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Challenges to Upscaling Community Ecoforestry and Community-based Reforestation in Papua New Guinea

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Abstract

Various approaches to forest management, which can generically be referred to as ‘community forestry’, have become widely promoted in much of Asia in recent decades, but they have had mixed success in providing genuine benefits to the rural populations involved. One major limitation has been the limited recognition of local tenure and the associated lack of decision-making power which limits the effective control of forest resources by the communities. Unlike the situation in most of Asia, rural people in PNG have legally recognised rights to land and forests under the Constitution. However, most commercial use of forests has been through concessions managed by the PNG Forest Authority. Royalties to communities are not always regarded as satisfactory by landowners and advocates, and much forest harvesting by concessionaires is frequently regarded as silviculturally unsustainable. One alternative approach that has been developed is ‘ecoforestry’ which involves sustainable management (including harvesting) by communities. Despite the obvious potential, there are a number of barriers to increasing income flows and to enabling wider practice of ecoforestry. A second approach to community forestry is community-based reforestation in grasslands. This has also faced challenges.

This paper identifies some of the challenges to both these forms of community forestry, based largely on a review of the literature and the experiences of a project funded by the Australian Centre for International Agricultural Research and implemented in partnership between Australian and PNG based partners. Among the key challenges identified are poorly understood market chains, economies of scale and limited cooperation between landholding groups. Some possible ways in which these challenges might be addressed through action-oriented research are suggested.

Key words: ecoforestry, community forestry, forest restoration, small scale forestry

Introduction

A variety of approaches to forest management based on the involvement of local communities has been widely promoted globally in recent years. They have been especially prominent in Asia. The various approaches have a variety of names, including community forestry, community-based forest management and joint forest management. For convenience the generic term ‘community forestry’ is useful and is being applied in this paper. Although the programs in different countries have somewhat different objectives and operate in widely different contexts, they generally have broad concerns with improved (more sustainable) forest management and provision of livelihood benefits, sometimes including cash income, to participants.

Community forestry programs are often seen as having been moderately successful in contributing to improved forest management, especially in terms of increasing and improving forest cover. (For an overview of the impacts of community forestry programs on forest cover, see Porter-Bolland et al, 2012.) However, their success in providing genuine benefits to the rural populations involved has been mixed at best (Malla et al, 2003; Fisher, 2014). In Asia, one of the factors regarded as a constraint to increasing benefits is the limited recognition of local tenure and the associated lack of devolved decision-making power which limits the effective control of forest resources by the communities (Dahal et al, 2011; Fisher, 2010). The situation in Papua New Guinea differs widely from the usual situation in Asia, in that customary ownership of land, including forest land, is legally recognised in PNG law and under the Constitution. Despite this, the development of community forestry in PNG has been relatively limited.

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In PNG use of forests for timber production is regulated by the PNG Forest Authority and most commercial is directly managed by the PNGFA. Apart from relatively limited timber production by landowners, legal timber harvesting is generally undertaken by commercial companies with logging concessions managed by the Forest Authority. Landowners receive royalties for timber extraction from their land, but these royalties are not always seen as satisfactory and much commercial harvesting is regarded as unsustainable. In response to the perceived lack of control of forests by landowners and the limited benefits they have received, alternative approaches to forest management have been promoted. One of the key models is ecoforestry (see Bun and Baput, 2006). The underlying principles of ecoforestry include sustainable management of forests by communities for their own benefit. These principles fit the broad objectives of community forestry as a general international movement quite closely. Generally ecoforestry deals with community management of natural forests. It has been advocated by civil organisations such as the Ecoforestry Forum and the Foundation for People and Community Development (FPCD), which has been especially active in Madang Province.

A second form of community involvement in forestry in PNG can be described as community-based reforestation. This involves community involvement in reforestation of grasslands, especially where the grasslands are the result of deforestation, but also in areas where the grasslands may be natural rather than anthropomorphic. Large areas of grasslands which are probably suitable for reforestation can be found in the highlands and in the Ramu and Markham valleys. Both ecoforestry and community-based reforestation are concerned with sustainable forest management or forest restoration and both are strongly focused on providing benefits to landowner communities. In the case of ecoforestry,

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benefits include provision of forest services and non-timber forest products as well as income from timber harvesting. The potential benefits are less obvious in the case of community-based reforestation as any access to forest products or income from harvesting tend to be long-term prospects rather than relatively short-term.

Both of these approaches have faced challenges in terms of wider adoption and providing increased benefits to communities. This paper explores some of the challenges involved in upscaling these two forms of community forestry. The paper is largely based on the experiences of the project “Enhancing the implementation of community forestry approaches in Papua New Guinea”. The project is funded by the Australian Centre for International Agricultural Research (ACIAR) and is implemented by the University of the Sunshine Coast in Australia, in partnership with PNG based and other Australian partners. The research problem is about identifying ways to improve outcomes from the two forms of community forestry and how to upscale community forestry initiatives through exploring constraints and opportunities. The project is an applied research project. Success will ultimately be measured in terms of the benefits achieved with communities.

The approach is intrinsically multi-disciplinary, with strong focuses on social science and market research. The underlying logic is that ‘upscaling’ community forestry involves providing species and technical options for reforestation and natural forest management that will contribute to the livelihoods of rural communities as well as to sustainable forestry. This can only be achieved if the communities see the options as attractive and if they are viable. The process is therefore inseparable from the decision-making that occurs within communities about forest activities and the dynamics of relationships within and between

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groups. Understanding decision-making involves understanding the information people use when they make decisions and understanding the social dynamics (including conflicts) which occur. This involves exploring questions about who decides, who benefits and how disagreement is addressed. Biophysical options are only viable if local decision-making and social dynamics allow them to be implemented. Aspects of decision-making and small-scale forestry have been previously explored in a PhD by Mulung (2011; see also Mulung et al, 2011).

The project’s research is focused in three areas: Madang province (for research into upscaling ecoforestry); the Ramu and Markham Valleys (for reforestation); and Goroka District (for reforestation).

The observations reported and discussed in this paper are, necessarily, only preliminary. The project has been working on identifying issues and constraints, but this is a continuing process and applied research to address constraints is at a preliminary stage.

Sociological Constraints

It is clear from literature and from research findings that, while customary tenure provides opportunities simply because landowners have legal ownership of land and resources, it can also lead to major complications. One issue is that the concept of ownership by clans obscures the existence of complex (and sometimes competing) individual rights that exist within clans. There are a variety of ways in which individuals within a clan are allocated land for farming (including tree farming) and while land may be owned by a clan, it is often individuals within a clan who plant trees for private use. Agreement may be required for

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that individual to harvest trees for sale. This sort of issue needs to be clarified before promotion of tree planting takes place. A related issue is that planting of trees may represent a long term assertion of individual ownership and this may be disputed by other clan members.

Advocates of ecoforestry generally see it as an activity for a landowning group (a clan), but in practice many of the existing ecoforestry operations operate at a family level or as cooperation between one or two families within a clan. This can be a source of conflict within a wider clan where the families are seen to be profiting from jointly owned resources, but it is also a challenge in terms of scaling up impacts as the level of activity is essentially very limited, relates to very small areas of forest and benefits few people.

In some communities in the Ramu valley, our preliminary research indicates that villagers are very concerned about the motives of outsiders seen to be promoting reforestation. This type of activity is questioned on the basis that land forested by outsiders might then be alienated to those outsiders. An underlying question is who would own the trees if the seedlings were provided by a project.

Understandable suspicions of this type, along with the complex interplay between group and individual rights mean that promotion of tree planting needs to be based on careful exploration of local interests and facilitated negotiation with and between local people.

A common pattern associated with customary tenure is that there is conflict between clans and between individuals within clans, especially when land-use changes. In the case of

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reforestation, tree planting by one group may interfere with the secondary use rights of others, such as access for hunting. For this reason, negotiations need to go beyond the group with primary interest in land to be reforested.

Similar issues can occur in ecoforestry. In the case of a small clan in Madang Province, a decision by the landowners to allow commercial logging on a portion of their clan land, while maintaining the rest for their own activities including ecoforestry, required negotiations with a neighbouring clan who had a long-standing informal arrangement to use that portion for hunting. Those negotiations were time consuming and required ritual recognition by members of both groups and by neighbouring groups.

A further constraint related to customary ownership is the reluctance of multiple clans to cooperate. In the case of community-based reforestation this is a challenge to the scale of reforestation in the form of reforestation across clan boundaries and cooperation between clans in sharing nursery resources and collaborating in activities. In the case of ecoforestry it can be important in terms of sharing equipment and carrying out joint marketing operations. In ecoforestry, economies of scale are a major challenge. Ecoforestry activities tend to occur in relatively remote location, often with very poor road access. They also tend to be carried out on a small scale, producing small quantities of rough-sawn timber. From a marketing point of view, the operations are marginal and small and unreliable production is of little interest to processors and exporters. Combining shipments, sharing sawing and milling equipment (too expensive for most small operators to purchase individually) and sharing transport could potentially contribute to addressing some of these needs. However experience in Madang and elsewhere is that willingness to cooperate is very limited. A

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challenge for applied or action research is to facilitate the development of mediating institutions or ‘umbrella’ organisations which provide opportunities for cooperative activities. These institutions do not need to be in the form of formal cooperatives, but might be in the form of NGOs which provide services or equipment on a not-for-profit loan basis. The nature of potential ‘mediating institutions’ and the processes of developing support for them will be a significant focus of our research.

All this demonstrates that customary (essentially clan-based) tenure, while providing the local tenure missing in most countries which have community forestry programs, presents challenges both within the clan (in terms of tensions between individual and group rights) and in terms of limited cooperation between clans. It has to be stressed here that none of these pressures are deterministic. They do not inevitably lead to conflict or inevitably prevent cooperation, but they require careful investigation, facilitation and negotiation.

Market chain and business issues in ecoforestry

Market chain and business management issues are central to improving the potential for ecoforestry to generate income for communities. The sociological factors that sometimes mitigate against inter-group cooperation are closely linked to business issues involving economies of scale. Social and business/market dynamics are often inseparable. One of the main issues in trading in timber is that harvesting and milling both require portable equipment, for which the costs are very high, especially when the scale of operations is small. Equipment raises other issues. The maintenance costs of equipment need to be covered. This involves the need for business planning skills as provision for maintenance and depreciation costs of equipment need to be included in business plans if activities are to be

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sustainable. Research in Madang Province suggests this is a major constraint. Training in both technical and business skills is essential.

Access to markets for harvested timber is complicated by very poor roads and harvesting sites are often located in difficult terrain remote from roads. The costs of transport can be very high, particularly for small ecoforestry operations which have higher production and transport costs per unit than larger commercial operations.

Scale remains a major problem for marketing in another way: the market requirements for constant and reliable supply often does not match the scale of landowner operations.

In order to achieve optimum profits targeting of the export market for timber from ecoforestry has been advocated and in a few cases achieved. A challenge here is that timber certification is generally necessary for the export market. Group certification has been practiced by FPCD in Madang, but maintaining registration for timber certification is very expensive.

Another concern for effective marketing is lack of reliable market information. Information available is often very vague in terms of prices, regulations and availability of services. One intervention by the ACIAR/FPCD project team in Madang has involved collection of such information for dissemination to groups.

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Training needs for addressing some of the constraints include: business management and planning, especially budget and cash flow management; use of equipment; and knowledge of market requirements in terms of grading of timber.

It is clear that economies of scale, need for market information and technical and business skills are real constraints. Action research is required to develop practical and socially acceptable ways of addressing these issues.

The focus in this discussion of market issues has been on ecoforestry. At present market issues are less relevant to community-based reforestation as it is necessary to build the resource first.

Economic incentives

The economic incentives for upscaling and adoption of the two forms of community forestry present different challenges. Potentially ecoforestry offers greater returns to communities than royalties, but there are significant investment and transaction costs and there are problems with comparing royalties from Forest Agreements with potential benefits from ecoforestry. The lack of readily available data on royalties is a challenge.

For community-based reforestation there is potential to sell timber resulting from reforestation, but there is little potential for short and medium term benefits due to long term maturation of planted trees. Innovative ways to provide at least medium term benefits need to be explored.

Technical forestry issues

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At this stage of research, technical forestry issues have not been the major challenges, although they are likely to become more important in later stages of the research.

Two issues are already apparent. In ecoforestry, skills to assess forest growth rates and sustainable harvest are needed. These skills are crucial for sustainable forest management and business planning. The skills can be outsourced as there are many trained foresters available. A disadvantage of outsourcing is that local people would lose control over forest management, particularly logging. Hence, extended capacity building (e.g. training in silvicultural techniques) may be the best option to increase community involvement and understanding of the consequences of the new management regime.

Previous efforts at providing seedlings for reforestation by farmers have tended to focus on large scale government or community nurseries. These have not been very successful in reaching out to farmers, especially poorer farmers, for a variety of reasons. A serious question arises as to how effective large nurseries are compared to small nurseries aimed at a single clan or perhaps a small number of clans. Trials of small nurseries (managed by individuals or small groups) are being carried out in several locations and training in seed collection and nursery management is being provided. For community-based reforestation, nursery skills are required, but the necessary skills are not complicated. The key requirement is careful investigation of the interests of relevant stakeholders.

Policy issues

A paper by Bun (2012) explores a number of policy factors that limit the capacity of landowners to benefit from their mown forest resources. Bun’s main critique is that while

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most land in PNG is held under customary ownership, the provisions of the Forestry Act (1991) are not clan-based and regulations work in favour of commercial companies. Bun also points out that ‘the process of acquiring a timber licence (TA) is cumbersome, expensive, and time consuming, sometimes taking up to 18 months.’

Incorporated Land Groups (ILGs) are an institution intended to enable landowners to better manage their customary land. One effect is that they also give landholder groups a form of legal personality which assists access to bank loans. In Madang landowners involved in ecoforestry at a number of locations have been attempting to register as ILGs, facilitated by the FPCD. The process was almost completed when the regulations for registration changed and the process had to commence again. The process is now quite onerous with all clan members required to provide birth certificates. In one group, most clan members (several hundred people) did not have birth certificates and were required to pay a fee in order to obtain them. This regulation has delayed (if not prevented) registration of an inclusive ILG with the result that a loan to the landowners for a mobile sawmill is not available.

The theoretical purpose of ILGs is to enable communities to better manage their customary land, but some critics have argued that the use of the ILG process has been ‘opportunistic’ in the sense that ‘it has largely been used as a “short cut” to obtain landowner consent for resource exploitation’ (Tararia and Ogle, 2010 :22). Further research is needed into the way policies work in practice in terms of facilitating or constraining the development of the two forms of community forestry in PNG.

Conclusions

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This paper has presented a preliminary overview of research into constraints facing the upscaling of two forms of community forestry in PNG. One key feature of the research is that it demonstrates the close integration between social and market research in understanding how upscaling might occur and in informing biophysical research. People’s decision-making about forestry closely links the economic and the social.

Future applied or action research, arising from the early stages of the research, will focus on the following problems and questions:

- Addressing issues of scale by exploring ways to support mediating institutions;
- Exploring clan, hamlet or even household nurseries as alternatives to large scale community or government nurseries;
- Assess to what extent forestry extension programs successfully promote planting and reforestation and particularly why people decide to engage or not engage in forestry activities.

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