

# News on the Model Forest Approach



## to Sustainable Forest Management

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### Paukkaung MF Partners Meet

The 4<sup>th</sup> meeting of the Paukkaung Model Forest (PKMF) Partners Group was held on 27 July 2001 at the Paukkaung Forest Office library, and attended by 32 persons. The secretary of the Township Peace and Development Council (TPDC) tendered the apologies of the chairman of the TPDC for not being able to attend the meeting because of other commitments. He said that the TPDC is working with the FD in roadside and school premises tree planting, and in managing the natural forests. It will try to take part in all activities related to forestry.

The NPC said that the new library, built with JIFPRO support, is for the use of the general public, students and FD staff. He said that with JIFPRO assistance, they will also build a primary school in Letha village located in the catchment area of the North Nawin Dam. The FD has set up a nursery producing 100,000 seedlings for rehabilitation of degraded areas, planting along road-sides, in school premises, etc, and for distribution to the public. But, the FD cannot do all these on its own, and will need the support and active participation of the local people. He said that with the support of RMFP, energy efficient stoves will be distributed to selected villages, and if useful and effective, this can be extended to more villages. He emphasised the key role of the partnership group, which should meet 3 to 4 times a year.

The RMFP CTA said that successful development of the MF will depend on effective partnerships among all the stakeholders. The usefulness of the partnership groups will be determined not by the number of times they meet, but what they achieve. He said that the partnership groups should feed back to the RMFP through the FD whether the MF activities have been useful/effective or not, and suggest what can be done that is more useful. He informed the meeting of the forthcoming PSC meeting and workshop to be held in November in Yangon and Pyay, and it would be important to show the participants what has been achieved in the PKMF. He said that a review mission would visit Pyay early next year to assess the progress of the project, including the effectiveness of the partnerships.

*Continued on page 2*



Participants at 4<sup>th</sup> PKMF partners' meeting

#### INSIDE

- 2 - PKMF Community Group Meets.
- PKMF Library Opens
- 3 - PKMF C&I Prep. Workshop.
- Pilot CoHP in Myanmar
- 4 - C&I in Ulot Watershed MF
- 5 - Ulot POs Get Funding Support.
- Partnerships to protect Ulot MF.
- New NPC for Philippines
- 6 - Lin'an Hickory Farmers Meet
- 7 - Control of Bamboo Shoot Aphids in Lin'an MF
- 8 - Farmers' Participation in Eco-tourism in Lin'an MF
- National Award for Mr. Wang Anguo of Lin'an MF
- Lin'an MF Partners Look for New Markets
- Japan Delegation Visits Lin'an MF
- 9 - Partnership Building in Ngao MF
- Rehabilitation of Mixed Deciduous Forest in Ngao MF
- 10 - Protected insects in Ngao MF
- 11 - Ngao MF C&I Workshop
- 12 - International Conference on Advancing Community Forestry
- RMFP 3<sup>rd</sup> PSC Meeting and Regional MF Workshop

#### QUOTE

The three phrases I should let go from my mind, if I want to be serene, are "What if?", "If only..." and "Why me?"  
(Author unknown)

## Paukkhaung MF Community Group Meeting

The 2<sup>nd</sup> PKMF community partnership group meeting was held on 26 July at the Bawdigone village primary school. The primary school has about 70 students between the ages of 5 and 13 years attending grades 1 to 4, and three teachers (2 permanent, 1 temporary). The village has a population of 500 persons in 95 households, and a village committee of seven members.

More than 60 persons from 15 villages downstream of the South Nawin Dam were present. Four persons were invited from each village for the meeting. The purpose of the meeting was to introduce the villagers to the MF concept; the FD/RMFP, and FD/JIFPRO activities and staff; to form a partnership group among the 15 villages; to initiate improvement of the relationship between the downstream and upstream villagers, and with the FD; and to discuss MF activities.

Prof. Kyaw Htun briefed the meeting on the MF concept, the stakeholders in the MF area, and the role of the community partnership group. He said that the protection of the forest resources is critical to the long-term interests of all the local communities, but the FD cannot protect the forests by itself.

This can only be achieved with the help and active participation of the villagers. Mr. Tang, CTA RMFP and Mr. Naka, Director JIFPRO also addressed the meeting.

During discussions, the chairman of the Village Peace and Development Council said that although seedlings have been planted regularly in the area, they are not doing well due to lack of maintenance. There is no incentive to provide this maintenance as anyone can enter the area and cut the trees. He suggested the area should be designated as a community forest and assigned to a specific group of persons to protect and harvest. Prof. Kyaw Htun responded that this issue is under consideration by the FD.

The village head said fuelwood collection is one of the main causes of forest degradation. Therefore, he welcomed the proposed MF activities to introduce improved wood stoves, fuelwood planting, and production of briquettes. At the end of the meeting, two 'self-reliant' nurseries established by the FD under the PKMF were handed over to the respective village representatives.

## PKMF Library Opens

A small library has been built in the Paukkhaung Forest Office compound, beside the main road, with funding assistance from JIFPRO. This library was inaugurated during the visit of the JIFPRO Director, Mr. Naka, on 27 July 2001.

*Continued from page 1 - Paukkhaung MF Partners Meet*

Mr. Naka, Director of JIFPRO congratulated the people on their new library, and on the good cooperation between the people and the FD. He explained the objectives of JIFPRO's participation in the implementation of PKMF project. He hoped to see more progress in the future.

U Thein Win of the Animal Husbandry and Veterinary Department said that duck rearing has become a popular and successful activity in the South Nawin Dam area. There is a market for duck meat in Pyay and Paukkhaung, and for duck eggs in Mandalay and Yangon. However, the present duck farming families are interested only in raising ducks, and not trees, and there are no trees on the river bank. He urged the FD to encourage them to plant trees to provide shade and reduce erosion. The NPC said the FD will follow up on this and supply seedlings for the farmers to plant.

U Htay Aung, Staff Officer, Paukkhaung Township, said that the tree guards placed around trees planted along the roads are not strong enough, and asked for suggestions on how to protect the trees. He said that it is important to ensure that the planted trees grow well, otherwise it will give a negative impression to the people and visitors.

U Taung Tin, Deputy Director of Bago (West) Division, informed the meeting that the authorities concerned have appreciated the efforts to green the area, and called on the FD to plant more valuable species such as teak, and for greater vigilance against forest encroachment. The TPDC secretary said that it has issued instructions to the villagers not to collect fuelwood in protected areas, and that non-compliance will attract severe penalty. In order to address the fuelwood demand, the fuelwood planting, improved wood stove distribution and

charcoal/briquette initiatives should be stepped up.

U Mya Win, Staff Officer, FD, emphasised the importance of protecting water catchment areas from erosion, which has caused some dams to become shallow through siltation, and contribute to floods. He said fuelwood collection is a major factor in increasing siltation of rivers or dams. All new developments should have environmental impact assessments (EIA), and only sustainable projects should be carried out.

The NPC informed the meeting that the first step of turning the area into a Protected Public Forest is almost completed. The second step will be implementation of a fuelwood substitution programme, which has also been emphasised by the State. He cited the example of Tarkaut village, which is using an improved stove that uses saw-dust as fuel. Briquetting is another way of fuelwood substitution. FD has the experience of working on such technologies. Briquettes could be made from agricultural waste and other materials, which can be supplied to villages initially free of charge, and at a subsidised price later. One village has been selected by the TPDC and FD as a model village for the briquette factory.

The RMFP CTA said that the field trip during the regional MF workshop in Lampang in Feb. 2001 (which the Myanmar delegation was not able to attend) included a visit to a small factory producing charcoal and briquettes from bamboo waste for export to Australia, Turkey, etc. He said that if the NPC can confirm that there is no local expertise or experience in this field, then he can propose a visit to the Lampang factory by selected persons from the PKMF area to learn and "borrow" the technology.

## C&I Preparatory Workshop for Paukhaung MF

A preparatory workshop on “*Development of Field-level Criteria & Indicators for Paukhaung Model Forest*” was held from 11-12 September 2001 in Yangon, Myanmar. The workshop was organized by the Forest Department, Ministry of Forestry, Myanmar, with the support of the Regional Model Forest Project (GCP/RAS/177/JPN). The workshop was a follow-up to the regional C&I workshop held from 10-15 June 2001 in Lin’an, China by the RMFP, which produced a set of guidelines for the development of field-level C&I for use by the participating countries for their respective MFs.

The objectives of the preparatory workshop were to discuss and share the knowledge and experiences related to C&I development at the regional, national and field-level among a wider group of people in the country; develop a draft set of field-level C&I for PKMF, and testing procedures for the C&I.

Workshop participants included representatives of the Planning and Statistics Department, Forest Department, Dry Zone Greening Department, and Myanmar Timber Enterprise (MTE) (all under the Ministry of Forestry), and other forestry-related organizations such as Forest Resource Environment Development Association (FREDA), Forest Products Joint Venture Corporation Ltd. and Myanmar Forest Products and Timber Merchant Association. The workshop was also attended by advisors and directors from the Ministry of Forestry as observers. Six papers, dealing with various aspects of C&I development at the field-level and related issues, were presented at the workshop.

In his opening remarks, U Shwe Kyaw, Director-General of the Forest Department thanked the Regional Model Forest Project for their technical and financial support for the workshop. He recalled the activities and objectives of the national C&I initiatives, and emphasized that C&I are an important tool for monitoring progress towards sustainable forest management. He noted that SFM must first be achieved at the field level before we can achieve SFM at the national level. Thus, the importance of having proper C&I at the field level was emphasised.

The following recommendations were adopted at the workshop,

1. To consider forest plantations as a criterion in the development of field-level C&I for PKMF.
2. Wherever possible, to consider EIA as an important and required activity.
3. To include enrichment planting operation as a required activity.



Participants at C&I preparatory workshop

4. To implement the National Code of Forest Harvesting Practices in Myanmar in the PKMF area.
5. To expand the implementation of consultative processes and educational activities in order to promote public awareness and voluntary participation.
6. To develop and test a mini-land use policy for the PKMF area prior to the emergence of the National Land Use Policy.
7. To introduce the concept of EIA to the stakeholders at the MF level.
8. To consider poverty alleviation as an indicator.
9. Under the indicator of Forest Conservation, to consider the use of energy-efficient cooking stoves, briquettes and agricultural wastes as required activities.
10. To record some indicators even if they may not be implemented at present.
11. To consider water quality as an indicator for the watershed areas and dams.
12. To develop a set of C&I for SFM for the dry forests in the Central Dry Zone.

A draft set of Field-level C&I for SFM for PKMF and a set of testing procedures were prepared, to be presented and discussed at a field level workshop in Paukhaung to seek inputs from the field level stakeholders.

*From Associate Professor Kyaw Htun  
National MF Project Counterpart, Myanmar*

## Pilot CoHP Implementation in Myanmar

In response to a request from the Forest Department, Myanmar, the RMFP is providing a consultant, Mr. Clynton Wells, to assist the FD design a pilot activity for the implementation of the Myanmar National Code of Harvesting Practice (CoHP). Mr. Wells will visit Myanmar from 14-27 October 2001.

During his visit, he will study the Myanmar National CoHP, visit some current logging operations (in natural forests and plantations) and the proposed pilot CoHP implementation area, propose action to be taken by the FD and MTE for the pilot implementation of the CoHP, prepare guidelines for the FD/MTE staff to use in the pilot CoHP implementation, and provide training to the FD and MTE staff in the use of the above guidelines.

A report of Mr. Wells' first visit will be published in the next issue of this newsletter. A follow-up visit about six months after logging has commenced in the pilot CoHP implementation area is envisaged, to assess the adequacy/effectiveness of the CoHP compliance measures taken.



## C&I for SFM in Ulot Watershed MF

The “*Workshop on C&I for SFM at the MF Level*” held from June 10-15, 2001 in Lin’an, China provided an opportunity for sharing knowledge and experiences among the four RMFP countries and resource persons in the development of C&I at the field level. The guideline for the development of C&I for MFs formulated by the workshop inspired participants to revisit their national and local-level C&I for SFM.

The Philippine team, composed of the MF NPC, the Project Manager, and a Community Based Forest Management (CBFM) Specialist, committed to implementing their action plan that incorporates the following activities:

1. Translation of the guideline for developing field level C&I to the local dialect;
2. Formation of C&I working group of national and field-level DENR representatives;
3. Review/refinement of the draft national C&I and the field level C&I developed for CBFM;
4. Orientation workshop on C&I with emphasis on field-level C&I for Ulot MF stakeholders;
5. Workshop on the identification, refinement and screening of indicators;
6. Organizing C&I field teams, and preparation of data gathering and analysis guide;
7. Training of the C&I teams on data gathering and analysis;
8. Testing the feasibility of selected indicators. Initial data gathering and analysis;
9. Final screening of indicators;
10. Implementation of the C&I process, and
11. Evaluation

The Forest Management Bureau (FMB) of the Department of Environment and Natural Resources (DENR) facilitated the C&I review workshop in Quezon City on 04-05 July 2001. It was a multi-sector workshop participated by 40 stakeholders representing government, academe and the private sector. The guidelines of the International Tropical Timber Organization (ITTO) and the ASEAN C&I were used as a framework for the review. The workshop resulted in the refinement of the national C&I and better appreciation of the relevance of community level indicators and their conformity with the basic criteria for SFM.

At the regional level, the Ulot MF project manager, in coordination with the DENR-Regional Public Affairs Office, initiated the translation to the local dialect of the “*Guideline for Field Level C&I for MFs*”. He also coordinated with the nine Peoples’ Organizations (POs) within Ulot watershed and informed them of the orientation workshop that will be conducted to introduce the idea of C&I to the community.

The announcement for the orientation was reiterated during the Ulot MF Stakeholders’ Federation general assembly meeting held on 08 August 2001 at the MF Project Information Center. During the said meeting, the Federation formulated their objective in managing the Ulot MF Project as follows:

*“To strengthen partnership among the MF stakeholders to effectively manage and protect the Ulot watershed and to sustainably use and manage its non-timber*

*resources to improve livelihood and quality of life of its people.”*

Following the Federation meeting, the orientation workshop on C&I for SFM was held in Tacloban City on 09 August 2001. The DENR national and regional C&I working groups facilitated the workshop that was attended by 25 participants. Most of the leaders of the nine POs within the Ulot MF were present. Mr. Tang Hon Tat and Mr. Ravi Hegde of the FAO/Japan RMFP provided useful inputs to the workshop.

The orientation workshop included discussions on the following:

- The SFM framework;
- Importance of C&I at international, national, and MF Level;
- Guidelines for Field Level C&I for MFs; and
- Community level indicators for monitoring SFM.

For a better appreciation of SFM criteria, a jigsaw puzzle game was given as an exercise towards the end of the workshop. The PO members were requested to find out what figure can be formed out of the 7 criteria of SFM written in various paper shapes. The criteria were: 1) enabling conditions for SFM; 2) forest resource security, 3) social, economic and cultural aspects, 4) forest ecosystem health and condition; 5) flow of forest produce; 6) biological diversity; and 7) soil and water conservation.

As they formed a human figure with its 7 major parts, the inter-relationships among the different criteria of SFM and the contribution of each part to the total sustainability goal were highlighted.

Based on the existing model of community level C&I developed under the DENR-Natural Resources Management Program (NRMP), as well as the discussions during the workshop, several indicators for each criterion were identified and validated with the participants.

One significant output of the orientation workshop was an action plan prepared by each PO that includes the following:

1. Echo their learning to their constituents;

*Continued on page 12*



Jigsaw game at C&I orientation workshop for SFM

## Ulot MF POs Get Financial Support For Livelihood Projects

Six POs in the Ulot Watershed Model Forest (UWMF) were provided financial assistance of one hundred and fifty thousand pesos (P150,000) for the third quarter of this year to support their livelihood enterprise/projects.

Recipients are Lokilokon Development and Credit Cooperative (LUDECO) for bags and mat weaving (P10,000); Casandig Farmers Multi-Purpose Cooperative for bag, basket and mat weaving (P10,000); Tenani Association for Progress (TAP) for bag, mat and rattan furniture making (P10,000); Basaranan nga Organisasyon han San Isidro (BOSIS) for bag, mat and rattan furniture making (P10,000); Paglaum Han San Rafael, Inc. (PHBSAI) for hollow block making (P20,000); and Katatapurang nga Pederasyon han San Isidro (KAPPAS) for hollow block making (P90,000).

The funds were provided by the DENR Regional Office and its Provincial Environment and Natural Resources Office (PENRO) in Catbalogan, Samar. This is their counterpart for Income Generating Projects (IGPs) under its CBFM Programme.

The provision of funding support was the result of a series of consultations by the UWMF Project Management with the PO stakeholders. A Memorandum of Agreement (MOA) was signed by the POs and the DENR for the livelihood projects. A project

management team will manage the livelihood project.

As a result of this funding support, the KAPPAS are now producing high quality rattan items. Some of these products were exhibited in SM Megamall, one of the popular commercial malls in the country.



Hollow block making as a livelihood enterprise

## Strengthening partnerships to protect Ulot MF

The Project Management Office of the UWMF recently forged an agreement with the Samar Island Biodiversity Project (SIBP) and the three Community Environment and Natural Resources Offices (CENROs) in Dolores, Eastern Samar, Basey and Catbalogan, Samar to strengthen partnerships towards effective protection and implementation of CBFM Projects within the watershed area. The SIBP is a biodiversity conservation project supported by the UNDP-GEF. This eight-year project, now on its initial phase of implementation, covers 360,000 ha of forest lands in Samar Island which include the Ulot Watershed. The three CENROs are the field offices of the DENR that have administrative jurisdiction over the Ulot Watershed.

The joint agreement was finalized after a series of meetings conducted in Taft, Eastern Samar and Casa Anson, Tacloban City, on September 18 and 26 2001, respectively. Under this

agreement, each of the CENROs in Dolores, Basey and Catbalogan will assign two forest rangers and one CBFM Site Coordinator to the UWMF. Personnel from the said offices form part of the teams that will be assigned to work in the identified cluster barangays within the MF. PM Poculan is assigned as counterpart of the UWMF, and shall work closely with the teams.

The SIBP, UWMF and CENRO concerned have collaborated to pool their financial resources to support the implementation of integrated and holistic activities within the watershed. The SIBP in particular shall also extend funding and technical assistance to help POs in their forest protection activities.

*From Ms. Lourdes Wagan and Mr. Leo Poculen, DENR, Quezon City/Taclorban.*

## New NPC for Philippines

The Government of the Philippines has designated Dr. Romeo T. Acosta to succeed Mr. Adriano Nava Jr as the Philippine National Project Counterpart (NPC) for the RMFP. Dr. Acosta is the Director of the FMB in the DENR. He has a Bachelor's and a Master's degree in Forestry, and a Doctorate in Administration.

Dr. Acosta is a Registered Professional Forester (Board Topnotcher, 1977) and a Career Executive Service Officer III. He has held the positions of Director of Region IV in the DENR, and Regional Technical Director for Environmental Management and Protected Areas Services. He has also served as the Head of the CBFM Office, Programme Director in the Environment and Natural Resources Sectoral Adjustment Programme (in the DENR-SECAL World Bank-assisted

programme), Programme Coordinator for the NRMP (under the NRMP-USAID assisted programme), Chair of the DENR Panel on Forest Resources Securitisation Strategy, Co-chair of the Project Management for Community Based Resource Management Programme (World Bank-assisted programme led by the Department of Finance), and Chief Forest Management Specialist.

We welcome Dr. Acosta to the RMFP, and look forward tapping his considerable expertise and experience for the development of model forests not only in the Philippines, but also in our three other MF Project countries. We would like to thank the out-going NPC, Mr. Adriano Nava Jr., for his very valuable contributions to our MF activities.

## Lin'an MF Hickory Farmers Meet

A Hickory partners' meeting was held in Daoshi Town, Lin'an City, on Sunday 19 August on "*Issues & Strategies for Hickory development*". About 50-60 hickory farmers including women, were present. There are about 15 species of Hickory world-wide, and three in Zhejiang Province.

Daoshi Town is a small, ancient town, with 18,000 people and is one of the main Hickory production areas in China. About 80,000 of the 130,000 mu of hill land in the township are under Hickory (*Carya cathayensis*). This constitutes about 36% of the total Hickory land in Lin'an City, and produces about 2,250 tons, or about 38% of the annual production of Lin'an City. About 20,000 mu of the hickory stands were planted. About 65% of the income of the town is from hickory, and the rest from tea, rice and provision of manual labour. Average income is 20,000-50,000 Yuan per household, with some reaching 80,000-100,000 Yuan. There are plans to establish 3,000 mu of demonstration Hickory farms, and to upgrade about 20,000 mu of low-yielding Hickory stands.

Talks were delivered on,

- "*sustainable control of hickory pests*" by Associate Professor Wang Jiangqing, an entomologist from Zhejiang Forestry College. The pests stick to leaves and tips of shoots. Three generations of pests can occur in one year, and next year is expected to be a severe year. Control measures include using light traps, natural predators (bio-control), "lacing" (with poison) food for the pests, and spraying with insecticides. But, the best control is to remove and burn the infected twigs. Attack by squirrels can also be serious.
- "*how a farmer managed and improved his hickory farm*", by a farmer. The farmer had been allocated an 80-year old stand, with trees of poor form and broken branches. Through the high-yield technique provided by the Lin'an Forestry Bureau, use of fertilisers and pest control, the form and health of the trees improved. Nut output from the 98 trees increased more than 2.5 times (from 600 kg to 1,640 kg) compared to the previous year. This year, pollination has also been very good because of favorable weather (if the weather is bad, they may have to use hand-pollination). Lessons learnt included making friends with the technicians, observing the trees closely, and using organic fertilisers (grass cuttings). It was commented that few families could manage their farms like this.
- "*safety measures in harvesting hickory nuts*" by Dr. Zhou Cheng, Director of Lin'an Forestry Research Institute. The hickory nuts are harvested once a year, and harvesters climb the trees to make the fruits fall. Every year a number of harvesters fall from the trees because of inexperience, lack of proper safety equipment and inability to distinguish branches attacked (and therefore weakened) by pests. Clearing the ground under the trees to facilitate nut collection can cause or aggravate soil erosion. Precautions recommended included the use of safety belts (better quality belts are imported and expensive) and shoes, checking for weak branches, using contact (instead of systemic) weedicides for clearing the ground under trees, taking out insurance against injury, and using experienced climbers. Research to develop shorter hickory trees is being pursued.
- "*keep renewing ideas to promote hickory production and contribution towards SFM*" by Mr. Wang Anguo, Coordinator, Lin'an MF Partnership Committee and senior engineer, LFB. *Sustainable development* was defined as

ensuring that you, your children and their children continue to receive the incomes and benefits from the activities undertaken. It is important to ask why some (hickory) forests are high yielding while others are low-yielding, and seek the answers so that we can increase the area of high yielding forests. Hickory trees should be managed intensively. Hard work by the farmers is not enough – it must be combined with new or improved technology. Strong research, extension, quality control and marketing support is important.

During the discussions, the following were raised,

- the remote location of the area makes access to markets and information difficult. The LFB should help establish an association to address this problem.
- the gap between high and low yield hickory stands has been reduced, but the production level of high yield stands has not been increased.
- some farmers are receiving lower prices for their nuts, although demand has been high and supply low. This may be due to their reliance on the buyer coming to the farm, and having to accept whatever price is offered.
- quality control is sometimes a problem, with empty kernels mixed with good kernels.
- establishment of a "famous brand" for the hickory nuts to secure better prices for the farmers, and production of "green (i.e. organic) hickory".
- the need for advice and guidelines on best management for high yield and high quality. The LFB and the ZFC should document "*best practices*" for hickory management (including cultivation, harvesting, processing and marketing).

Mr. Jiang Chunqian said that the LMF Project can provide assistance to address some of these issues. Mr. Tang Mingrong of the LFB said that they will look into the issues raised and assist wherever possible. He said that this meeting, convened by the LMF Secretariat, was the first time that hickory farmers were meeting with government officials to discuss key issues and problems. A similar meeting of bamboo farmers and government officials will be held in a week's time (60% of Lin'an City is involved in bamboo farming, and 30% in hickory farming).

*By Jiang Chunqian (CAF), Tang Mingrong (LFB), Wang Anguo (LMF Sec.)*



Participants at hickory farmers meeting



# Non-hazardous Prevention and Control of Bamboo Shoot Aphids in Lin'an MF

A group of technicians from Lin'an Forest Disease and Pest Prevention and Control Station (FDPPCS) and Lin'an Forestry Research Institute (FRI) recently visited Xu Yinghua's bamboo farm at Henglu Village, Qingyun Town, to provide on-the-spot supervision on how to control bamboo aphids. Farmers nearby learnt of the news, and came to see the demonstration of non-hazardous prevention and control of aphids using smoke and fog technique. This is one of many non-hazardous cultivation techniques used for food bambooshoots.

Meanwhile, along the streets of Qingyun Town, forestry technicians were busy delivering materials and offering advice. A training workshop was held by Jiutai Organic Fertilizer Co. Ltd. and FRI from Lin'an, to help fertilizer salesmen and bamboo farmers learn about Jiutai brand organic fertilizer, and giving advice on how to use the fertilizer which does not produce public hazard.



Forestry technicians giving pointers on use of smoke pesticide.

Lin'an is one of the ten counties that enjoy the title of "Land of Bamboo" in China. Food bamboo forest totals 0.25 million mu, annual fresh shoot output totals 65,000 tons, and output value is 0.34 billion Yuan. Bamboo is the main source of income for farmers in Lin'an. With increasing living standards, people have a higher demand for environment and food. The traditional way of cultivation cannot satisfy their needs any more. In order to improve quality and reputation of bamboo shoots, and meet the market demand for non-hazardous food, Lin'an City is now actively involved in a new production mode: *to produce based on market requirement*. The municipal government has established an "Administration Office for Unpolluted Vegetable Project".

The Lin'an Forestry Bureau has developed provincial level criterion for non-hazardous (to the public) cultivation of bamboo

shoots. This cultivation mode is incorporated into the above-mentioned project. As an important part of MF development in Lin'an, a 10,000-mu demonstration farm for standardized cultivation of non-hazardous food bamboo has been set up in Qingyun town, guided by FDPPCS and FRI of Lin'an City. The technical regulation includes two aspects of cultivation process, through use of only non-hazardous fertilizer (organic fertilizer, biological fertilizer and organic compound fertilizer), and no use of farm chemicals during the harvesting season. When pests and diseases infest the bamboo, only low-toxic and low carry-over farm chemicals in line with non-hazardous cultivation are applied.

Among non-hazardous pesticides, smoke pesticide is ideal in that it is effective, easy to apply, and produces no carry-overs.

One pack of this can smoke two mu of bamboo, which costs 6.75 Yuan per mu with 100% killing effect. It is especially suitable for dense bamboo forest, and for places where water is not easily accessible. For bamboo forests close to water, and sparse in density, 20% Fenvalerate diluted 100-150 times with water is effective for killing pests (90%), and the cost would be 12.05 Yuan per mu.

Jiutai organic compound fertilizer is recommended for non-hazardous bamboo cultivation. Experiments on 30 mu of bamboo forest on Linglong Forest Farm showed that by using Jiutai organic compound fertilizer, the output could reach 455.2 kg per mu, with an output value of 382.2 Yuan per mu. This is 45.2% and 74.4% higher respectively than from using special fertilizers for bamboo. All the food shoots conform to the non-public hazardous food standard.



Spray fogging in bamboo forest.

By Mr. Ge Huaping and Mr. Liu Wei  
Lin'an Model Forest Secretariat

## Facilitating Farmers' Participation in Eco-tourism in Lin'an MF

Following their return from the RECOFTC training course on Facilitation Skills in Community Forestry held in Bangkok from 21 May-01 June 2001, Mr. Liu Wei of the Lin'an Forestry Bureau and Ms. Shen Yueqin of the Zhejiang Forestry College, applied some of the facilitation skills learnt to assess the impacts of the eco-tourism development that began in the area in 1998 on the farmers, and get their views on the future development of ecotourism in the area. They were assisted by Mr. Wu Weiguang and four students of the Zhejiang Forestry College,

During the day, individual interviews were conducted with 71 tourists (38 male, 33 female) and 44 householders (27 male, 17 female) to determine their views of the impacts of the eco-tourism development. In the evenings, group meetings were held with four groups of persons, i.e. women, older persons (over 50 years),

farmers contributing land for eco-tourism development and village leaders. Questionnaires developed for each group, and flip charts were used to get the responses of the members of each group on issues such as impacts of ecotourism on the environment (including sanitation), the local economy, social culture, participation of women; constraints encountered and prospects for the future.

The results are being analysed and will be presented to the Lin'an MF Partnership Committee for consideration in guiding the future development of ecotourism in the area. A summary of the results will also be published in this newsletter.

*By Ms. Shen Yueqin, Zhejiang Forestry College (ZFC), Mr. Liu Wei, Lin'an Forestry Bureau and Mr. Wu Weiguang, ZFC.*

## National Award for Mr. Wang Anguo of Lin'an MF

Mr. Wang Anguo, Engineer General in the Lin'an Forestry Bureau, has been recognised by the Chinese Government for his distinguished service to forestry. Mr. Wang was among the first recipients of a new "**National Agrotechnique Outstanding Spreader**" award, which carries a certificate of distinction and cash prize. At the same time, he also received the award of "**Provincial Outstanding Contributor of Agrotechnique in Zhejiang Province**" in June 2001. Mr. Wang is the Secretary of the Lin'an MF Secretariat and has been a driving force behind the Lin'an MF.

Born in 1942 in Lin'an, Mr. Wang has had a productive 30-year professional career. His contributions have helped to make Lin'an forestry world famous, and have also helped the local farmers to get richer. He is deeply loved by the local farmers as "*the god of wealth with science and technology*". Six major programmes and projects which he was involved in have won awards in Zhejiang province. One was even recognised at the

international level. The estimated increased value of these projects was 1.45 billion yuan RMB. The most popular programmes were the "*Early shooting and high-yield technique of food bamboo shoot*" and "*Integrated high-yield technique of hickory*". Thirty science and technology demonstration villages, and over 400 demonstration farmers are involved in spreading these programmes, which also attracted over 400 visitors from 32 countries, and 18,000 visitors from 28 provinces and regions in China.

Half of Mr. Wang's work time and one third of his vacations were spent to train farmers. He has trained more than 15,000 farmers, and conducted 205 training courses since 1992. In the past 20 years, he has received about 25 awards.

*(On behalf of the RMFP and the other three MF countries, we would like to congratulate Mr. Wang on his fine achievements. Tang Hon Tat, CTA, RMFP)*

## Lin'an MF Partners Look for New Markets

Lin'an is famous for its bamboo shoots and vegetables produced in mountain areas, which are sold mainly to big cities such as Shanghai, Nanjing, Suzhou, Wuxi and Hangzhou. With increased cultivated area and production, some farmers (MF partners) requested the Lin'an MF Partnership Committee (LMFPC) to organise marketing visits to Nanjing and Shanghai.

### *Trip to Nanjing*

In consultation with the Lin'an City government, the LMFPC organised an exhibition in Nanjing on 15 April 2001. A delegation of 20 participants from 10 partners, including households in 5 township and enterprises, displayed their products. During the exhibition, some supermarkets in Nanjing signed contracts with some Lin'an MF partners.

### *Trip to Shanghai*

Shanghai is the main market for Lin'an bamboo shoots and vegetables. In recent years, the demand for "unpolluted" vegetables, including bamboo shoots, has increased. The Lin'an MF has helped to develop standards for bamboo shoot production and processing, and train the partners in using the standards. On 10 July, an exhibition of the unpolluted vegetables of Lin'an was held in Shanghai, with 20 participants from 12 partners. A chef from Lin'an also showed how to cook the bamboo shoots, and a video of Lin'an's eco-environment was introduced. Some partners received feedback on how to improve their products.

*From Mr. Jiang Chunqian, Chinese Academy of Forestry and Mr. Wang Anguo, Lin'an Forestry Bureau*

## Japan Delegation Visits Lin'an MF

On 14 September 2001, a 5-person delegation from Japan led by Dr. Fusho Ozawa (former Director General of Forestry Agency of Japan) visited the Lin'an MF, accompanied by Ms. Chen Lu from the Exchange Center, State Forestry Administration of China.

Mr. Wang Anguo from the Lin'an MF Secretariat briefed the visitors on the status and progress of Lin'an MF development. Regular meetings of the Partnership Committee, with 28 partners, are held to exchange experiences and discuss issues in the development of Lin'an MF. Several pilot projects, identified by the partners meetings and supported by GCP/RAS/177/JPN MF project, are being implemented. The MF also organises

many training courses for, and disseminate market information to, farmers and these play an important role in the improvement of forest management in Lin'an.

The delegation visited Baisha village, a bamboo shoot production demonstration site in Qinyun Town, and Yihua Green Food Ltd. Company. The delegation also met and talked with some farmers. They thanked the Lin'an Forestry Bureau for their hospitality and appreciated the achievements of the Lin'an MF.

*From: Mr. Jiang Chunqian, NPC, Chinese Academy of Forestry and Mr. Tang Mingrong, Lin'an Forestry Bureau*



## Partnership Building in Ngao Model Forest

The National Inception Workshop on MFs from 22-24 Nov. 2000 in Thailand emphasised that partnership building is a prerequisite for the successful development of MFs. With guidance and support from the RMFP, partnership development in Ngao MF has made good progress, through a series of meetings and activities with stakeholders, i.e.

- a meeting on **10 April 2001** at the Teak Improvement Centre in Ngao MF with 26 participants, which highlighted the good understanding and cooperation among the stakeholders;
- a meeting on **04 July** at the Teak Plantation in Ngao MF, and on **07 July** at the Rong Ta Temple, Ban Huad sub-district in Ngao, which resulted in 40 persons planting 350 trees at the headwater (spring) of Huai Pong Tong of Rong Ta Village on **July 15**;
- a Conservation Summer Camp for secondary school children was organized at Tham Pha Tai National Park in Ngao MF from **June 29-July 01**, to provide them with knowledge and experience in forest appreciation and conservation. The NPC and RMFP CTA and APO visited the training camp, and briefed the students on MF concepts;
- a meeting on **14 Sept. 2001** at the Teak Improvement Centre in Ngao MF with 42 participants to discuss two main issues, the Man and Biosphere Programme (Huai Tak Biosphere Reserve, within the Ngao MF) and Ngao MF partnership development;

The rationale and benefits of the model forest approach and the crucial role of partnerships were also explained at a number of informal meetings with stakeholders by the Royal Forest Department staff.

Through these meetings and activities, local people are more aware of the issues and problems regarding the proper use of forest resources, and are interested to participate in ensuring their sustainable

management. Stakeholders have been informed about the MF concepts, and small groups of local people are being organised to be partners in the MF. Government officials and local groups are working together to develop a long-term partnership. The next step will be the formal establishment of the Ngao MF Partnership Committee/Group.

*By Mr. Jira Jintanugool  
MF National Project Counterpart  
RFD, Thailand*



Stakeholders meeting on partnership development

## Rehabilitation of Mixed Deciduous Forest in Ngao MF

### Background

Rapid deterioration and decline of tropical forests have become global concerns in recent years. The area under forest cover has also declined in Thailand. In 1961, 53% of the land area in the country was covered by forest, whereas by 1991 it had declined to 27%. Consequently, forest areas have been rapidly losing their functions and contributions as timber resources, water resources and environmental resources.

In 1985, the Thai government in the National Forest Policy set the target of 40% of forest cover. In order to achieve this target, the appropriate management of the remaining natural forests, with a parallel promotion of re-forestation, are needed. Knowledge and techniques for appropriate natural forest management for sustainable yield and environmental conservation should be developed. The high productivity mixed deciduous forests covering the northern and western regions of Thailand, are particularly suitable for such management. Some studies on this end are being carried out in the Ngao MF.

**Objectives** are; (a) to study and understand the status and system of the regeneration in mixed deciduous forest ; and (b) to develop artificial methods which support the regeneration in mixed deciduous forest

**General description;** (a) *Place:* Ngao Demonstration Forest, Lampang Province; (b) *Topography:* Two small hills and the plain, (c) *Altitude:* 330-350 meters above sea level; (d) *Climate:* Tropical monsoon; (e) *Forest type:* Mixed deciduous forest; (f) *Original vegetation:* Teak forest; (g) *Present vegetation:* Low-dense forest with over-storey of trees; (h) *Occurrence of forest fire:* Once or twice a year; and (i) *Human activities:* Hunting, collection of bamboo shoots, cutting bamboo

**Activities carried out** include bamboo cutting by strips, prevention of forest fire, weed control, sowing of seeds and enrichment planting.

**The valuable species in the study** include teak (*Tectona grandis*),

*Continued on page 11*



*Xylia kerrii* seedlings under bamboo shade



*X. kerrii* seedlings 1 year after cutting bamboo

# Protected insects in Ngao MF

## Present status

Insects are well known as the most abundant species compared to other creatures. Many insect species are being driven to extinction with their population in the natural habitat decreasing to endangered levels. There are many factors that trigger fluctuations in the insect population. They include conversion of forest land to non-forest uses and the consequent destruction of natural habitats and food plants of insects, and collection of some insects for consumption and as souvenir gifts. Increased demand and prices for insects and their products encourage the collectors to expand harvesting of insects beyond sustainable levels.

Some species have been in very high demand. The swallowtail butterfly (*Bhutanitis lidderdalii*) is one example. In Thailand, this butterfly was limited only to the top of Chaing Dao Mountain where its larval food plants were found. This butterfly is very beautiful and a very rare species, but its intensive harvesting has caused this butterfly to disappear from Thailand. The last record of its citing was made about 8-9 years ago.

## Protected insects

Due to the factors described above, many insects are treated as protected. There are two regulations related to insect protection, namely the *Wildlife Reservation and Protection Act (1992)*, and



Golden birdwing butterfly (*Troides aeacus aeacus* C. & R. Felder)

**Table 1.** Protected insect species listed under the Wildlife Reservation and Protection Act (A), CITES Appendix II (B), and those found in NMF (C) and Thailand (\*)

Insect species	Status	Insect species	status
<i>Bhutanitis lidderdalii</i>	A,B	<i>Teinopalpus aureus</i>	A,B
<i>Bhutanitis ludlowi</i>	A,B	<i>Teinopalpus imperialis</i> *	A,B
<i>Bhutanitis mansfieldi</i>	A,B	<i>Trogonoptera brookiana</i>	B
<i>Bhutanitis thaidina</i>	A,B	<i>Trogonoptera trojana</i>	B
<i>Meandrusa gyas</i> *	A	<i>Troides aeacus</i> *	A,B,C
<i>Ornithoptera aesacus</i>	B	<i>Troides amphrysus</i> *	A,B
<i>Ornithoptera akakeae</i>	B	<i>Troides andromache</i>	A,B
<i>Ornithoptera alexandrae</i>	B	<i>Troides criton</i>	A,B
<i>Ornithoptera allottei</i>	B	<i>Troides cuneifera</i> *	A,B
<i>Ornithoptera caelestis</i>	B	<i>Troides darsius</i>	A,B
<i>Ornithoptera chimaera</i>	B	<i>Troides dohertyi</i>	A,B
<i>Ornithoptera croesus</i>	B	<i>Troides haliphron</i>	A,B
<i>Ornithoptera goliath</i>	B	<i>Troides helena</i> *	A,B
<i>Ornithoptera meridionalis</i>	B	<i>Troides hypolitus</i>	A,B
<i>Ornithoptera paradisea</i>	B	<i>Troides magellanus</i>	A,B
<i>Ornithoptera priamus</i>	B	<i>Troides minos</i>	A,B
<i>Ornithoptera richmondia</i>	B	<i>Troides miranda</i>	A,B
<i>Ornithoptera rothschildi</i>	B	<i>Troides oblongomaculatus</i>	A,B
<i>Ornithoptera tithonus</i>	B	<i>Troides plateni</i>	A,B
<i>Ornithoptera urvillianus</i>	B	<i>Troides plato</i>	A,B
<i>Ornithoptera victoriae</i>	B	<i>Troides prattorum</i>	A,B
<i>Papilio chikae</i>	B	<i>Troides rhadamantus</i>	A,B
<i>Papilio homerus</i>	B	<i>Troides riedeli</i>	A,B
<i>Papilio hospiton</i>	B	<i>Troides vandepolli</i>	A,B
<i>Papilio palinurus</i> *	A	<i>Actias maenas</i> *	A
<i>Papilio protenor</i> *	A	<i>Actias rhodopneuma</i> *	A
<i>Parnassius apollo</i>	A	<i>Actias selene</i> *	A,C
<i>Stichopthalma camadeva</i> *	A	<i>Actias sinensis</i> *	A
<i>Stichopthalma cambodia</i> *	A	<i>Lyssa zampa</i> *	A,C
<i>Stichopthalma godfreyi</i> *	A	<i>Cheirotonus parryi</i> *	A,C
<i>Stichopthalma louisa</i> *	A	<i>Cladognathus giraffa</i> *	A,C
<i>Teinopalpus aureus</i>	A,B	<i>Mormolyce phyllodes</i> *	A
		<i>Mouhotia batesi</i> *	A



the *Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)*.

According to the *Wildlife Reservation and Protection Act*, many threatened and important insects were listed in the protected species list, which includes 20 species (**Table 1**). These include butterflies, moths and beetles. These insects, whether alive or dead, are illegal to be collected or be in any possession. Thailand is a signatory to the CITES which controls the export and import of endangered animal and plant species listed in the appendices to the convention. There are many insect species listed under CITES Appendix II (**Table 1**) which are found in Thailand. Most of them are butterflies. Both the regulations are observed in order to protect the natural insect harvesting which would impact on their populations in their natural habitat.

#### **Protected insects at Ngao Model Forest (NMF)**

At least five protected insect species are found in NMF (**Table 1**). They include one species of butterfly, two species of moths and two species of beetles.

The golden birdwing (*Troides aeacus aeacus*), the only protected butterfly seen in this area, is found throughout Thailand. The larvae feed on the climber of *Aristolochia spp.* Adults are commonly found in NMF, but its beautiful colour pattern, with black colour in the fore wing and bright yellow in the hind wing, attracts people.

The lunar moth (*Actias selene*), which belongs to the giant moth family (Saturniidae), is usually found in the rainy season (July-August) at NMF. Its larvae feed on *Cinnamomum spp.* and *Lagerstroemia calyculata*. The adult is a big attractive moth with pearl green on the wing, and has a long tail.

The giant uranid moth (*Lyssa zampa*), which belongs to the Uranidae family, is quite a large moth with dark brown scales and white tail.

The long arm beetle (*Cheirotonus parryi*), is very difficult to find in the natural habitat. The adult is a big beetle with long prominent fore legs. It occurs during August- September at NMF. The specimens have been collected only twice at Ban Sop Pleung and Pan San Pa Sak. The life cycle of this beetle is not clear,

presumably its larvae feed on the organic matter beneath the soil.

The stag beetle (*Cladognathus giraffa*), was found only once in NMF in September 2000 at Ban Huad. The larvae stay inside oak (family Fagaceae) timber and feed on the wood. However, most parts of its life cycle are not clear.

A survey of these protected insect species at NMF needs to be



**Long arm beetle (*Cheirotonus parryi* Grey)**

undertaken on a regular basis, covering all the areas. There are many locations that the surveyors do not visit. These areas might have more protected insects.

*By Kobsak Wanthonchai and Poonsri Wanthonchai  
Forest Pest Research and Control Center  
Royal Forest Department, Ngao, Lampang, Thailand*

## **Ngao MF C&I Workshop**

A workshop on development of C&I for the Ngao MF was held on 18-19 October 2001 in Lampang. Over 40 participants from Government, NGO, private sector and local communities attended. A report on the workshop will appear in the next issue of this newsletter.

*From Mr. Jira Jintanugool, NPC.*

*Continued from page 9 - Rehabilitation of Mixed Deciduous Forest in Ngao MF*

daeng (*Xylia kerrii*), pradu (*Pterocarpus macrocarpus*), maka (*Azelia xylocarpa*), and yomhin (*Chukrasia velutina*)

#### **Results**

Heavy shade is not suitable for the seedlings under study e.g., *P. macrocarpus* and *T. grandis*. In order to ensure suitable conditions for the seedlings, it is necessary to cut the bamboo to allow sunlight to the ground. Seedlings are more sensitive to forest fire and it is necessary to protect them from forest fire until they reach 3 cm. diameter (d.b.h.)

#### **Conclusion;**

To achieve success in rehabilitation of mixed deciduous forest, operations such as bamboo cutting, forest fire prevention, weed control, sowing and enrichment planting etc. are necessary. Attention should also be focussed on enrichment planting to ensure that plant the right species is planted in the right place.

*By Mr. Suraphong Chaweepak, RFD, Ngao Model Forest*



# International Conference on Advancing Community Forestry

The *International Conference on Advancing Community Forestry - Innovations and Experiences* was held from 25-28 September 2001 in Chiang Mai, Thailand. In view of the relevance of community forestry in MF development, the RMFP sponsored seven participants from RMFP countries to the conference, i.e. Mr. Jiang Chunqian from China; U Aung Than Win and U Mya Win from Myanmar; Ms. Fe Visto and Ms. Remedios S. Evangelista from Philippines; and Mr. Jira Jintanugool and Mr. Suraphong Chaweepak from Thailand. Mr. Patrick Durst from FAO, and Mr. Tang Hon Tat and Mr. Ravi Hegde from RMFP also attended the conference.

The conference format was unusual as there was no “presentation of papers”. A “impromptu” debate on “*there is no way to get forests in Asia properly managed unless the rights of communities are clearly defined*” served as the opener for the conference. This was followed by thematic discussions in parallel sessions on *Planning and managing dynamic and sustainable collaborative agreements; Community forest management practices; Income generation and livelihoods; Policy development and implementation; Institutional reform in the forestry sector; Education; Training; and Networking and information management*. One day was set aside for field visits. An ‘Information Market’ was organised which included 24 information kiosks and displays of various themes of community forestry. A display on the RMFP, showing the concept of MFs, and information on field sites and activities in the project countries, was set up, and various publications displayed and distributed. Many participants visited the display area, and inquired about the concepts and benefits of MFs, prospects of expansion of MFs and so on.

Among the benefits of the conference highlighted by the RMFP-sponsored participants were innovative approaches used for discussion and information dissemination, new ideas on Community Forestry, and improved networking among the participants.

## ***RMFP 3<sup>rd</sup> PSC Meeting and Regional Model Forest Workshop***

The 3<sup>rd</sup> PSC meeting will be held on 30 November and 01 December in Yangon, Myanmar. This will be preceded by the 3<sup>rd</sup> RMFP workshop from 25-28 November 2001 in Pyay, Myanmar. The theme of the workshop will be “*C&I for Sustainable Forest Management in Model Forests*”. For more information, please contact the CTA RMFP at the address mentioned below.

*Continued from page 4 - C&I for SFM in Ulot Watershed MF*

2. Prepare *barangay* maps and identify data gathering or monitoring points for SFM indicators; and
3. Identify 4 volunteers to join the C&I teams who shall participate in a subsequent training on the gathering, consolidation and analysis of data on SFM indicators.

The follow-up training on C&I involving the teams identified by each PO was held on September 18 – 19, 2001. It was attended by 41 participants representing POs, NGOs, DENR and the SIBP. A resource person on community level C&I was invited from NRMP. The initial part of the training was a brief review of the identified C&I during the workshop in Tacloban on 09 August 2001. The participants came up with 2 indicators for each of the 7 criteria of SFM for monitoring. Selection was based on relevance, information availability, relative ease in gathering data, willingness to do the process, and availability of needed materials. The importance of monitoring the indicators of SFM, the process of gathering, consolidation & analysis of data were discussed during the training. The methods of monitoring plant growth survival, change in forest cover, soil erosion, and water quality and quantity were demonstrated.

The nine POs within the Ulot MF will be conducting their monthly monitoring of SFM indicators by area of jurisdiction. Afterwards, all teams will meet to share experiences and consolidate their findings. Three local DENR personnel were assigned to provide assistance to the POs. The first consolidation meeting is scheduled for the last week of October 2001. The initial findings and teams’ experiences that will be reported will give hints for further screening indicators or refining the community’s statement of intent. The intent of the different POs in conducting the C&I work is “*to support the Federation objective of SFM and livelihood development built on partnership among members*”. The C&I process aims to provide opportunities to community members for information sharing, cooperation, and teamwork - the foundation of partnership which is vital for SFM.

*By Ms. Isabelita Austria, Ms. Lourdes Wagan & Mr. Leo Poculan, Ulot Watershed MF Project, FMB, DENR*

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