



EU-China Natural Forest Management Project



PROJECT SUMMARY REPORT

The forest sector in China has undergone three broad phases of development since 1949. Up to the early 1980s, emphasis was given to timber exploitation aiming at boosting industrial output with consequent erosion of China's forest resource base. The focus then changed to rehabilitation primarily by means of extensive reforestation programmes. Despite the achievements attained in this period, environmental problems continued. A catastrophic flooding in the Yangtze basin in 1998 led to recognition of the importance of the environmental services provided by natural forests and a logging ban was swiftly imposed on natural forests in most provinces. In 1998, the government of China (GoC) instituted the Natural Forest Protection Programme (NFPP) in 12 provinces. The programme was extended, in October 2000, to 17 provinces, with the aim of protecting forest resources on over 95 million ha, increase forest coverage and implement soil and water conservation measures and run for eleven years (2000-2010). The programme is administered by the Natural Forest Protection Program Centre (NFPPC), a semi-autonomous body within the State Forest Administration (SFA).

The **EU-China Natural Forest Management Project (NFMP)** was designed with the aim of developing improved sustainable management techniques in natural forest areas which were protected under the NFPP and with the intent to decrease rural communities' dependency on forests in the areas most affected by the NFPP restrictions. It was thus conceived as a contribution to the implementation of the NFPP.

This partnership project was funded by an EU EUR 16,9 million grant and a GoC contribution of EUR 6 millions. The project was supplemented by an IBRD US\$93.9 million loan for establishment of plantations and a US\$16 million grant from the Global Environment Facility (GEF) for the management of protected areas.

NFMP was implemented over a period of seven years (2003-2010) by the NFPPC with the support of an EU technical assistance team (led by GTZ IS). It worked through three main components: i) a natural forest management component for the testing of improved sustainable forest management techniques, ii) a community development component for supporting rural communities in diversifying their livelihood base and replace traditional activities no longer possible because of the logging ban and iii) an information training and dissemination component for

capacity building and dissemination activities in support of the other two components.

Fields activities were undertaken in Sichuan (Baoxing, Pingwu and Songpan counties), Hunan (Yanling and Yongshun counties), and Hainan (Changjiang county) covering 58 Administrative Villages (comprised of almost 300 Natural Villages), and 6 state forest enterprises or forest farms.

This summary report provides an insight of major achievements attained in these three components.

NATURAL FOREST MANAGEMENT (NFM)

The natural forest management activities were all directed towards increasing local capacity in forest management in the areas where the logging ban was active and towards piloting new techniques to improve the quality of forest management planning, implementation and monitoring. The activities were implemented in natural forest areas outside nature reserves and outside the main areas of plantation forest.

In this component the project piloted and demonstrated actions in the following areas:

Forest Management Planning

The project piloted actions to improve technical aspects of resource inventory and planning methodologies. The approach attempted to vertically integrate planning activities from broader "land-use" and "strategic" level plans to field level operational plans (township/village). Attempts were also made to introduce "ecosystem modelling" into this sequence – though this, in most respects, involved upgrading local capacities and technical inputs beyond a level that the project could effectively support. Using participatory methodologies, NFMP tested:

Forest Maps. As a first step for forest planning NFMP prepared forest maps for all 11 townships. The maps were based on interpretation of satellite images and their projection of existing topographic maps. The classification system used was very similar to the classification of the national forest inventory.

Multi-forest resource inventories (MRFI). MRFI were conducted for areas where the project intended to support the formulation of a plan. These inventories also included the identification and assessment of resources generally not tallied during traditional forest inventories, typically Non-Timber Forest Resources (such as medicinal plants, fodder, etc...). MRFI were produced with the participation of local stakeholders, like local government agencies and the villagers and showed therefore potential for transparency and conflict resolution in determining borders between state and collective forests. They also raised local awareness on the extent and type of the forest resources. NFMP completed and demonstrated the MRFI in 7 townships, developed an EDP program for data processing (FRIDAP) and a manual to guide the assessment process.

Demonstrations on eco-system modelling. Demonstrations on ecosystem modelling were completed in 11 townships to determine structures and dynamics of a given ecosystem for further planning procedures. A guide for ecosystem modelling was prepared and used to produce ecosystem modelling reports for each township. This experience represents a valuable input for the current Chinese forest management planning system where ecosystem modelling is not included and is lacking any guidelines for its implementation.

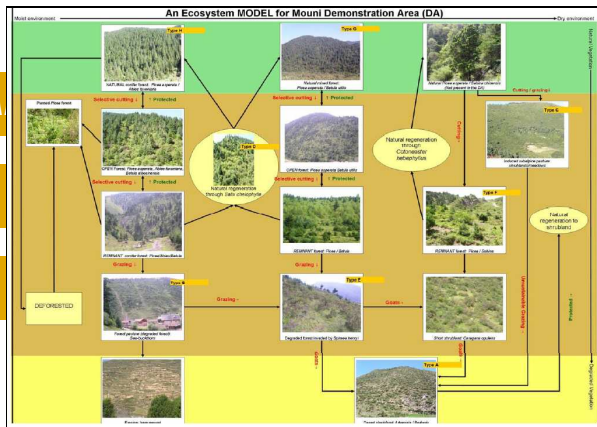


Fig. 1 The above figure shows a typical ecosystem model built at township level. The model illustrates how various forest ecosystems (shown in pictures) in the area were degraded in the past, and how they can be rehabilitated with different measures (shown with lines and arrows).

Land Use Plans (LUP). LUP aimed at zoning different types of ecological and commercial forests and represent a further step in the forest planning process. Land use strategy maps were prepared for 12 townships (available in a GIS data base). NFMP-LUPs represent a valuable test in the current forestry system. They were produced in a participatory manner and thus have the potential to be more accepted by local stakeholders than the LUPs carried out by the land management bureaus. A manual to guide this planning exercise was also prepared by the project.

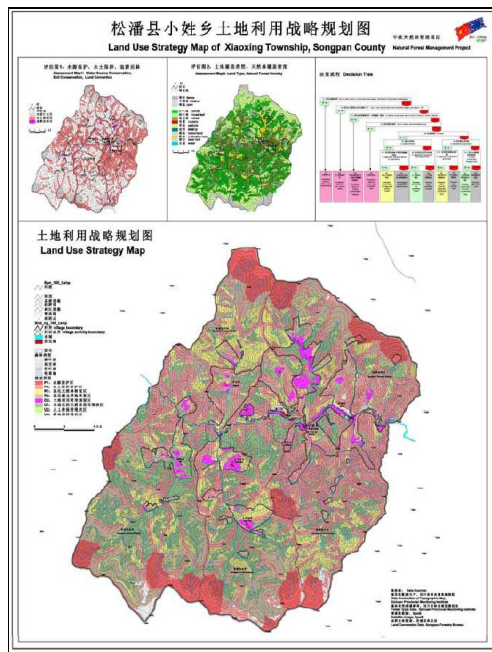


Fig. 2 The above map shows a typical land use strategy at township level. The land used strategy was determined by a decision tree under constraints of conservation policy, topography, as well as forest stand condition. The land use was classified into areas of protection, rehabilitation and development with different measures.

Strategic Forest Management Plans (SFMP). SFMP represented the main planning document providing information of the forest resource base's potential and indicating the strategy for different forest types and the silvicultural objectives. It was realised through participatory methodologies. It reflects a new approach in the Chinese forest management planning procedure mostly for this reason and also because considers the multiple services

provided by the forest (timber, recreation, non timber forest products, etc...). The SFMP is based on information provided by MRFI, LUP and Eco-system Modelling. 4 SFMP were completed at the township level together with a manual to guide the planning process.

Operational Participatory Village Management Plans (OVFMPs). The OVFMPs proposed by the NFMP intended to cover the area of an administrative village. OVFMP is an integrated plan defining silviculture treatments and harvestable amounts for forest management types on a per ha basis, which is then applied for individual forest user right owners lots. It is an integrated plan because incorporates not only the direct use of timber and firewood, but also NTFPs, the use of forest land as recreation area, touristic uses and grazing for domestic animals. The basis for the OVFMP is the SFMP, where the strategy for the different forest zones already was defined and the silvicultural objectives formulated for forest management types. OVFMPs gain particular importance in the framework of the ongoing collective forest reform, where the forest farmers are granted long term user rights of forest resources. In fact these plans have the potential to guarantee better protection of forest resources and at the same time generate income due to modern silviculture techniques. NFMP has developed 4 OVFMPs.

The plans produced by NFMP could not unfortunately received final official approval and could not be implemented as they not constitute legally recognized planning documents under the existing Chinese forest management planning framework. These key project outputs coupled with the project Manuals covering ecosystem modelling, land use planning, and strategic forest planning, form however a cohesive knowledge package to guide local and central forest planning officials in the application of advanced forest and forest resource planning approaches and techniques.

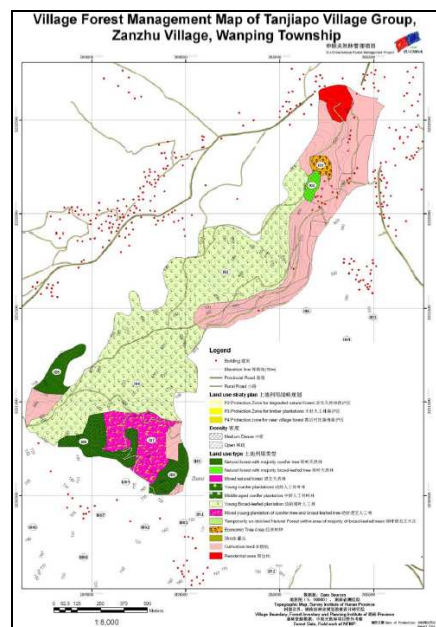


Fig. 3 The above map shows operational silvicultural measure for forest stands at village level. Information includes stand type and density, land use strategy, and management types

Silviculture Demonstrations (STDs)

The project implemented several studies to provide and initiate management of selected forest types applying close to nature silviculture model approaches and techniques. It piloted 25 STDs with the intent of introducing techniques to obtain desired stand characteristics at the time of harvest

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and be then used in OVFPs. STDs consisted primarily of release thinnings, stand improvement thinnings, fuel-wood thinning, and sanitation thinnings. Selective harvest cutting and enrichment planting were also supported by the project. 15 demonstrations of other natural forest management technologies were also implemented under STDs, like demonstration on bamboo management, grafting of walnut or chestnut, showing negative effects on grazing in forest vegetation or applications of border line survey with GPS. NFMP accomplished a manual and quite a number of comprehensive technical reports in the field of silviculture. Evaluations of the Project's STDs unfortunately revealed weaknesses in implementation particularly in proper "base-line" measurement of stand characteristics prior to treatment prescription and implementation and "post-project" systematic periodic "re-sampling" of a treated stand.

Forest co-management

Aside from using participatory approaches in most aspects of the implementation of its various "planning" activities, the Project also introduced specific "co-management" approaches in an attempt to institutionalize or embed such approaches into not only forest management planning activities, but also forest management "implementation" and "monitoring" activities. The project facilitated several activities to demonstrate and pilot Forest Co-Management (FCM) approaches in Songpan County, established two township start up teams and co-management committees in all the 11 villages of the pilot area. The Project's efforts to demonstrate and pilot FCM approaches were difficult to implement. This seems to have been primarily because these efforts were generally resisted by participants (especially by forestry officials when planning involved the management of state forests and by villagers where the planning involved collective forests). But it is also apparent that the NFMP's intentions for Forest Co-Management may have been over-ambitious and that the efforts required to prepare and support forestry officials and village participants in these activities was underestimated. A key output of this activity has been a manual to guide FCM.



Fig. 4 Formulating Village Forest Management Operational Plans with RongTang Village (HuNan Province) villagers

NFMP produced a valuable set of **manuals or guidelines** which were associated with most of NFM's key demonstrations and pilot activities.

- ▶ "A guide for ecological survey, data analysis and preparation of an ecosystem model" (CH/EN)
- ▶ Manual for Co-Management of Natural Forests in Song Pan County (Sichuan) (CH/EN): manual describing the various steps to start up co-management activities at village, township and county level;
- ▶ "Land Use Strategy Manual" (CH/EN)
- ▶ "Multi-Resource Forest Inventory Manual" (CH/EN): manual describing alternative methods for forest inventory;
- ▶ "Strategic Forest Management Planning Manual (CH/EN)": manual describing the various steps to make forest management planning at township level and with participatory approaches;
- ▶ "Strategic Forest Management Plan for Wanping Township, Hunan Province" (CH/EN): example of plan;
- ▶ "Multi-Resource Forest Inventory for Wanping Township, Hunan Province" (CH/EN): example of inventory;
- ▶ "Village Forest Management Plan for Zanzhu Village, Hunan Province" (CH/EN): example of village plan;
- ▶ "Village Forest Management Plan for Chanziping Village, Hunan Province" (CH/EN): example of village plan;
- ▶ Manual on Design and Establishment of Demonstrations for Close to Nature Silviculture Model Development.
- ▶ Tree identification keys have been developed for Songpan and Yongshun counties

NFMP has also performed a series of evaluations to identify specific lessons learned. The key documents at this respect are the following:

- ▶ "NFM Component Overview: approaches, implementation and outcomes" (CH/EN): summary of the approaches implemented by NFM component and lessons learned;
- ▶ "Forest Management Planning: Present Procedures and NFMP Proposed Methods" (CH/EN): comparison between traditional forest management methods and alternatives proposed by NFMP;
- ▶ "Forest Co-management development: status and lessons learned from the NFMP" (CH/EN): evaluation report about Co-management experience under NFMP;
- ▶ "Evaluation of Silviculture Treatments Demonstrations (STDs)" (CH/EN): evaluation report about the STDs established under NFMP;
- ▶ "Policy Paper: Regulatory Frameworks influencing Natural Forest Management in China" (CH/EN): study identifying policy framework, implication of policy to its sector in China, implication of policy to its implementation in NFMP and recommendations.

COMMUNITY DEVELOPMENT (CD)

The CD component aimed at supporting the diversification of rural communities' livelihood base in the areas most affected by the NFPP restrictions and at introducing more sustainable land use practices. The component allowed for various types of community development activities that were based on participatory exercises, training and other capacity building activities targeted to villagers, forest staff and local government.

It has to be noted that by the time NFMP has started delivering CD activities, most rural households already initiated alternative activities to support income, mostly through migration labour or other support from the local government. CD activities therefore contributed to further diversify these strategies and improve livelihood opportunities.

Village Development Plans (VDP)

VDPs represented the planning instruments to assess needs and implement community development actions. They were prepared using Participatory Resource Appraisal methodologies that allowed better understanding of the linkages between livelihoods, policy, institutions and the environment. 57 VDP were completed.

Community Entry Point activities (EPA) and Micro-infrastructure Projects (MIP)

These included village roads or trails, canals for field irrigation, household water supply or sanitation systems and other community infrastructure. 58 EPAs and 271 MIPs were completed. These interventions not only had very positive impacts on the villages' livelihood base, but were also very effective in generating people's interest in NFMP activities and improving the ability of communities to plan, implement and manage their own resources. The largest benefits were

achieved with the construction of new roads or bridges particularly in remote areas. These have opened up new areas for access and potentially created additional income earning opportunities for community members.



Fig. 5 A suspension bridge rehabilitated in Pingwu

Alternative Livelihood Demonstrations (ALD)

ALD included support to household based practices such as beekeeping, bamboo management/processing, orchard management/processing of products for consumption or traditional medicine, livestock and poultry rising. New techniques were introduced or local ones improved. 76 ALD were implemented. Overall ALD created an interest among beneficiaries in expanding production possibilities and introducing innovative schemes to improve income. A series of weaknesses have however been identified on the way these activities were implemented particularly with respect to household targeting and or household financial capacity to replicate these activities.



Fig. 6 Integrated utilisation of bamboo resources: developing models for small processing enterprise, high-yielding cultivation (Yanling)

Thematic Demonstration Projects (TDP)

Thematic Demonstration Projects were often similar to ALD but were implemented by community organizations or groups of proponents. They included: bamboo management & production, community-based ecotourism, livestock and fodder management, non-timber forest products processing (particularly improved drying techniques for medicinal plants), bio-gas, solar cookers, solar water heaters, fuel-saving stoves, sustainable rural building design, traditional beekeeping. 9 TDP were implemented in 11 villages. TDP were highly appreciated by the beneficiaries and some of the actions (particularly community based eco-tourism) show very good sustainability prospects and represent valuable experiences to be replicated. TDP has

also shown a great potential to contribute to gender equality and sustainable natural forest management.

Micro-credit Fund (MCF)

The MCF was intended to provide small loans for income generating activities to village households and State Forest Enterprises (SFEs) workers who had insufficient access to formal bank loans due to insufficient collateral or that lived in rural areas not reached by financial institutions. The MCF was implemented in 29 Administrative villages and 4 State Forest Enterprises (SFEs) or Forest Farms in the project area and was managed and operated by 24 Micro-credit Units (MCUs) set-up by the project. The MCUs operated according to three management models and included, 1 MCU managed by China Foundation for Poverty Alleviation (CFPA) in Changjiang County, Hainan (NGO model); 19 MCUs managed by respective Community Natural Forest Management Associations (Community Fund Model); and 4 MCUs managed by respective State Forest Enterprises (SFE model). The MCF granted over 7000 loans to over 3200 village households or SFE employees. These loans have been invested by the borrowing villagers in income generating activities, typically animal husbandry, cropping activities and small trade/service businesses. The MCUs have proven capable of disbursing and recovering loans in a cost effective manner and with very few exemptions, the loan conditions and procedures have been adhered to. This has been a valid achievement and a vital input to rural development in the targeted areas. The MCF has been handed over to the NFPCC of the SFA at the closure of the project. The ownership of the fund now stands with the various MCUs and the NFPCC of the SFA insures their coordination, monitoring and supervision.



Fig. 7 One of the Community Natural Forest Management Associations

Despite the project could not ensure a clear integration of CD and NFM activities, several CD activities were almost entirely forestry related (i.e. reading livestock or crops under forest canopies, bamboo management, bio-gas, etc...) and many of them have heightened villager's awareness on the impact of livelihood practices on forest resources. The CD activities that had a direct positive impact on livelihood may have also had an indirect positive impact on natural forests. It has to be noted also that forestry staff in all 6 counties and 11 townships have become active in community development.

The analysis of impacts of NFMP on gender showed that the project had a positive impact on gender equality through its gender sensitive approach in recruiting villager link workers and implementing micro-credit, micro infrastructure construction and livelihood improvement activities.

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NFMP developed and tested a series of procedure manuals/guidelines to facilitate the implementation of CD activities. These are listed below:

- ▶ "Participatory Resources Appraisal & Community Development Planning Manual"
- ▶ A Guide to CD Field Operation for FMO"
- ▶ Operational Guidelines for the Development of Alternative Livelihood Micro-projects
- ▶ "Beekeeping manual" (CH): instructions for villagers about the implementation of traditional beekeeping with alternative methods;
- ▶ "Renewable Energy Manual" (CH) for villagers (about biogas system installations);
- ▶ "Rural Tibetan Sustainable Building Manual" (CH): instructions for villagers about building and maintenance of Tibetan houses with environmental/sustainable concepts;
- ▶ "Sustainable Moso Bamboo Forest Management Manual" (CH): guide for project villagers on the management of bamboo resources;
- ▶ "Cropping and livestock in forests" (CH): basic guidelines to project villagers for cropping and livestock activities without damaging the forests;
- ▶ "Maintenance of village roads" (CH): basic instructions for maintaining roads built under NFMP;
- ▶ "Community Eco-tourism Manual" (CH/EN): describing all the steps for the establishment of an eco-tourism centre (This document is a unique reference of this type in China and is likely to establish standard in this field.);
- ▶ "Participatory Impact Monitoring Manual" (CH): guidelines for the establishment and implementation of Impact Monitoring Groups among villagers;
- ▶ "CD synthesising paper" (CH): summary of the approaches implemented by CD component and lessons learned;
- ▶ "Micro-Credit Manual (CNFMA model)" (CH/EN): instructions for the establishment and implementation of Micro-Credit activities with village-based MCUs;
- ▶ "Micro-Credit Manual (SFE model)" (CH/EN): instructions for the establishment and implementation of Micro-Credit activities within the State Forest Enterprises;
- ▶ "Micro-Credit Manual for NGO model" (CH/EN): instructions for the establishment and implementation of Micro-Credit activities by an NGO.
- ▶ "Investigation on Current Collective Forest Management and Land Tenure" (CN/EN)
- ▶ "Village Link Worker Training & Process Documentation" (CN/EN)

NFMP has also performed a series of evaluations to identify specific lessons learned for the CD component. The key documents at this respect are the following:

- ▶ Assessment of the Alternative Livelihoods and Thematic Demonstrations Projects;
- ▶ International Consultancy on Rural Small Scale Infrastructure;
- ▶ Gender Impact Analysis and Awareness Training;
- ▶ Participatory Impact Monitoring and Case Study Guidelines;
- ▶ KAP (Knowledge, Attitude & Practices) Training and Capacity Building Evaluation;
- ▶ EU-China NFMP internal Micro-credit Programme Evaluation;
- ▶ EU-China NFMP external Micro-credit Programme Evaluation.
- ▶ "Policy Paper: Regulatory Frameworks influencing Natural Forest Management in China" (CH/EN). The study includes an analysis of the role of CD and micro-credit regulatory framework on NFM in China.

Manuals and guidelines are available in Chinese language under: <http://tribh.forestry.gov.cn/SiteAction.do?dispatch=index&colid=1873&siteName=tribh>

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INFORMATION TRAINING AND DISSEMINATION (ITD)

A total of 366 ITD events and activities have been carried out by the project to support the implementation of the activities under the CD and NFM components, which collectively have included:

- 55 village level training courses / study tours
- training of 1,657 villagers in SFM practices
- training 278 SFE workers
- 16 awareness raising events
- monitoring 27% of ITD training courses
- 2 dissemination study tours
- 1 film produced and televised with NFMP support (done, though focused chiefly on NFPPC)
- 1 project closing conference.

The project also produced a number of awareness raising and visibility items and set up a 'training M&E system' to monitor and evaluate training.

NFMP capacity building events have increased the awareness of NFPP staff, village link workers and villagers in subjects related to participatory approaches and sustainable forest management, and to a certain extent also have increased the related knowledge and skills.