THE IMPACT OF FOREST POLICIES AND LEGISLATION ON FOREST PLANTATIONS

Based on the work of

Christopher J. K. Perley
Consultant

Edited by D. J. Mead

March 2001
Disclaimer

The Forest Plantation Thematic Papers report on issues and activities in forest plantations as prepared for FRA 2000. These working papers do not reflect any official position of FAO. Please refer to the FAO website (http://www.fao.org/forestry) for official information.

The purpose of these papers is to provide early information on on-going activities and programmes, and to stimulate discussion.

Comments and feedback are welcome.

For further information please contact:

Mr. Jim Carle, Senior Forestry Officer (Plantations and Protection),
Forest Resources Development Service
Forest Resources Division
Forestry Department
FAO
Viale delle Terme di Caracalla
I-00100 Rome (Italy)
e-mail: Jim.Carle@fao.org

For quotation:

## Contents

1. Introduction  
   Page 4

2. The Agents, Motivations, and Decision Making Frameworks Influencing Plantation Investment  
   2.1 The agents and their motivations 5  
   2.2 Situational factors determining plantation advantage 5  
   2.3 Social capital 6  

3. Analysis of Specific Policy and Legislation Examples  
   3.1 Framework policies 7  
   3.1.1 Land tenure, security and land availability 7  
   3.1.2 Forest management institutions 9  
   3.2 Direct government involvement through state agencies 9  
   3.3 Direct government forestry plantation policies 10  
   3.3.1 Financing mechanisms to encourage plantation forestry: taxation, loans and grants 10  
   3.3.2 Extension in motivation and information 11  
   3.3.3 Provision or subsidisation of forestry products and services 11  
   3.4 Indirect government policies affecting plantations 12  
   3.4.1 Privatisation and the allocation model 12  
   3.4.2 Institutional reform, markets, log pricing and log trade control 13  
   3.4.3 Public participation in policy development and implementation 14  
   3.4.4 Land use policies and environmental values 14  

4. Conclusions  
   Page 15

References 16
1. Introduction

The extent to which government policies and legislation impact on forestry plantations will relate both to the greater goals of government, and to the particular circumstances in that country.

The goals of governments can be broadly classified into three broad domains – the economic, the social and the environmental (Buck 1995, Ruitenbeek and Cartier 1998) which broadly relate to policy instruments of market modifiers, institutions and laws (Buck 1995). These goals are linked such that a policy pertaining to, say, social equity may affect sustainability of economic efficiency either positively or adversely (Ruitenbeek and Cartier 1998).

For the plantation policy making environment, additional complications are that:
- plantations provide interrelated, multiple outputs within these three domains;
- there are different agents through which plantations can be established and managed – government, corporate, community or individual.
In essence, forests have multiple uses and multiple users (D’Silva et al. 1994). The interrelated environmental, social and economic domains also highlight the need to consider policies in parallel (Klooster 1999) with some understanding of the linkages and potential distortions that can result. Identical policy and legislative frameworks in countries with different environmental, social and economic advantages will achieve very different results.

Government policies affecting forestry plantations may direct or through some indirect effect from outside the forestry sector (Ruitenbeek & Cartier 1998), which may be unintended, or even undesirable. Conversely, government decisions directly relating to plantations may have unintended effects outside those intended, depending on other variables particular to a given situation.

This analysis of the impact of forestry policies and legislation on forestry plantations is not, therefore, likely to provide a set of universal principles for how particular governments can influence plantation development, with the possible exception of issues relating to land tenure and forest management institutions. The aim is to identify the possible policy options that can affect plantation forestry, and to discuss alternative outcomes and the wider context influencing the outcome.

2. The Agents, Motivations, and Decision Making Frameworks Influencing Plantation Investment

Knowing who are involved in plantation and why they make the decisions they do, is critical to the analysis of policies and legislation affecting plantation development, and to the formulation and implementation of policy. Policy after all works through people – through agents. This sociological and psychological dimension to plantation policy is discussed by Buck (1995).
2.1 The agents and their motivations

Plantation development is carried out by a number of key agents, including:

- direct agents of central government (forestry departments),
- corporate investors (either domestic or foreign, small or large)
- local communities, and
- private individuals.

The same central government policies and legislation can act on each agent in different ways. Depending on the goals of the policy makers, this can lead to unintended consequences.

Each of these agents has different motivations and goals, different perspectives on risk, different time perspectives, and differing access to information and resources.

Only corporate agents and some private investors are likely to respond predictably to government policies based on rational financial motivation. Generally, corporate investors can be considered to be more motivated toward forestry investment than individuals. This is due to a better degree of information and knowledge available to them through labour specialisation, less constrains with resources such as capital. The motivation for corporate investors investing in plantations is generally to generate financial returns on investment. This return, however, does not imply a financially maximising strategy – rather it is a return considered in relation to risk and chosen strategy.

While a private investor can profit from a forest harvest while living far distant, the other multiple benefits that all forests provide – such as shelter, soil conservation, and other social and environmental benefits – are not so transportable. Their effects are immediate to the people and environments nearest to them. Given the local value of these forest services, it is not surprising that generally local community and individuals’ motivations are different from those of commercial investors and place less emphasis on financial returns. For such people government policies based solely on financial motivation are likely to be less attractive than ones with social or environmental goals.

Government agents have some similarities with corporates. They are often well motivated toward forestry investment, can possess a comprehensive degree of knowledge and expertise, and have access to available resources. They have proven to be very effective agents in plantation establishment. The key differences relative to corporate investors are the government agents’ emphasis on broader and longer-term goals, rather than shorter-term financial goals, and the greater social pressure placed on them by both central government and local community stakeholders (D’Silva 1997).

2.2 Situational factors determining plantation advantage

Those necessary conditions relating to motivation and information do not present the complete picture. Some appreciation of factors external to the agents is necessary.

Porter (1998) identified four key factors that determine competitive advantage in the international market place as being:
Natural advantage. The main ones are where trees grow fast and where land and expertise are available (FAO 2000; Clapp 1995).

- A strongly competitive domestic market which ensure that firms are efficient
- Well developed infrastructure with a network of supporting industries, and
- The country’s (and its firms’) capacity to innovate and upgrade, arising from competition, pressure and challenge.

Porter’s theory also suggests that long-run international competitiveness cannot be based on factors such as exchange rate, and low costs of interest and labour (FAO 2000). These factors are subject to change over time in relation to a country’s economic performance, and are unlikely to be accurately predicted by investors in forest plantations.

These situational factors accord with commonly stated prerequisites for corporate and institutional investors to invest in plantations. They look for security of tenure, a strong legal framework, the prerequisites of profitable forest growth including growth potential, management options, infrastructure (physical, political, financial, and social), access to markets, and access to required products and services (Wiltshire 2000).

### 2.3 Social capital

The factor on which Porter (1998) puts much emphasis relates to the ability to innovate and show enterprise. He attributed much of this ability to competition, pressure and challenge. However, social capital is also important. Putnam (1993) concluded that the quality of civic attributes, both within civic institutions and within the community, such as values of trust, honesty, a predisposition to compromise and work together, as well as traditions of collective enterprises and interest in current affairs, underpinned better economic performance.

On the basis of these social capital theories, policies that provide for an increase in the social capital of a country or region may have positive effects on overseas investors. Ahn (1999), who studied the foreign investment patterns in Viet Nam, found investment took advantage of high quality labour, including more literate communities, regardless of their income levels.

The theory of social capital also highlights the possible unintended consequences of pursuing a policy-making framework whose basis is too narrowly focused in theories of economic efficiency, particularly where social capital is eroded.

These ideas on social capital relates to the local individuals and communities that are agents in the development of forest plantations, especially those planted for social objectives such as provision of woodfuel or site rehabilitation, so important to rural economies. Planting trees can be a direct instrument in the development of social capital, just as much as the success of social forestry initiatives can rely upon the social capital that exists in the local community. An acknowledgement of the importance of social capital in the success of forestry plantings is reflected by the growing trend in community participation in policy making, and in the increasing acceptance that community attitudes and local knowledge play a major role in the uptake of forestry planting incentives.
3. Analysis of Specific Policy and Legislation Examples

Government policies that affect the forestry plantations can take a number of forms. These can be generally be characterised as:

- Framework or “Pervasive” Policies
- Direct government plantings
- Direct incentives or disincentives to potential plantation forest investors (corporates, individuals or communities)
- Indirect incentives or disincentives to potential plantation forest investors (corporates, individuals or communities)

The choice of agent or agents – whether corporates, individuals, the state itself, or communities – is itself a policy decision, and reflects economic and policy-making philosophies. Goals based upon neo-liberal theories of economic efficiency will likely tend governments toward the treatment of all investors as the same, irrespective of available resources and influence, and the removal of direct government involvement in plantation forestry. The effect is likely be positive for corporate investment, but not necessarily positive to other groups. New Zealand and Chile are probably the most obvious examples of that underlying economic philosophy in action.

Policies that reflect a broader economic philosophy are pursued by many developing countries, whose social equity goals are as important as economic development, and who have need of a pragmatic approach to complex problems. Other countries, notably the industrialised “north” and Australia, are also mindful of social equity, as well as economic, social and environmental sustainability. This increased interest in sustainability and social equity is a major policy trend.

3.1 Framework policies

Insecure land tenure and weak forestry institutions are a framework that leads to difficulties for forestry activities (Ruitenbeek and Cartier 1998). When this framework is distorted, the distortionary effects of other policies, such as under-priced timber, are exacerbated. There are also linkages between policies pursuing economic efficiency and other social and environmental goals in either positive or negative ways.

3.1.1. Land tenure, security and land availability

A wide range of policies affects land tenure and control. Where land tenure is insecure it can influence a range of other policy issues, exacerbating nearly every policy distortion (Ruitenbeek and Cartier 1998). The litany detailed by Ruitenbeek and Cartier includes extraction damage, wastage in harvesting and processing, suboptimal silviculture and the lack of non-timber forest products (NTFT) development.
Land tenure is key factor in the success of both corporate and community-based forestry (Khan 1998). Corporate interests require a secure interest in the land as a prerequisite to investment (Wiltshire 2000). This need not include land ownership per se, as utilisation of potential rights and benefits of land relates to the control of land, rather than legal ownership (Klooster 1999). Co-management by communities, together with another institution providing some resources and support – perhaps even having title of the land while control is jointly held – is an example where systems which provide security of control can be as effective, or more effective, than ownership of a title itself.

Klooster (1999) has illustrated this in an example from Mexico. Prior to 1980, the San Martín Ocotlán community did not accrue significant community benefit from the forests to which they had tenure, because forestry management remained outside of community control. The situation was exacerbated by the insecure tenure of short-term concession holders, which encouraged cut and run logging, and by corrupt local leaders, intimidation, and violence. The problems of community tenure were made worse by an effective monopsony where forest owners could only sell to concessionaires when they wanted to buy, at very low prices controlled by government officials. In this case the control of the concessionaires extended beyond the logging operation to road maintenance, direct commercialisation and to the accounting. All the power and influence was concentrated. The concessionaires had the incentive to high-grade the forest, and neither they nor the owners had commercial or ecological incentives to encourage regeneration.

The most dramatic changes in policy related to the improvement in community control, including access to professional forestry expertise, the control of tenders, and a system of co-management with government. This lead to a 600 percent increase in the community benefit from forestry (Klooster 1999). By 1992, 40 percent of the country’s timber was coming from organised, community-controlled forests.

These policies encouraging community forestry of natural forests through the development of control, skills and market access may be in conflict with other policies that directly encourage larger-scale plantation forestry projects and international investment (Klooster 1999), through competition for government resources, and the relative priorities given to economic, social and environmental goals.

A similar case to Mexico occurred with logging on customary land in the Solomon Islands (Bennett 1995, Frazer 1997). Resource owners had little real protection from overseas operators, and extreme community divisiveness resulted. Community resistance lead to a direct challenge to the large-scale, capital-intensive development policies, including plantations, followed by the postcolonial government

Community ownership of land can itself be a problem through the increase in decision-making complexity required. In New Zealand, Maori land is often communally owned, but control is lacking, partly because many are absentee owners. Compounding the problems of tenure are a lack of expertise among owners, a lack of collective will, a lack of shareholder knowledge or interest in their nominal title, a lack of access to either equity or debt capital, and local land use controls on clearing vegetation. All these factors diminished control by the owners, and combined to make investment in plantation forestry by either the community or commercial interests unattractive.
In the 1990s the government attempted to assist commercial investment principally through facilitating liaison between the Maori owners and forestry investors. However, the policy failed because it was designed from a perspective of economic efficiency alone; too narrowly focused to address the wider social and environmental issues. In addition, community participation in both policy formulation and policy implementation was weak. The acknowledgement of such potential policy failures is a major reason why public participation is such an influential trend in policy making.

### 3.1.2 Forest management institutions

Ruitenbeek and Cartier (1998) argue that where government forestry institutions are strong and capable, there are fewer policy distortions in the forestry sector. Weak forestry institutions reinforce the problems associated with other forestry distortions such as insecure land tenure. An example is the inadequate control by government of minimum forestry management standards, and in the inadequate provision of information required by agents to more confidently make management decisions.

The complexity of forest policy environment is itself a recommendation for a broadly knowledgeable and competent forestry institution. In addition to these factors, a willingness to draw on wider areas of expertise, in particular local communities, is increasingly recognised (D’Silva 1997). Integral to this is the development of trust, a function of social capital. Trust is necessary for policy and legislative implementation, and control (Southgate et al. 2000), as it is a prerequisite for open public participation.

Southgate et al. (2000) states “any market must be undergirded by a functional set of enabling institutions”. The attainment of such institutions is related to the development of civic traditions and values (Putnam 1993). A policy approach that emphasises economic efficiency over social equity may hinder the development of these values.

Southgate is supported by Erskine (1991), who analysed the failure in the uptake of agroforestry in southern Africa. Amongst the constraints and policy issues identified for the failure were several that related to weak institutional knowledge and support. These included poorly developed rural development policies, lack of awareness of land use systems, a weak, poorly trained, understaffed and under-funded extension service, poor communication between land uses, and the absence of site-specific research applicable to specific local conditions. These all relate to weak forestry institutions. Other constraints related to insecure land tenure, a lack of direct incentives, low confidence, and poor market access.

### 3.2 Direct government involvement through state agencies

Government policy implementation through the direct actions of government agents such as forest services usually reflect a range of goals including:

- Industrial development and import substitution
- Regional development, employment, and other social equity goals
- Water and soil conservation and mitigation or remedying of land degradation
- Biological and ecological protection, and ecological services (including international policy obligations).
Direct government involvement has a long and successful history, if area planted is the criterion. In almost every case where the plantation resource represents a significant portion of the total forestry holdings, direct state planting was a significant, perhaps the most significant factor, in the establishment and success of the industry. (see also Working Paper FP/8)

In the case of New Zealand, major state plantation initiatives began in the late 1920s after a forestry policy was developed. An expertise in plantation forestry was established through practice, as was infrastructural support such as nurseries, as well as research, forestry education, a strong forestry management institution able to competently analyse and implement forest policy, and eventually timber processing. Private investment followed the state’s initiative even prior to the first wood coming on-stream. They used the infrastructure, and hired the expertise that was now present.

Whether a corporate investor would have risked being the first to establish plantation forestry in the country without the expertise, infrastructure and domestic markets is, according to Porter’s key factors, an unlikely prospect.

Chile, Australia, and the wetter southern African states are among the countries that followed a similar pattern to New Zealand (Clapp 1995), and whose natural advantage, together with the development or improvement in the other factors of competitive advantage, was sufficient in encouraging private investors to follow the governments’ lead.

Should natural advantage be sufficient, the policies of major direct investment in plantation expansion by the governments of China, Myanmar, and Korea may follow a similar pattern. However, if natural advantages are insufficient then the private investment may not follow due to a relatively poor competitive advantage. This is especially where growth is poorer because the areas planted are determined by other goals – such as halting desertification (North African Mediterranean countries of Algeria, Morocco, Tunisia and Libya, as well as western China) or for soil conservation in, for example, mountainous areas.

3.3 Direct government forestry plantation policies

3.3.1 Financing mechanisms to encourage plantation forestry: taxation, loans and grants

This topic is treated in depth in Working Paper FP/8.

Taxation policies vary widely, between countries, but often throughout the plantation rotation. The effect of taxation on investment is therefore very difficult to assess as a forest may be established under one tax legislation, and harvested under another. It can be a major uncertainty. However, so far as changes in marginal tax rates are concerned, the cashflow pattern of forestry acts as a partial hedge against such changes (Perley 1992). A more significant effect than marginal rate of taxation is the treatment of the tax deductibility of costs.

A more common financing method is tax exemption. Morell (1997) attributes the establishment of 50 000 hectares of plantation in Costa Rica to tax exemption but noted that this was inequitable in that those who paid little or no tax did not benefit.
One alternative funding mechanism is state financing through low interest rates or nil interest loans, or grants. Indonesia uses zero-interest rate loans in the encouragement of short rotation pulpwood forests. These loans cover approximately one third of the re-establishment costs with repayment required within three years (Potter and Lee 1998).

In developed countries grant schemes have been common, though notoriously ineffective due to a variety of constraints in at least parts of Europe (Watkins et al. 1996) although not always (Gairdner 1993). In Ireland, an exponential increase in forestry plantings occurred after the introduction of a “compensatory allowance” or annuity to overcome the long payback period (Gairdner 1993). However, this sometimes had negative effects, such the planting of ecologically significant bog land. Not only were ecological values threatened, but also the plantations were in areas with no natural, commercial advantage for industrial forestry.

The land use conflicts that result from direct incentives to promote plantations is a relatively common criticism of incentives. Klooster (1999) suggested such conflicts might occur between community management of natural forests and incentives to promote large-scale plantation forests. The conflict is more pointed where the natural forest is removed and directly substituted with plantations.

Such conflicts are not universal. In New Zealand, a forestry encouragement grant scheme in lieu of tax deductibility was introduced between 1970 and 1984. Almost all of the land chosen by farmers to plant in trees was marginal for agriculture, but unlike the Irish example above, the land chosen tended to be good for forestry growth (often weed-prone gully sites which trees naturally favour). Again in contrast with the Irish experience, practically all the plantations in South America have been established on abandoned agricultural land (Keipi 1997).

### 3.3.2 Extension in motivation and information

Extension is more usually concerned with the transfer of information to communities and individuals. However attitudes and beliefs are also important factors affecting the success of forestry plantations. Motivational factors are not always in accord with ideas on economic rationality.

An illustration of the complicated motivation of landowners is provided by research into land use options in Costa Rica. Howard and Valerio (1996) found that individual were not basing their land use decisions on economic grounds alone. Landowners disliked the periodic nature of forestry cash flow, and also lacked information and expertise relating to returns and technical requirements of forestry – points with potential policy implications.

A possibly simpler answer is one that relates to attitude and the culture within which individual choices and actions are made. O’Leary et al. (2000) looking at regional differences in attitudes toward afforestation in Ireland found strongly contrasting preferences, perceptions and attitudes in two populations. One was strongly supportive of forestry and the other, within an agricultural economy, was highly critical. They concluded, that rather than relying on a generic approach, policies and strategies needed to be developed for different regions. Similarly, Klooster (1999) compared forestry case studies in community forestry in Mexico.
Koostler highlighted cultural difference and advocated a model that analysed individual choices and actions as embedded within communities and cultures.

Morell (1997) documents specific policy goals to change these constraining attitudes within Cost Rica through extension efforts, though does not document their effect.

### 3.3.3 Provision or subsidisation of forestry products and services

A number of countries, especially in relation to social forestry provide direct assistance in-kind to individuals or communities. Commonly, as in India and some African countries, this is by providing seedlings. Extension services that provide knowledge on planting and tending are very common in both developed and developing countries, often through state agencies.

The effectiveness of providing information and changing attitudes is difficult to gauge. Attitudinal change may take a generation, or conversely can be caused by some unexplained trigger (Gladwell 2000). However, the constraints of information are an obvious impediment to achievement of effective forestry management, and a market for information cannot exist where the participants do not know what it is they do not have.

### 3.4 Indirect government policies affecting plantations

#### 3.4.1 Privatisation and the allocation model

Privatisation is advocated as a prerequisite for the investment in plantations and processing investment (Clapp 1995, Clarke 1999) and as an inevitable progression (Clarke 1999). However, as noted by Kanowski (1997) the stated imperatives for privatisation are as much ideological as economic.

In New Zealand the government in the mid 1980s took a view that the multiple objective management carried out by the NZ Forest Service was “economically sub-optimal” (Brown and Valentine 1994). On the philosophic grounds of economic efficiency, the functions of the department (and others) was split into organisations with single objectives, and ownership of those objectives not thought appropriate to government, such as their plantations, was devolved to the private sector. Inherent with this view of forests is the Allocative Model, which assumes that a forest both can be managed, and is best managed, with only one objective in mind. For that purpose discrete blocks of forest are accorded single management objectives, in contrast to an Integrative Model approach which requires forestry management on any one piece of land to consider a range of issues and objectives.

However, international trends are towards increasing the importance of both sustainable management and public participation in the management of all forests, productive or otherwise. Thus questions are being asked about whether the neat accounting possible in the Allocative Model gives rise to either the efficiency or the management effectiveness that it presupposes.

Further, the claim that privatisation is a prerequisite to further forestry investment is also a moot point as this does not always follow. In New Zealand, not all new companies followed vertical integration strategies, and some investors have come into the country purely as forest
growers or as timber processors. The increasing woodflows provided the major incentive for processing investment.

In New Zealand, privatisation did, however, provide a broader base of forest management strategies and innovation through different investment cultures entering the forestry sector. This was one important factor in the improvement in competition and innovation within the industry, especially in the change in relationship between a sympathetic state provider of wood and independent processors. The forest grower was no longer a source of cheap wood.

In addition, there are social equity issues associated with privatization, which are often ignored, including the issue of foreign ownership of ex-state assets, which often remains unpopular with the public.

3.4.2 Institutional reform, markets, log pricing and log trade control

One of the most common industrialisation policies in the past has been the pursuit of growth through restrictions of trade, in the case of forestry either through log export controls or tariffs (Southgate et al. 2000). The effect of these policies has been a reduction in the value of standing timber, often compounded directly by state control on log prices, and concessions in the form of long-term supply contracts specifically designed to encourage processing, and sometimes social goals such as cheap housing.

Low log prices are one of the main disincentives to the investment in forestry plantations and high quality management of plantation forestry. The effect is to reduce the realisable rate of return, reduce the value of an owner’s equity, make investment in more sustainable and technical management less worthwhile, reduce market development options, and lead to inefficiencies and a lack of international competitiveness in the domestic processing sector.

A significant trend in forest policy is toward the liberalisation of trade, especially in the removal of monopoly privileges to concessionaires and the removal of log price control (Castilleja 1993). Castilleja’s analysis of the forestry policy trends of Nicaragua, Chile and Mexico gives similar findings to Klooster (1999), with local communities benefiting from the greater economic returns from liberalisation.

Southgate et al. (2000) analysed the partial trade liberalisation reforms in Ecuador. In this case prices did not improve significantly due to other constraints imposed by “a severe lack of competition”, with new investment not occurring because of weak property rights and corruption; the latter being exacerbated by an over-regulation relating to environmental controls. North & Cameron (2000) also were critical of the past protectionist policies of import substitution industrialisation in Ecuador, arguing that it favoured the development of a “capitalist class”, and an “urban bias”. Where rural communities were considered, the incomplete range of adopted policies proved disadvantageous to community participation and strengthened local elites. In the Ecuadorian case, social capital comes out strongly as a necessary accompaniment to the economic reforms.

These Ecuadorian studies strongly support Porter’s analysis of competitive advantage and the need for social capital (See sections 2.2 and 2.3).
3.4.3 Public participation in policy development and implementation

D’Silva et al. (1994) identified one of the major issues in sustainable forestry management in developing countries as the failure for government forestry agencies to incorporate local knowledge and skills in both forestry policy formulation, and its implementation. The results of such policies are documented in a failure to achieve the government goals desired through too narrow a consideration of issues, a theoretical rather than a pragmatic approach to local initiatives, and the lack of community support, especially where no community benefit accrues.


The often-unforeseen adverse effects of top-down policy making can not only affect the community, but also the environment. This occurred in Malawi in relation to the Blantyre Fuelwood Project Area (Kalipeni & Feder 1999), where the top-down approach failed to gain local support and disempowered the people, leading to resistance and environmental degradation. The concept of “policy ecology” is advocated whereby all factors in the real world (social, economic and environmental) are considered by policy makers. Public participation is very much a part of this broader policy making approach, and is a major trend in policies relating to land use and the rural community.

The issue of public participation is also related to the need for clear property rights and decision-making control at community level for policy implementation to be effective, including trends in co-management of state resources by local and indigenous people. A committed participatory process does not cease at public involvement at the policy development stage; it carries participation through the policy implementation.

3.4.4 Land use policies and environmental values

Contradictory policies affecting forestry plantations commonly include competing land uses such as agriculture. The competing effects of the European Community agricultural support are well documented. The favouring of agricultural production through competing policies may not only decrease the natural forest cover, but also reduce the rates of reforestation of farmland to plantation forest.

Perhaps the most pervasive trend influencing forestry in the last 20 years has been the growing awareness of environmental values, in relation to both natural and plantation forests. This trend has been manifested in:

(i) international government agreements on environmental issues such as global warming and biodiversity (see Working Paper FP/12)
(ii) government policies relating to land use control, or protection of natural forest, and
(iii) pressure from environmental NGOs resulting in voluntary standards and protocols being adopted by private individuals and corporations (e.g. FSC Certification).

Each of these has resulted in policies with an effect on plantation forests. For instance, plantations have been advocated as carbon sinks in relation to greenhouse gases.

The more direct influence on plantations is through local land-use control legislation. These environmental policies are either implemented through an enabling process that encourages a bottom-up voluntary (and audited) compliance, through such mechanisms as the development of industry codes of best practice, or policies are imposed through top-down, general regulations involving inflexibility, stakeholder resistance, and high cost.

The choice of approach has an effect on plantation investment and management. Southgate et al. (2000) provides an example from Ecuador, where the environmental regulations are both restrictive in their approach, and conducive to corruption by officials because of their over-regulatory nature. The Pacific North West of North America has a similar reputation for over-regulatory environmental requirements (without the corruption), which contrast with the voluntary best-management practices approach of the South Eastern United States and New Zealand.

4. CONCLUSIONS

Government policies relate to a wide range of varied but interconnected goals – social, economic and environmental. The multiple use attributes of plantation forests mean that their management can be both instruments of policy, and can be indirectly affected by a wide range of policies concerned with either economic efficiency, social equity, or environmental and economic sustainability factors.

For this reason, effective policy development needs to be holistic in approach by taking account of these linkages and the “policy ecology” relating to particular circumstances. Policy development that does otherwise, by the pursuit of a narrow agenda such as economic efficiency, runs the risk of not achieving policy goals, or even working against their achievement.

There are further complications for the policy makers to consider. The agents through which plantation forestry is established and managed include individuals, communities, governments themselves, and corporate entities. To this complication is added the differences in background conditions both within countries and between countries. These conditions relate to human factors (social preferences and attitudes), the infrastructure of the socio-political and economic environment, and the natural environment conducive – or otherwise – to plantation forestry.

The differences among and between countries make the transferability of policy difficult. Country-specific and even locally specific policies are advisable. The rise in public participation is part of this realisation in action.

A useful policy analysis framework from which to appraise policy options is offered by Porter’s analysis of competitive advantage, augmented by the developing analysis and importance of social capital (a sociological component). To this framework should be added
an understanding of decision-making of the various agents who affect forestry management; especially an understanding of their motivations (a psychological component). Simple assumptions of rational economic man without reference back to real people are too narrow a basis for policy.

The emerging trends in forestry policy affecting plantation forestry include:

- the rise in bottom-up stakeholder participation in the development and implementation of policy;
- the increase in environmental conservation issues, including international protocols;
- the rise in social equity concerns, especially relating to local and indigenous people;
- the rationalisation of economic structures relating to forestry, especially relating to market access;
- the pursuit of economic efficiency being softened by these demands of social equity and ecological sustainability;
- the increase in the areas of plantations themselves, with increases in activity by all agents, from individuals to governments, in the pursuit of a variety of goals.

REFERENCES


Bray, D. B & Wexler, M. B. 1996. Forest Policies in Mexico

In Randall, L (Ed) Changing Structures in Mexico: Political, social and economic prospects ME Sharpe Press, Armonk, NY.


|-------------------|--------------------------------------------------------------------------------------------------|