Basin – October 2007;
19. Assessment of Ecosystem's Water Retention Functions in the Upper Yangtze Basin – October 2007;
20. Assessment of the Biodiversity Conservation Importance in the Upper Yangtze River Basin – September 2009;
21. Assessment report of land utilization and ecosystem productivity in the Upper Yangtze River Basin – September 2009;
22. Ecological Function Degradation and Threats Assessment in Upper Yangtze River Basin (Chinese)– December 2010;
23. Ecosystem Service Value Assessment in Upper Yangtze River Basin (Chinese)– December 2010;
24. Integrated Ecosystem Assessment in Upper Yangtze River Basin (Chinese)– December 2010;
25. Planning technical program for important ecological function protected areas of the Upper Yangtze River Basin (Chinese) – May 2011
26. Proposal for New EFCAs in Upper Yangtze River Basin (Chinese)– May 2011;
27. Ecosystem Function Monitoring Report in upper Yangtze Basin (Chinese)
28. Ecosystem Function Monitoring Report for two demo sites (Chinese)
29. IEM Plan for Laojunshan Nature Reserve (Chinese)
30. IEM Plan for Lashihai Nature Reserve (Chinese)
31. IEM Plan for Baoxing County (Chinese) – 2008
32. 30 Issues Newsletter from Baoxing PMU (Chinese)
33. 33 Issues Newsletter from Lijing PMU (Chinese);
34. Final Report from Baoxing Demo Site (Chinese) – September 2011;
35. Final Report from Lijiang Demo Site (Chinese) – September 2011

Annex 5: Interview questionnaire/guide with summary responses

Question	*Response*
A Attainment of objectives and planned results	
Overall Achievement of Project Objectives	
Has the project succeeded in developing methodologies to promote sustainable use of natural resources in areas critical to global environmental conservation and flood control?	- the project contributed to establish ecosystem function assessment and MEWS approaches, in particular the innovative index and models for quantitative calculating on ecosystem carbon sequestration, ecological service value and ecosystem function degradation and threats assessment, as well as well embedding the related elements into the integrated ecosystem function assessment system through interactive exploring between academic research and practical application. The approaches could provide the baseline calculating method for catchment, and promote the development of ecological compensation; (sources: PMO, CRAES, Chengdu Institute for Mountain Hazards and Environment, two demo sites, PSC members and SAG members)
Has the project succeeded in developing methodologies to promote rehabilitation and conservation of ecosystem functions in degraded protected areas where the globally significant environment is at stake?	- the project succeed in seeking the harmonious development between eco-social development and ecosystem protection through using IEM approaches in line with local context, likely alternative livelihood, alternative energy, cross-sectoral coordination and collaboration, capacity development and public awareness raising. (Sources: PMO, CRAES, Renmin University of China, two demo sites, PSC and SAG members)
To what extent has the project strengthened capacity of the central ads well as local government bodies concerned, to enable them to apply developed methodologies to the region as a whole in a flexible and sustainable manner?	- SuperMap Deskpro software selection for continuous and replication purpose (CRAES); - Simplified and user-friendly interface management system development (CRAES); - 12 times of training for local staff to use the management information system (CREAS);
Did the project succeed in responding to the socio-economic needs of the people living in the Yangtze River Basin area?	- Income increasing through community-based ecotourism development, alternative livelihood, alternative energy and capacity development (PMO and two demo sites).
Was the site selection for the demonstration projects the best possible and were valuable and applicable lessons drawn, which are likely to be	- Provided practical support to the “National Programme of Key Ecological Function Conservation Areas " (PMO)

Question	*Response*
applied in integrated management of future Ecosystem Function Conservation Areas and protected areas? Is the approach used by the project replicable?	- provided practical support to the " National Plan of Main Functional Zones" in the Yangtze River basin; (PMO and MEP) - Effective use of the methodologies and expert teams of the Yangtze Project has led to the input 1.8 billion RMB to the "County-level Ecological Monitoring in the Disaster Prone Areas" (PMO, MEP, CRAES, Chengdu Mountain Institute and SAG) - Indicators and methodologies of ecological functions assessment are adopted by the national survey "Remote Sensing Survey of Changes in the National Environment in Ten Years (2000-2010) " (PMO, MEP) - Provide advice and suggestions directly to the Chinese State Council and relevant ministries (PMO) - First state key laboratory of national ecological function assessment; (CRAES, PMO) - Establish the ecological function monitoring and early warning center for the upper catchment of Yangtze River; (CRAES, PMO) - Expansion of catchment ecological monitoring - the establishment of Jinggangshan ecological monitoring station; (CRAES, PMO) - MEWS and management information system were used in some outside project area already, including Ruergai Wetland, 2 plateau lakes in Yunnan provinces (Lugu Lake and Chenghai Lake) and Qinghai Province (Yunnan EPD and PMO);
What would have happened without the support of the GEF and other project partners?	- N.A.
Achievement of Outputs and Activities	
Did the project achieve all planned outputs? If not please explain	- The EFCA planning proposal was developed but delay delivered due to: earthquake in 2008 and budget payment. Also, the recommendation is too ambitious.
How did the outputs contribute to the outcomes?	- See part A.
Can the project impacts be quantified? (e.g., number of percent increase in water retention,	- Yes, through the quantitative the index and models of the MEWS and management information and field survey, significant

Question	*Response*
reductions in sediment loads, areas of effective protection of prime wildlife habitat, number of carbon sequestration and improved local resident's income)	impacts were shown through data analysis between baseline Yr 2005 and Yr 2010 (Yr 2009 for the field survey). (PMO, CRAES and Renmin University of China, two demo sites)
What are the global environmental, local environmental socio-economic benefits from IEM at Baoxing demonstration site?	- County-based administrative IEM approaches including cross-sectoral coordinating and collaboration, alternative planting, alternative energy, eco-tourism, mineral industrial development plan, participatory management, capacity development, awareness raising and using MEWS and management information system; (Baoxing demo site and PMO)
What are the global environmental, local environmental socio-economic benefits from IEM at Laojunshan demonstration site?	- township-based IEM approaches (natural boundary) including cross-township coordinating and collaboration, alternative energy and livelihood, eco-tourism, capacity development, awareness raising and using MEWS and management information system; (Laojunshan demo site and PMO)
Relevance	
How did the project's objectives fit within the priorities of local/national government?	- Highlighted the ecosystem service function; - Provide doable tools and methodologies for national policies enforcement, likely MEWS and EFCA assessment; - Promote PSE policy development and provide calculation approaches; - Promote the change from thematic management to IEM; - A series of local policies/plans were elaborated with involvement of the demo IEM practice.
Was the project relevant to community needs and environmental priorities? Give examples of how the project was relevant	- Income increasing through community-based ecotourism development, alternative livelihood, alternative energy and capacity development (PMO and two demo sites). ■ For example, two-day eco-tourism income at peak season could catch the annual income beforehand. (a Tibetan resident, Jiuluo Village, Yaoji Township, Baoxing County);
How did the project's objectives fit with UNEP national/regional priorities?	- N.A. due to no UNEP national strategy at present (UNEP China)
How did/will the project's objectives and outcomes contribute to GEF's global objectives?	- See PIR 2011

Question	*Response*
What was the relevance of the two demonstration projects to achieving the overall objective of the project?	- The two demo-sites established an IEM management mechanism. The IEM plans were developed and adopted. IEM approaches and technical backstopping tools were adapted at two demo site for showcase harmonious development in light of ecological conservation and eco-social development, and further replication at regional, national and global levels.
Effectiveness	
To what extent have the project objectives been met?	- All project objectives are fully meeting.
What are the key factors that contributed to the success?	- Well project design, - Well logframe; - Well implementation and management; - Strong PMO team and right institution/person selection; - Meet local needs between ecosystem protection and economic development
What factors caused problems for project implementation?	- Payment delay; - Earthquake in May 2008;
How were the risks and assumptions managed?	- Some payment delay had negative impacts on the implementation, and the PMO and local PMU changed in work plan and method of implementation.
Were there clear strategies for long-term risk mitigation related to sustainability? Give examples of strategies	- For example, Baoxing incorporated the IEM concepts into the 5 years overall development plan; - Three key project staffs were promoted to senior positions in light of the importance and sustainability of the IEM concepts and practice.
How effective were the two demonstration projects in meeting the overall objectives of the project?	- Showcase on IEM approaches in practice; - Using the MEWS and management information system; - Replication the demo experience to other areas;
Efficiency	
How was the project cost effective?	- Low cost in light of fruitful outputs, outcomes, even impacts…EFCA assessment, MEWS and IEM information system, a series of successful IEM practice, with corresponding policies development and replication to other areas, also following up activities by the government in light of their success and impacts;

Question	*Response*
What caused delays in the project implementation?	- Earthquake in May 2008 led to 8 months suspension for about 8 months; - Payment delay due to disbursement procedure arrangement result in no any GEF-fund payment in 15 months.
What was the contribution of cash and in-kind co-financing to project implementation?	See financial sheet (PMO)
To what extent did the project leverage additional resources?	See financial sheet (PMO)
Give examples of how adaptive management approaches were utilised to enhance the efficiency of the project implementation. .	- Because the low efficiency in GEF fund allocation, some activities had to be conducted under co-financing support and all four sub-contractors have prepaid for project activities. Also, workplan and method of implementation were modified in a flexible way. - The original baseline was modified because it could not be monitored in light of local context and tool developed.
Were financial and accounting systems in place adequate for project management and producing accurate and timely reports?	No (PMO, UNEP China and UNDP China)
Were progress reports produced accurately, timely and according to reporting requirements?	N.A.
Was procurement carried out making efficient use of project resources, and how?	No
How was results-based management used during project implementation?	- Excellent. The project are well designed, well implemented with right persons and well monitored toward the project objectives.
How was local capacity utilised at the demonstration site? How will these approaches be applied at a regional & national level?	- The local capacity was improved through a series of training and public awareness raising activities, as well as incorporated into IEM practices and technical tool backstopping from outsides.
B Sustainability and catalytic role	
Socio-political sustainability	
Are there any social or political risks that may jeopardize sustenance of project outcomes?	N.A.
What level of political commitment is there to	- Ya'an Municipality: replicate lessons from

Question	*Response*
build on the results of the project?	Baoxing Model to other counties in the municipality (Mr. Jiandong Huang, Vice Mayor) - Baoxing County: seeking for in-depth IEM support and willingness to participate in international experience sharing (Mr. Bing Han, Party Secretary, Baoxing CCP commission)
How did the project contribute to improving the socio-economic conditions of the local population?	- Income increment through alternative livelihood, eco-tourism, alternative energy, public awareness raising and capacity development; - Better ecological status;
Financial sustainability	
Did the project adequately address financial and economic sustainability issues?	Yes,
What is the likelihood that financial and economic resources will be available once GEF assistances stop?	- the broader inputs from the GOC, - PST - Alternative livelihood - Mainstream IEM into development plan;
Institutional sustainability	
What is the risk that the level of stakeholder ownership will be insufficient to allow the project outcomes to be sustained?	- Data updated continuously at demo sites;
What is the likelihood that institutional and technical achievements, legal frameworks, policies and governance structures and processes will allow for the project outcomes/benefits to be sustained?	- First state key laboratory of national ecological function assessment - Establish the ecological function monitoring and early warning center for the upper catchment of Yangtze River; - Expansion of catchment ecological monitoring - the establishment of Jinggangshan ecological monitoring station;
Were the results of the project well assimilated by organisations?	
Is there evidence that project partners will continue their activities beyond the project support?	
What evidence is there for local ownership of the project initiatives and results?	
Were laws/policies changed to address sustainability of issues addressed by the project?	

Question	*Response*
Environmental sustainability	
Did the project help to influence environmental and development policies plans in the pilot reserves?	Yes, IEM concepts and approaches were incorporated into the overall development plans and thematic plans;
Did the project provide opportunities to work with other similar/neighbouring reserves on common issues and problems?	MEWS and IEM information system were used to Jinggansha Municipality, Ruoergai Wetland, and Qinghai Province, as well as Luguhu Lake and Chenhai Lake in Yunnan Province;
Are the any environmental risks that can undermine the future flow of project environmental benefits?	N.A.
Are there any new environmental threats that emerged in the project lifetime?	Earthquake in May 2008.
Catalytic role and replication	
How have the pilot projects stimulated further investments and what influence have they had on national policies and programmes>	EFCA and MEWS: - Effective use of the methodologies and expert teams of the Yangtze Project has led to the initiation of the “Ecological Function Assessment and Monitoring in the Disaster Prone Areas". MEP started to compile the “Ecological Function Assessment and Supervision Management Plan at Disaster Prone Area”. The outputs from the project including the ecological function assessment and monitoring methodologies were utilized for the Management Plan; The Management plan will cover 2,058 counties at 29 provinces in China, including the counties where the small and mid size rivers with flood control requirement are more than 200 KM2 in basin area, also the counties located at key river and suffered from the flood geographic hazards; It is noted that the ecological function monitoring methodologies including water resource retention and soil stabilization under the Monitoring for disaster prone zones are developed on the basis of the MEWS from
Have any of the pilot efforts been replicated in other reserves? Example?	
Are there efforts underway to find new sources of funding to continue and expand the activities that were started under the Yangtze project?	
Was there a replication strategy developed and how is this to be used?	
Has the project stimulated similar activities funded by national resources?	
What are the experiences / lessons from the project that are relevant for future projects with similar objectives?	
What are the key lessons and linkages from this project with the proposed project ‘*Ecosystem-based Management of Water Systems in the*	

Question	*Response*
Upper Yangtze River Basin.' What are the main differences>	the Yangtze Project. - Indicators and methodologies of ecological functions assessment are adopted by the national survey "Remote Sensing Survey of Changes in the National Environment in Ten Years (2000-2010) ". - The project also provided technical support to the CCICED annual meeting in 2010. At the Ecological Function Service and Management Strategy in China, the thematic report from CCICED to the State Council, it is recommended to convene county-level cross-sectoral coordination integration for ecosystem management projects in light of the best practice at Baoxing. Yunnan Province: - IEM concepts and approaches were incorporated to Ecological Functional Zoning of Yunnan, Biodiversity Species Conservation and Utilization Plan Outline of Yunnan, Biodiversity Action Plan in Northwest Yunnan, Colorful Yunnan Ecological Conservation Plan Outline and Other key provincial environmental protection plans; - Apart from Luguhu Lake and Chenghai Lake, the IEM information system is planning to replicated to additional 7 plateau lakes of Yunnan; - As part of the project, TNC Yunnan Representative Office worked on Laojunshan National Park for practical and policy exploration; Sichuan Province: - Release the Sichuan Biodiversity Action Plan including planned projects in September 2011; - Sichuan Province Government stipulated the file to replicate Baoxing IEM Models to other counties for ecological conservation purpose; - IEM concepts and approaches were mainstreamed into the county development plan and thematic plans for year 2011-2015.
C Processes affecting attainment of project results	
Preparation and readiness	

Question	*Response*
Were the project's objectives and components clear, practicable and feasible within its timeframe?	Yes
Were the capacities of executing institutions and counterparts properly considered when project was designed?	Yes
Were sustainability issues integrated into the design and implementation of the project?	Yes
Implementation approach and adaptive management	
What recommendations from the MTE have been implemented and what benefits did these have?	See the attachment – *fulfilment against the Mid-Term Review report*
Have there been issues (and what were they) that could not be addressed by the PMO? How were these resolved?	FECO internal control procedures and GEF fund payment delay;
Has the logframe been used as a component of the 'results based management' of the project?	Yes
Have project steering committee meeting decisions been followed?	Yes
Effectiveness and efficiency and adaptability of project *management* – day to day as well	Yes
Has the project developed an 'Exit Strategy' to define the future activities following the GEF support as an aid to sustainability?	The GEF 5 project preparation: - Water ecosystem; - Biodiversity conservation; - International water - On the basis of the good fundamentals for in-depth and new initiatives;
Stakeholder participation and public awareness	
Were the mechanisms put in place by the project for identification and engagement of stakeholders in each participating pilot reserves successful? What were strengthens and weakness?	Yes, in particular the community-based participatory approaches were used to select targeted households for alternative livelihoods and alternative energy support. Also, the cash-for-work scheme were introduced and all related information were made know to public (Shunjiang village, Baoxing County)

Question	*Response*
Were collaboration/interaction between the various project partners and institutions during the course of implementation of the project effective?	Four levels coordination: National PSC, SAG and PMO, Provincial LSC, Municipal LSC, and County LSC and PMU; Collaboration between MEWS and EFCA teams, also with two demo site;
Were public awareness activities undertaken during the course of implementation of the project effective?	Yes, Laojunshan Demo-site – Training more than 800 people directly and more than 10,000 indirectly. The project organize a series of significant replication efforts including public the "Laojunshan IEM Rules", discuss the IEM and biodiversity conservation, exhibit the outcomes from the biodiversity conservation at Northwest part of Yuanan Province, and disseminate the lessons from Laojunshan demo site. – In light different targeted people developed and released the Laojunshan IEM Reading Materials for governmental staff, guideline for community-based residents, and training textbook for public schools, and in particularly convened environmental awareness and education activities at primary and middle schools. Baoxing Demo-site – the project carried out 42 times public awareness activities on IEM concepts and approaches, biodiversity, policies and laws, alternative livelihood, ecosystem monitoring, eco tourism, community-based co-management, useful technologies for vegetable and fruit planting; released 10,000 copies of training materials; trained staff 500 person times, trained students 5000 person times, trained farmed 22,000 person times; the public ecological conservation awareness was improved to 80%. This provided solid bases for IEM practice and ecological county development. – Compiled and released 7,000 copies of training materials including the training textbook for primary students, training materials for farmers, training material for staff; compiled and released 2,000 copies CD-ROM for primary students; printed more

Question	*Response*
	than 6,000 copies of project briefing materials; printed 2,000 copies of conference outcomes on the project; printed training materials on practical technologies on economic corps cultivation; procured 350 copies for training on practical technologies; developed 15 sets of educational boards; – Mass media: the Comprehensive channel of China Center TV (CCTV), the News Channel of CCTV, English Channel of CCTV reported the IEM models at Baoxing Demo Site under Yangtze Project in 8 mins; the report stated that IEM could leverage and integrate the balance between protection and development including poverty alleviation, and show the advantage for replication and adaptation in a broader range.
What are the perceived benefits from active stakeholder involvement in the project?	N.A.
Country ownership and driven-ness	
Was the project effective in catalyzing action taken by the authorities in the pilot reserves that received assistance from the project? What actions?	See above
What is the level of national/sub-national commitment to facilitating financial and in-kind contributions to the project?	See financial sheet
Are there government budgetary allocations towards continuation of the project activities?	See above
Gender and vulnerability	
Did the project take account of gender issues and vulnerable people at the demonstration sites? What actions were taken?	N.A.

Monitoring and Evaluation	
Did the project have an M&E system in place with proper training for parties responsible for M&E activities?	Yes, - M&E plan with quantitative indicators -
Was there a complete, accurate baseline in response to the M&E system?	The baseline were modified and approved at the PSC meeting;
Was the information provided by the M&E system used during the project to improve the project performance and to adapt to changing needs?	Yes, the MEWS tools are used to monitor the performance, as well as baseline adjustment;
How was the M&E system reported and what actions were taken to revise elements when/if needed?	- The reports were reviewed at the PSC and LSC meetings; - Delivered to UNEP as part of PIR; - 33 issues newsletters by Laojunshan demo site since Jan. 2008; - - 31 issues newsletters by Baoxing demo site; - Baseline was modified in November 2009;
Financial Planning and Controlling	
What was the actual final costs compared to the budgets?	See the financial sheet
Were there major findings from financial audit?	Two audits were organized by the PMO;
What were the main sources of co-financing – how much and timeliness?	See the financial sheet
UNEP supervision and Backstopping	
Were there any critical managerial or administrative events in the course of the project implementation and how were they addressed?	N.A.
What was UNDP country office's role/response (timeliness, effectiveness)?	GEF fund payment and verfication
Was the response from UNEP timely with regards to addressing issues of concern?	N.A.
D Complementarities with the UNEP Medium Term Strategy and Programme of Work	

Linkage to UNEP's expected accomplishments and PoW 2010-2011	
How relevant were the project contribution to UNEP's expected accomplishments and PoW 2010-2011	N.A.
What changes have been made to UNEP's PoW as a result of lessons learned from this project?	N.A.
Alignment with the Bali Strategic Plan	
How relevant were the project contribution to the objectives of UNDP BSP?	N.A.
What were the key contributions to the BSP?	N.A.
South – south co-operation	
How relevant were the project's contribution to the S-S cooperation?	N.A.
What were the project's contributions to S-S co-operation?	N.A.

Annex 6: Summary of project expenditure and co-financing

GEF Project Costs

Component/sub-component	ProDoc * USD	Estimated cost at design – PMO working figures* USD	Reported Actual Cost (June 2011) USD	Expenditure ratio (actual/planned) USD
Outcome 1: IEM assessment	475,000	403,000	341,877	85%
Outcome 2: MEWS	471,000	427,500	326,238	76%
Outcome 3: Baoxing demonstration site	1,247,400	1,061,100	653,418	62%
Outcome 4: Laojunshan demonstration site	918,260	744,810	428,377	58%
PMO/National Support	538,000	1,013,250	703,283	70%
Total	**3,649,660**	**3,649,660**	**2,453,194**	**67%**

* The differences between 'ProDoc' and 'Estimated at design' are due to the PMO costs also containing large procurement items for the two demonstration projects and training / dissemination for Outcome 1 and 2. Both sets of figures are used in the ProDoc and reflect the costs per outcome and costs per sub-contractor. They are presented here for completeness.

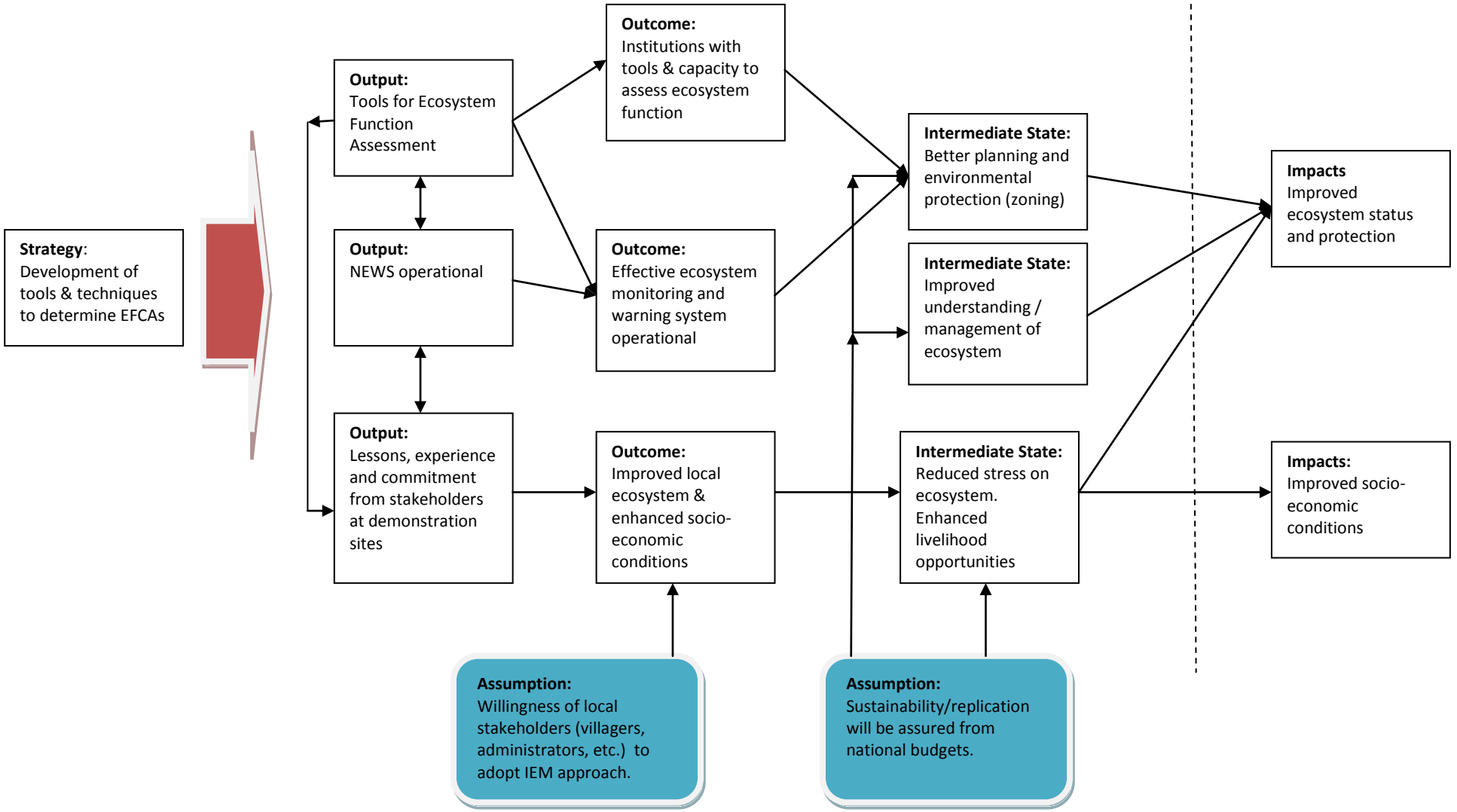
Co-financing

Co financing (Type/Source)	IA own Financing (mill US$)		Government (mill US$)		Other TNC (mill US$)		Total (mill US$)		Total Disbursed (mill US$)
	Planned	**Actual**	**Planned**	**Actual**	**Planned**	**Actual**	**Planned**	**Actual**	
– Grants	0.25	0.25	-	0.97	0.49	0.57	0.74	1.54	1.54
– Loans									
– Credits									
– Equity investments									
– In-kind support			20.01	26.92	2.0	2.0	22.01	28.92	28.92
– Other (*) - -									
Totals	**0.25**	**0.25**	**17.31**	**27.89**	**2.49**	**2.57**	**22.95**	**30.46**	**30.46**

UNEP input assisted with the vulnerability assessment for the basin as well as the Dongting lake area

Annex 7: ROtI – Review of Outcomes to Impacts analysis

Generalised Theory of Change figure for GEF Yangtze Project



Main Outputs	Outcomes	Rating (D-A)	Drivers and Assumptions	Intermediate States	Rating (D-A)	Impacts	Evidence of Impacts	Overall Rating
1. Upper Yangtze ecosystem analysed 2. EFCA planning elaborated 3. EFCA assessment and designation mechanism established 4. Dissemination of EFCAs	**Outcome 1:** Fully developed institutional mechanism for assessment of ecosystem functions and planning for Ecosystem Function Conservation Areas in the upper Yangtze basin	**A**	• Demand by GoC to improved ecosystem management • GoC/MEP accepts approach and continues support • Trained staff remain in-post • Local/regional/national acceptance of IEM • Approval of final project outputs by PSC/LSC • MEP resources available for replication	• Approach of IEM has been acknowledged by GoC as an important tool for ecosystem management and vision on EFCA replication • IEM and assessment skills developed and strengthened at local/regional and national level. • Strategies developed for detailed assessments undertaken have validated approach and been accepted at the local/regional level • Acceptance of IEM principles by wide range of stakeholders • Visualisation tools already utilised by EPBs at two demonstration sites	**A**	• Improved ecosystem management demonstrated at both demonstration sites with reduced stress and enhanced ecosystem function status as a result of project. Reduced sediment loads, increased water retention capacity, biodiversity conservation actions. • PES being strengthened as a result of Project • Actions at a local regional level on improving biodiversity have resulted in improved socio-economic conditions through the development of alternative livelihoods	**+**	**AA**
5. Independent evaluation with MEWS elaborated	**Outcome 2:** Established ecosystem-	**A**	• Demand by GoC to improve ecosystem management	• MEWS capacity in research institutes and management	**A**	• MEWS utilised in two pilot demonstrations	**+**	**AA**

Main Outputs	Outcomes	Rating (D-A)	Drivers and Assumptions	Intermediate States	Rating (D-A)	Impacts	Evidence of Impacts	Overall Rating
and monitored 6. Management plans with MEWS at two demonstration sites improved 7. Ecosystem function at two demonstration sites monitored by MEWS 8. Experience of the demonstration level MEWS disseminated	function-based Monitoring and Early Warning System (MEWS) in the upper Yangtze basin		• Resources available to continue data collection and enhancement of the MEWS system. • Acceptance of the MEWS presentation interface by local stakeholders. •	at local/regional and national level developed. • MEWS accepted as a tool to assist ecosystem assessment and management addressing the priority issues of the project. • MEWS system has already been extended to view water quality issues (Yunnan Province) • MEWS assisted with post-earthquake actions in Sichuan Province.		• MEWS assisted in post-earthquake actions • MEWS enabling development of ecosystem zones for future development areas • MEWS mainstreamed as management tool within the city of Lijiang (for the Laojunshan pilot area) and within Ya'an for the overall management of Baoxing country. Clear statements for further extension of IEM/MEWS to other counties		
9. Institutional framework for IEM at two demonstration sites established 10. Participatory IEM plan elaborated 11. Existing sector programmes mainstreamed 12. Pilots implemented at demonstration site (buffer zones, corridors, alternative livelihoods, awareness raising)	**Outcome 3:** Demonstrated efficiency and effectiveness in achieving global environmental benefits and local environmental and socio-economic benefits by taking an integrated ecosystem management approach in the Baoxing demonstration site	**A**	• Baoxing county level administration desire to improve ecosystem including the protection of key species (e.g. Giant Panda) and to enhance socio-economic conditions of population. • Activities supported by the project will continue with regional support • Support of local population • Continuing demand for ecotourism and organic	• Significant support and acceptance of IEM and alternative livelihoods by local population and local/regional environmental managers • Adoption of IEM for planning / zoning of local industry • Improved environmental management by local industry • 111 small marble processing industries closed	**A**	• Improved local livelihoods in wide range of demonstration activities. • Reduced industrial pollution from marble factories by adoption of IEM • Income in one village increased by factor of 8 through change of crops; • Tibetan village income significantly increased through tourism with 7000 – 800 tourists per weekend;	**+**	**AA**

Main Outputs	Outcomes	Rating (D-A)	Drivers and Assumptions	Intermediate States	Rating (D-A)	Impacts	Evidence of Impacts	Overall Rating
13. Experience of EFCA, MEWS and IEM disseminated			• products • Restructuring of local industry (marble mining/utilisation) to adopt IEM principles continues to be seen as a benefit	• as result of IEM implementation • Creation of 8 corridors between protected areas/national parks • 1300 biogas plants installed reducing demand for firewood • Villages protection biodiversity • 500,000 ecotourists visit YaoJi Tibetan village.		• Benefits of ecotourism resulted in reduced pressure on wood for fuel and recognition of importance of protecting environment by local population.		
14. Institutional framework for IEM at two demonstration sites established 15. Participatory IEM plan elaborated 16. Existing sector programmes mainstreamed 17. Pilots implemented at demonstration site (buffer zones, corridors, alternative livelihoods, awareness raising) 18. Experience of EFCA, MEWS and IEM disseminated	**Outcome 4:** Demonstrated efficiency and effectiveness in achieving global environmental benefits and local environmental and socio-economic benefits by taking an integrated ecosystem management approach in the Laojunshan demonstration site	**A**	• Willingness of local population and administration to further support IEM approach.. • Continuing demand for ecotourism and organic products • Local residents are interested in utilising alternative fuels and protecting environment	• Conversion of local farmland to wetlands • Sustainability plan for IEM developed • Local support for bird protection (as aid to ecotourism) • Reduced demand for firewood • Increased number of tourists for local villages 316,000 in 2011 • 80% of villages (one example) work for 'tourism'	**A**	• 1488 biogas plants and 2400 ovens and solar heaters have reduced demand for wood by 12,889 m^3 per year (equivalent to 750 ha of forest) • Reduced CO_2 emissions by 181 tonnes/year • Income for 5 villages: increased from 162 M RMB/year (2005) to 310 M RBM /year (2011) • Forest coverage: increased 67.8% (2005) to 74.7% (2011) • Snub-nosed monkey: 80 (2005) to 290 (2011)	**+**	**AA**

Main Outputs	Outcomes	Rating (D-A)	Drivers and Assumptions	Intermediate States	Rating (D-A)	Impacts	Evidence of Impacts	Overall Rating
						• Water-birds : 25,000 (2005) to 100,000 (2011)		
Overall Rating /Justification	Project has achieved (and exceeded in some cases) expected outputs. Approximately 50% additional co-finance attracted to project. Clear evidence of changes at both the very local level (the benefits of conservation/biodiversity were clear to the local inhabitants) and the local/regional environmental management at the EPBs through the adoption of IEM principles and the utilisation of the MEWS to further manage the environment. Clear evidence through project impacts of improvements of local socio-economic conditions and reduced ecosystem stress by providing alternative fuel sources and through improved awareness of the benefits and importance of ecosystem (as shown in project surveys)						**+**	**AA**

Annex 8 Assessment of Project Logical Framework achievements

Project objective and Outcomes	Description of indicator	Baseline level	End-of-project target	Project Assessment of Level at 30 June 2011	Evaluators' comments
Objective Promote and implement an Integrated Ecosystem Management approach for the upper Yangtze River basin, to reduce sediment loads, increase catchments water retention capacity, conserve and sustainably use biological diversity, and decrease net Green House Gas emission, while improving socio-economic conditions	1. Until June 2010, finish comprehensive ecosystem function(EF) assessment	There was no comprehensive assessment of ecosystem functions in the upper part of the Yangtze River basin.	Recommendation of provincial and national EFCA establishment, mapping of ecological function.	• Assessments of 4 key ecosystem functions (water conservation, soil retention, biodiversity, and carbon sequestration) in the upper Yangtze River basin have been completed; • Assessment of another 3 aspects (Land use, root cause for degradation and economic value) of ecosystems in the upper Yangtze River Basin has also been completed; • Integrated assessment of ecosystem functions in the Upper Yangtze River has been completed; • Recommendation for potential EFCA sites has been	• The project developed three innovative indicators and models including carbon sequestration, ecological degradation and threats and ecosystem service value. Furthermore, this led to more comprehensive integrated ecosystem function assessment methodologies for practical and decision making. • The methodologies also provide quantitative tools to calculate the PES decision making and control. • Anyway, due to too ambitious and payment delay, the proposals for EFCAs were developed but failed to delivered and approved by

Project objective and Outcomes	Description of indicator	Baseline level	End-of-project target	Project Assessment of Level at 30 June 2011	Evaluators' comments
				drafted; • Assessment of social, economic and land use & productivity in Baoxing county have been completed as a test in upper Yangtze (funded by PMO).	the authorities so far. • Note that some additional outputs were developed, including EFCA systematic and simplified tool with visualized three-dimension and user-friendly interface. • The system was tested and supported the IEM practice in Baoxing county.
	2. Until June, 2008, establish MEWS in demo sites of Laojunshan and Baoxing	Very limited sectoral monitoring programmes existed.	A fully developed MEWS design for upper basin EFCAs, and establishment of MEWS in demo site	• A fully developed MEWS design, which include indicator system, database, models and a information system have been established for the upper Yangtze River Basin; • Monitoring work was conducted in 2010 in the upper Yangtze and two demo-sites. Results were compared with 2005 baselines and MEWs reports of 4 key	• MEWS team worked closely with the EFCA assessment team to sharing the tools and indicators and models. Thus, it also possessed the same advantage in the field of innovative thematic indicators, models and comprehensive integration. • Additional output - IEM information system with simplified, three-dimension visualized and user-friendly

Project objective and Outcomes	Description of indicator	Baseline level	End-of-project target	Project Assessment of Level at 30 June 2011	Evaluators' comments
				ecosystem function were completed; • MEWS system has been established and is running in the two demo-sites. Training materials have been developed and local users have been trained to use MEWS and related information system to monitor ecosystem functions.	interface was developed; • Also, in light of sustainability, the system is based on the SuperMap software, with China-own copyright and discount price for in-depth development and broader replication. • MEWS and IEM information system have be applied in the IEM practice at two demo sites in the field of comparison of baseline (2005) and Yr 2010. • More than 200 person times were trained at 12 times of training session for better using the system. • As supplement, a social-economic survey was convened for better present the Social-economic results

Project objective and Outcomes	Description of indicator	Baseline level	End-of-project target	Project Assessment of Level at 30 June 2011	Evaluators' comments
					from IEM practice. • Note that the MEWS approaches were backstopped for a series of ecosystem policies and decision making and enforcement initiatives.
	3. In June 2007, IEM plan in demo site is drafted, in June 2008, it will be revised and finalized in June, 2009.	No IEM plan existed.	Demo sites will be fully operated as EFCAs with fully established management structure and plan	IEM plans in the 2 demonstration sites are both finalized approved. The application of these plans is being undertaken. The promotion and replication of the IEM plan will be conducted according to the results of the pilot application.	• IEM plans for two demo were approved by the provincial LSC in the 1st of 2011, a little later than that anticipated; • The IEM practice was carried out at the demo sites since 2007 and 2008. • The key elements of IEM practices including cross-sector coordination, alternative livelihoods, alternative energy, eco-tourism, hydro power plant, marble industries adjustment, capacity development and

Project objective and Outcomes	Description of indicator	Baseline level	End-of-project target	Project Assessment of Level at 30 June 2011	Evaluators' comments
					public awareness raising; • The results showed significant impacts/changes on social, economic and ecological development, like income increment, better ecology status. • Also, the NEWS and EFCA assessment was used in the demo site for better IEM practice.
Outcome 1: Fully developed institutional mechanism for assessment of ecosystem functions and planning for Ecosystem Function Conservation Areas in the upper Yangtze basin	1. Year 5. Situation on the ecosystem functions in the upper Yangtze River Basin in 2010 is estimated and disseminated.	No integrated assessment and dissemination of ecosystem functions.	Ecological function reports and maps of the upper basin of the Yangtze River.	• Assessments of 4 main ecosystem functions (water conservation, soil retention, biodiversity, and carbon sequestration) in the upper Yangtze River basin are completed; • Assessment of land use & productivity; threats and root cause for degradation of critical ecosystem functions	• The project developed three innovative indicators and models including carbon sequestration, ecological degradation and threats and ecosystem service value. Furthermore, this led to more comprehensive integrated ecosystem function assessment methodologies for practical and decision making.

Project objective and Outcomes	Description of indicator	Baseline level	End-of-project target	Project Assessment of Level at 30 June 2011	Evaluators' comments
				are also completed; • Integrated assessment of ecosystem functions in the upper Yangtze River is completed; • Assessment of social economic and land use & productivity in Baoxing county (co-financing).	• The methodologies also provide quantitative tools to calculate the PES decision making and control. • Note that some additional outputs were developed, including EFCA systematic and simplified tool with visualized three-dimension and user-friendly interface.
	2. Year 5. The Government of China and five provincial governments establish a streamlined and science-based EFCA assessment and designation mechanism, based on the existing EFCA Evaluation Committee and Groups	The EFCA Evaluation Committee at the national level and EFCA Evaluation Groups at the provincial level exist but its decision is not based on the science based assessment	Established EFCA assessment mechanism	• In the two provinces where the project demo sites are located, EFCA mechanism has been promoted. • National EFCA implementation was progressing. The Vice Premier Li specially gave direction that EFCA should be continue to be implemented by MEP, and the National 11th Five Plan (2005-2010) emphasizes the importance of IEFA (Important ecological	• Uncertainty the relationship between EFCA and IEFA, as well as the attribution to IEFA from the project in this item.

Project objective and Outcomes	Description of indicator	Baseline level	End-of-project target	Project Assessment of Level at 30 June 2011	Evaluators' comments
				function area) establishment.	
	3. Year 5. SEPA and five provincial governments decide to establish 6-8 new EFCAs in locations consistent with the recommendations of the assessment.	Two national-level EFCAs in the upper Yangtze basin, but no EFCA established base on scientific assessment	New EFCA recommendation	• Development Priority Zoning Plan was approved by the GoC on 12 June 2010. • Based on the results of ecosystem functions assessments, in line with the approved Development Priority Zoning Plan, a report to recommend new EFCAs have been drafted.	• Anyway, due to too ambitious and payment delay, the proposals for EFCAs were developed but failed to delivered and approved by the authorities so far. • Note that the EFCA assessment system was tested and supported the IEM practice in Baoxing county.
Outcome 2: Established ecosystem-function-based Monitoring and Early Warning System (MEWS) in the upper Yangtze basin	1. By the end of Yr.4, an independent evaluation indicates the usefulness of MEWS in managing the two demo sites.	No management oriented EFCA MEWS established.	MEWS establishment	• MEWS platforms in demonstration sites of Laojunshan and Baoxing were established. • Local users were trained to use MEWS and related information system to monitor ecosystem functions and concerned biodiversity information. • A complete round of	• MEWS team worked closely with the EFCA assessment team to sharing the tools and indicators and models. Thus, it also possessed the same advantage in the field of innovative thematic indicators, models and comprehensive integration. • Additional output - IEM information system with simplified, three-dimension

Project objective and Outcomes	Description of indicator	Baseline level	End-of-project target	Project Assessment of Level at 30 June 2011	Evaluators' comments
				monitoring carried out in 2010.	visualized and user-friendly interface were developed; • MEWS and IEM information system have be applied in the IEM practice at two demo sites in the field of comparison of baseline (2005) and Yr 2010. • More than 200 person times were trained at 12 times of training session for better using the system. • As supplement, a social-economic survey was convened for better present the Social-economic results from IEM practice. • Note that the MEWS approaches were backstopped for a series of ecosystem policies and decision making and

Project objective and Outcomes	Description of indicator	Baseline level	End-of-project target	Project Assessment of Level at 30 June 2011	Evaluators' comments
					enforcement initiatives.
	2. By the end of Yr. 4, the Local Steering Committees in two demonstration sites approve the revised management plans of the two demo sites, based on the results provided by MEWS.	No management plans on EFCA demo sites.	The IEM management plans are approved by the LSCs at the two sites and the implementation of the plans are initiated.	• IEM plans in the 2 demonstration sites were finalized and approved by the LSCs. • Application of these plans is being undertaken, plans will be revised based on the monitoring results provided by MEWS.	• More than 200 person times were trained at 12 times of training session for better using the system. • As supplement, a social-economic survey was convened for better present the Social-economic results from IEM practice. • Note that the MEWS and IEM information system embedded the IEM elements in response to local context and into other thematic plans and comprehensive development plan.
	3. Based on the capacity of upper Yangtze MEWS established and connected with provincial and local	Ecological monitoring capacity at the Chinese Research Academy of Environmental	Replication of MEWS in other basins	• MEWS platform established in the Chinese Research Academy of Environmental Sciences • MEWS will be updated	• In light of sustainability, the system is based on the SuperMap software, with China-own copyright and discount price for in-depth development and broader

Project objective and Outcomes	Description of indicator	Baseline level	End-of-project target	Project Assessment of Level at 30 June 2011	Evaluators' comments
	nodes (By Year 2), by the end of Yr. 5, SEPA initiates to cover other river basins in the MEWS system	Sciences may exist.		replication of MEWS in other basins will be initiated.	replication. • MEWS system was replicated to Qinghai province, Jingganshan City and Ruoergai Wetland.
	4. By the end of Yr. 5, at least 3 non-project EFCAs and PAs request MEWS support for their management.	No request for MEWS support.	Replication of MEWS in EFCAs or PAs	• The approach developed by MEWS will be applied to the'Monitoring and Evaluation of Ecosystem Functions in the Disaster Prone Areas in China Programme' , total funding for the programme is 1.8billion RMB in the 12th five-year plan period (2011-2015).	• The Ecosystem Monitoring for Disaster Prone Counties will be backstopped by the MEWS methodology. • Also, MEWS and IEM information system was used in Luguhu Lake and Chenghai Lake already, and is planning to replicate to another 7 lakes in Yunnan Province.
Outcome 3: Demonstrated efficiency and effectiveness in achieving global environmental	1. By the end of Year 4, the LSC is official accepted, by local and provincial governments, as a long-standing IEM-	No IEM plan existing.	IEM –EFCA, committee approves the IEM plan.	• IEM plan in Baoxing demonstration site was finalized and approved by LSC. • IEM mechanism established to monitor resources and	• Three levels LSC at the provincial, municipal and county levels were established for better coordinating IEM plan and its implementation;

Project objective and Outcomes	Description of indicator	Baseline level	End-of-project target	Project Assessment of Level at 30 June 2011	Evaluators' comments
benefits and local environmental and socio-economic benefits by taking an integrated ecosystem management approach in the Baoxing demonstration site	EFCA committees with EFCA management responsibility.			industries development • An IEM committee was established by county government.	• Cross-sectoral coordination at Baoxing county was established for mainstreaming IEM plan and its practice. • The Baoxing County IEM Plan (administrative base) was approved by the provincial LSC at the 1st half of 2011, through more than three years practice in Baoxing County. • Also, IEM concepts and approaches were mainstreamed into the county-level development plan (2011-2015); and the PMU played as the leading coordinating agency to develop the plan.
	2. By the end of Yr. 4, at least 3 non-project EFCAs use the results and experiences of		Experience replication expected.	• Implementation of IEM plan and the other related plans in Baoxing demonstration site, with a strategy to further	• Ya'an Municipality is planning to replicate Baoxing IEM Model to all the counties in

Project objective and Outcomes	Description of indicator	Baseline level	End-of-project target	Project Assessment of Level at 30 June 2011	Evaluators' comments
	the Baoxing demo site.			promote and upscale the implementation.	the municipality. • Sichun Province Government stipulated official file to highlight that IEM concepts should be mainstreamed into the ecology development in all municipalities and counties in the province.
	3. Comparing initial conditions (Year 1 Baseline) and those prevailing by the end of the project; the Baoxing demonstration site shows: (a) a 5-10% average increase in water retention capacity; (b) 20-40% average reductions in	(a) baseline: 2,800-3,300 m3/ha (b) baseline: 0.8 kg of sediments in 1 m3 of run-off; (c) baseline: 39,567 ha (d) baseline: 1,045,407 tons C per year)	Improved Ecological and economic environment	• The PAs rebuilding project aiming to restore the ecosystem. This project will conserve 210,000 ha areas of natural reserve and increase water retention capacity with 15,000,000 m^3(co-financing) . • Forestry project to restore vegetation and plant trees on mountains. The project increased the water retention capacity with 260,000 m^3. • Improved local economics and increased local community's income with	- The assessment could not answer the achievement of indicators. - County-based administrative IEM approaches including cross-sectoral coordinating and collaboration, alternative planting, alternative energy, eco-tourism, marble industrial development plan, participatory management, capacity development, awareness raising and using MEWS and management information system;

Project objective and Outcomes	Description of indicator	Baseline level	End-of-project target	Project Assessment of Level at 30 June 2011	Evaluators' comments
	sediment loads; (c) effective protection of 15,000 ha of wildlife habitat; (d) additional carbon sequestration equivalent to 22,950 tons C; and, (e) Average income of local residents in the demonstration site increased by 5%.	(e)baseline: 2,259 Chinese Yuan)		alternative livelihood development and agricultural technology training. The project also helped local community to develop alternative livelihood.	■ Improved local livelihoods in wide range of demonstration activities. ■ Reduced industrial pollution from marble factories by adoption of IEM; ■ Income in Shunjiang village increased by through change of crops; ■ Raoji Tibetan Township income significantly increased through tourism with 7000 – 8000 tourists per weekend; ■ Benefits of ecotourism resulted in reduced pressure on wood for fuel and recognition of importance of

Project objective and Outcomes	Description of indicator	Baseline level	End-of-project target	Project Assessment of Level at 30 June 2011	Evaluators' comments
					protecting environment by local population.
Outcome 4:[22] Demonstrated efficiency and effectiveness in achieving global environmental benefits and local environmental and socio-economic benefits by taking an integrated ecosystem management approach in the Laojunshan demonstration site	1. By the end of Year 4, the LSC is official accepted, by local and provincial governments, as a long-standing IEM-EFCA committees with EFCA management responsibility.	No IEM plan existing.	IEM –EFCA, committee	• IEM plan was approved at local city/ county-level leader group meeting and LSC.	- Three levels LSC at the provincial, municipal and county levels were established for better coordinating IEM plan and its implementation; - Cross-sectoral coordination at Yulong County was established for mainstreaming IEM plan and its practice. - The Laojunshan and Lashihai IEM Plans (natural boundary including several townships) were approved by the provincial LSC at the 1st half of 2011, through more than three years practice in Yulong

A. [22] Add rows if your project has more than 5 Outcomes

Project objective and Outcomes	Description of indicator	Baseline level	End-of-project target	Project Assessment of Level at 30 June 2011	Evaluators' comments
					County.
	2. By the end of Yr. 4, at least 3 non-project EFCAs use the results and experiences of the Laojunshan demonstration site.		Experience replication	• EFCA IEM mechanism has been promoted to another 5 sub-prefectures in North-west Yunnan Province though forums and meetings convened by the project.	- IEM concepts and approaches were incorporated to Ecological Functional Zoning of Yunnan, Biodiversity Species Conservation and Utilization Plan Outline of Yunnan, Biodiversity Action Plan in Northwest Yunnan, Colorful Yunnan Ecological Conservation Plan Outline and Other key provincial environmental protection plans; - Apart from Luguhu Lake and Chenghai Lake, the IEM information system is planning to replicated to additional 7 plateau lakes of Yunnan;

Project objective and Outcomes	Description of indicator	Baseline level	End-of-project target	Project Assessment of Level at 30 June 2011	Evaluators' comments
					- As part of the project, TNC Yunnan Representative Office worked on Laojunshan National Park for practical and policy exploration;
	3. Comparing initial conditions (Year 1 Baseline) and those prevailing by the end of the project; the Laojunshan demonstration site shows: a) a 5% average increase in water retention capacity (b) about 20% average reductions in sediment loads (baseline: 1.2 kg of sediments in 1m3 of runoff), (c) effective	(a) 2,100-2,600 m3/ha); (b) (baseline: 1.2 kg of sediments in 1m3 of runoff), (c)(baseline: 6,523 ha) (e) (baseline: 1,014 Yuan)	Improved Ecological and economic environment	• 1,488 biogas digesters installed in the demo site. • 2,418 households were equipped with energy saving stoves. • 1,589 households were equipped with solar heater. • More than 300 ha farmland were returned to wetland in Lashihai. • Ecotourism and ecological culture were developed in Lashi Town to alleviate livelihood issues. • 1,235 villagers engaging in ecotourism, with 2,860 Yuan	- township-based IEM approaches (natural boundary) including cross-township coordinating and collaboration, alternative energy and livelihood, eco-tourism, capacity development, awareness raising and using MEWS and management information system; ■ 1488 biogas plants and 2400 ovens and solar heaters have reduced demand for firewood by 12,889 m3 per year (equivalent to 750 ha of forest) ■ Reduced CO2 emissions

Project objective and Outcomes	Description of indicator	Baseline level	End-of-project target	Project Assessment of Level at 30 June 2011	Evaluators' comments
	protection of 121,869 ha of wildlife habitat, (d) 553,568 ton C of carbon sequestration and 10,232 ton C of reduced emission (e) Average income of the local residents in the demonstration site increased by 10%			income per month.	by 181 tonnes/year through eco-hydro power plant; ■ Income for 5 villages: increased from 162 M RMB/year (2005) to 310 M RBM /year (2011) ■ Forest coverage: increased 67.8% (2005) to 74.7% (2011) ■ Snub-nosed monkey: 80 (2005) to 290 (2011) ■ Water-birds : 25,000 (2005) to 100,000 (2011)

Annex 9 Analysis of project's responses to the MTE

The following assesses the responses made by the PMO to the issues and recommendations given in the MTE

Part 1- Issues identified in the mid-term review report	Sufficient	Insufficient	Remarks
1. Designing the system of EFCAs for the upper Yangtze basin is behind schedule.	✓		
2. MEWS development is behind schedule as well. The project needs to strengthen the establishment of MEWS, especially the local MEWS; and give more attention to make local MEWS user friendly and build local monitoring capacity.	✓		
3. Identification of baseline ecosystem conditions needs to be strengthened and improved. It is the first task of MEWS at the two demo sites, but was delayed.	✓		The Adjustment of Baseline Value for the Two Demo Sites was delivered in November 2009 and approved at the 3rd PSC meeting
4. IEM planning for the demo sites and development of recommendations on changes to bylaws and regulations are also delayed.	✓		The project started the initiatives but it is a long-term process.
5. Interaction and coordination between the project components seems insufficient and needs improvement, especially between the MEWS and the demo sites.	✓		
6. Involvement of Inter-ministry Coordination Office (ICO) in the project needs to be strengthened to coordinate resource inputs to the project.	✓		
7. Capacity of Project Management Unit (PMU) staff needs to be further improved in the areas of IEM knowledge, coordination with the IEM planning teams, and communication with Project Management Office (PMO) and the Local Steering Committee (LSC)	✓		

Part 2 – Recommendation from the Mid-Term Review Report			
The project needs increasing efforts to complete those ongoing assessments on ecosystem functions and the integrated assessment to enable the initiation of EFCA planning as scheduled. It is also necessary for the project to build EFCA planning capacity, other than that of The Institute of Mountain Hazards and Environment, for replication and/or scaling up of EFCA planning in China, as a potentially catalytic role of the project.	✓	delayed	The EFCA planning proposal was developed but delay delivered due to: earthquake in 2008 and budget payment. Also, the recommendation is too ambitious.
The project needs to strengthen the development of local MEWS in order to get ready the full monitoring reports of the two demo sites and disseminate experience of the demo-level MEWS to other EFCAs and/or PAs as scheduled. It is recommended to improve the design of the local MEWS to make them more user-friendly and develop a MEWS system	✓		

Part 2 – Recommendation from the Mid-Term Review Report			
for local people.			
The project needs to enhance the development of IEM plans if the two demo sites are to be examples of integrated ecosystem management. The IEM planning teams need to agree on the scope of IEM with PMO, closely interact with local government agencies and community groups. Inter-disciplinary and inter-sector approach are strongly recommended for IEM plan development and revision in the next stage.	✓		
The project needs to improve coordination and interaction between the project components and between the IEM teams / planners and local stakeholders in the demo sites.	✓		
It is recommended to tighten project report requirements to monitor project progress, reporting more specific progress and factors that affect achievement of project objectives and completion of planned activities, from all the project components and the planning teams to PMO, and from PMO to UNEP as well. It is necessary to use the indicators developed in the Logframe in reports.	✓		
It will be helpful for efficient project implementation if the project can improve its current project finance arrangement (ideally reporting project expenditure from PMO to UNEP Representative Office in Beijing, then to UNEP Headquarters).		✓	Delayed: Not adopted, see the Amendment to MOA between UNDP China and UNEP in November 2010;
It may be desirable and likely feasible to involve UNEP-Beijing in assisting in the project oversight action and coordinating UNDP Beijing Office and UNEP Headquarters, as an option for enhanced UNEP supervision and backstopping.		✓	Not applicable to UNEP arrangement
It is recommended that PMO be delegated more power for project implementation and coordination with the PSC member institutions and other key stakeholders.		✓	Not applicable due to its conflict with FECO internal control requirement
The project needs to further improve the capacity of PMUs. PMO should be more active in assisting PMUs.	✓		
It may be necessary to extend the project to August or October 2011, because the project actually started in June or August 2006 (effective dates of the subcontracts) and some project activities will not be able to complete if the project closes as scheduled. Additional resources required for this extension are the salary of PMO and PMU staff and the offices' operational costs. These may be covered by cancellation of one or two project activities or reduction of the scale of one or two project activities, at little expense of the project's overall results.	✓		Extended to 31 October 2011 in line to the Amendment to MOA between UNEP and UNDP China;
Hold an international conference to disseminate /share project results for replication and scaling up, and conduct comparative analysis of the project results and best practices in IEM from	✓		Apart from one before the mid-term review, additional 2

Part 2 – Recommendation from the Mid-Term Review Report			
other parts of the world, in Year 4 or Year Five of the project.			international meetings were convened with the support of the project.

Annex 10: Brief CVs of TE Consultants

This Terminal Evaluation has been undertaken by two consultants.

Dr Peter Whalley is a physical chemist who has been working in international water management for the last 20 years. He has extensive experience of developing appropriate water monitoring networks, implementing training programmes and providing trans-boundary support in a range of countries including, the Danube Basin, China, Taiwan, EECCA, Egypt, Kuwait and Ghana. He is currently Project Manager (Chief Technical Advisor) of the UNDP/GEF funded project in the Tisza River Basin leading to the development of an integrated river basin management plan addressing both water quantity and quality. Between 2004 and 2007 he was the Environmental Specialist / Deputy Project Manager on the UNDP/GEF funded Danube Regional Project. Since 2007 he has been an independent expert predominately working on GEF funded activities through UNDP, UNEP and the World Bank covering the project preparation and drafting of Project Documents, Mid-Term Evaluations and Terminal Evaluations and assisting projects with undertaking Transboundary Diagnostic Analysis and Strategic Action Plan development.

Xiangyang Fang is an environmental and disaster specialist with 17 years' experience in government, academic and international development sectors whose clients include UNDP, GTZ, The Asia Foundation and EU. He worked as a civil servant at Shenyang Environmental Protection Bureau between 1993 and 2001. He also worked as the National Programme Manager of the Project entitled "EU-China Biodiversity Programme" sponsored by EU and implemented by UNDP and Ministry of Environmental Protection in 2006. He also worked as the Programme Analyst of the UNDP Project entitled "Post-Wenchuan Earthquake Early Recovery and Disaster Risk Management" between 2009 and 2011. Also, He worked as the monitoring expert of a GTZ project on intensive agriculture between 2005 and 2006. He obtained his first degree in Physical Geography (in the field of Environmental Planning and Management) from Northeast Normal University (China) in 1993 and another MBA from La Trobe University (Australia) in 2001.