This paper examines the key issues which arose during the planning workshop of the Australian Centre for International Agricultural Research (ACIAR) Tree Farm Project (ACIAR/ASEM/2003/052). Areas of presentation and discussion had been grouped according to key research areas and activities. Background and activity paper presentations were an important vehicle for sharing information and promoting discussion of the issues concerning the overall project implementation. Thorough discussions on these issues were critical for sharpening of project design, and gave rise to a number of changes in views on how components of the project should be conducted. Particular areas of improved understanding and revisions to plans arose with regard to the concept of a smallholder tree farmer, defining a population frame for sampling purposes, designing a multi-stage sampling design, the role of action research for extension purposes, and the scope of biodiversity analysis.

INTRODUCTION

A planning workshop was held for ACIAR project ASEM/2003/052 – Improving financial returns to smallholder tree farmers in the Philippines – at Sabin Resort Hotel, Ormoc City over February 15-18, 2005. This workshop was designed as an important step in refining the project design, prompting participants to think through their roles in greater detail, and sharing information on proposed research. Prior to the workshop, members of the research team were assigned tasks of preparing background and research activity presentations, in the form of both written papers and as Powerpoint displays. Also, fieldwork was set in progress for identifying and collecting basic data from registered tree farms (as described separately by Cedamon et al., this volume).

This paper provides an overview of the planning workshop discussions, and examines some of the key issues which arose from deliberations about how to improve the project design. The next section outlines the scope of the workshop. Some of the key issues are then discussed. The last section examines in more detail the simple descriptive definition of smallholders, the target beneficiaries of the project research, to clarify the objectives of the research.

SCOPE OF THE WORKSHOP

The areas of presentation and discussion in the planning workshop may be grouped as follows:

Tree registration: experiences of smallholders registering trees; current regulations governing – and sources of information about – tree registration and harvest and transport regulations and approval mechanisms from the Department of Environment and Natural Resources (DENR) to local government units (LGUs) and communities; potential strategies for improving the flow of information about tree registration and harvest and transport regulations and approval mechanisms between stakeholder groups, assessing the impact of pilot schemes to improve the flow of information about tree registration and harvest and
transport regulations; collaboration between university researchers and DENR officers in relation to policy reform; and avenues to be explored to improve the approvals framework for tree registration and log transport.

*Timber market research:* current knowledge of Leyte timber markets; identifying market requirements in terms of tree species and timber type and quality; estimating the profitability of tree farming; modeling of timber supply and demand associated with existing tree farms within Leyte including external markets; analysis of the financial gains from improved silviculture on tree farms; and the trialing of systems for bringing timber buyers and sellers together.

*Tree farm research:* locating tree farms on Leyte and Biliran Islands; compiling a database of information collected about existing tree farms; assessing timber yield and likely yield per product class in Leyte tree farms; improving the management of existing tree farms through the use of demonstration sites; designing a survey of tree farms; examining social and economic factors that affect the management of plantations and the types of products produced.

*Biodiversity within Leyte tree farms:* biodiversity concepts, methods in biodiversity research, and a strategy for biodiversity assessment in relation to tree farming.

*Forestry extension to tree farmers:* potential use of a constructivist approach in designing extension and teaching activities; using demonstration sites as an extension vehicle; assessing the impact of measures designed to improve silviculture; the potential role of nurseries as a means to improve silviculture; identifying typologies in relation to tree farming at the land parcel level.

*Smallholder livelihood systems:* the potential for developing livelihood systems based on integrating abaca and timber trees; incorporating tree farms into livelihood systems using landholder typologies; profitability of smallholder tree farms as an alternative livelihood system.

*Forest policy:* developing Leyte forest policies based on project findings.

*Detailed planning activities:* selection of demonstration sites; defining the survey area and designing the tree farm sampling method; identifying data requirements from tree farms; designing the market-related studies; finalizing the equipment list and arranging equipment acquisition; listing priority and urgent tasks and assigning persons to monitor progress in these tasks; key attributes and selection criteria for new research staff.

These areas were identified as providing a reasonably comprehensive coverage of the management and policy areas which need to be addressed in designing research which will assist smallholders who are currently engaged, or potentially could become involved, small-scale forestry.

**RESEARCH AREAS WHERE NEW PLANNING INSIGHTS WERE GENERATED**

ACIAR project ASEM/2003/052 is a large complex project which requires multi-institutional collaboration. Hence, the planning workshop was designed as a key avenue to discuss with other project members the overall project activities. The critical need to ensure there is a clear understanding of the research activities and their complex interrelationships, as well as share information between project members, was recognized. The background paper presentations provided up-to-date information from research in the previous ACIAR project (ASEM/2000/088, running from 2000 to 2004), and a rationale and framework for viewing research planned in the new project. For example:
• an ex ante financial analysis of the new project provided a clear indication of the nature of expected benefits for smallholders

• the presentation from DENR on the rules and regulations governing timber and timber products on private land clearly outlined the procedure for registering trees, integrating information contained in various Ministry Administrative Orders and Departmental Memorandum Circulars.

• reviews of previous research highlighted to role of seedling nurseries, and the potential or abaca-based agroforestry systems, to promote forestry development.

• a review of preliminary fieldwork conducted to tree farms for the project research and extension activities identified major difficulties in finding the tree farms and making contact with their owners, also raising concerns about differences between existing policies and practice in tree registration.

Activity papers provided briefings and invited responses on the various components of the planned research, as defined in the project document (Herbohn et al. 2004) under the various research objectives and, within these objectives, the research activities. A number of areas of discussion raised issues which had not been clearly thought through, and shed new light on how the project could deal with these issues. The following sections review these issues.

Clarification of present tree registration arrangements. Lack of understanding of tree registration procedures is a potential source of uncertainty and conflict, between agencies and with smallholders. One critical issue concerned whether smallholders on tax declared land (a substantial proportion of the potential tree growers) could register their trees. It was explained that the government does not accept tax declarations as proof of ownership, and that ownership has to be proven by an application filed to the DENR for titling purposes (Calub, these proceedings).

GIS development and the role of GIS. Demonstrations of the geographical information system of tree farms under development for the project conveyed the power of GIS to aid in project planning, including identifying locations for demonstration sites, providing details and photographs of tree farms, identifying areas for sampling, and assisting timber flow modeling. While several project members have received GIS training, the benefits of more in-depth training, and training additional people, and promoting use of the tree farm database became apparent.

Designing silvicultural demonstrations and choice of demonstration sites. Immediately prior to the workshop, delegates visited 11 tree farms in Leyte and Southern Leyte provinces, and debated future silvicultural management of (sometimes neglected) stands. This provided background for informed discussions in the planning workshop. A disappointment was that few of the plantations had been established in the last five years. Most of the plantings were of mahogany, made by landholders who are prepared to wait 20 years or more for harvest revenue. This raised questions for both choice of demonstration sites and definition of the reference population for the tree farm survey. Nevertheless, these sites appeared well suited for bringing other smallholders to witness thinning and pruning demonstrations and to discuss plantation establishment, tree spacing, pruning and thinning. It is clear that tree farmers favour very high density planting and are averse to thinning. The need for a memorandum of agreement with tree-farmer project cooperators was recognized. A number of criteria for site selection were identified, including stand age, spatial distribution of
demonstration sites, species planted and cooperativeness of the landowner. The concept of organizing bus tours of smallholders to demonstration sites was developed.

*Deriving yield tables for farm-grown timber.* A critical step in evaluating the benefits to tree farms from project research and demonstrations will be the estimation of stand yield by age and by product type, under both current and improved silviculture. This involves modeling stand growth and yield of timber output for both on-farm use and sale. Developing yield models for the most commonly grown species on tree farm will be a priority activity, led by Jerry Vanclay, an international expert in this area.

*Designing market research.* It was noted that there is a dearth of information about the purchasers of Leyte farm-grown timber and their requirements in terms of tree species, log or sawn timber dimensions, timber quality, and assortment size. Also, experience reveals that timber millers and timber processors are traditionally reluctant to provide information in surveys. A two-stage survey of timber enterprises was therefore developed, following the method devised by Venn (2004) in relation to indigenous forestry in tropical Australia. In the initial stage, which will be conducted mainly by telephone, basic enterprise activity information (e.g. about lumber retailing, sawmilling, or furniture production) will be gathered, and a request will also be made for participation in an interview survey. The interview survey of the second stage will involve a smaller number of more detailed case studies, using a semi-structured questionnaire.

*Relevance of biodiversity assessment.* In that the project is concerned with encouraging sustainable forestry, the need to consider the biodiversity implications of expanded tree planting was recognized. The presentation by a biodiversity specialist was valuable for helping team members to understand biodiversity concepts, scope and roles, and assessment approaches. Observations of both plant and animal biodiversity are required, not only within tree stands, but also in their surroundings, to understand overall biodiversity impacts. This will involve substantial sampling and observation, using proven fieldwork methods, including the laying out of quadrats (probably circular) in plantation areas.

*Sampling tree farmers.* It became apparent that the target area of Leyte Province was too restricted spatially to investigate timber flows from tree farms to existing and potential markets. Flow direction arrows for timber movements into various parts of Leyte Island from Mindanao, Cebu and Bohol were demonstrated on a map. It was decided to extend the survey area to be all of Biliran, Leyte and Southern Leyte Provinces, but excluding the upland areas where subsistence and shifting agriculture is practiced and where security is more difficult, and the south-east of Southern Leyte where road access is relatively difficult. Given the difficulties experienced in locating tree farmers prior to the workshop, particular attention was paid to sampling methods for the tree farmer survey. A multi-stage sampling procedure was proposed for selection of tree farmers and their plantings, for tree assessment, biodiversity studies and collection of socio-economic data (including experiences about tree registration). This sampling design provides a reasonable balance between costs of listing sample members and traveling to them, and statistical efficiency in data collection. A suggested survey design is to sample about seven municipalities, and then about three barangays in each, and then up to 15 tree farmers in each selected barangay, with a target overall sample size of 400 tree farms (with a minimum area planted to timber trees of least 0.05 ha). All relevant local government officials (particularly mayors and barangay captains) will need to be contacted and visited to seek cooperation in the survey. Two teams of three people are to be used in carrying out interviews with the tree farmers and making measurements of tree plots. An investigation is needed of whether all barangay captains within a municipality can be brought together in a group meeting rather than each visited individually; this will influence the balance between number of barangays included and number of tree farms included per barangay.
Planning collaboration between agencies. The project is somewhat unique in the collaboration planned between the university researchers and the government forestry agency (DENR). This requires various measures to ensure effective and collegial cooperation, including both formal arrangements (secondment of two DENR officers to the project, two policy workshops) and informal collaboration including visits of DENR officers to Australia, visits of university researchers to DENR officers, and preparation of joint publications.

Setting priorities. For this large complex research project to achieve its objectives, a rapid commencement is critical, with careful coordination and sequencing of activities. The development and progressive updating of a list of urgent and priority tasks, and of persons responsible to monitor progress in these tasks, was commenced.

Equipment issues. It was recognized that a substantial number of equipment items are needed for the project, in relation to transport, tree measurements, GIS development and needs of the ACIAR project office at Leyte State University. Some equipment items can be obtained locally and some from Australia or through mail order from the USA. Digital cameras will play a role in recording information at demonstration sites and developing extension materials.

Skills required on project research officers. A skills table was developed for the staff to be appointed to carry out fieldwork, data entry and preliminary data analysis. Skills identified as desirable for appointees include English proficiency, survey experience, driver’s license, data entry skills, willingness to travel and stay away from home, basic plant identification skills, and familiarity with local dialects. The team will require a mix of Waray and Cebuano speakers, as well as gender balance.

THE DEFINITION OF ‘SMALLHOLDERS’

In addition to the issues discussed above, there arose a pressing issue on the definition of smallholder, in the context of the target beneficiary group for the project. The question of ‘what a smallholder is’ has been raised at various times when ‘smallholder forestry project’ is mentioned. Although this question can simply be answered as ‘small-scale forestry as opposed to large-scale industrial plantation’, an important aspect to be addressed is the quantitative and qualitative definition of ‘how small’ is a smallholder tree farmer.

Looking at the goal of this project which is ‘to improve financial returns to existing smallholder tree farmers’, the word ‘smallholder’ seems to imply poor upland farmers, but the project focus on ‘existing tree farms’ is not compatible with this concept. This argument is supported by Emtage (2004), who found that households interested in forestry and tree farming are those who are neither rich nor poor. Also, nine of the 11 tree farms visited as part of this planning workshop are owned by relatively well-off landowners interested in growing timber trees.

Harrison et al. (2002) pointed out that farm forestry in the Philippines tend not to be the planting of large woodlots but rather small stands (less than a hectare), fenceline plantings, underplanting with other trees, and multiple land uses such as combination of coconut, timber, fruit trees and vegetables. Other Leyte studies confirm that farmers mostly grow trees in association with coconuts and other agricultural crops (Bernaldez 2003; Cedamon et al. 2004; Cedamon, these proceedings).

The Encarta Dictionary (2004) defines smallholdings as synonymous to small farm which means a piece of farmland that is smaller than the average farm. The definition of smallholder can therefore be drawn out by knowing the average area of farm holdings in the
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locality or region. This definition also implies that different size criteria as to what constitutes a smallholder farm in different regions.

In the case of Philippines Region 8, to which Leyte Island belongs, the majority of farmers have landholdings of less than 1 ha up to 5 ha titled land (Groetschel et al. 2002). In the survey conducted by the National Statistics Office in 2002 the average farm size was found to be 2.19 ha. Furthermore, Emtage and Suh (2004) reported that the 200 households sampled at random from four communities in Leyte Province have an average land area of 2.9 ha of which 1.44 ha was land they owned. If this average area of owned farm land is used in defining smallholder farmers, then smallholder farmers would be those farmers who own an area of less than 1.44 ha. However, the definition of smallholder adopted by Mangaoang (2005) – that ‘smallholders are resource-constrained farmers’ – removes the confusion of ‘smallholders’ being poor farmers. He further explained that the critical resource constraints may include not only money but also knowledge, land and labour.

Observation in Leyte communities indicates that farmers who plant timber trees are mostly those who have secure land access, and that farmers who plant long-rotation tree species (and in particular mahogany which is widely planted on registered tree farms) are the better-off farmers with the larger landholdings.

From the preceding discussion, it can be concluded that smallholder tree farmers are not poor farmer and that farmers interested in planting trees are those that are reasonably well-off with secure land tenure. In other words, it is a misapprehension to think that forestry research projects (including the ACIAR Tree Farm Project) can target the ‘poorest of the poor’. Forestry research projects can assist a large number of landholders, but the beneficiary group needs to be clearly understood.

CONCLUDING COMMENTS

The project planning workshop provides a valuable forum for information sharing and strategic thinking about how to proceed with the planned objectives and activities. Various challenges became apparent. Selecting a representative sample of tree farms, and arranging and conducting site interviews and measurements, was recognized as requiring particular attention. The number of tree farmers in each barangay is likely to be small, but including a large number of municipalities and barangays could impose very large costs in terms of observing protocols and securing support for survey work from local leaders. GIS will play an important role in the project, e.g. in survey design and in matching livelihood activities to site conditions. Observations of timber market studies conducted elsewhere provided a basis for a two-stage survey strategy which is likely to have a high probability of success. The introduction of action research in the project creates new opportunities for technology transfer. Substantial monitoring of impacts will be required throughout the project.

It became apparent how complex the Tree Farm Project really is, how the various activities are highly inter-related, and how difficult it is for members of the research team to have a detailed understanding of all the research activities. This presents a challenge for research coordination, and for scheduling research activities where outputs of one activity are critical inputs to another activity. A list of urgent and priority tasks provides a first step in project implementation. Further planning will be required as the project proceeds, but a strong foundation has been laid for project implementation.

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1 Households sampled for this survey were not all farmers.
REFERENCES


Mangaoang, E.O. (2005), Dean, College of Forestry, Leyte State University, Baybay, personal communication.