

PROJECT COMPLETION REPORT

A. Project Identification

- a) A Scientific and Technical Workshop for Southeast Asia on Forest Restoration for Wildlife Conservation
- b) PD 28/99 Rev.1 (F)
- c) The Forest Restoration Research Unit
- d) The Government of Thailand
- e) June 1999
- f) 13 months

Part I: Executive Summary

1. Background information about the project

The aim of the workshop was to contribute substantially to advancing research and practice in forest restoration for wildlife conservation. The development of effective techniques for diverse forest restoration is crucial in the implementation of both the Thai Government's proposals for extensive reforestation of National Parks and watersheds with native species, and for achieving sustainable forest management on a Regional scale. In South East Asia more information is urgently needed on how to establish and maintain biodiverse forest plantations utilising native species, the importance of which is highlighted in ITTO's "Guidelines for the Establishment and Sustainable Management of Planted Tropical Forests" (1993). Losses of biodiversity, unsustainable forest management, reduced watershed protection and the resultant community impoverishment are all problems whose resolution can be aided by the results of this workshop.

The potential for utilising indigenous tree species in plantations for timber and NTFP's as well as for wildlife conservation should not be underestimated, but is limited by current lack of knowledge on the performance and care of the majority of native species. Currently, research in this area is largely uncoordinated, resulting in possibilities for duplication and thus ineffectual use of the available limited funding resources. In addition, the benefits of direct sharing of information and experiences in such a forum are substantial, where the interplay between researchers and practitioners can generate innovative ideas and techniques.

The specific objective of the workshop was to produce a focused research agenda that will make most effective use of available and potential scientific resources in the development of techniques for restoring biodiverse, seasonally dry tropical forests. In addition, the workshop aimed to identify a mechanism for ensuring the more efficient and productive sharing of such information in the future.

The region targeted was South East Asia where seasonally dry tropical forest occurs, specifically Thailand, Myanmar, Vietnam, South China, Cambodia and Laos. In addition, countries in South Asia (Bangladesh and India) that have seasonal tropical forests, or where relevant research on other forest types is being undertaken (Malaysia, Indonesia, Australia, the US and the UK) were also involved in the workshop. Most of these countries are currently suffering extensive deforestation and only some have a focused reforestation programme so the overall result is a substantive net loss of forest cover. The environmental impacts of this are many and manifest, but include loss of biodiversity, destruction of watersheds, reduced long-term timber availability and widespread erosion of soil resulting in impoverishment of

local communities. The majority of the countries also have growing human populations so pressure on remaining forests will increase.

Throughout the region, there is a need for reforestation for maintenance of ecological function at both local and landscape scale and for industrial timber production. Many of the countries have programmes to support community forestry, where sustainable utilisation of forests for both timber and NTFP's will be undertaken, but knowledge of propagation of the most suitable species and their successful establishment is often limited. Swidden agriculture is still widespread throughout the uplands of the region and clearance of lowland forests for agriculture is still ongoing.

The choice of a workshop as a strategy to help to resolve these problems was derived largely from the benefits that can accrue of such direct interaction between scientists and practitioners. A proportion of the necessary knowledge was already available in research institutes or amongst practitioners, but synthesis was required to make most effective use of the information and to achieve successful implementation on the ground.

If these problems are not addressed, it is probable that initially substantial resources will continue to be committed to reforestation schemes with native species that prove to be unsuccessful or disappointing. This will discourage those involved and may ultimately lead to withdrawal of funds. Consequently, it will be harder for member countries to achieve sustainable forestry targets.

The intended outputs of this workshop were:

- a) To provide an overview of the most effective methods currently used to restore forest ecosystems in the region, so researchers can identify useful techniques. Such information should immediately improve ongoing forest restoration schemes.
- b) To establish an agenda to focus research programmes and to fill gaps in knowledge identified during the workshop.
- c) To establish a network for information exchange between scientists and practitioners within the region, and outside if appropriate.
- d) The publication of the proceedings of the workshop to ensure that the information gathered is widely available.

The planned duration of the project was from June 1999 to July 2000 (including publication of the proceedings) with an overall cost (including ITTO monitoring) of \$47,550.

The information generated from this workshop has the potential to bring benefits to all forestry sectors in the Region. The improvement of techniques for growing, planting and maintaining indigenous tree species has direct benefits for timber and NTFP production as well as for watershed stabilisation and wildlife conservation. Thus, the commercial and community forestry sectors will be served by the outputs.

Project Achievements

Outputs Achieved

- a) A regional workshop was organised, with 55 participants from 14 countries who attended the full programme. A further 30 participants were present on the first day which was open to junior researchers and those in related fields, such as NGOs involved in agro-forestry and community forestry. Papers were presented that reviewed the status of forest restoration in the region and addressed the technical issues of species selection, seed collection, nursery care, planting, aftercare and silviculture of native trees. In addition, the effectiveness of these techniques for attracting wildlife to restored sites, and the interactions with community forestry were explored.
- b) A research agenda was produced containing 136 proposals, of which 14 were prioritised by consensus amongst the participants.
- c) A mechanism for establishing a regional network for information exchange was devised, with a voluntary co-ordinator appointed and several in-country representatives identified who will circulate information.
- d) The proceedings of the workshop containing all presented papers (peer-reviewed and edited); the research agenda and network proposal has been completed in draft. The final version will be printed by July 25th.

Specific Objectives Achieved

The objectives of producing a research agenda and establishing a regional network were achieved as detailed above.

Contribution to the Achievement of the Development Objectives.

The workshop substantially advanced forest restoration research and practice. The exchange of knowledge about effective techniques for diverse forest restoration will help to further implementation in the countries of the region. Information was provided that will be key to the Thai Government's proposals for extensive reforestation of National Parks and watersheds with native species. Similarly, other governments with comparable aims will benefit, as well as those who wish to establish native tree species as timber crops on degraded farmland, and those that are prioritising NTFP production in community forest areas and buffer zones.

2. Target Beneficiaries Involvement

The target beneficiaries are those who work in forest restoration, sustainable commercial forest management and communities that are dependent on forests for their livelihoods. Researchers and practitioners in forest restoration in the region played an active role in the development and delivery of the workshop programme, particularly in the prioritisation of topics for the discussion groups. All participants agreed on the research agenda and on which topics most urgently required attention. The priority research proposals are included, in draft form, in the published proceedings so that researchers can adopt, develop and seek funding for them as a matter of urgency. Similarly the nature and functioning of the proposed regional network was agreed and some participants volunteered to take on certain tasks.

The improved techniques developed by this workshop, and the further research that it will generate, will support both state forest departments and local communities in achieving biodiversity conservation and sustainable forest management.

3. Lessons Learned

a) Development Lessons

Small, parallel discussion groups, as a means of information exchange, proved a very effective method of achieving the outputs. This format created opportunities to explore new ideas and innovative techniques and to allow transfer of information across both disciplinary and country boundaries. The original setting of clear objectives within a tight timeframe was also instrumental in the successful outcome.

As the workshop developed, the linkages between forest restoration for wildlife conservation, sustainable forest management and community forestry became clearer. The necessity to integrate biodiverse planting schemes into the other forestry sectors was emphasised throughout.

The decision to establish a regional network will facilitate future co-operation between researchers and practitioners in the region and ensure more effective targeting of resources towards priority areas. Both financial resource availability and personal commitment by network members will affect the sustainability of the outputs

b) Operational Lessons

Concerning project organisation and management it was felt that this ran smoothly with only a few small operational mistakes that were a result of staff inexperience and were easily rectified. No significant problems affected achievement of the outcomes. An additional member of staff to help specifically with the documentation relating to travel claims etc. would have helped to reduce the workload at the workshop for other staff who might have been used more effectively elsewhere.

The relatively short time from planning to implementation of the workshop was probably the minimum realistically necessary; this was constrained by the availability of suitable staff. A longer preparatory period would normally be preferable because of the limitations of communication where e-mail contact is not possible. The principal implementation was undertaken by staff of the Forest Restoration Research Unit with advice and guidance from the Royal Forest Department.

Certain external factors influenced the implementation of the project, both foreseen and unforeseen. The unexpected refusal of a funding contribution from DANCED that had been positively propounded was a setback that was overcome by reassessment of the budget and marginal reductions in certain cost areas. The hospitalisation of one of the speakers 3 days before the start of the workshop was unfortunate and resulted in no representative from Cambodia being able to attend. The visa problems encountered by all 3 of the proposed Laotian participants (despite provision of official invitation letters etc.) were unexpected and irresolvable.

4. Recommendations

The principal recommendation as to how to improve the effectiveness of delivering such a workshop in the future would be to marginally expand the organising team. One extra person to help with processing travel receipts and paying reimbursements

would allow better use of other staff time. A slightly longer preparatory period might help to overcome the sorts of problems that were encountered with visas. Although it was previously considered that 6 months for bureaucratic processing of travel documents would be sufficient.

The possibility of achieving an even wider input into the proceedings through e-conferencing before the main event might be considered in the future. Providing a "virtual" discussion group forum that could consider the same issues as the main participants, then feeding these into the deliberations would broaden the range of ideas that could be generated.

PART II: Main Text

5. Project Results

The changes that have occurred as a result of this workshop are:

- a) Closer informal communication between forest restoration researchers and practitioners in the region.
- b) Enhanced awareness amongst researchers of the range of complementary work that is currently being undertaken, and the good practices that have already been established elsewhere.
- c) An agreed research agenda that clearly identifies priority areas for urgent work.
- d) A mechanism for running a regional network.
- e) A published document containing all the papers presented and the results of the discussion group deliberations, which can be circulated widely to restoration professionals.
- f) Through the above, a more widely dispersed knowledge of techniques that will achieve successful restoration in the field.

Thus, in summary, all the specific objectives were achieved.

The research priorities agreed were as follows:

- a) *Plantation design* –
 - methods of assessing the potential for assisted natural regeneration on a particular site
 - assessment of optimal tree species, size, species mix and effects of plot distance from remnant forest
 - techniques to improve structural and niche diversity in new plantations
 - relationship between plantation design and successful colonisation by native wildlife
- b) *Species selection, nurseries and planting* –
 - maintenance of genetic diversity
 - site-species matching on local and bioregional scales
 - effectiveness of direct seeding
- c) *Seed dispersal* –
 - effects of perch trees on seedling establishment in degraded sites
 - how to harness the effectiveness of bats as tree seed dispersers
 - identification of tree species that are attractive to mammalian dispersers
 - identification of key seed dispersers that augment restoration techniques
- d) *Fire* –

- resistance of different tree species to fire
- feasibility and effects of controlled burning as a method of wildfire prevention

e) *Social and community issues* –

- effects of restoration on watersheds and water flow
- motivating factors for involving villagers in forest restoration
- threshold capacity of restored areas

The above will lead to beneficial research culminating in substantive impact on the ground. All the research areas will have direct effects on forest restoration and management, through optimisation of silvicultural techniques, enhancement of biodiversity in new plantations and sustainable involvement of communities. The results will have applications in the commercial and community forestry sectors as well as in watershed protection and wildlife conservation.

The sustainability of the project is now dependent on the attainment of funding and institutional support for the implementation of the priority research proposals. Political advocacy will also be necessary if there are to be substantive changes in the region that will lead to large-scale forest restoration and sustainable forest management.

The network will require limited financial resources, but greater support in terms of time committed by individuals to circulating their results, translating documents etc. Thus, sustainability will depend on the enthusiasm of the network members, which will in turn depend on how useful they find it.

6. Synthesis of the Analysis

a) Specific Objectives Achievement	Realised
b) Outputs	Realised
c) Schedule	On time
d) Actual expenditures	Below planned
e) Potential for replication	Significant potential
f) Potential for scaling up	Modest potential

Part III: Conclusions and Recommendations

a) Development Lessons;

The results demonstrate that there is substantial potential for advancing research and implementation of forest restoration through a workshop of this kind. There is a core of scientists and practitioners in the region who have extensive knowledge and experience which could be more effectively shared and disseminated than has previously been the case. A workshop format of mixed presentations and strictly targeted discussion groups can be an effective means of collating such information.

b) Operational Lessons;

Such a workshop can be organised by a small team (4 persons working part time) in the planning phase, with more required during implementation to cover

recording and general logistics. Visas and exit permits for participants to travel from certain countries can be difficult to obtain due to bureaucracy and may require more than 6 months for the speakers to arrange.

c) Recommendations for future Projects, regarding:

i) Identification

The process of identifying this project evolved over several years and was derived from a real need. Consequently the setting of clear aims and objectives was possible and tangible outputs could be achieved. This approach would be recommended for future workshops.

ii) Design

The design of the project was based on experience by the staff of both attending similar events and organising smaller scale workshops, and thus utilising the more successful techniques gleaned from these. The format would be recommended for other workshops where there are clear objectives to be met.

iii) Implementation, organisation and management

The implementation of the workshop by a small team liaising with a knowledgeable advisory group was successful. There were clear lines of communication amongst the team members, which are more easily maintained in a small group. The advisory group members had previous experience of organising workshops and seminars and thus could contribute meaningfully to this workshop's implementation. Undoubtedly a factor in successful organisation was the close working proximity of the staff, which allowed flexibility and rapid decision-making, a factor which should be borne in mind when trying to organise conferences "by committee". Thus, a recommendation would be that a tight-knit team is maintained so that planning and organisational decisions can be most effectively made.

Responsible for the Report

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