1. NATURE AND OBJECTIVES OF THE ACIAR SEEDLING ENHANCEMENT PROJECT AND OVERVIEW OF THE WORKSHOP PROGRAM

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This paper introduces ACIAR project ASEM/2006/091 Enhancing Tree Seedling Supply via Economic and Policy Changes in the Philippines Nursery Sector – also referred to as the ACIAR Seedling Enhancement Project. It provides an overview of the project and an outline of the role of the End of Project Workshop and Workshop Proceedings.

OVERVIEW OF THE PROJECT

Problems within the forestry nursery sector in the Philippines have been identified from previous and current ACIAR projects as major constraints to the development of smallholder and community forestry. The current organisation of the Philippine public and private sector nurseries is not delivering seedlings of appropriate quality to tree farmers in an equitable manner. There are no quality protocols in most nurseries and many potential buyers have no knowledge about the existence of nurseries which can supply planting material. Crowding out of private sector nurseries by those in the public sector nurseries (including those supported by development assistance funding) appears to be restricting the development of the sector.

There have been a large number of people involved in the seedling enhancement project. From the Australian side, it is a joint project between The University of Queensland and Southern Cross University in Australia and the Visayas State University in the Philippines. We are very fortunate also to have as formal participants this time DENR Region 8 and DENR Region 10, as well as the World Agroforestry Centre (ICRAF), our team’s strong partner in Mindanao. While not outlined in the original project document, we have subsequently been very fortunate to have brought in new partners into the research, particularly some local government units. Palompon is one of them and the work being carried out in this municipality is an excellent initiative. Sagittarius Mining Incorporated (SMI) is also now part of our project, as well as a number of other local government agencies that Dr Gregorio has tapped that will contribute to the project. People want to become involved in the project because it is relevant to their needs, which is a very good sign.

RELEVANCE OF THE PROJECT TO THE PHILIPPINES

The project addresses a number of priorities in the 2006/07 ACIAR Operational Plan for the Philippines:

- Propagation systems for indigenous trees for soil and water conservation
- Market identification and utilisation of industrial trees and fast-growing agroforestry species
- Policy constraints to agroforestry development on small farms.

Also, research into nursery practices is one of the Research and Development priorities identified by PCARRD (Aggangan 2005).
The nursery sector in the Philippines (in Visayas and Mindanao) is characterised by low quality planting stock, unavailability of planting materials of a wide variety of species and poor matching of the species to planting sites. Recent studies by ASEM/2003/052 in Leyte and ICRAF in Mindanao, Bohol and Cebu indicate that this problem is widespread. Prior to the current project, there were no quality controls placed over nurseries, and many potential buyers lacked knowledge about the existence of nurseries from which they could access seedlings.

The current nursery industry organisation is in a state of flux. The budget for seedling production by DENR has been reduced in recent years, and municipal governments have been attempting to expand seedling production. On the other hand, community and private nurseries have been producing seedlings only periodically, or failing financially, due to lack of seedling orders. This has in part been because of DENR supplying free seedlings and undermining the commercial sector. There is currently no clear agreement or understanding of the appropriate roles of the different nursery groups. As well as operating their own nurseries, DENR has been contracting out for production of seedlings, but problems arise for private nurseries due to the uncertainty of DENR orders. Private nurseries do not have the capability to produce seedlings of the difficult-to-grow native species often demanded by smallholders. Further, to meet orders private nurseries often simply collect advanced wildlings, which they hold for relatively short periods before supplying to DENR. These issues impede the development of smallholder forestry in Leyte, and increase pressure for illegal logging of native forests in Leyte and Mindanao. Another issue would be the need for seedlings of native species for environmental plantings, e.g. watershed protection.

Previous ACIAR projects in the Visayas and Mindanao (FST/96/110, ASEM/2000/088) have developed some nursery techniques but these have yet to be widely applied. DENR budget constraints limit the number of seedlings produced, and there are a number of policy and practical constraints that result in inequitable access to these seedlings. ‘Crowding out’ of the private by public nursery sectors appears to be restricting the development of an expanded private nursery sector, especially for species in high demand such as gmelina and mahogany.

In 2004, there were nearly 21,000 ha reforested by government and smallholders (DENR-FMB 2006), which roughly equates to 63M seedlings\(^1\) being planted per annum. Reducing seedling mortality within nurseries and when out-planted is thus likely to have substantial economic benefits. The project will also develop improved seedling market structures and address issues of unmet demand for seedlings. It is expected that both improved volume of seedling sales and increased net margins per seedling will result from project activities.

Seedling production is one of the major areas of support in which donor organisations provide funding to communities; especially through the establishment of community nurseries. However, the effectiveness of this support is questionable because inadequate attention has been paid to seedling quality, and often high mortality rates of seedlings occur, both within the nurseries and on outplanting. Improving the efficiency and effectiveness of the nursery sector will thus also potentially improve the impact of aid programs.

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\(^1\) No accurate data exist on the size of the nursery sector within the Philippines. The figure presented is likely to be an underestimate as it is simply an estimate based on the area planted and assuming no restocking due to seedling mortality. Seedling mortality on outplanting can be as high as 50–60%. In addition, no allowance has been made in this estimate for seedling mortality within nurseries and unsold seedlings.
PROJECT AIM AND OBJECTIVES

The aim of the project is to improve the economic efficiency and policy environment of the Philippine forestry nursery sector. The specific objectives of the project are to:

1. examine the respective roles and effectiveness of the private and public nursery operators in the forestry seedling nursery sector;
2. develop a policy assessment model and identify policy intervention points at both the national and the local level; and
3. implement local-level policy changes in conjunction with the Department of Environment and Natural Resources (DENR) and pilot test strategies to increase the economic viability of the nursery sector.

PROJECT IMPLEMENTATION

The project was implemented through the following activities:

1(a) Describe the current private and public seedling nursery sector industry and policy environment in the Philippines.
   (b) Undertake a comparative analysis with other SE Asian countries.

2(a) Develop a policy assessment model for the Philippines Tree Nursery Sector.
   (b) Develop policy recommendations with respect to the Philippines tree nursery sector at the national level.
   (c) Identify a set of policy options to be implemented by the project at the local level in conjunction with DENR.

3(a) Initiate local level policy change affecting the nursery sector and access of smallholders to seedlings and determine implications for national level policy changes.
   (b) Undertake an economic evaluation of private sector nurseries with a view of identifying strategies to enhance economic viability.
   (c) Test business strategies to enhance economic viability of tree seedling nurseries.

Further detail on the each of these activities is provided in papers contained within these proceedings.

It is worth highlighting that a systems perspective was applied in the project. This systems approach assisted in the integration of the various disciplines involved in the project. A systems approach provides a framework which allows the effective integration of information generated from different disciplines and scales. Various systems ‘tools’ and techniques were used including regular facilitated meetings of key stakeholders and researchers during project conceptualisation and implementation and the use of the Netica modelling framework which allowed integration of expert (discipline based) and local (stakeholder) knowledge.

The systems approach was also used in conceptualizing the project. Nurseries were contextualised within the policy environment and within the broader system of expansion of smallholder forestry and of development of the seedling nursery sector. The nursery sector is viewed as comprising of three interacting segments, viz. private, community and government nurseries operating within a policy framework largely administered by DENR. At a broad scale, a systems approach has been applied in the conceptualization of the project. That is, the issues associated with improving the economic efficiency and policy environment of the Philippines Tree Nursery Sector have been conceptualized as being interrelated and cannot be addressed in isolation (as would be in a reductionist approach). At a finer or
operational level, systems thinking is embedded in value chain and policy analysis to be undertaken in Objective 1; the development of the policy assessment model and identification of policy intervention points at both the national and at the local level as part of Objective 2; and will guide all the activities undertaken as part of Objective 3.

This project was also implemented within a policy analysis framework. The project worked with DENR and other government agencies to modify existing policy implementation and also to influence policy formulation at a regional and potentially national level. In order to successfully implement this approach, project researchers actively engaged with key stakeholders, in all stages of the research, including design and implementation.

PREVIOUS PROJECT MEETINGS

This End of Project workshop is the culmination of four years of work by many people involved in the project. This meeting is the fourth major project meeting to be held since the commencement of the project. The previous three project meetings were:

- A half-day workshop was held in Tacloban in September 2007.
- A small-group workshop was held in Brisbane for three days in October 2007.
- The mid-term workshop was held in Ormoc City in February 2009. Proceedings were produced, and an issue of *Annals of Tropical Research* is nearing finalization.

THE ROLE OF THE END OF PROJECT WORKSHOP AND WORKSHOP PROCEEDINGS

The project formally ends on 30 September 2010. This is the end of the funding period. It is also the end of the ACIAR source of income for project team members (including Annerine Bosch and Steve Harrison in Australia) and Philippine project staff. The workshop also marks the end of about 10 years of ACIAR-funded research projects.

An EOP workshop is a normal step towards the winding up of an ACIAR project. The workshop provides a deadline to compile research findings, though some research may be continuing. It also facilitates sharing of information between team members, and with other stakeholders and provides an avenue for validation of research findings, and identification of successes and shortfalls. Importantly, an end of project workshop also supports the production of a written record on the research achievements.

A set of proceedings will be produced from this workshop. These provide a durable record of the project research findings, available to the project team, to other researchers interested in the research topics, and to users of the research finding. The proceedings will provide input to the end of project report as required by the funding body (ACIAR). Where there is a project review (as in the case of the seedling enhancement project) they provide information for the reviewers. They also provide a publication opportunity for project team members, in the proceedings and possibly as a subsequent journal publication.

We plan to get as many of the presentations as possible in the workshop proceedings. Each of the papers submitted will be reviewed and comments will be provided as quickly as possible. Be prepared to make revisions quickly in response to the review comments, and perhaps respond to any follow-up questions.
OVERVIEW OF THE WORKSHOP PROGRAM

The workshop has been organised into the following sessions:

- **Session 1:** Overview Papers
- **Session 2:** BMP, Training and Nursery Certification
- **Session 3:** Improving the Quality and Availability of Forest Reproductive Materials
- **Session 4:** Seedling Nursery Extension and Training
- **Session 5:** Paper Presentations by Q-seedling Project Staff
- **Session 5:** Nursery-Related Livelihood Projects and Financial Analysis

These sessions are simply one way of organising the great volume of material to be covered by various presentations. The themes allow similar papers to be presented together, which will also allow discussion to continue along a similar theme within a session.

Presentations will generally be 25 minutes for papers, including 5 minutes questions and discussion. There are also a number of shorter papers of 10 minutes. Session moderators will enforce time limits to ensure following speakers also have adequate time for their presentations. This may mean that sometimes it will be necessary to follow up discussions with speakers outside the presentation sessions. Powerpoint files should be provided to the conference organizing committee before the session in which you are scheduled to make your presentation.