Citation: Wilkinson, G.R. (2001). Building Partnerships – Tasmania's approach to sustainable forest management. *In*: International Conference on the Application of Reduced Impact Logging to Advance Sustainable Forest Management: Constraints, Challenges and Opportunities, 26th February to 1st March 2001, Kuching, Sarawak, Malaysia. Compendium of Conference papers: 219-226.

Building partnerships - Tasmania's approach to sustainable forest management

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Abstract

Tasmania formally introduced reduced impact logging and related provisions of a Forest Practices Code in 1985. The introduction of an effective forest practices system was fundamentally based upon a philosophy of cooperation and encouragement, rather than coercion. The system is primarily delivered under a self regulatory approach that uses partnerships between government and key stakeholders to clarify their respective rights, roles and responsibilities, and to optimise the use and development of their collective skills and resources. The objective is to provide opportunities and incentives that motivate and empower all parties to strive for best practice, rather than minimal performance. This paper describes some of the key partnerships that have been developed among government, private landowners and the forest industry.

1. Introduction

Tasmania has 3.4 million hectares of forest, which represent 50% of the landmass. Over 39% of the forests are in formal reserves, with 30% available as public multiple-use forest and 31% privately owned forest. The average annual volume of wood harvested from public and private forests is about 4.5 million m^3 p.a. (Forestry Tasmania 1998). The Tasmanian forest industry contributes about $AUD 1 billion to the State's economy each year. Tasmania's population is relatively small (474,000) and the wood and paper products industry accounts for more than 20 per cent of total manufacturing employment.

Tasmania's forest practices system began in 1985 with introduction of the *Forest Practices Act*. The objective of the Act is to achieve the sustainable management of public and private forests (*Forest Practices Act* 1985). The various components of the forest practices system are described by Wilkinson (1999a, 1999b). The founders of the system were far sighted, believing that it should be based on a philosophy of cooperation and trust, rather than coercion and antagonism. Tasmania's forest practices system is therefore delivered through a cooperative approach between government and the private sector. Partnerships have been developed in order to

optimise the use of existing resources, and avoid duplication, unnecessary bureaucracy and excessive regulatory costs. As a result, Tasmania has an effective and efficient forest practices system that is actively supported by government, landowners, the forest industry and the broader community.

2. Challenges, constraints and opportunities

The challenges to the forest practices system in Tasmania continue to evolve. In the 1980s, Tasmania faced the challenge of gaining the support of private forest owners and the forest industry for the introduction of a Code of Practice. Twenty years later, the level of support for the Code within these sectors is very high. The continuing challenges are twofold:

i. It is important to maintain the philosophical approach of cooperation rather than coercion at both the personal and institutional levels. Appropriate structures and processes are necessary to ensure that institutional commitment does not diminish over time as a consequence of changes in staff.

ii. The Code must be continually updated and improved on the basis of research, operational experience, and social expectations. Continuing improvement in the application of the Code must be delivered through the ongoing training and education of forest owners and workers.

There are no major internal constraints on the ability of the forest practices system to make progress, although there are obviously limits in areas such as research capacity. The external operating environment continues to impose constraints. These constraints vary, in accordance with changing social expectations. Current constraints are often related to conflict over land-use, for example, debate over the use of native forests for wood production and perceptions that plantation forestry is displacing traditional agriculture. In addition, the community is increasingly demanding more information and verification with respect to the efficacy of, and compliance with, codes of practice. Whilst many within the forestry sector see this demand as a threat to their business, others see it as an opportunity to demonstrate that their practices meet the highest standards for sustainable forest management.

3. The development of partnerships

An appropriate regulatory framework is necessary to implement Codes of Practice and Reduced Impact Logging. In designing a regulatory framework, it is important to remember that forest regulation is primarily concerned with the regulation of *human behaviour*. Forests tend to be remarkably well behaved! The attitudes and behaviour of governments, industry, landowners, communities and other stakeholders determine the effectiveness and efficiency of regulatory regimes.

The choice of a regulatory regime depends upon the interplay of a number of factors. These include: social attitudes; the proportion of operations within the public and private sectors; the type of forest operations; institutional arrangements within government; and the availability of skills and resources in both the government and private sectors (Wilkinson 1999a). In many jurisdictions, an emphasis on government regulation and litigation leads to an increasing spiral of tightening regulations (Garland 1996). Such processes impose considerable costs on both industry and government, and often result in systems that only achieve the minimum standards

necessary to avoid penalties, rather than the pursuit of excellence. In contrast, a more self-regulatory approach with appropriate safeguards can avoid unnecessary bureaucratic costs, provide greater flexibility and autonomy for industry and deliver improved environmental performance (Gunningham and Sinclair 1999).

Tasmania's regulatory regime can be described as one of self-regulation by the forest sector, with oversight and independent enforcement by the government through the Forest Practices Board. The statutory objectives of the Forest Practices Board are to:

(a) best advance the objective of the State's forest practices system; and

(b) foster a co-operative approach towards policy development and management in forest practices matters.

A cooperative approach has been largely achieved through the development of partnerships, which have allowed the forest practices system to-

- recognise and clarify the rights, roles and responsibilities of each party;
- optimise the use and development of skills and resources within both the governmental and private sectors; and
- motivate and empower all parties to strive for best practice, rather than minimal performance.

Independent monitoring and reporting of outcomes by the Board provides a high degree of transparency and credibility. The Board is also empowered to take enforcement action in instances where self-regulation has not achieved acceptable outcomes.

This paper discusses the origin and development of some key partnerships that have fostered the adoption of reduced impact logging techniques in Tasmania.

(a) Partnership between government and private landowners

Privately owned forests account for about 60% of forest practices operations within Tasmania (Forest Practices Board 2000a). About 25% of these operations are conducted on land owned by forest companies; the remaining 75% occur on land owned by numerous small landowners. Prior to the 1980s there was no regulation of forest management on private land and there were increasing concerns about forest regeneration and long term sustainability (Everett and Gentle 1977). A government inquiry in the late 1970s recommended the introduction of a forest practices system that would apply equally to both public and private tenures. At that time, there was a strongly held principle of 'private rights', with the politically powerful private sector very strongly opposed to the introduction of regulatory controls by government. To overcome this resistance, the government engaged the private sector in a cooperative way, and negotiated a package of legislation that was mutually agreed. The package recognised the rights of private landowners and provided benefits, in terms of resource security and streamlined approval processes. In return, private landowners gave a commitment to comply with a legally enforceable Forest Practices Code. The main features of the partnership between government and the private landowners include the following-

- *Governance* - Private landowners are involved in the governance of the forest practices system, through membership of the Forest Practices Advisory Council, which is a statutory body established under the *Forest Practices Act*. The Council provides a forum within which stakeholders exchange views and information as part of reviewing the operation of the forest practices system and providing advice to the Forest Practices Board.

- *Code of Practice* - The *Forest Practices Act* formally provides that the Board must consult with the private sector prior to making any amendment to the Forest Practices Code. In practice, reviews of the Code are carried out in a highly consultative manner to ensure that the Code remains a practical document that has the ownership and support of all sectors, including the private forest owners.

- *Resource security* – The *Forest Practices Act* allows landowners to have their land declared as a Private Timber Reserve. This status provides a guarantee that the land can be managed in the future for wood production. In this way, the landowner's investment in long term forestry is not at risk from land use zoning changes or other restrictions that may be imposed under other legislation. In return for this security, the landowner gives a commitment to manage the forest in accordance with the Forest Practices Code.

- *Duty of care* – The reservation of private land for conservation purposes generally involves some combination of voluntary and imposed measures, which may or may not involve compensation (Hanna 1997). The degree of "take" by government is a highly contentious issue for the private sector. In Tasmania, the government and the private landowners have agreed upon a definition of 'duty of care' by which landowners have agreed to reserve land from logging, up to prescribed thresholds, in order to protect natural and cultural values. The reservation of land beyond the thresholds is deemed to be for the community benefit and on this basis is subject to voluntary arrangements or the payment of compensation.

(b) Partnership between government and the forest industry

A partnership between government and the forest industry was developed as part of the *Forest Practices Act* to recognise that all parties have a collective responsibility to ensure that forestry operations are properly planned and conducted. As an underlying principle, good forest practices should not be dependent upon the availability and presence of a governmental inspector. All parties should have the motivation and resources to strive for excellence. To achieve this, there needs to be a commitment to providing incentives, training and education.

Key features of the partnership between the government and forest industry in Tasmania are as follows:

- *Governance* – The forest industry is represented on the Forest Practices Advisory Council, and the Board includes a director with expertise in forest harvesting and processing.

- *Streamlined regulatory approach* – Tasmania has a 'one stop shop', which provides a streamlined approval process for a range of legislation. Wherever possible, the approval of a Forest Practices Plan under the *Forest Practices Act* removes a requirement for separate approvals or permits under other legislation.

- *Delegated powers to Forest Practices Officers* – Foresters employed by industry can be appointed under the *Forest Practices Act* as Forest Practices Officers. The Forest Practices Board provides continuing training courses for Forest Practices Officers to ensure that they remain up to date and motivated. These officers have a statutory responsibility to plan and supervise their operations to ensure that they comply with the requirements of the Act and Code. In return, the Forest Practices Board may delegate to Forest Practices Officers the power to approve plans. The Board audits the performance of Forest Practices Officers and may suspend or revoke their appointment for instances of poor performance. The delegated powers available to Forest Practices Officers are highly valued by the industry. Accordingly, there is a strong incentive for the industry to employ and maintain highly professional staff for the planning and supervision of their operations.

- *Funding* – The employment of Forest Practices Officers by industry represents a significant contribution to the cost of regulation ($AUD 7 million p.a.). In addition, under the principle of self-funding, the industry voluntarily contributes about $AUD 1 million p.a. to support a research and advisory program within the Forest Practices Board. This program provides specialist expertise and develops management guidelines and tools in the areas of botany, zoology, soils, water, geomorphology, cultural heritage and visual landscape for application by Forest Practices Officers. This collective expertise is available to all industry bodies, irrespective of size and resources. Under the partnership approach, there is a strong network between Forest Practices Officers and the specialists. Research priorities are determined collaboratively to ensure that industry has ownership of the research and the means by which the findings will be implemented at the operational level. The specialists are also closely involved in giving planning advice to Forest Practices Officers. This synergy increases the skills and motivation of Forest Practices Officers, whilst also ensuring that the specialists take a practical and pragmatic view towards the management of natural and cultural values within wood production forests.

(c) Partnerships between forest companies and forest contractors

In Tasmania, the planning and supervision of forestry operations is generally undertaken by forestry organisations that engage forest contractors to carry out the forest operations. Partnerships between forest companies and forest contractors are usually contractual in nature, but they are underpinned by a commitment to training and continuing improvement. Such synergies have led to the introduction of reduced impact logging techniques such as cording and matting and shovel logging. These techniques have been shown to have a range of economic, operational and safety advantages, in addition to delivering significantly better environmental outcomes. The close partnership between industry and contractors consistently results in better standards of forest practices than those achieved by contractors who work independently of the large forest companies (Forest Practices Board 1999).

Matting and cording refer to the placement of small logs, logging slash and/or bark on snig tracks to create a layer that spreads the ground pressure of the logging machines and avoids direct contact between the soil surface and the machine tyres or tracks (Forest Practices Board 2000b). Matting refers to the placement of understorey and logging slash to form a mat over the ground surface prior to any snigging. Depending upon the harvesting regime and availability of suitable slash, matting may be used to create a complete cover over the harvesting area or may be concentrated on snig tracks. Cording involves the use of larger material such as small diameter logs, which are placed on snig tracks at 90^{o} to the track in wetter areas. Corded areas are then often matted to improve the trafficability of the tracks. Best environmental effects are achieved when cording is installed on snig tracks prior to rutting or damage to soils. Matting and cording have been extensively adopted by harvesting contractors in the wetter, more productive forests of Tasmania. Matting is most viable where there is sufficient logging slash or understorey to create a reasonable layer of vegetation. Matting and cording material is removed by logging machines and/or burning during rehabilitation works following harvesting. The environmental benefits of matting and cording are profound, with virtually no soil disturbance even on primary snig tracks. In addition, there are important benefits for the harvesting contractors due to less wear and tear on machines, less stoppages due to wet conditions, and safer operating conditions (Wilkinson 2000). The matting and cording of snig tracks is an excellent example of a 'bottom up' approach to reduced impact logging. Snig tracks in Tasmania previously occupied between 10 and 20% of the harvest area (Wilkinson and Jennings 1994). Although the desirable objective is for minimal soil damage due to snig tracks, codes of practice generally accept that some degree of soil rutting and puddling is inevitable under wet soil conditions. Codes therefore attempt to set tolerated limits that can not be exceeded. For example the Tasmanian Forest Practices Code prescribes that the area of snig tracks should not exceed a maximum of 10% of the harvest area. Operations must cease if soils form a slurry to a depth of 200mm or are rutted to a depth of more than 300mm below the original ground surface over a 20m or longer section of snig track (Forest Practices Board 2000b). By the use of matting and cording on snig tracks, forest contractors have independently developed a method that virtually achieves a zero level of soil damage in suitable operations.

Shovel logging refers to harvesting systems that use excavators or tracked loading machines with log grabs to lift and move logs while the harvesting machine is stationary. Logs are passed from stack to stack or in a continuous ribbon across the coupe to the landing. Shovel logging can substantially reduce soil disturbance because excavators have comparatively low ground bearing pressures due to their large tracks, their tracks are generally stationary while logs are being moved, and the logs are primarily lifted or slid along other logs rather than being dragged behind a machine. Shovel logging has environmental and economic advantages over conventional ground-based skidding. It can be more productive over snig distances of up to 200m (CSIRO 1997) and can facilitate reduced impact logging under wet conditions that would preclude conventional skidding. Shovel logging is highly suitable for clearfell operations and can be used in partial harvesting regimes provided that damage to the stems of residual trees can be minimised.

(d) Partnerships between government agencies

Forestry is often subject to regulation by separate governmental agencies that have specific responsibilities for single use (such as wood production, wildlife, water, and recreation). A multi-agency approach can often fail to fully integrate the forest uses and values (Ellefson *et al.* 1997) and can lead to an adversarial approach and increased bureaucracy (Gasser 1996, Eddins and Flick 1997).

In Tasmania, we have tried to overcome the traditional adversarial relationship between 'production' and 'conservation' agencies by fostering a partnership approach. The development of agreed procedures for the management of threatened species within wood production forests is described below as a case study.

Case Study – management of threatened species within wood production forests

Tasmania's *Threatened Species Protection Act* was introduced in 1995. The Director of National Parks and Wildlife administers the Act and a permit from the Director is required if human activities are likely to disturb the habitat of threatened species, as listed in the schedules to the Act. About 40% of forestry operations potentially occur within the habitat range of threatened species, particularly in relation to the more wide-ranging forest dependent species such as the wedge-tail eagle (Forest Practices Board 2000a). Prior to the Act being introduced, the Forest Practices Board had worked closely with the Parks and Wildlife Service and other scientists to establish efficient and effective procedures for the management of threatened species in areas subject to forestry operations. Over the years, these procedures have been refined into a comprehensive and sophisticated computer program that helps Forest Practices Officers to make many routine decisions at an operational level. In addition, the collaboration with external scientists has resulted in them developing a much better understanding of forest management for wood production, rather than adopting an ideological opposition to it. This collaborative approach has now been formally endorsed in a partnership agreement between the Director of National Parks and Wildlife and the Forest Practices Board. The agreed procedures form part of the Forest Practices Code, and they are supported by continuing training, research and monitoring. This approach has mutual benefits. For the forest industry, the management of threatened species is covered by a streamlined, efficient process that allows Forest Practices Officers to make scientifically validated decisions on routine matters with a minimum of bureaucracy. In return for this benefit, the industry is prepared to fund further research and development as part of a program of continuing improvement. For the Forest Practices Board, it means that the scientists can devote their time to further research and improvement. For the Parks and Wildlife Service, self-management by the forestry sector frees up its staff to work in other areas, particularly in non-forest areas where the availability of procedures and resources are very deficient.

(e) Partnerships between the forest industry and the rural community

Until recently, forestry operations in Tasmania have been largely confined to the heavily forested, very lightly populated parts of the State. In recent years, tensions between the forest industry and rural communities have arisen because of changing land use. A rapid acceleration in the establishment of forest plantations on cleared farmland in more settled areas has been one outcome resulting from a broader change

in traditional patterns of agricultural land use. At the same time, many people from an urban background are settling in rural areas for lifestyle reasons. Opposition to forest plantations stems from a myriad of issues, which include: shading of residences and crops; effect on water quality and quantity; fire protection; use of herbicides; and loss of visual amenity.

The response of the forest industry has been to develop a Good Neighbour Charter, in partnership with the main representative body of the rural sector. The Charter sets out a commitment for consultation and negotiation with neighbours on planned operations. Generally, there is an acknowledgment by all parties of a need for give and take. Often, the negotiations lead to the voluntary adoption by industry of forest practices that are well in excess of the minimum requirements of the Forest Practices Code. At the same time, direct consultation with neighbours generally leads to a more pragmatic and reasonable outcome than might otherwise result from a more bureaucratic or adversarial approach.

Some examples of outcomes negotiated between neighbours and forest companies under the Good Neighbour Charter approach-

- Companies often substantially modify the use of chemicals within domestic water catchments;
- Neighbours have agreed to share the cost of fences or animal control measures in order to protect crops from browsing damage and reduce the use of poisons;
- Companies have established short rotation Christmas tree plantations rather than longer rotation plantations in special areas to avoid issues such as shading or loss of scenic views from rural residences;
- In situations where major bridge and road construction may lead to a temporary increase in stream turbidity, companies have provided water tanks to residences that normally extract water directly from forest streams.

4. Conclusions

The requirements to strive for sustainable forest management can place increasingly onerous demands on the resources and skills that are available within both the governmental and private sectors. The regulation of forest practices in Tasmania involves a large number of landowners and forest companies. Neither the government nor the majority of forest companies would, in isolation, have the resources to deliver best practice forestry across all sectors in an effective and efficient manner. Collectively, partnership arrangements have facilitated the development of a very progressive forest practices system through the sharing of resources and responsibilities.

Codes of forest practice need to be complied with if they are to be effective and credible. Compliance can be achieved through either a cooperative or adversarial approach. Regulatory frameworks that adopt a highly prescriptive approach often become increasingly bureaucratic and process-driven. Partnerships by their nature require a cooperative approach, with mutually agreeable outcomes. The continuing challenge for Tasmania's forest practices system is to maintain a spirit of cooperation and to avoid the seemingly inevitable regulatory spiral that would lead to a more bureaucratic and litigious system. This means a commitment at all levels to the maintenance and further development of partnerships among all key stakeholders.

5. Recommendations

1) Reduced impact logging should be implemented where possible through an approach that fosters cooperation between government and other stakeholders.

2) Formal partnerships among government and other stakeholders should be considered and developed where appropriate to-

    - clarify the rights, roles and responsibilities of all parties;
    - optimise the sharing of resources and skills;
    - establish mutually agreed standards, and minimise ongoing disputes;
    - develop efficient processes and avoid unnecessary duplication and bureaucracy; and
    - provide structures and incentives to encourage best practice through continuing improvement.

Acknowledgments

Ken Felton and Thomas Enters kindly provided valuable comments on a draft of this paper. I gratefully acknowledge the support and assistance of the conference organisers and my sponsors FAO, and the Tasmanian Government and Forest Practices Board.

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