CEPF FINAL PROJECT COMPLETION REPORT

I. BASIC DATA

Organization Legal Name: The Chinese Academy of Sciences, Kunming Institute of Botany

Project Title (as stated in the grant agreement): Applied Ethnoecology for Biodiversity Assessment, Monitoring and Management in Northwest Yunnan

Implementation Partners for this Project: Shangri-La Alpine Botanical Garden, TNC

Project Dates (as stated in the grant agreement): Sept. 2004-July 2007, extended to Dec. 2007

Date of Report (month/year): Feb. 2008

II. OPENING REMARKS

Provide any opening remarks that may assist in the review of this report.

"Applied Ethnoecology for Biodiversity Assessment, Monitoring and management in NW Yunnan" is a project designed:

- to provide a robust assessment of scientific data collection and analysis on ecosystem process and identified threats, including logging, reafforestation planning and practice, agriculture, grazing pressures, fuel collection, tourism, infrastructure development.
- to develop a database to centralize much disparate data and form an on-going resource for conservation policy formulation.
- to identify and catalogue ethnobotanical resources in the region.
- to document relevant indigenous knowledge (IK) and cultural practices of minority cultures in NW Yunnan.
- to establish monitoring sites to objectively quantify habitat changes in watersheds, grassland, shrublands and forest to enable more informed planning of appropriate protective measures and natural reserves.
- to educate and create dialogue between all levels of stakeholders including, indigenous communities, government policy makers and researchers.
- to harness aspects of indigenous practices to contribute to the preservation of biodiversity of NW Yunnan.
- to attempt to create long-term management solutions that balance the needs and inputs of various stakeholders to preserve or enhance the biodiversity of NW Yunnan.

This project relates to several of the Strategic Directions and their relevant investment priorities articulated in the ecosystem profile for the Mountains of Southwest China. The project directly addresses STRATEGIC DIRECTION 1 (Develop and operationalize hotspot-wide monitoring and evaluation projects) and STRATEGIC DIRECTION 4 (Integrate biodiversity conservation concerns and benefits into the implementation of policies and programs at local, regional and national levels), and dovetails into STRATEGIC DIRECTION 2 (Support site related projects led by civil society to mitigate key threats to natural areas and species populations).

This present report provides general information about the accomplishment and self evaluation of the project and lessons learnt. A technical report is also provided with summarizing the overall project components and achievements.

III. ACHIEVEMENT OF PROJECT PURPOSE

***Project Purpose**: Land-use planners (Government in association with local peoples and NGOs) formulate policy that reflects specific local needs while enhancing biodiversity conservation in the study areas. Empowerment of these local communities to manage key species and ecosystems in an ecologically sustainable manner that will improve the environment while maintaining or enhancing cultural identities and knowledge.*

Planned vs. Actual Performance

Indicator	Actual at Completion
Purpose-level:	
That the local community land-use practices and major ecological community types are recognized and incorporated in land-use planning.	The local community land-use practices are recognized and NTFPs management are integrated in to community land-use planning, especially for valuable mushroom matsutake
Plants, animals, practices or other resources that may form the basis of new or improved local industries or practices have been identified and documented.	Useful plants and its traditional process practices are documented that have potential to be developed as local industries
Stakeholders have a greater understanding of the major ecological habiats, and the threats to them in NW Yunnan. Acceptance of the applicability of methodology to expand findings and model ecological conditions through the region.	Multi lateral understanding on ecological knowledge of biodiversity and habitat conservation enhanced amongst various stakeholders of local government and agencies, communities, researchers and commercial sectors. Toolkits for Applied Ethnoecology on biodiversity monitoring and conservation developed and will be disseminated for expansion of the knowledge learnt

Describe the success of the project in terms of achieving its intended impact objective and performance indicators.

The intended impact objective is the ecological and cultural status of important non-timber products and ecosystems in the Southwest China Hotspot has been documented, understood and incorporated into conservation planning. The biodiversity status of key ecosystems has been improved through ecologically sustainable local practices and improved land-use management. The performance indicators are six outputs including: 1, database creations that provide status information; 2, identification of major ethno-botanical zones that can facilitate the land-use planner; 3, the educational guides and toolkits that disseminate knowledge and information; 4, publication of findings; 5, general dissemination of traditional knowledge and information exchange; 6, establishment of key ecological habitats. Despite the 2 output was not fully implemented and used (elaborate in the following context), rest of the 5 outputs are generally accomplished.

Were there any unexpected impacts (positive or negative)?
No.

IV. PROJECT OUTPUTS

***Project Outputs**: Enter the project outputs from the Logical Framework for the project*

Planned vs. Actual Performance

Indicator	Actual at Completion
Output 1: Creation of a database. Develop a	Relevant Geodatabase of project area are

linked spatial Geo-and-Bio database incorporating lists of the valuable traditional plants and their habitats and uses; specific IK processes for land management; the ecological status of watersheds, forests, shrublands and grasslands. This database will amalgamate various threads of research including links to relevant specialist ecological, taxonomic and anthropological information together with the new data collected during this project.	produced, organized and synthesized with the software environment of ARCGIS. It includes the following components: administrative data, topography data, transportation network, watersheds, DEM, Satellite imagery, land use, forest cover/type, ethnic minority data, botanical/biological zones, NTFP botanical collection data. A database of vascular plants of the Hengduan Mountains, 9951 records of species, subspecies or varieties are available. A database of NTFPs of NW Yunnan was constructed mainly based on the first hand field Ethnobotanical survey in selected village of Zhiti, Jidi and Qizong. A top ten list of NTFPs was also proposed.
1.1. All available data captured and processed with the ability to be able to produce quality maps, and relevant reports	Data were captured and synthesized with the ability to produce quality maps, Data are continuously capture and updated.
Output 2: Identification of major ethno-botanical zones. The production of a working map, stratified to indicate the major ethnic groups and ecological zones studied in NW Yunnan - this will be developed concurrently with the database. Information will include permanent monitoring site locations and indicate the major ecological community types, key threats, and major land-use patterns. This will form the basis for informed and relevant conservation policy development.	Preliminary ethno-botanical zones identified. The processed ethnic data is linked spatially in the geodatabase file. The environmental variables used to drive ethno-botanical regions include climate, mean elevation, terrain complexity and forest cover. The information of the permanent monitoring sites including locations, indicators and result of first phase survey are installed in database. The key threats and major land-use pattern of the permanent plots are analyzed. All these can serve as the basic information for the decision maker on conservation and development policies. Please refers to the technical report for detail.
2.1. *Preliminary maps which enable the planning of ethno-botanical zones by land-use managers.*	Preliminary maps of the ethno-botanical zones were produced, but need further works on identifying the needs from the land-use managers in order to make the best use of the data.
Output 3: Educational guides and toolkits. On-line access to the accrued database together with educational guides & toolkit for applied ethnobotanical and biodiversity assessment in NW Yunnan. These guides and toolkits may be constructed directly from the database. Information can be tailored for individual needs or regions ranging from modelling most appropriate habitats of viable crop varieties or potential sources of NTFP in local communities, through to conservation policy planning needs to prioritise the selection of sites for protection or land-use modification.	Educational guides and toolkits includes 1) method for permanent sites monitoring; 2) a manual for community based monitoring. These toolkits are developed from the field practices imbedding general scientific methods with community practical needs. The first tool kit is much research based but includes the ethnoecological aspects for instance the human impact that make the monitoring different from conventional ones. The second is much more developed from the grassroots level especially illustrate different ongoing cases of community biodiversity monitoring in mountain SW China and synthesized and leverage with the view of research.
3.1. *Greater appreciation of ethnoecological potential and understanding of IK practices by land managers. More interactive approach to conservation policy setting in NW Yunnan.*	The value of traditional practices on resource use and conservation are acknowledged by different recipients through presentations and publications. The management of nature reserve and surroundings have started to take community approaches into consideration and practices.
Output 4. **Publication of findings. Various threads of the research will be published in appropriate journals, newsletters or websites as they are completed throughout the project. These will vary from interim or progress reports, working papers on the KIB and CBIK websites, through to**	In total 17 papers are have been published or accepted by international and national peer reviewed journals and symposium proceedings or as working paper. Through these publications, the biodiversity status, threats and research findings of the project are well introduced to wider recipients.

papers for publication in refereed journals and/or for seminar presentation.	
4.1. *Information about the project outcomes freely available through publications.*	Project outcomes are freely available through scientific publication, website, workshop presentation and DVD.
Output 5. **General dissemination of traditional knowledge and information exchange. Establishment of workshops to disseminate indigenous knowledge and potentially useful resources within and between communities. Specific community needs can be addressed with targeted workshops. Such workshops will coordinate seed fairs for local varieties which may be re-introduced; exchanges on IK with regards to pasture management; weed control; development of alternative industries (such as mushroom and/or medicinal plant collection and cultivation); advice on conservation strategies for threatened habitats/species.**	Dissemination of traditional knowledge is achieved through publications, websites, presentation, DVD, popular article and workshops. A DVD was produced for introducing the knowledge on the matstake management. Three articles expected to reach the general public were prepared on NTFPs management and one topic was selected by journal of *Huaxiarenwendi* and under preparation. There workshops were carried out for the purpose of exchange and share knowledge and promote dialogues on resource management and biodiversity conservation among different stakeholders such as government agencies, researchers, commercial sectors, communities and NGOs. The topics of the workshop was on matsutake management and community biodiversity monitoring.
5.1. *Community involvement and participation in workshops and seed fairs. Flow of IK and identification of new pilot industries.*	Community members are greatly involved in the workshops and seeds fairs. In total, more than 60 community members of Tibetan, Naxi, Yi and Han across the mountain SW China have been participated in to various workshops or community exchanges.
Output 6. **Establishment of key ecological habitats. Floristic and structural changes will be recorded in the permanent monitoring sites. Species richness, biodiversity indices, community structure and landscape condition will be recorded in grassland, shrubland and forest. This information will be stored on the database and available for comparative studies and for making informed decisions on land-use management in the future. Such information may include, the ecological tolerances of plant communities to on-going fuel, wood, fodder collection, the long-term implications of grazing or burning, the regeneration of replanted forest and/or restored rangeland communities**	Eleven sites on the Qianhu–Haba transect were selected to be representative of important factors, including: indicators of climate change (alpine wetlands, alpine rangelands); climax reference (mature forests); post-disturbance effects (wildfire, insect-affected); importance to local livelihoods (headwater forest, grazing lands, sources of NTFPs or wood). Permanent sites have been GPS-located, photo-recorded, and marked with concrete posts. A nested quadrat system is employed to record information appropriate to the major vegetation (forest, shrub-land, or grassland). At each site, floristic, structural, and environ mental attributes are recorded. These include species richness, biodiversity indices, community structure, landscape, and edaphic conditions. For forest sites, stand basal areas were determined, making possible forest dynamics and biomass calculations. In addition, woody debris is measured (significant as an index of ground habitat diversity and potentially affected by wood collection). The methods minimize subjectivity so that meas-urements can be repeated by different observers; for example, point quadrats are used in grasslands and photo points are designated. Information has been analyzed for the first data collection phase and will be continuously and systematically collected and analyzed in the future for comparative studies to help make informed decisions on land use management. Such information may include the ecological tolerances of plant communities to ongoing fuelwood or fodder collection, the long-term implications of grazing or burning, the regeneration of replanted forest,

	and/or restored rangeland communities.
6.1. *On-going flow of information on ecological changes. Changes enacted to land conservation where appropriate.*	The obtained information on ecological change is introduced through published paper and seminar or workshop attended. More data will be continuously collected and accumulated post the project from which solid information for policy advocacy are expected to generate.

Describe the success of the project in terms of delivering the intended outputs.

In general, most the targeted outputs are successfully implemented and delivered through out data collection and synthesizing, field survey, organizing stakeholder workshops, promoting dialogues and exchanges, leverage and disseminating knowledge on biodiversity conservation with the view of ethnoecology. All means of tools are used for disseminating the output of the project including scientific and public publications, DVD, website, free data bases and presentation on workshop and seminars.

Were any outputs unrealized? If so, how has this affected the overall impact of the project?

No so much in terms of unrealized, but one output not been able fully implemented by the team as initial plan was the ethno-botanical zones. A preliminary analysis was done and major ethno-botanical zones were identified. However, it was not clear within the team how the data will be used for policy implication. Therefore no in-depth analysis and work was further done. Nevertheless, it didn't create big problem for the implementation of the whole project.

V. SAFEGUARD POLICY ASSESSMENTS

Provide a summary of the implementation of any required action toward the environmental and social safeguard policies within the project.

One of the long term goals of this project is that land-use planners formulate policy that reflects specific local needs while enhancing biodiversity conservation in the study areas and empowerment of local communities to manage key species and ecosystems in an ecologically sustainable manner. Policy advocacy is a long term and never a straightforward product of a particular project and organization. With the many efforts of various organizations (including NGOs, research bodies) and various levels of governments, biodiversity conservation have become one of the priority of the NW Yunnan which is trying to balance the economic development with environment protection. On one hand, more nature reserves are established, on the other hand, incorporation community and their livelihood in biodiversity conservation is under processes. Many nature reserves have established the practices of co-management and empower the local community for resource management. The many traditional ecological practices such as sacred mountain protections are gradually acknowledged. Management of NTFPs at grassroots level is also recognized by the official management agencies. In this project, we tried to promote the dialogue and mutual understanding of the governmental resource management agencies with different sectors including researchers, community and commercial bodies. We also try to provide suggestions and recommendation on management NTFPs products through Shangri-La Initiative to the local government.

VI. LESSONS LEARNED FROM THE PROJECT

Describe any lessons learned during the various phases of the project. Consider lessons both for future projects, as well as for CEPF's future performance.

In many cases, when we start to apply and implement a project, database construction maybe one of the important tasks. Frequently we do not have clear ideal or do not reach a common understanding on why we need the data and how we use it. For instance, in this project, we spent many efforts on producing a ethno-botanical zones, however, the maps are not functioned as it was designed. Apparently data construction is an important work, however establish a data exchange mechanism or standard and use the data efficiently and effectively is equally important.

Project Design Process: (aspects of the project design that contributed to its success/failure)

The project design is obviously an important factor for the implementation of a project. Lesson learnt from this project is that the purpose of the project should have been better clarified. Due to the staff change of this project, the understanding of the project varies among different project implementers that cause some confusion.

Project Execution: (aspects of the project execution that contributed to its success/failure)

Due to above mentioned staff movement and changes, for certain period, the project was moving slow. However, the approved extensions enable the team to accomplish most of the designed tasks.

VII. ADDITIONAL FUNDING

Provide details of any additional donors who supported this project and any funding secured for the project as a result of the CEPF grant or success of the project.

Donor	Type of Funding*	Amount	Notes
WWF	A	USD 7500	Russell E. Train Education for Nature for matsutake workshop
CBIK	B	RMB 30000	Sub-grant of IDRC project for rangeland evaluation and monitoring

***Additional funding should be reported using the following categories:**

- ***A*** *Project co-financing (Other donors contribute to the direct costs of this CEPF project)*
- ***B*** *Complementary funding (Other donors contribute to partner organizations that are working on a project linked with this CEPF project)*
- ***C*** *Grantee and Partner leveraging (Other donors contribute to your organization or a partner organization as a direct result of successes with this CEPF project.)*
- ***D*** *Regional/Portfolio leveraging (Other donors make large investments in a region because of CEPF investment or successes related to this project.)*

Provide details of whether this project will continue in the future and if so, how any additional funding already secured or fundraising plans will help ensure its sustainability.

The project will be continued in following directions:
matsutake management: strengthening the community management under the policy environment of forest tenure reform , USD 5000 are secured by WWF/EFN;
Medicinal and Aromatic Plants in Asia and Pacific Network, USD 20000 secured by ICIMOD;
toolkits development for wild mushroom harvesting management: around USD 50000 budget are under applying from the Ford Foundation;
biodiversity monitoring along the established transect: continues monitoring activities at a interval of 2 years with the fund from Chinese Academy of Sciences and other potential sources;
phenology and productivity monitoring of matsutake: proposal developed for Nature Science Foundation of China.

VIII. ADDITIONAL COMMENTS AND RECOMMENDATIONS

No.

VIII. INFORMATION SHARING

CEPF is committed to transparent operations and to helping civil society groups share experiences, lessons learned and results. One way we do this is by making programmatic project documents available on our Web site, www.cepf.net, and by marketing these in our newsletter and other communications.

These documents are accessed frequently by other CEPF grantees, potential partners, and the wider conservation community.

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