National Forest Programmes in a European Context

Oslo, Norway

13–15 September, 2001

Olav Gislerud and Ine Neven (eds.)

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Preface

The second workshop and meeting of COST E19 "National Forest Programmes in a European Context" was held 13–15 September in Oslo 2001. The event was organised by The Research Council of Norway, COST, European Forest Institute and the Department of Forest Sciences, Agricultural University of Norway. The event was attended by about 65 persons, a few of the registered participants cancelled their participation on a short notice due to the tragic events of September 11.

The main objective of the COST E19 Action is to provide the policy makers in Europe with improved means for formulating and implementing national forest programmes. More information on the COST Action E19 can be found on the homepage of the Action at www.metla.fi/eu/cost/e19/index.htm

The workshop covered the following two topics:

- Collaborative approaches (negotiation, communication)
- Financial framework and incentives

The present selection of papers covers most of the papers presented in the workshop as well as most of the prepared presentations given in the Working Groups.

The papers have been reviewed Ine Neven and Olav Gislerud. The editorial work has been carried out by Tim Green and Minna Korhonen of EFI. The Forestry Programme of the Research Council of Norway has given financial support to the publishing of the Proceedings.

Olav Gislerud
Ine Neven

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Understanding Collaboration as Deliberative Communication, Organizational Form and Emergent Institution

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Abstract

Collaboration refers to organizing for joint action among individuals, organizations, and processes. As understanding of ecological systems moved towards greater complexity and interrelatedness of parts and processes over the past decades, so also the governance of human institutions shifted towards processes and institutions with greater connectivity and interdependence than past bureaucratic forms. This evolution led slowly to new principles of environmental governance, new forms of action and organization, and new emergent governance processes. While collaboration is often viewed as simply a cooperative form of communication, this paper examines collaboration as communicative action, generative politics, and organizational form. By looking first at how local actions are linked to global processes, this paper takes at its starting point the proposition that policy processes, like national forest programmes, must build connections as well as new institutional linkages between global principles and placemaking activities. To elaborate the kinds of connections needed, this paper proposes a typology of scientific and political deliberation along with another model of how communicative decision processes are connected to context factors. The basic argument of this paper is that participatory processes and collaboration are generating new forms of emergent governance institutions.

Keywords: generative politics, communicative action, participatory processes, deliberation, community of interpretation, emergent governance.

Communicative action creates shared understanding through public deliberation within a community of interpretation leading to mutually defined social goals and a common vision of desired outcomes.

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1. Introduction

Collaboration is a word whose different meanings all come together when used in the context of forest policy planning today. According to Webster's Dictionary (1979) collaboration means (1) to work jointly with others especially in an intellectual exercise, (2) to cooperate with or willingly assist an enemy of one's country and especially an occupying force, and (3) to cooperate with an agency or instrumentality with which one is not immediately connected. The tension between serving the goals of one's own interests or agency and contributing to the goals of others is a necessary element in today's environmental governance institutions. Whereas former models of technocratic decision making and fragmented agency jurisdictions fostered a governance culture of autonomous actors and institutions (Shannon 1999; Stanley 1981), current models of participatory decision making require a new governance culture of interdependent institutions and cooperating actors (Stanley 1983; 1990).

Collaboration as a concept is coming to mean the institutional frameworks created in multi-level governance contexts so that ultimate goals (like sustainability, improved environmental quality, sustainable forest management) guide long term strategies and near term decisions (Anderson 1979; Bellah et al. 1991; Committee of Scientists Report 1999). These institutional frameworks for collaboration are created through communicative action among actors linked together in a "community of interpretation." Communities of interpretation emerge through deliberative processes of dialogue, conflict, learning, and negotiation (Shannon 2001a). Thus, governance institutions are the result of institution building though collaborative action in an environment of open, participatory relationships. This concept of "emergent governance" stands in contrast to "received governance" based upon legislative or constitutional directives and represents a new cultural pattern (Geertz 1973). Obviously, constitutions play a critical role in establishing core responsibilities and rights, but it is through the interplay of joint action over time that governance institutions and cultures emerge, persist, and change (Bennis and Slater 1968).

Thus, communication is the key process for creating and maintaining governance (Brown 1989). When a community of interpretation deliberates future goals, strategies, decisions, and accountability mechanisms, then the result of such communicative action is a collaborative process as well as organizations and institutions. By understanding the way the governance processes create governance institutions and organizations through communicative action, it is possible to better conceptualize the processes linking the global and local spheres of social action. The following sections of this paper propose conceptual frameworks for thinking about governance, understanding collaboration as process and structure, and understanding how elements of the policy process contribute to building governance capacity.

2. New Principles of Environmental Governance

Over the past thirty years, nations individually and collectively have created new legal and policy frameworks governing natural resource use and protection as well as conservation of environmental qualities, including biodiversity (Caldwell 1998, 1990, 1970). These new frameworks have in common a new set of guiding principles that both led to definition of the issues and problems addressed and emerged as a new governance regime as new policies and laws accumulated (Anderson 1979). These new principles, taken together, create the need for and nature of collaboration as a form and process for emergent governance (Forester 1995). The next section proposes a conceptual framework for understanding emergent governance,

- cross-sectoral *policy integration*
- generative learning through *deliberation in participatory processes*
- social learning and social action through *collaboration*
- adaptive action through organizational *learning*
- stewardship based on commitments to *sustainability* principles.

Figure 1. New Principles of Environmental Governance (Shannon 2001a).

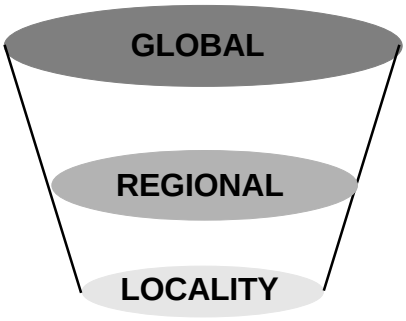

Figure 2. Top-Down Hierarchy of Global to Local.

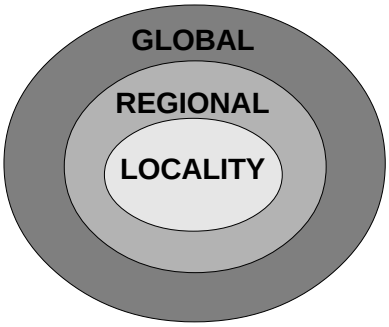

Figure 3. Nested Hierarchy of Global to Local.

and this section lists these new principles and discusses them from the perspective of changing world views as well as new forms of action.

This new set of governance principles is emerging through practice (Braun and Duguid 1991). The important element of these principles is that they rely on democratic impulses to generate responsive and adaptive institutions and organizations (Forester 1996). While some

of these principles are becoming widely accepted, others are more challenging and progress is slow. Nonetheless, by presenting them in a single framework, it is possible to generate new ideas for theory as well as practice (Shannon 2001a). To the extent that institutions, organizations, and administrative rules support and actualize these principles, they can create the kind of generative politics imagined by these principles (Shannon 2001b).

These principles assume a different relationship between levels of governance: global, bioregional, and local. If the global is understood as the encompassing of all bioregional processes and bioregional of all local relationships, then a "top down" relationship among different government responsibilities seems natural. Even the "nested hierarchy" model places the local at the center of expanding spheres of geographic scale and supports the same governmental approach (O'Neill et al. 1986).

But if the local is viewed as the place where everything comes together – where everything is literally connected to everything else – then the bioregional and global are levels of governance that emerge through local actions and reflect the institution building capacity of joint action through processes of social inquiry (Shannon 2001a). This seemingly small shift in world view has a huge impact on how governance, policy integration, participatory processes, collaboration, conflict, and partnerships are understood (Schneekloth and Shibley 1995). It is this new perspective that underlies recent global policy frameworks for sustainable forests (Benz 1999). The rest of this paper examines this basic reframing of governance processes as applied to forest policy and planning institutions within a global context.

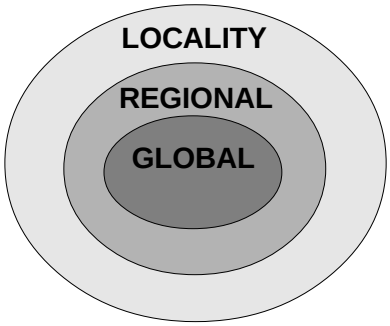

Figure 4. Place-Making Hierarchy of Local to Global.

3. Collaboration: Process and Structure

Collaboration is a concept that includes both agency and structure elements (Crozier 1980; Giddens 1984). In terms of structure, collaboration describes a pattern of cooperation that includes sharing resources – including staff and budgets, working to craft joint decisions, engaging the opposition in designing creative solutions to shared problems, and building new relationships as needs and problems arise. Collaboration is a process that leads to emergent institutions. For emergent institutions to persist over time, however, they must institutionalize the creative, generative capacity of collaboration (Wheatley 1992). Thus, the structural element of collaboration is produced and maintained by the agency of actors to engage in cooperative, supportive, learning, and adaptive behavior. Facilitating, supporting, and rewarding such behavior is a necessary characteristic of collaborative institutionsGovernance

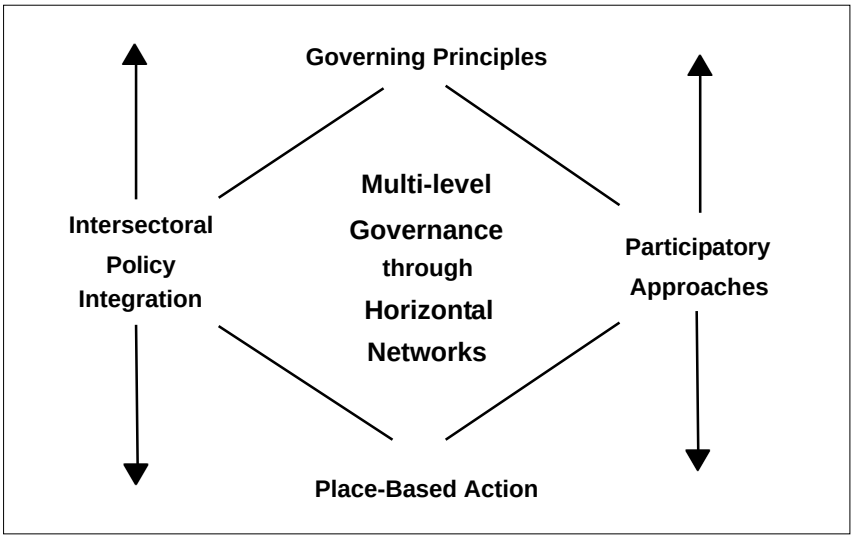

Figure 5. Conceptual Framework for Emergent Governance.

is a pattern of institutions and behavior over time that link principles to actions, choices, and outcomes. However, the emergent quality of collaboration and
communicative action leads to understanding governance as an emergent system. Since environmental governance connects expressions of principles and ethical commitments to actions and choices in actual localities, it is important to conceptualize the elements of the system and their relationships as well as their respective functions. The following schematic is a start in developing such a conceptualization.

Collaboration refers to certain kinds of cooperative behavior, certain forms of institutions, and certain kinds of communicative action. To call this framework "emergent governance" is to say that these kinds of behaviors, institutions, and opportunities for communicative action bring into existence this type of governance system. This kind of system shall be referred to as "emergent governance." However, it is important to make clear at the outset that emergent governance is an outcome of action and the sustained capacity for collaborative action over time. While generally applied to management, the concept of "backward mapping" – asking what resources are necessary to carry out a desired objective – is a useful framework for thinking about emergent governance (Elmore 1970/80). Through communicative processes various actors develop common visions for action along with creating the capacity to achieve these visions – collaboration.

First to describe briefly the elements of this framework and what kinds of behavior, institutions and communicative action are entailed in its parts as well as in giving it unity. Beginning with the relationship between *globalism and localism.* In this conceptual framework, the primary communicative work of the global sphere is the creation of principles (agreements, conventions, laws, or shared ethical commitments) that arise from within action and are expected to have a more or less universal or global reach. By place-based localism is meant the everyday work of creating meaning through action and carrying out actions with consequences for land, resources, and people (Jacobs 2000; 1992). Place-making is a critical feature of emergent governance because meaning can only come through action within a context of actors (Schneekloth and Shibley 1995). Thus, without place-making action there can be no situated meanings that guide decisions, frame management choices, and link policy networks.

This conceptual model shows only two of several potential linking relationships between global and local spheres. The first is the process of *intersectoral policy integration*. Whereas historically policy issues have been located within relatively autonomous policy sectors supported by separate government bureaus, the emphasis today is upon developing intersectoral policies that link policy networks, policy purposes, and affect desired changes in policy outcomes (Lee 1993). For example, many of the changes in land management in the United States result from linking resource extraction policies with nature conservation policies (Caldwell, Wilkinson and Shannon 1994). When actors, agencies, NGOs, and political resources that have traditionally ignored one another are suddenly forced (usually by legal changes) to work together and collaborate, there is often a lot of animosity and territorial behavior at the outset. However, the kinds of problems that land and resource policy address today demand collaboration because no one policy sector, agency, or political actor can effectively address the problem alone (Shannon 1998; Johnson et al. 1999). The new issues cross boundaries ecologically, socially, politically, administratively, and legally (Meidinger 1999; 1997). Indeed, frequently several regions, states, countries are involved and their separate regimes must find ways to work together on a common problem.

The demand for intersectoral policy integration stretches beyond just the environmental arenas into the agricultural, social welfare, economic and other policy spheres (Sandel 1996). Meeting the challenge of these new demands for integration is difficult and time-consuming, and requires new relationships to be built among very different policy networks, academic disciplines, and administrative agencies (Landy and Plotkin 1982). This paper does not address this element of emergent governance in detail, however another paper is in progress that does take up this topic as a companion to this article.

The second linking process is *participatory approaches*. By participatory approaches is meant political processes that self-consciously and directly engage the people interested in and affected by the choices as well as those whose actions, budgets, and commitments are necessary to carry out the choices (Reich 1985). This paper will describe a variety of different contexts for participatory processes as well as several types based upon social and political characteristics.

The result of these integrative and participatory linking processes is a form of organization that works at *multiple levels through horizontal networks*. Rather than a focus on the vertical integration of levels of governance, this framework suggests multiple levels of policy, planning and administration that are linked through both demands for policy integration and participatory processes (Schattschneider 1960). At each level there are numerous networks which reflect the problems of that scale of governance. Clearly, both agencies and NGOs play important roles in vertical integration across these levels of governance. However, this is different than assuming the each lower level is simply a subset of higher levels in terms of desired policy goals and outcomes. For example, in federalist system of government each lower level of government is expected to carry out the mandates of the higher levels. However, the higher levels do not have to apply lower level decisions nor need these decisions even be recognized or treated as legitimate. In a multi-level system, there is only a loose-coupling between levels based on the integrative and participatory processes that link them. There is also, of course, the “feedback” process based on the actual responses of the ecological or social systems to policies and actions. This element is not evident in this framework but should not be forgotten.

As a unity, this conceptual model of emergent governance reveals to us the necessity for continuous creative action. Thus, the next section addresses the nature of generative politics which creates new meanings, actors, and organizations as compared to reactive politics which is bound by existing interests, preferences, and authorities.

4. Communicative Action as Generative Politics

By generative politics, I mean, the capacity to create new meaning, new resources, new social organizations, new values and new interests through public deliberation. This conception is in opposition to an "implementation" politics that attempts to secure meanings, resource use claims, interests, values, and organizations through consistent affirmation of their claims (Wildavsky 1987). Thus, "to implement" is quite different than "to generate" in an administrative context. However, in environmental and forest policy the demand "to generate" stretches back in the United States to at least the National Environmental Policy Act of 1970 which clearly articulated the need for environmental policy to "balance between population and resource use" along with "attain the widest range of beneficial uses of the environment without degradation…". In the context of US federal land management, 1976 both the National Forest Management Act and the Federal Land Management and Policy Act required agencies to work together and develop integrated management plans that balanced a multiple use-sustained yield framework with the long term protection of the productive capacity of the land and resources as well as of the biodiversity of land and resources.

Generative politics occurs in democratic institutions using open and public participatory processes (Thompson and Schwartz 1990). The natural resource and environmental laws in the United States require public participation in the policy planning as well as the management planning processes. Most importantly, generative processes lead to a focus on the "desired goals and conditions" and incorporate the capacity for change and learning through experience in mechanisms like adaptive management (Shannon and Antypas 1997). Generative politics are inductive in that differences in values, situation, context, and interests mean that different social actors have different visions of the world (Shannon 2001a; Dietz et al. 1999). According to Buttoud, the role of the public authority is not to translate these visions, but rather to coordinate the actor's actions in a public context (Buttoud 2000). Within a technocratic rational-comprehensive planning approach, the goals are assumed at the outset from an ideological or moral standpoint (Shannon 1999). Whereas in a participatory process of open, public deliberation, the goals arise from practice and reflect pragmatic compromises among social actors (Forester 1989). As a result, generative politics tends to create more lasting and stable policies, because the role of participation is not merely to legitimate expert choices of goals and means (Nonet 1980).

For generative politics, the public authority needs to play many different roles at different stages in the process. It plays a "convener" role at the outset by using scientific assessments of the social, cultural, economic, biophysical, and ecological context at a fairly large geographic scale. A participatory process is a necessary element of these assessments in order to identify the full range of values, interests, and visions associated with the lands and forests. Then, the public authority "facilitates" a public deliberative process by creating a public forum for discussion, debate and analysis. These are not shouting matches, but rather opportunities for careful social learning. Social learning means that the deliberative community learns together through analysis and debate. From such deliberative processes arise various conceptions of "desired future conditions" for society, economy and the federal lands.

This is not the point at which technocratic control is reasserted. Rather, from a set of desired future conditions, the public authority "engages" the various social actors across the landscape in identifying strategies for achieving the desired conditions. Since the federal lands, like most contexts, are part of a patchwork of ownership and jurisdiction, seldom can the federal agency working alone achieve the desired conditions. Thus, the role of "coordinator" is essential to design and garner the necessary resources to carry out the

activities forming the pathway of actions to achieving strategic goals. The necessity of collaboration is clear: public deliberation is an open process and stewardship requires the commitments and resources of all those who are engaged with the public lands.

Once activities are underway, the role of the public authority shifts to "social learner" along with the rest of the deliberative community. To learn means to gather new information or have new experiences that lead to changes in thinking and doing (Weick 1990). Thus, learning cannot be a passive process of information gathering! It also means that learning in a public context does not happen by one actor thinking or working alone. Rather, social learning is a process of deliberation about the empirical outcomes of action as well as about the meaning or desirability of different outcomes (Yankelovich 1991). Social learning implies that change occurs throughout the deliberative community, not for just one actor. Thus, experience may change values, interests, visions and understanding among some or all of the actors (Innes and Booher 1999).

Clearly policy planning is more than just a technocratic matching of means to ends. The process by itself is generative in that a participatory approach requires the existence of the organizational and individual capacity to participate (Thompson 1977). Thus, policy planning can build social capital by offering an opportunity for public thinking, learning, and action (Friedman 1987).

Thus, this discussion of generative politics leads to several hypotheses. One, generative politics are inductive meaning that differences in values, context, and interests mean that different social actors have different visions of the world and of what might be desired future conditions. Second, in generative processes goals emerge through the participatory process. Thus, the kinds of participatory processes that are offered need to provide for open, collaborative public and scientific deliberation. As a result, goals, rather than being assumed based upon ideology, past decisions, or technical preference, reflect pragmatic compromises among social actors. Thus, the nature and form of communication and deliberation is strongly related to the degree to which goals are inclusive and accountable to multiple social and political interests.

5. Typology of Generative Politics in Deliberative Contexts

It is a truism to say that not all contexts are alike and that these differences affect the nature and desired outcome of political discourse (Dryzek 1990; Easton and Shelling 1991; Fisher and Forester 1987. In generative politics, not only goals and means arise through political discourse (Gutmann and Thompson 1996; Habermas 1979), but also accountability and implementation capacity (Dietz et al. 1998). These latter elements are highly dependent on the nature of the participatory process, particularly when information is limited and goals unclear (Shannon and Antypas 1996). The following typology suggests some "ideal types" of deliberative contexts that provide some insight into both the design and behavior of actual practices.

First, it is important to describe the four different types of deliberation and then it is possible to discuss the various roles of different actors within them. Under conditions of relatively high agreement on values or desired goals and a fairly well-developed state of knowledge regarding design of means to achieve them, then the kind of simple decision analysis or routine representation politics (through legislatures as well as basic administrative policy planning) is sufficient for routine analysis and oversight. What is critical in this type is the role of "oversight by experts and stakeholders." The ideas of adaptive management or learning organizations depend upon learning processes through self-critical review by independent outsiders. Thus, the role of experts, stakeholders, and the public in this type is to ensure that choices fit desired social and public values, not just internal survival goals of an

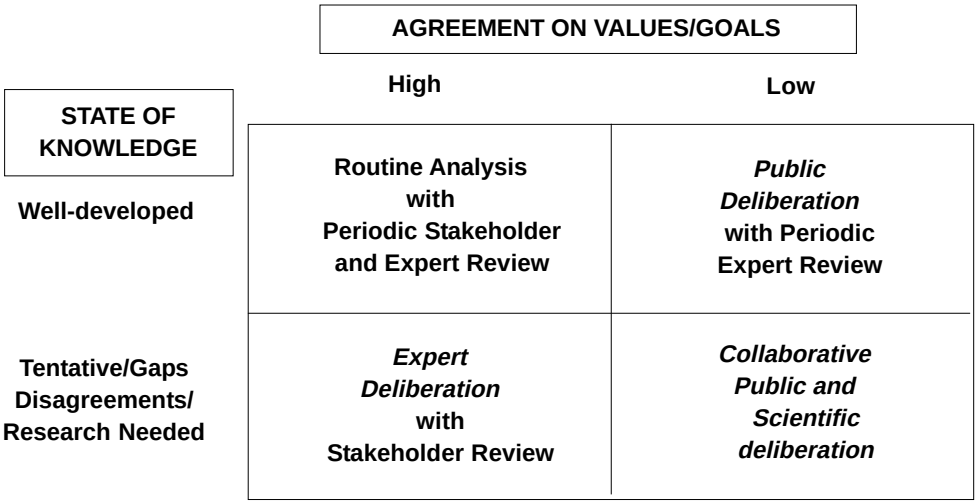

Figure 6. Typology of Deliberation among Experts, Stakeholders, and the Public.

organization (Brooks 1984). These kind of participatory processes are a vital part of "everyday" politics, but often they are often missing. As a result, some managerial practices often are continued long after they are socially appropriate.

Under conditions of high agreement on values and goals but without adequate scientific and technical knowledge, then expert deliberation is needed with a strong role for stakeholder and public review. Sometimes this is called "fish bowl science" whereby scientists hold their meetings and discussions within a public context. Thus, the scientists must not only make their assumptions and analyses clear to one another, but also explain themselves fully and clearly to stakeholders and the public. While scientists and experts often resist this form of deliberative work, experience has taught us that they come to both appreciate the quality of the discussions and the open forum for debate. It is critical once again to ensure the role of stakeholders and the public. While the primary responsibility of stakeholders and the public is to ensure independent review, they must also be sufficiently engaged in the discussions to recognize missing elements as well as provide knowledge and understanding outside of the simple scientific realm.

Under conditions of low agreement on values or goals and yet with a relatively well developed state of knowledge, the political dialogue is central. However, while the emphasis is on discourse aimed at value clarification and goal definition, nonetheless the scientists and experts now have the responsibility for accountability. Thus, in a deliberative context for choices with a technical and scientific dimension, it is critical that potential choices are held up for review and critique against technical criteria. The role of scientists and experts in this deliberative context is to both provide information and to provide oversight over possible choices.

Under conditions of low agreement on values and goals as well as inadequate scientific knowledge, then a collaborative process of deliberation amongst the public, stakeholders, scientists, and experts is necessary. When goals are broad and ambiguous – like sustainability, clean air or clean water, biodiversity, then political choices of values and priorities are essential to give strategic direction for specific pathways of actions over time. Likewise, under conditions of high uncertainty and high complexity, scientists need to be engaged in creative and generative discussions to imagine new potentials for action. As a result, the kind of collaborative deliberation envisioned here is generative politically and scientifically. Often,

these kinds of collaborative deliberative processes continue for many years and those involved organize themselves into a "community of inquiry." As a community of inquiry they fulfill the responsibilities of formulation of ideas, values and goals as well as responsibility for accountability to public values and scientific credibility. Ideally, there is also some kind of independent oversight review of this process periodically because inevitably such groups become inward focused over time.

These four types of deliberative contexts suggest quite different kinds of generative politics. Sometimes, as in the first two, where there is high agreement on values, the real political choice comes in terms of means. In forestry, this is where the discussions about moving from even-age and plantation forestry to ecosystem management and "close to nature" forestry would fit. This example clearly demonstrates the political nature of the choice of means, and thus the necessity of oversight and independent review from experts and the stakeholders. Other times, as in the second two discussed above, there is low agreement on values and so policy planning is necessary where the focus of discussion is on values and goals. However, again, it is impossible to select either means or ends without reference to how they interrelate to one another (Lindblom 1959), and so the term deliberation points to the elements of accountability and responsibility within this form of discourse.

Generative politics can apply to any kind of political discussion (Lindblom 1990). However, this section has applied this term in the context of policy planning in natural resources policy. This means there is an essential technical and scientific element in formulating as well as implementing policy choices. It also means that there needs to be public accountability as well as creativity in making political choices among values and means to achieve them.

Two propositions regarding generative politics and deliberation arise from this analysis. One, differences in values, situation, context and interests mean that different social actors have different visions of the world and desired future conditions. It is this knowledge that participatory processes access and bring into the policy process and especially into institutions for social learning. Without difference, there can be no learning and no politics.

Two, goals emerge through participatory processes with open, collaborative public and scientific deliberation and reflect pragmatic compromises among social actors. Generative politics is by definition open in terms of goals, values, interests, and outcomes. Thus, the participatory process is the mechanism to generate social actors, social action and social learning.

This typology opens another question: how is society organized in terms of participatory processes and are issues and values clear enough to allow for deliberative processes? This is the topic of the next section.

6. Typology of Social Organization and Issue Definition

In the discussion of deliberation above, no distinctions were made regarding the organization of society or different kinds of issues, beyond the degree of agreement on values and goals. However, clearly some issues and some societies have strong social organization of government actors, non-governmental actors, and private actors. In these situations, it is both necessary and possible to draw a representative group of stakeholders together for a deliberative process. However, sometimes there is low social organization of actors and little opportunity for representative processes.

Similarly, some issues are well-defined and have long histories of policy and action. Others are highly diffuse and have short histories, or highly contested, or simply too vague and in

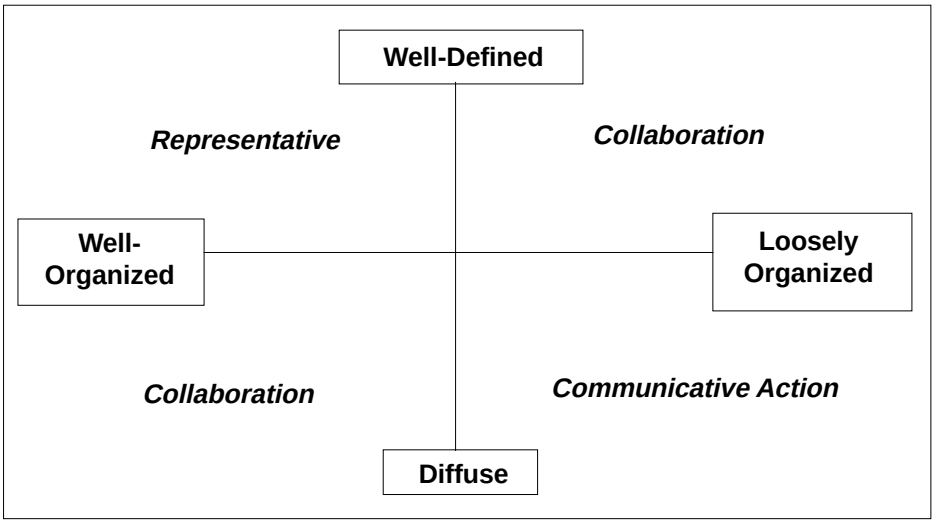

Figure 7. Participatory Processes as defined by the Degree of Social Organization relative to the Degree of Issue Definition.

need of greater specification. These differences in context must be recognized and understood if appropriate and effective participatory processes are to be undertaken. All too often in participatory processes in natural resources policy and planning, all issues and all societies are assumed to be the same in terms of social organization. This tendency has led to at best inadequate participatory processes and at worst destructive ones in terms of creating greater social and political instability. The following typology developed by Margaret Shannon and Gerard Buttoud (2001) suggests one way of thinking about this process.

By degree of social organization is meant the degree to which organized groups – interest groups, agencies, community groups, and so on –are present in the society in general. By degree of issue definition is meant the degree to which for a specific issue, there is a clearly defined desired outcome towards which policy choices are aimed. One kind of diffuse issue is simply issues like biodiversity, sustainability, and so on. In these instances, there is high value agreement on the importance of the issues, but little specification of issues in terms of developing strategic policies. This would be in contrast to issues which are well-specified in terms of goals and strategic directions.

The purpose of this typology is to understand the relationship between context and participatory processes (McRae 1987). Obviously, different deliberative strategies would also be appropriate as related to these different contexts (Majone and Wildavsky 1978). The *Representative* type of participatory process is the context assumed by models of rational-comprehensive planning. The nature of the participation is based on the assumed presence of organized interests from which representative groups can be assembled. In addition, the objective or goal is assumed to be well-specified and to require simply the choice of technical means to achieve it. In such cases where these assumptions are met, then a representative participatory process would fit the context. However, most policy and decision analysis processes assume this context and seldom is this assumption warranted (Kickert 1993). Thus, it is essential to examine the context carefully to ensure that participatory processes are designed with actual conditions in mind.

The *Communicative Action* type of participatory process assumes just the opposite type of context. In this instance, not only is society only loosely organized at best – especially in

terms of actors defined that are prepared to join a participatory process – but the issues are also highly diffuse and usually contested as a result. “Global warming and whether it is actually happening or not and if so, what to do about it” is an example of a diffuse issue. In this context, open, broadly participatory processes are needed in which communicative action can provide the social capital needed for social organizing and the political discourse necessary for issue definition. In this setting, participatory processes create generative political dialogue. While sometimes greater social organization and issue specification may develop through participatory processes, it is not necessary as this kind of participatory process is designed for this context.

There are two forms of *Collaborative* processes depending on the context. The first type fits situations with highly organized social groups but highly diffuse issues. In this case, it is possible to identify stakeholders and affected interests. This form of collaboration fits when stakeholders participate in creating strategies and mechanisms in policy planning for diffuse issues. The important distinction here is that there are identifiable stakeholders as well as public interests that need to be represented in the political dialogue.

In the second type of collaborative process, there are only loosely-organized social groups even though the issue is well-defined. In this case, the nature of the issue – often with the perspective of scientists and experts – contributes to identifying participants for a collaborative process designed to create sufficient social capital to address the issue. Noxious weeds might be an example where the issue is very clear, but the social capacity to address it is very weak. NGOs have taken the lead in organizing collaborative processes designed to create stakeholders and to initiate social organization and mobilize resources.

The nature of the context is an essential feature of a participatory process. This simple typology is an attempt to characterize two important features of any policy process and show how they affect the design of the participatory approach.

Two propositions result from this analysis. One, when actors are loosely organized, collaboration can build social capital for social organization through deliberative processes and thereby strengthen organizational capacity for joint action. Two, when interests and issues are diffuse, collaborative processes among well-defined actors can generate learning through deliberation leading to visions of desired future conditions and joint action.

7. Organizational Forms and Collaboration

Much of the preceding discussion has focused on the organizing aspect of processes like communicative action, collaboration, and deliberation. This section turns to this topic directly because clearly the nature and structure of the organization affects the kinds of relationships and communication that can or might occur, as well as the potential outcomes and actions. Historically, organization theory drew from the late 19th century work of Max Weber who described the characteristics of a highly efficient organizational structure when the goal was rapid transfer of information to action (like in a military setting or a factory) (Weber 1968). Weber and others described what we now think of as the typical bureaucracy. It is a top-down communication structure where decisions are made at the top by a few and carried out without question by the many at the bottom. In most bureaucracies, there are few mechanisms for bottom up communication. Although how “orders” are carried out often reflects the creativity of the “workers” and what orders are resisted also reflects the limits of directive communication (Meyer and Rowan 1977). In natural resource administration, bureaucratic forms of organization are typical in most countries. Indeed, the influence of the Prussian

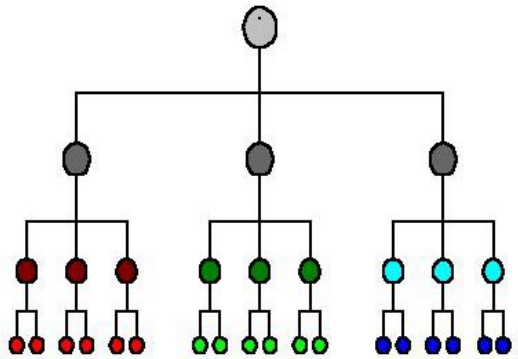

Figure 8. An Ideal Type Bureaucratic Structure of Formal Organization.

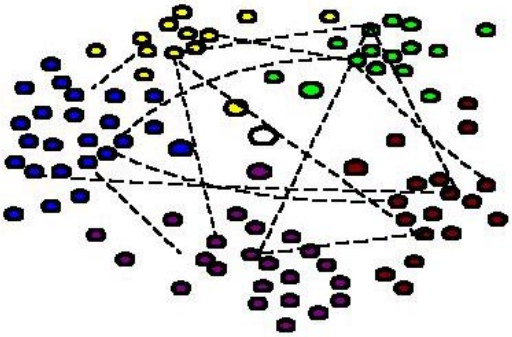

Figure 9. A Loose Network Organization.

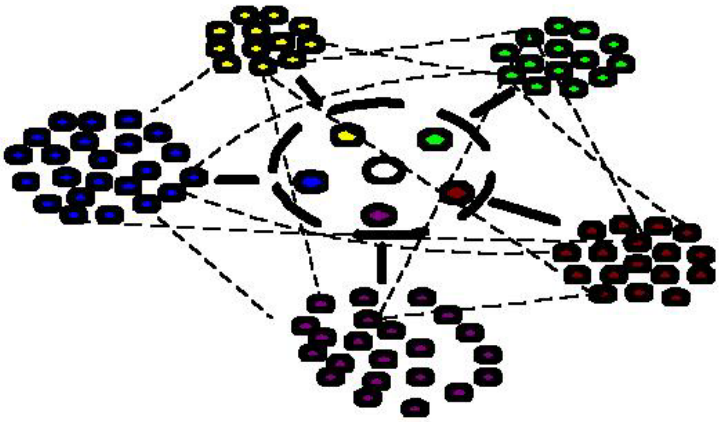

Figure 10. A Network Organization with Coordinative Functions.

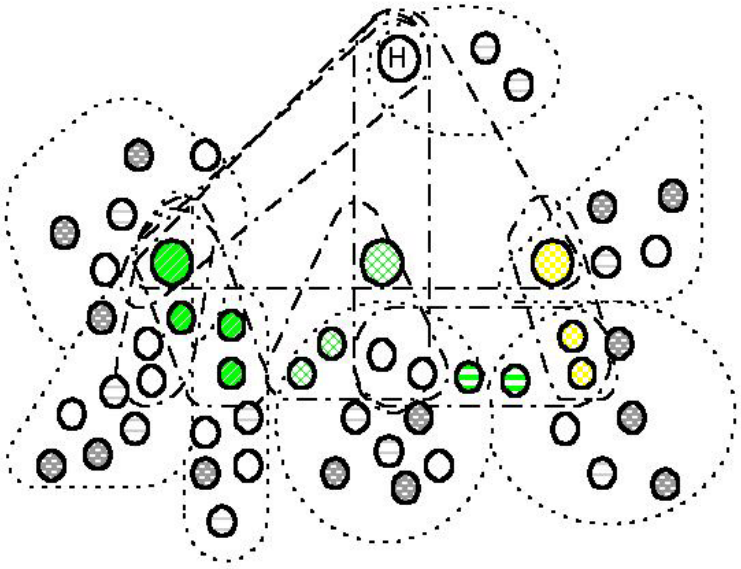

Figure 11. A Collaborative Organization with Coordinative, Directive, and Team Elements.

administration on German and British forestry services and then through them on India and the United States is well-documented (James 1981; Miller 1997; Williams 1989).

While bureaucracy remains a strong model of formal organization (Crozier 1964), there are many other forms of social organization that have quite different communicative characteristics and possibilities (Heckscher and Donnellon 1994; Morgan 1986; Ranson, et al. 1980). At one level are simply loose networks or coalitions of actors around a shared interest or issue (Drucker 1989, 1988). These loose networks are open and highly fluid in their membership and form. Sabatier's "advocacy coalitions" is an example of a loose network organization (Sabatier 1986; 1988).

Sometimes the degree of social organization is higher and there are defined groupings with some coordination. This model can fit an administrative agency which has developed a strong team-based organization and uses representative of each team to form a coordinative management team (Burns and Stalker 1994). It can also fit situations of collaboration where there are organized stakeholders and interest groups and they develop a coordinative group in order to assemble the necessary resources to carry out a desired policy or set of actions (Gunderson et al. 1995; Johnson et al. 1999).

A collaborative organization is one which draws upon people, resources, and relationships as needed to achieve desired actions. This organization has some of the directive functions of a bureaucracy and the flexibility of a team based organization. While the general structure of the organization persists over time, the membership and actual content of the elements can change as needed. The usefulness of this model of organization is that it presumes sufficient organizing capacity to identify elements and teams, but has sufficient stability to assemble adequate resources to support actions over time.

The usefulness of these conceptual organizational models is that they provide a way to think about how the actors in a participatory process are individually organized and what kind of organization the participatory process itself creates. For example, in the Representative context, the actors are often bureaucracies and the processes are often generated by

bureaucratic decision processes which require some kind of public or stakeholder involvement, comment or review. Seldom are these representative processes designed to be generative because the bureaucracy is already organized around desired solutions to the policy problem and seeks to maintain its structure, not change it!

So, when speaking of generative politics, communicative action and deliberation, it is important to consider the organizational structure of the actors and to also develop an organizational structure for the participatory process that fits with the kind of participation desired and the nature of the context (Sahal 1979; Senge 1990).

Three propositions can be developed from this discussion. One, the capacity for organizational learning depends upon the nature of relationships among actors and the type of communication characteristic of these relationships. Two, the more the communication is directive, the less the capacity for learning and generative politics. Three, the great the opportunities for collaborative deliberation, the greater the capacity for social learning and joint action.

8. Conclusions and Future Research Questions

Collaboration is not just a mechanism for bringing conflicting actors together for joint problem solving or policy planning (Healy 1997). Rather, collaboration is both a context for participatory processes and an outcome of generative politics and deliberation (Cortner and Shannon 1993). As context and outcome, collaboration expresses both the institutional and agency aspects of social action (Brown 1978; Coser 1956). Collaboration requires sufficient social organization for actors to either be organized or recognize the need for self-organization based upon a public problem or issue (Dewey 1927). Collaboration is more than just participatory process, it is an organizational means of assembling the resources, staff, and funding for carrying out joint action (Hjern and Porter 1981; Laird 1993).

Thus, collaboration is a context for negotiation and other conflict resolution strategies (Forester 1989). Collaboration describes a kind of social organization that is assembled from the parts of other organizations and its role is to create the capacity for joint action among them, not replace or co-opt them. From collaborative and participatory processes arise new institutional forms that result from the agency of actors and organizations (Douglas 1986). These new institutional forms then support (or inhibit) the organizations and actors. What is mainly evident is the dynamic, fluid and highly responsive kind of communication and organization that characterize collaborative processes (Bennis and Biedermann 1997).

Three propositions summarize some of these conclusions. One, social learning is a process of deliberation about the empirical outcomes of action and the meaning or desirability of possible outcomes. Two, social learning means that change occurs throughout the deliberative community of actors and organizations. Three, experience in collaborative processes may change values, interests, visions, and understanding among actors. Collaboration creates new institutions, preferences, and identities.

Research tasks ahead in understanding collaborative processes in the context of the national forest programme process are many. A few can be identified from this paper. First, how to better link participatory processes with collaboration. Generally, participatory processes are designed based upon past forms rather than an analysis of current context and needs of the NFP process. This paper suggests some ways to think about the context of the NFP process in different countries and circumstances in order to better design effective participatory processes.

Second, how to understand the role and contribution of conflict and compromise as essential elements of deliberation. Through conflict, social organizations are formed,

identities created, and boundaries of difference made manifest. Thus, conflict is essential in order to have social actors, issues, and organizations (Coser 1956). Yet, generally conflict is treated as a destructive force to be minimized, thus leading to a lack of flexibility and change. Thus, compromise is generally defined as a "zero sum" process with winners taking away from losers. Yet, if interests, values, organization, and identities are outcomes (not fixed inputs) to deliberative processes, then collaboration and joint action should represent a new state of affairs that moves toward a desired set of future conditions envisioned by all (Mansbridge 1980; 1990).

Third, clearly there are trade-offs to be made with scarce resources. Thus, another area of much needed research is regarding the types of negotiation processes that fit in different circumstances. Negotiation and mediation processes generally assume that interests and positions exist and the problem is to find a satisfying solution to conflicting goals. However, if the process is designed to be generative, what kinds of negotiation processes need to be designed to fit this new context? Surely they need to focus on the value discovery, interest creation, and identity formation. Just how this might occur remains an interesting problem.

Fourth, another dimension of this new institutional context is that governance takes place in a multi-level framework through multiple horizontal networks. These networks are collaborative organizations and more research on their structure, form, culture and relationships to one another is needed.

Fifth, partnerships link actors, organizations, and institutions to one another. This is an interesting arena for future research as there are so many different forms and levels of partnerships. Understanding partnerships as a form of collaborative organization is a promising direction for empirical research. It is also essential for better understanding and crafting national forest programmes.

In summary, several principles can be suggested that form a new template for policy planning and policy integration within a collaborative framework (Shannon 2001a). Taken together, these principles chart a new era of environmental governance and creative institution building through efforts like the national forest programme process.

- Use a participatory approach for social inquiry
- Create deliberative forums for social learning
- Create collaborative capacity through joint action
- Create governance capacity through institution building
- Ensure that choices are accountable to human values and scientific knowledge

Acknowledgements

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Collaboration in the Forest Policy Arena in Finland – from Neo-Corporatist Planning to Participatory Program Preparation

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Abstract

Functional forest resource planning was applied in Finland when the Sustainable Timber Management forest policy objective was followed from the 1920s up to the early 1960s. Functional planning, meaning a rational-comprehensive policy agenda, gave considerable power to the inner circle of the forest policy community for promoting their targets in the forest policy arena. Selective participation, often based on the excludability of the entrants was applied in policy processes.

Progressive Timber Management replaced sustainable timber management as the forest policy objective. Progressive timber management was accompanied by a Keynesian active financial policy in the macroeconomics of the 1960s to 1980s. The non-governmental forestry organisations, that participated actively in income contracting, acquired the primary positions in forest policy arena. The formulation of a neo-corporatist forest policy network proceeded forest planning and the expansions in the public subsidies of the timber production investments. The neo-corporatist network included non-foresters, but the forest policy community was able to preserve their primary position through selective participation of the secondary stakeholders. Economic sustainability was the dominating paradigm, and the power relations among the most powerful policy stakeholders were preserved.

The neo-corporatist policy agenda was challenged by the international commitments on ecological and social sustainability of forests in the early 1990s. The enforced new dimensions of sustainability released the deadlock in the forest policy arena. The first initials towards the collaborative policy approach, introduced in the context of National Environmental Program of Forestry, were proceeded in the planning process concerning public forests from the mid-1990s on.

The neo-corporatist network of key forest policy stakeholders regained their dominant position in the preparation of Finlands National Forest Program 2010 in 1998. The program

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output was a symbolic national program. The program was dominated by the proposals concerning the enlargement of timber production subsidies. The steps in the implementation of the national forest program have gradually changed with respect to the features of a substantive national forest program. The three dimensions of sustainability have been strictly separated in the program process. The dominance of economic sustainability in the program output satisfied the dominant NGO forest organisations and enabled the detailed preparation of the policy actions for ecological and social sustainability. Regional Forest Councils supervise Regional Forest Programs and are able to transmit the bottom-up initiatives for changes. These regional institutions expand the forest policy arena with respect to participation and delegation. The participatory policy forums, provided for the top executives of the society and Research & Development communities respectively, open up new channels for inter-sectoral coordination.

Keywords: National forest program, Participation, Collaborative agenda, Neo-corporatism, Forest policy.

1. Introduction

Access to participation in the forest policy process is a key element for identifying a substantial national forest program from those that are merely symbolic (Hogl and Pregernig 2000). There are necessary conditions for participation in initial, procedural and substantive issues that must be met to make forest program substantive. These conditions should be separately identifiable in the program process, its output and its outcome. Poor initial conditions imply a symbolic program, but they are not an obstacle to a substantive output. The significance of program output does not imply the significance of the outcome. A symbolic policy outcome can be transferred into a substantive one through implementation if an adequate continuous and adaptive program process can be arranged. On the other hand, a substantive output can turn into a symbolic outcome through policy deadlocks during implementation.

The purpose of this paper is to evaluate participation in the forest policy arena in Finland in general and in the 1990s in particular. The neo-corporatist forest policy network has dominated forest policy in from the 1960s on. The dominance of this network, consisting professional stakeholders from the key forest organisations, have been challenged by the need for the new type of policy process in the 1990s. The focus of this paper is in collaboration. The development in participation and the options for collaborative actions in the future are current challenges in the implementation of Finland's National Forest Program 2010.

Functional forest resource planning was the major policy agenda during the Sustainable Timber Management (STM) objective in Finland[1]. Functional planning often implies a rational-comprehensive policy agenda (Shannon 1999). Such policy agendas are easily identifiable in Finland. Selective participation, technocratic planning and top-down policy implementation were the key features in rational-comprehensive policy planning applied from the 1960s on. The major policy outputs during the sustainable timber management objective, and especially in the timber production programs carried out during the progressive timber management objective, were dominated by the actions of the neo-corporatist forest policy network. Consensus over the significant program data, as well as over the formulation of the new policy targets, were easily achieved by the stakeholders of the inner core of the forest

1 The definitions of Sustainable Timber Management and Sustainable Forest Management see Pearce et al.1999.

policy community. The network and agenda of the neo-corporatist policy are discussed in Section 3 when the successes of this policy are evaluated. The agenda, characterised by professional stakeholders from the key forest policy community, failed to realise the challenges in the existing agenda consequent upon the international forestry and environmental commitments on sustainability in the early 1990s. The needs for a new information base and the structures of participation were ignored. However, the moves towards a collaborative forest policy agenda were enforced by the government with the preparation of the Environmental Program for Forestry in the mid-1990s. The initial steps towards the permanent adaptation of the new forest policy agenda failed, mainly due to the priority of economic sustainability and the collective power of the neo-corporatist forest policy network. The collaborative policy agenda, discussed in Chapter 4, made it difficult for the stakeholders with major policy interests to create new cultures to preserve their priorities. These structural features partly explain the revival of the rational-comprehensive forest policy agenda during the preparation of Finlands National Forest Program 2010[2] in 1998. The symbolic features of this program are discussed in Chapter 5. However, the attempts to adopt a collaborative policy agenda permitted a substantive national forest program through its implementation. The new policy arenas proposed during the program process or thereafter were, a) a bottom-up initiation, b) expanded regional participation and decision making, c) the co-opting of executive and Research & Development (R & D) communities, and d) substantive inter-sectoral policy coordination. Each can be considered to be steps towards the new forest policy agenda in Finland.

2. Participation in the Forest Policy Arena

2.1 Access to the forest policy arena

Open access and selective participation are the main approaches to organise the national forest program process. Open access participation is a considered the necessary condition of the substantive program process. All interested stakeholders are able to participate in this agenda. The selective invitation approach subjects the participants to formal or informal restrictions and qualitative requirements. The rules for participation are even more restrictive in the excludable invitation approach, where a open or implicit veto is allowed by current participants when auditing new participation.

The mode of participation applied in forest management planning of a particular country depends, among other things, on 1) the distribution of land tenure, 2) the traditions and power structures between public institutions and NGOs in the forest policy arena and 3) those among the NGOs. Open access participation can easily be considered in the management planning of public forests, whereas the rules of privacy and ownership restrict the participation in the planning of non-industrial forests (Pykäläinen et al. 1999).

The level of generality in planning also matters. There are few restrictions on participation at the strategic level, natural resource planning, where only the general principles concerning forest land use are evaluated. The planning is valid for both on public and private forests. The rules are completely the opposite in the operational planning. Wide -based participation can be allowed in the planning of public forests, whereas on private land each individual owner has sole autonomy concerning the operational planning of his forest tenure.

2 The key features of FNFP are available in the address: http://www.mmm.fi/metsatalous/kansallinenmetsaohjelma/english/

There are both supporting and impeding factors related to these modes of participation. Open access participation can be considered to be the most demanding for the organisers. Considerable time, resources and expertise must be used in the program moderation (see: Hoffmann and Liss 2001). The challenges of selective participation lie in the credibility and validity of the program output. Output must be widely adopted beyond the stakeholders of program process if it is to become significant. The programs prepared by the few selected participants are typically symbolic with low credibility in implementation at least in consensus democracies.

The common qualities related to the political compromises and consensus solutions in the program agenda mean specific challenges related to the multilevel policy agenda and targets because joint decision-making tends to favour the beneficiaries of the status quo. Compromises support the consequent resistance to reforms (Hogl 1999). Open access participation supports the specification of policy aims and targets, but challenges the policy preparation by way of the determination of priorities and minority targets. Selective participation supports the compromises of substantial contents if the relevant and adequate support in the parliamentary arena is not available.

2.2 Access to participation

The typical features that characterise participatory planning are expert policy preparation and the opportunity for reactive and /or proactive participation among the stakeholders of the process (Hytönen 2000a). In participatory processes, only the most powerful stakeholders are represented in the preparatory phases.

The necessary conditions for considering the collaboration in policy planning are difficult to define a priori. Collaborative program processes are characterised by formal or informal agreements between the stakeholders on the division of tasks and responsibilities. This arrangement can be included either at the beginning of the process or at some later stage. The mode of participation is a core in the identification of the collaborative process. The arrangement of the secretarial services and substantial data production are among the features which enable the identification of collaborative processes. These activities are typically agreed parallel with the initial decisions concerning the power structures among the stakeholders. The secretaries of the participatory process, on the contrary, are typically invited and determined externally on beforehand by the initiator (normally a public authority). Secretaries are independent and come either from the organisations of key stakeholders or are external. Neutrality in program moderation and in substantial data processing are necessary preconditions for the substantive outcome. The secretarial arrangements in the program preparation and modification characterise the participatory processes. The access to the joint creation of the policy is the property that helps to identify participatory mode in collaborative processes (Pendzich et al.1994).

The principal agenda of participatory preparation is the frequent modification of secretarial proposals according to the reactions of the stakeholders. A rational, comprehensive planning agenda is often participatory, whereas the secretarial work can be collaborative in these processes. The latter is especially true when key stakeholders of the neo-corporatist policy network have their own members among the secretaries. The latter situation makes it easier for the most influential stakeholders to actively introduce their goals into the consensus proposals.

2.3 Collaborative planning in forest policy

The institutional framework of Sustainable Forest Management is created through the actions of the stakeholders in the non-hierarchical, multi-level forest policy arena. The agenda can be arranged on collaborative basis. The social capacity to adapt the multi-level governance of sustainable forest management into forest policy by national program either exists or must be developed before the initiation of program process. The social capacity is necessary in the formation of institutions and in the governance of interdependent institutions and co-operating actors. The institutions created in a program process (or outside) should mediate the tensions related to the environmental utilities between serving the goals of ones own interests and contributing to the goals of others. In this context, collaboration means the mode and intensity for creating institutions and other policy frameworks. Collaboration means intensive participation through a) social inquiries, b) deliberative forums in social learning and c) collaborative and governance capacities created through policy actions (Shannon 2001).

Technocratic planning and top-down implementation were adopted as the major mode of macroeconomic policy in the industrialised European countries during the 1960s. At that time inter-sectoral coordination was adopted symbolically in macroeconomic planning. The fragmented agency jurisdiction was characterised by the governance culture of autonomous actors and institutions in that policy. The origin and growth of the neo-corporatist policy agenda and the network of the stakeholders were firmly rooted in the nationally specific, legal, political and administrative institutions. The institutions were the outcomes of long-term historical processes which had shown great persistence over time. Some of the interest groups succeeded to establish themselves as the natural representatives of forestry in the eyes of the administrative agency and the whole community of the economic policy arena. Consequently, those interest groups in the neo-corporatist policy network constituted the reference point for the activity of the administrative agency.

The forest policy community could preserve its monopoly position in the neo-corporatist forest policy network and so command the actions in the forest policy arena for sustainable timber management. Continuous co-operation promoted close social relations. The socialisation of the policy community favoured the neo-corporatist policy agenda (Hogl 1999).

2.4 Participation and multi-level policy coordination

The maintenance of a national forest program implies multi-level governance. Standardized measures and indicators are needed not only for the policy making, but also for the forest environment at large. The number of policy arenas and stakeholders increases in multi-level policy governance. This decreases the possibilities for direct communication. The interdependent decisions in policy arenas may lead to a policy deadlock (Hogl 2001). The latter is especially true for a bottom-up flow of information. The standardized, audited measures of significance, concerning the policy variables, will help in the formation and revisions of a program. The social capacity of the forest policy community will benefit from the collaborative mode of participation in the program process. The use of the collaborative approach expands the community of competent forest policy stakeholders to include forestry and non-forestry expertise thereby expanding the social capacity for policy formation.

The forest policy carried out by the neo-corporatist policy network was based on the agency of autonomous actors and institutions. Participation was limited by restricting the number of entrants. The top-down policy implementation was separated from the policy process and the iterative feedback elements of planning were missing. The fragmented top-level policy work was based on the participation of professional agents from the interest

organisations and the use of expertise from these organisations and/or the scientific community. The neo-corporatist community had a poor capacity for conflict management because of the top-down policy implementation and the poor feedback channels from the private owners.

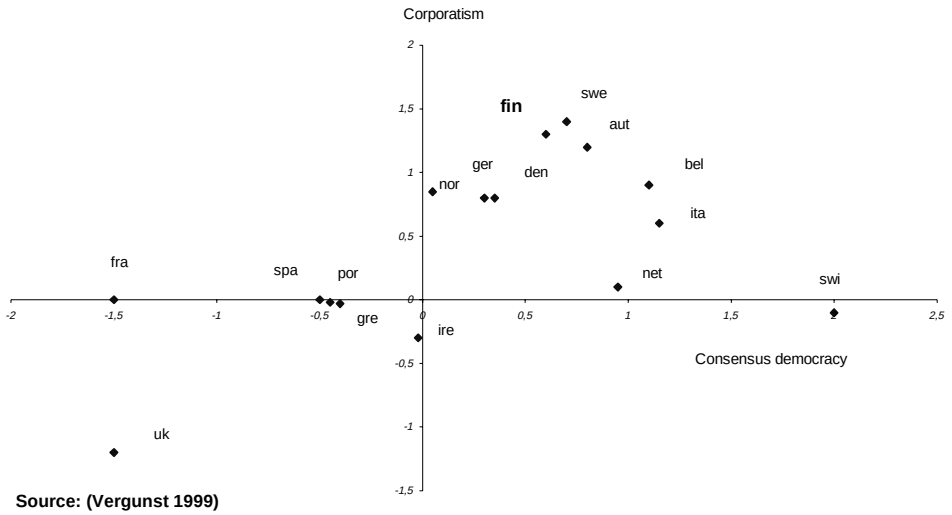
3. Neo-corporatism and Forest Policy Network

3.1 Neo-corporatism and consensus democracy in the political arena

Neo-corporatism is characterised by the co-operative relations between public and NGO partners. Their co-operative activities imply networks among the relevant NGOs and a certain decision making autonomy issued by the government. The collective bargaining and agreements on wages and prices between NGO partners are typical tasks in the neo-corporatist policy agenda. The bargaining concerns the major components of income division (wages, agricultural and stumpage prices etc.). The consensus style agreements are signed without direct intervention by the central government (Vergunst 1999). On the other hand, policy issues are formulated by the key stakeholders of the network, that is to say in a system of cooperation between the government and the relevant NGOs.

The degree of contracting and the coverage of collective bargaining labour market are often used to identify the degree of neo-corporatism in policy making (Rowthorn 1989). The extent of neo-corporatist structures inside a given nation is most commonly measured from decision-making in the labour market. This approach is familiar economics and political science concerning wage contracting because of the good visibility (OECD 1997).

The stakeholders of the neo-corporatist policy arenas are professional agents from the participatory institutions. The issuance of monopoly partnership to a single, most



Source: (Vergunst 1999)

Figure 1. Neo-corporatism and consensus democracy in fifteen countries based on the average scores of the measures between 1965–1992.

representative organisation is typical in each discipline concerned. The sub-networks between the stakeholders are used to find the consensus over conflict issues among the key organisations in the main policy arena. Selective (and often excludable) participation is applied due to the strong consensus targets in policy formation.

The consensus ideology in the political arena enables the provision of participation privileges to the most relevant NGOs. The consensus style of political decision-making is related to the proportional representation of minorities and oversized coalitions. Countries with a large number of effective parliamentary parties and multiparty government therefore receive high values in the measures of Consensus Democracy.

A consensual policy process and selective participation (NGOs in neo-corporatism and minority parties in the political arena) are the common features of neo-corporatism and consensus democracy. Political scientists have found a strong statistical correlation between the degree of neo-corporatism and that of consensus democracy in the political arena. The empirical findings, summarized in the figure below, provide an example on relationship between neo-corporatism (measured mainly by the degree of collective wage contracting) and consensus democracy (measured by the number of parties and structure of government in the parliamentary arena). In this analysis Finland, together with Austria and Sweden, received high scores both in terms of neo-corporatism and consensus democracy (Vergunst 1999).

The common feature of neo-corporatism concerns the cooperative networks between government and most relevant NGOs. This relationship tend to increase parallel with the degree of consensus democracy. Multiparty governments, typical of consensus democracies, tend to issue the privileges and access into the policy arena to the most relevant NGOs in the major policy spheres of income determination.

3.2 Neo-corporatism in Finnish forest policy

Policy for Sustainable Timber Management objective

The tradition of active forest policy for private forests can be traced from the late 1920s in Finland (Ollonqvist 2001a). The policy agenda was adopted instead the prior passive prohibition of forest devastation. The transfer was formulated in the comprehensive revision of non-industrial private forestry legislation in 1920s. The policy for Sustainable Timber Management was adopted gradually and the inner circle of forest policy community was assembled to initiate the preparations for forest policy programs, primarily for private forestry. The Central Forestry Board (currently the Forest and Park Service) was the central public authority for the management of private forests. This was parallel with the management duties of commercial state forests and Nature Parks and Strict nature Reserves. The semi-public organisations, the National Forestry Board (currently Forestry Development Centre, Tapio) as central unit and the District Forest Centres supervised private forest management and provided extension services for private owners. The regional organisations of the national board had monopoly in providing forest investment services. Each therefore had a major impact on forest policy implementation in private forests. The Central Union of Agricultural Producers and Forest Owners, representing all fractions among non-industrial private owners, was the only totally private stakeholder. The Finnish Forest Research Institute was the main provider of the Research & Development information base for the preparation of policy actions for sustainable timber management. The society of forest scientists was adopted into the forest policy community in the early stage.

The representatives of the key interest organisations of the forest policy community comprised the national forest elite at that time (Eriksson 1995). The Finnish Forest Association, originally established in 1877, became the early mediator between the forest

policy actors and the state in the political arena. The association became the ideological home for the forest elite.

Policy for Progressive Timber Management objective

The Keynesian targets of an active financial policy dominated the macroeconomic policy in the industrialised countries during the 1960s and 1970s (Puoskari 1992). The neo-corporatist contracts concerning the key elements of income distribution (wages, roundwood prices, agricultural prices etc.) became the essential tools for the stability and growth targets of the macroeconomic policy. The neo-corporatist forest policy network grew gradually, parallel with the neo-corporatist structures behind the macroeconomic planning (Ollonqvist 1999). Annual bargaining for forest labour and stumpage price contracts were the major duties of the neo-corporatist forest policy network from the 1960s on. During the 1950s, the union of forest industry firms (currently Finnish Forest Industries Federation) had joined into the forest policy community and the Unions of forest sector employees (Rural Labour Union, Union of Paper Workers and Union of Forest Workers) became involved during the 1970s. The relative position of the latter organisations strengthened in the forest policy network due to their position in roundwood price contracting. However, this is not the whole story behind the growth of the neo-corporatist forest policy network.

Progressive Timber Management substituted sustainable timber management in the 1960s as the forest policy objective. The majority of forest policy actions for Progressive Timber Management objective were directed to expand timber production in private forests (Heikurainen et al. 1961, Ervasti et al. 1964). The expanded public subsidies for timber production investments were the main policy tool for this purpose. The main beneficiaries were timber users, i.e. mainly forest industry firms, and labour unions. The latter benefits came through the increased employment.

This change of the policy objective turned the prior competitive position among forest industry and private owners into that of a joint interest. Together they initiated the neo-corporatist preparation for the public subsidy programs for timber investments. The aim of the expanded subsidies was to proceed timber production investments in private forests (Korhonen 1990). The subsequent national programs provided enlarged investment subsidies to the private forest owners (the MERA I-III in programmes in 1963–1975, the FOREST 2000-programme in 1983–85 and Revised FOREST 2000-programme in 1990–92). The scenario evaluations, concerning the alternatives for increasing the allowable cut, were adopted as the permanent substantial background into the preparation of the programs (Metz and Eriksson in Palo & al. 1993). The growth of timber resources ran as a parallel policy objective with those commonly used in the macroeconomic target plans at that time (Forest improvement... 1972).

The expanded sphere of stakeholders in the forest policy arena was the key feature of the progressive timber management policy agenda. The stakeholders outside the forest policy community were invited to participate by the excludable participation principle. The inclusion of the Bank of Finland in 1960s was based on the key role that Central Bank took in macroeconomic growth policy at that time. The inclusions of key ministries (Ministry of Finance, Ministry of Trade and Industry, Ministry of Labour) in the 1980s, completed the formation of the neo-corporatist forest policy network. The new relevant stakeholders could easily be identified and co-opted to the timber investment programs. The inner circle of the forest policy community could preserve their power over the substantial forest policy issues through the excludable selective participation principle.

The policy network increased the credibility of the stakeholders in the forest sector price contracting and provided the symbolic inter-sectoral coordination in forest policy issues (Ollonqvist 2001b). The representatives of the interest organisations in the forest policy arena were full time professionals what concerns attendance and substantial contributions. The

values and broad policy preferences were shared by the major participants irrespective of the unequal distribution of power behind the consensus and the unequal benefits (cf. the characterisation of the pre-program agenda of Austrian forest policy, in Hogl 1999). Personal networks were intensive not only between public administration and interest organisations (clientele), but between the interest organisations as such. The formation of the policy network during the preparation of national programs in Finland have been analysed in detail (Korhonen 1990, Metz 1993, Eriksson 1995 and Ollonqvist 1998). Economic interests in general, and those of the roundwood market in particular, dominated the neo-corporatist forest policy preparation during the period of progressive timber management objective. The consensus targets increased the potential credibility of the policy and indirectly weakened the needs of conflict resolution in policy preparation.

During the 1980s, rhetorical elements replaced quantitative policy targets in parallel with the expansion of the sphere of the stakeholders. The increased public subsidies to the private owners were issued through the State budget. Consensus over the program targets was achieved via general policy statements without substantial contents in the policy network. The programs provided expansionary visions of the annual allowable cut volumes and rural employment. The targets, set parallel with targets in macroeconomic plans for economic growth, enabled the rest of the economy to support enlarged public subsidies for investments with (exceptionally) long maturity (Ollonqvist 1998).

3.3 Selective participation and top-down implementation in the forest policy arena

The forest policy agenda for the progressive timber management objective was preserved up to the Rio declarations in 1992. The common features of this policy making process can be identified by using the five stage structure discussed next.

1) The inner circle of the forest policy community agreed on initial attempts for the forest policy action.
2) The information background, agreed on next, was dominated by timber inventories, wood use calculations and three projections of the Allowable Cut[3].
3) A new committee was nominated by the Ministry of Agriculture and Forestry to achieve consensus over the fundamental features (strategies) of the policy change. The top echelons of key ministries were involved, together with the representatives of the major NGOs.
4) Program preparation was dominated by the neo-corporatist forest policy network. The top echelons of key ministries and the representatives of the major NGOs had participation also here. The program output was carried out without the Parliamentary process. Conflict resolution processes were missing.
5) The top-down approach was applied in the policy implementation and execution of the investment activities.

The stages are presented in Figure 2.

3 The dominance of Allowable Cut Projections was typical in the preparation of timber investment programs (Kuusela 1999). The tradition of ACP goes back to 1940's (Lihtonen 1942, Kuusela and Nyyssönen 1962). The steady state projection alternative was formally included into forest policy preparation in the hearings for World Bank loan (Forest Improvement... 1972). The researchers inside Finnish Forest Research Institute updated and developed ACP in Finland during 1970's (Kilkki et al. 1969,1975,1977,1986). The three basic scenarios of ACP has since then been the mandatory part in the preparation of national forest programs. ACP-agenda has up to now been based on the optimisation of the future change of the growing stock without paying attention to ecological or social sustainability.

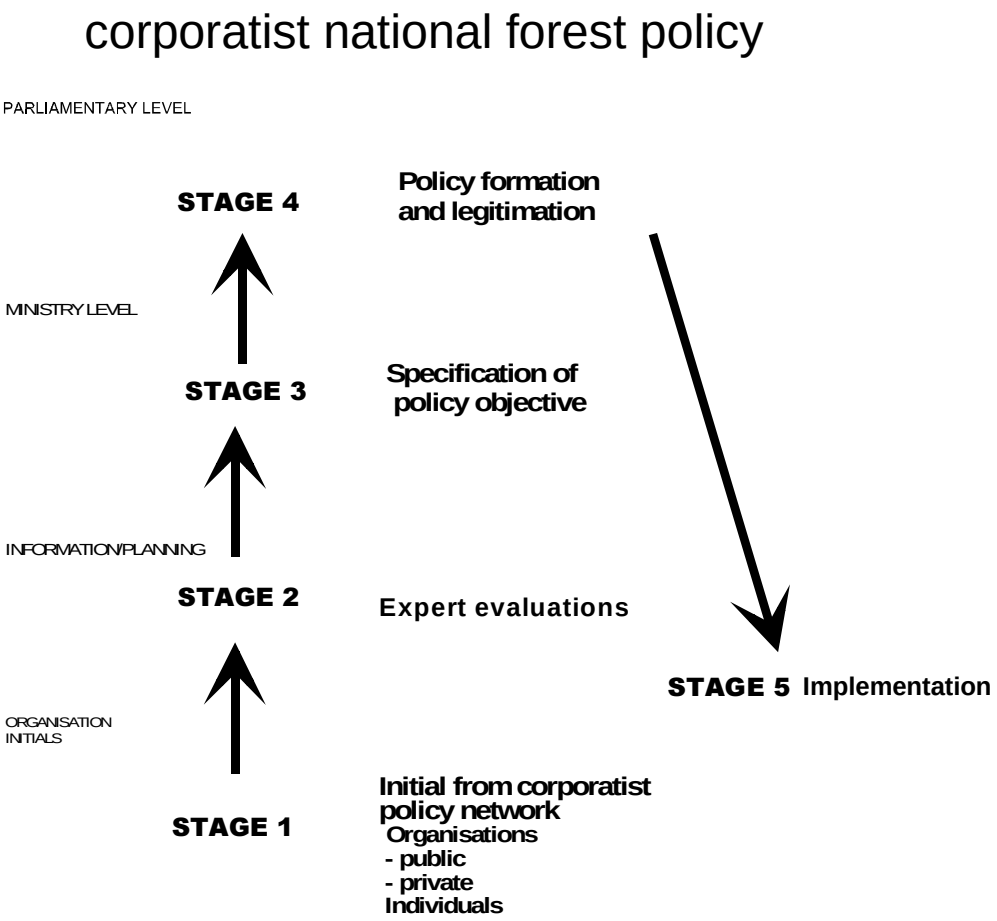


Figure 2. The stages of the forest program process in the neo-corporatist forest policy agenda in Finland (Ollonqvist 2001).

3.4 Development of Forest Conflict Management

Weak conflict resolution and poor arrangements for conflict management have been typical of the policy making process in Finland. The consensus targets for the top-down policy implementation gained credibility in the rest of the society due to the extensive structures in the neo-corporatist agenda. The consensus approach and wide participation were considered sufficient substitutes for conflict resolution.

The early history of forest conflicts in Finland is characterised by the strong clash in values between environmental and social interests following the rural decline which began in the 1950s. Authoritarian solutions dominated the management of environmental conflicts up to early 1990s (Hellström and Reunala 1995). Conflict management had features typical of neo-corporatist structures in general. During the early 1980s, the forest policy network community gradually recognised that the value differences in forest policy were permanent and multiple use principles were explicitly adapted in the Forest-2000 program in 1985.

The forest conflicts of the mid-1980s were characterised by well publicised direct actions to prevent logging of wilderness areas and old growth forests (Kessi, Talaskangas,

Kuusamo)[4]. The conflicts, including the involvement of police, were directed against the forest management patterns of the Forest and Park Service in the first stage and later to those of the private Kuusamo Forest Common. The issues of protecting wilderness and old growth forests grew into a struggle between environmental interests and those of local communities in northeast and eastern Finland. Employment and livelihood aspects of increased forest protection and livelihood of local communities became the major issues of the debate (Hellström 2001). Environmental conflicts in forestry involved a debate between environmental and economic interests within a setting of a wood production-oriented policy.

The typical features in the recent forestry conflicts in Finland are characterised by frequent on-site protests and campaigning. The polarised relationships between conflict participants have been typical and strong clashes of values have been detectable. Homogeneous environmental values were set against the high national economic importance of forests, as well as the strong values related to the right of local communities to live off their forests. The typical approaches to conflict management were strong emphasis on justification and authorisation and the dominance of practical changes with little emphasis on scientific justification.

The conflicts were understood as an important force behind social development and their constructive potential was adopted into the institutional procedures in 1990s. The Forest and Park Service began to include public participation in its forest management planning processes in the mid 1990s and significant changes in private forest management with increased environmental considerations were included in the Forest Act and Forest Decree of 1996.

The Wilderness Committee and other committees in the late 1980s stood behind the forest conservation programs. Increases in the areas of protected forests have been frequently proposed in these programs. In 1996, the financing committee of forest conservation and employment made a proposal for the conservation activities up to 2010. This program proposal preserved the separation in public policy between the conservation of natural forests and the management of commercial forests.

4. Participatory Approach on Forest Policy Arena

4.1 Ecological sustainability – challenge for the existing forest policy network

The core features of the progressive timber management objective were preserved in the neo-corporatist forest policy agenda in Finland up to the early 1990s. Policy actions were characterised by the questions of secondary importance with respect to those of the sustainable forest management. The neo-corporatist policy network had difficulties throughout the 1980s to identify the relevant multiple use and environmental stakeholders to be invited into the policy arena. Command over those issues became compulsory when general declarations became binding restrictions on the management of commercial forests. The international processes of the 1990s related to the sustainable forest management became the necessary jurisdiction for initiating the policy preparation[5]. The expanded contents of ecological sustainability in forest policy were signed at the Rio Conference in 1992. Open, non-hierarchical, multi-level forest policy principles were defined as the core elements of the sustainable forest management objective. Inter-sectoral co-ordination and open access participation were also proposed for the forest policy arena in the agreements of international conventions (Glück 1999).

4 Text in this context is heavily indebted to the evaluation of the conflict resolution carried out in the recent Ph.D. research in Finland (Hellström 2001). Forest conflicts in seven areas Finland, France, Germany, Norway, Sweden and in two areas of United States are compared and analysed in that research.

5 UN Intergovernmental Panel on Forests (IPF), International Forum on Forests (IFF), European Forest Ministerial conferences and the UN Conventions on the sustainability of resources.

The new statements brought forth controversies between private and public economic interests. The major step towards the new forest policy agenda in Finland can be identified in the preparation of Environmental Program for Forestry in 1994 (Metsätalouden... 1994). The modifications adopted are the participation of multiple interest and nature preservation NGO groups and the co-operation among forestry and environmental administrators. The inter-sectoral joint effort between forestry and environmental authorities in the preparation of the environmental program reduced the prior dominance of forestry authorities in forest policy. The network preparing the new policy was expanded to include environmental authorities, Ministry of Environment and the Finnish Environment Institute, as well as the key nature conservation organisations, Finnish Association for Nature Conservation, Nature and Environment and WWF, and that of local administrations, the Union of Communes in Finland. The selective participation was applied in policy processes.

4.2 New participation to environmental program implementation in state forests

The forest policy community had a new and challenging task in the parallel implementation of economic and ecological sustainability objectives in forestry. The feasibility of the environmental program for forestry was evaluated both in the forest policy arena and in practice. The evaluation in the policy arena was carried out by means of three intensive evaluations during 1995–1996.

The completion of the environmental program in 1994 became the turning point in the land-use planning of the Forest and Park Service. The three step agenda of forest planning was developed further to assess the local and other interested peoples willingness to participate into setting goals, creating alternatives, developing criteria and choosing means in forestry planning. The priorities for land use are established in the Natural Resource Plan. The inventory of natural and other values in specific areas of interest are carried out in Landscape ecological planning. The tasks on the operation plan are produced separately for each site to be managed.

Open access participation to forestry planning was arranged at all levels of abstraction to all interested parties. New institutions, open seminars and the special Forest and Park Service theme working groups, were initiated. The negotiations were arranged on a regular basis with the permanent interest organisations in the area of preparatory actions. Free access participation became available to hearings and seminars by attendance or by written statements.

The new planning agenda can be considered to be a field exercise and feasibility survey of the Forest and Park Service in public forests and an attempt to use participation in forest policy planning.

The consensus principle was followed in the preparation of the planning documents and consequently the preparatory material must be understandable, accessible and agreed by the participants. The alternative plans were presented to the participants and the impacts of the alternatives were identified and assessed. The natural resource plan alternatives, set by the Forest and Park Service, determine the open and hidden inter-linkages between the achievable utilities (complementary and substitute relations between the utilities). This preparation can be considered the formation of some specific kind of production possibility set.

Major disagreements on policy issues were considered to be political by the Forest and Park Service. The organisation preserved the privilege of making the final evaluation of the output of the participatory actions, as well as of the solutions to be accomplished in the implementation. The relative weights of the utilities were identified inside Forest and Park Service in using participatory actions in the planning (Raitio 2001). The decision-makers in the Forest and Park Service were faced with increased, if indirect, power among planning

professionals. Open participatory planning expands the prior power related to the specification of alternatives in the production possibility set. The bottom-up responses enlarge the power of professionals.

The final statement of the Environmental Program for Forestry was issued in 1998 after the comprehensive reform of the forest and environmental legislation. The program process remained open and adaptive until the new legislation had passed the parliamentary process. This policy agenda of the program can now afterwards be considered to be adaptive.

5. Rehabilitation of Neo-Corporatist Agenda in Forest Policy

5.1 Neo-corporatist planning agenda reintroduced

The coalition government, headed by the social democratic party, announced in their initial agenda in 1995 the target to formulate a national forest program for sustainable forest management. The government, supported by the broad parliamentary majority, added the national consensus target on the preparation of national forest programme.

The main features of the long tradition of neo-corporatist forest policy, including professional and monopolistic participation, were preserved in the early stages of the preparation of Finlands National Forest Program 2010. The expert scenario, prepared by independent specialists, was announced in 1998 as an initial step of the policy process to adopt sustainable forest management instead of progressive timber management in forestry practice. (The Announcement...1998). This scenario, that provided an alternative view, party controversial and uncertain over the future development of the forest sector options up to 2010, was discarded from the future preparation of the national forest program.

The organisation of the national forest programme, nominated in 1999, had power structures similar to those of the FOREST 2000-programme in 1985 and the Revised FOREST 2000-programme in 1992. Three hierarchical levels of organisation were applied. The strong forest policy stakeholders were included at all the major levels of program preparation. There were the joint top governance of 6 Ministries headed by Minister of Agriculture and Forestry. The Executive Program Committee was headed by the key forest policy executive of the Ministry.

5.2 Target specification of the detailed program work

The strategic objectives of the program agenda can be evaluated from the division of preparatory work groups and from their tasks. Three program work groups were established.

a) Evaluation of forest management and protection: the work group addressed the multifunctional use of commercial forests and the issues of forest conservation
b) Forest utilisation and markets: the work group had the stability in cuttings and roundwood market as the key agenda. There was a dispute in the mid 1990s concerning the legitimacy of roundwood price contracting. The need to preserve the latter institution was important, especially to the contractors representing private forest owners. The joint interests of forest industry and private forest owners were deteriorating as a result of the rapid globalisation of forest product markets.
c) Forest innovations: the work group addressed to the challenges of finding out new ways to collaborative activities in the forest policy arena.

The professional stakeholders representing the key forestry organisations had strong positions both in the work groups and among the secretaries. The low use of non-corporatist scientific expertise was an important difference in the program organisation when compared to the preparation of the earlier programs. The latter implies the growth in status of matters of qualitative belief rather than reliance on issues of a substantive nature based on the quantitative data.

A single ex-ante scenario of the exogenous developments in the forest products and roundwood market was prepared during the program work. The scenario was characterised by the assumptions of stable economic growth and permanent forest product and roundwood market structures. The approach continued the traditions of the rational-comprehensive policy agenda which was applied in the preparation of the earlier timber investment programs. The debate concerning the risks and uncertainties of the future were excluded from the consensus scenario that substituted the use of a preliminary expert scenario referred to above.

The evaluation of forest policy incentives to economic sustainability was rehabilitated from the earlier neo-corporatist policy agenda. The promotion of inter-sectoral co-ordination and institutions for conflict resolution followed the patterns of the earlier programs, but achieved a solid structure in the program implementation. Ad hoc work groups were established during the final stages of the process. They can be considered the basic arenas for separate conflict resolution. The open structure and agenda on the policy institution of the ad hoc groups provided an elastic mode for separating the policy preparations around the pending issues. This arrangement provided a convenient way to cope with unpredictable and contradictory policy issues.

Access to the basic information and expert evaluations was not arranged during the program process. The preliminary documentation of the program data remained internal up to the formal acceptance of the national forest programme. The open access to this information was provided ex post in the publication documenting the features of the program process.

5.3 Enlargements of participation in the program formulation

The fundamental aim of the policy process was an officially accepted national forest program. The target was announced in the programme of the new majority government in 1999. The coalition government had the same political power structure than its predecessor. The program work maintained its tight formal links with the economic policy at Governmental level through the Ministerial group of the program. The formal authorisation of Finlands National Forest Program 2010 in 1999 made it a legally binding instrument in the forest policy of Finland. This jurisdiction of the program helped to prepare the new public subsidies on forest investments and the conservation of the key biotypes in commercial forests.

Free access to participate was provided during the program work through the Internet pages and the Public Forums. The Internet pages of the Ministry of Agriculture and Forestry home page enabled the information transfer to the working group members in particular, the forestry network in general, and the public at large, via program drafts for evaluation and response. The ability to participate through the draft versions of the national program the Web pages remained ineffective because of the missing access to basic data and background information, the strong consensus target at the outset and the dominance of rhetoric in the public program documentation. There were only 140 responses to the program proposal through the discussion forum on the Internet.

The agendas used in the Public Forums were those arranged according a plan two times in each regional Forestry Centres as well as the ad hoc type of meetings. The Internet forum played only a minor role in the program preparation according to ex-post evaluations

published in the background report. The district organisations of the Finnish Association for Nature Conservation was the only one announcing their disappointment concerning the empowerment of the Public Forums (Reunala et al. 1999).

The network of corporatist stakeholders was expanded by the principle of selective participation in the program preparation. The non-profit private organisations on environmental interests (Nature & Environment and WWF) and non-profit activity organisations (Scouts, Women's Advisory Organisation for Development of Rural Areas) and the local administration (the Union of Finnish Communes) were invited into the preparation.

The rational-comprehensive policy agenda and the earlier neo-corporatist tradition were followed in the preparation of the macro-level background material for the program. The link between the national program and 13 Regional Forest Programmes was a new feature with respect to the earlier tradition. The first drafts of regional programs were completed early in 1998, just before drafting the national program. These regional programmes made a significant contribution to the formulation of the national program. They were independent and, prepared locally, in the spirit of open co-operation with the local interest groups. Therefore, the program process was considerably broader and involved large number of stakeholders from all over in Finland.

Cumulated learning from conflict management by using a collaborative agenda was discarded in the preparation of Finland's National Forest Programme 2010. A single plan for conflict resolution during the program work was employed. The chairman of each work group had the duty to document the different values and views and provide time to discuss them. Where consensus was unattainable, the controversial issues were transferred first to the Executive Committee, then to the Steering Group and, finally, to the Ministerial Group. Forest conservation was a combustible issue throughout the program preparation, and two discussion seminars on forest conservation and ecological sustainability were arranged.

The other channels for conflict resolution remained limited and weak in the program process. No plan is available for conflict management to be applied during the program implementation.

The nomination of a Forest Council in early 1999 preserved the neo-corporatist program management on national level. The nineteen members represent four ministries, trade unions in the forest sector, forest industry and forest owners associations, environmental organisations, the Scouts, and the women's advisory organisation for the development of rural areas. This representation expands the participation over the previous base of the economic interests.

6. Towards the Collaborative Agendas in Program Implementation

6.1 Initiatives to expand participation

Active and wide participation is a precondition for a substantive national forest program. The initial, procedural and substantive conditions on participation are, in principle, separately identifiable (Appelstrand 2001). An expansion in participation was among the targets of Finland's National Forest Program from the very beginning. This expansion was a challenging issue due to the strong neo-corporatist forest policy network. This network has had the target of the consensus solutions on the issues of progressive timber management behind their policy agenda.

The challenge to expand the access to participation was solved with two approaches. The open access participation was selected for the reactive bottom-up participation. The web

pages and public forums, discussed earlier, were the major arenas applied for that purpose. The second approach was related also to the intensified intersectoral coordination. Two new forest policy arenas were proposed: the discussion forum for the decision makers and scientific communities respectively. The selective participation principle was applied in both.

6.2 Top executive and R & D communities adopted into collaborative forest policy actions

The new discussion forums were formulated. The Forest Forum for Decision-Makers throughout the society was established in 1996 before the initial of the program work for Finlands national Forest Program. The forest forum for R & D communities was proposed in the Innovation work group and formulated as a part of the program implementation in the Ministry of Agriculture and Forestry in 2000.

Reflective dialogue within the top decision makers of the society

The top level discussion forum on forest policy issues, established about a year before the national program, can be considered an inseparable part of program work. The proposal of this arena was prepared by the top level advisory group called together by the Prime Minister of Finland[6] . The major mission of the Forest Forum, arranged by Finnish Forest Association[7] , is to improve readiness of participants to make far-reaching decisions on multi-dimensional and international forest issues. The response of the forest sector is to discover new ways for the sector to support the resolution of societal problems. New insights to the themes were sought through lectures, discussions and group work, top level commitment to forest policy through participation, round table activities and field visits. Two forums are arranged annually, lasting four days. The forum program consist of short lectures, group discussions, group work and joint strategy discussions led by cabinet ministers, administrators, leading scientists, interest group leaders, and practitioners. Forum is not a series of individual events but can be seen as a continuous dynamic activity for decision-makers and participants to attend as individuals rather than the representatives of organisations. This setting is considered to be more fruitful for open discussions. The forums usually have 25–30 participants, and each forum has different participants. The lectures, speeches, as well as group work and discussion summaries are published shortly after each event and publications are distributed free-of-charge (hard copies and Internet).

The participants (205 in during 1997–1999) have been made up as follows: political leaders 10%, top-level administrators 25%, corporate executives, interest group and NGO leaders 17%, leading researchers 13% and from the media and other influential opinion makers 6%.

The Forest Forum for Decision-Makers is a new element of the forest policy arena. The forum expands participation through the intensified intersectoral coordination. However, the forum is not collaborative what concerns the policy initiatives or proposals. There further preparation depends on the further activities of the individual participants ex-post.

New participation arena for R & D communities

The inferior use of scientific and technical background data in national forest program process,

6 The advisory group ordered the feasibility study in with nearly 50 potential participants of the forum and relevant organisations were interviewed.

7 The Finnish Forest Association (established in 1877) is a co-operation organization for the forestry field in Finland. Finnish Forest Association promotes the sustainable and multiple-valued tending and use of forests. The primary task of the Finnish Forest Association is to give information on Finnish forests, forestry and the forest industry both in Finland and abroad. The members of the Association represent broadly the forest related organizations in Finland; eg. forest industries, private forest owners, the state, research and education organizations and NGO's.

output and outcome, discussed above, was a change compared to the earlier programs. The position of independent scientific knowledge was to be redefined in the national program process The initial proposals on the forms of participation for R & D community were prepared by the Innovation Work Group. The preliminary survey drawn up by the work group defined the key supporting factors for the development of innovation: far-sightedness and involvement of various disciplines, creation and efficient utilisation of new skills, ability to take risks, unprejudiced thinking, appropriate allocation of resources, as well as the production of an image based on know-how in order to improve the attractiveness of the sector.

One of the ad hoc groups, established for the implementation of Finlands National Forest Program 2010, prepared the proposal of the Innovation forum for R & D community in 2000. The proposal, called Future Forest Halls (Tulevaisuuden Metsäsalit), identified first the recognition of the focal areas in the knowledge and skills in the forestry sector. The aim of the proposed Innovation forum is to identify the development needs related to skills and innovation, as well as the practical implementation of research results through communication and projects. The general aim of the forum proposed to improve the forest-related know-how through the stronger innovations based on research, education and expanding internationalisation.

The proposed agenda for the Innovation forum is designed along the principles followed in Forest Forum for Decision makers. The proposed management of the forum, issued to Finnish Forest Association, will strengthen the power of corporatist forest policy network in general and that of the inner core of the forest policy community in particular.

6.3 Top-down image campaigns to substitute Public Forums

The Web pages and the Public Forums arranged for the open access participation to the national forest program did not continue after the acceptance of the program. They were substitute with the top-down image campaigns[8]. The objective of the Savotta 2000 project (2000–2006) is to improve the forest sector image, which should increase the attractiveness of and interest in the sector. In 2000, the project concentrated on improving the wage systems in the sector and prepared information material on forest occupations. The training of logging truck drivers was begun and basic training in forest machine skills was increased. A decrease in the teaching of biology and geography in Finnish schools jeopardises the level of knowledge concerning forests among Finnish pupils, and thus an operational model called “Learning Path for Forests” (“Metsän Oppimispolku”) was drawn up in co-operation with the National Board of Education. The model forms the basis for the planning of a teaching curriculum that addresses forests and wood use, from the pre-school until high-school at the municipal and school level. The 4H association launched similar experiments under an “Opportunities Lie in Forests” (“Metsissä mahdollisuus”) model that is targeted at young people in three different areas in Finland.

7. Collaborative Innovations

7.1 Sequential preparation of the three dimensions of sustainability

The three aspects of sustainability have been addressed sequentially in the national forest program. Major efforts at the policy preparation were issued to the issues of economic

8 presented in: Follow-up Report. 2000. Finland’s National Forest Programme 2010. Ministry of Agriculture and Forestry . Publications 4/2001

Table 1. The stages of the Finnish National Forest Program 2010.

Sustainability	Background (1990s)	Preliminary 1998	Program work 2/1998–3/1999	NFP output 3/1999	NFP Implementation 3/1999
Economic	Updated legislation regional forest programs	Expert evaluation	Bottom up initials and program and proposed new public subsidies	Expanded subsidies decentralised planning and conflict resolution	Revised NFP and RFP´s
Ecological	Updated legislation		Policy evaluation and conflict resolution	R&D WG and committee for policy evaluation	Proposal on program and implementation
Social		Debate on the agenda	Policy evaluation		

sustainability. Consequently, the implementation of policy actions concerning economic sustainability started immediately after the acceptance of the program in March 1999. The resolution of conflicts over the contents of ecological sustainability in the national program was postponed until the implementation stage. Program work was continued by the evaluation on the needs of forest conservation in Southern Finland and Ostrobothnia region. Consensus over the acceptance of Finlands National Forest Program 2010 could be easily achieved partly due to the strong position of key stakeholders of the neo-corporatist policy network during the program process. Their major targets on the national forest program, related to economic sustainability, were achieved in the program output. The debate on the specification of the contents and dimensions on social sustainability is still on going in the program implementation. The phases of the programme policy agenda has been identified in the Table 1.

The sequential implementation and the strict separation of economic, ecological and social sustainability have helped in the resolution of conflicts related to the national program process. The separation of issues has advanced the implementation of the economic sustainability policy. The relevant stakeholders for each agenda can be specified more precisely. The sphere and mode of participation can also be accepted individually case by case.

7.2 The postponement of policy preparation on ecological sustainability

The attempts to seek a consensus solution in the program work with respect to ecological sustainability as well as the conflict resolution were delegated to the ad hoc groups. The environmental impact assessment of the program was a precondition for the implementation of the program. This conflict resolution was compulsory and based on the Environmental Impact Assessment Act. The ad hoc group for this task, set up by the Ministry of Agriculture and Forestry, nominated a scientific expert group (three university professors, a research director and a researcher from the environmental institute) to make the scientific evaluation. The ad hoc group consisted of twelve members and two permanent experts representing both governmental and non-governmental organisations. The scientific expert group found many shortcomings and criticised the programme (Hilden et al. 1999). The issues, raised in the environmental impact assessment, did not challenge the feasibility of the national forest program.

An ad-hoc work group was nominated in 1999 to evaluate the needs of forest conservation in southern Finland, the western part of the Province of Oulu and south-western Lapland (i.e. Ostrobothnia) from the ecological point of view. The work group was to define the objectives, and potential areas in the regions covered in order to be able to choose the partially conserved non-industrial private forests that will be included into the large scale areas of ecological conservation.

The Ministry of Environment appointed a large group of experts to report on state-of-art and demand for forest conservation. The group consisted of fourteen members from research institutes, universities, and ministries as well as two permanent experts. Unlike the other committees and working groups, the majority of the members represented universities and research institutes (Etelä-Suomen... 2000). When the work was finished in spring 2001, the Government appointed a new committee to make a proposal for the objectives, funding, and action programme for forest conservation in southern Finland. The committee has exceptionally broad base of stakeholders, consisting of 26 members, representing key ministries, forest industry and national organisations of landowners, environmental groups and forestry, as well as five permanent experts.

7.3 Multi-level governance through empowerment in the preparation of regional policy

Regional Forest Councils are to supervise the implementation and revision of regional forest programs. The initial members of these councils have been nominated in summer 2001. This institution empowers the regional influence in forestry planning and provides a new channel for transmitting the bottom up-initiatives into the national forest program. The regional institutions together provide the basis for subsidiary principle. They can in the long run terminate the tradition of neo-corporatist forest policy in Finland. National forest policy targets for outcomes and public interventions will be based on the initial regional targets and restrictions determinedby the regional programmes for the 13 regional forestry centres.

8. Conclusions

Major achievements and policy strengths in Finlands National Forest Programme

The juridical status of the national forest program allows for direct access to State budget planning and the parliamentary support from the governing political parties. This increases the status of the program and promote the opportunities for the substantive inter-sectoral policy co-ordination. The formal regional commitment to the targets of the national forest program is therefore able to activate regional participation in the forest policy issues.

Compulsory regional programs and regional councils in their supervision can empower the formal position of special forest policy targets at the district and regional level. The wide base of participation on district level provide the counterforce to the neo-corporatist policy planning on national level. However, the current agendas on national and regional level do not imply collaborative policy actions.

The strict separation of economic, ecological and social sustainability policy processes encourage conflict resolution and inclusion of the most relevant stakeholders into the policy preparation. Sequential implementation of economic, ecological and social sustainability is a convenient way to decrease the dominance of the neo-corporatist forest policy network in the preparation of policy actions in ecological and social sustainability. A more precise choice of stakeholders into policy preparation has also become possible.

Unsolved problems and challenges

The redistribution of power within the neo-corporatist network and with respect to the new stakeholders in the forest policy arena are the major future challenges in the implementation of the national forest program. Independent international analyses and evaluations of forest policy in Finland are rare (Voitleithner 2000). The majority of the policy instruments applying the neo-corporatist policy agenda are disadvantageous to the substantive national program. The formation of arenas for bottom up-initiatives and collaborative policy actions have been supportive for substantive national forest program. The absence of an arena for conflict resolution is one of the most challenging issues remaining in the multi-level governance of forest policy in Finland.

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Stakeholder Participation and Democracy – A Structural-Functionalist Observation of Forest Politics in Norway and Africa

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Abstract

A policy is a course of action chosen by public authorities. A stakeholder in forest policy is someone interested in forestry. A group should either influence a case proportionally to the number of people in the group, or it should influence the case proportionally to its interest in the matter. The resources available to stakeholders may not reflect their legitimate claims. Some may be poorly organised, and have less influence than they deserve. In some cases, more vocal groups may sideline a silent majority. Formal representation of commercial interests is not sufficiently developed in many poor countries. In Zimbabwe, there has been little progress in allowing local communities to set their own rules, generate revenue from forest resources and democratically elect their own representatives. In Uganda, recent consultations on forest policy were undertaken with a variety of stakeholders never experienced before. This created great expectations among the stakeholders. In affluent societies stakeholder participation has a long tradition, but the rather narrow view of which interests should be involved in forest policy formulation has been challenged. Stakeholder participation is no guarantee that forest policy will be formulated with due consideration of the views of all participants. If the sector consists of stakeholder groups with conflicting interests, politicians must weight these interests against one another. Implementation reveals the actual priorities of government, and it is equally important that stakeholders have channels for expressing their views on implementation as it is for them to participate in policy formulation.

Keywords: forest policy, stakeholder participation, Zimbabwe, Uganda, Norway.

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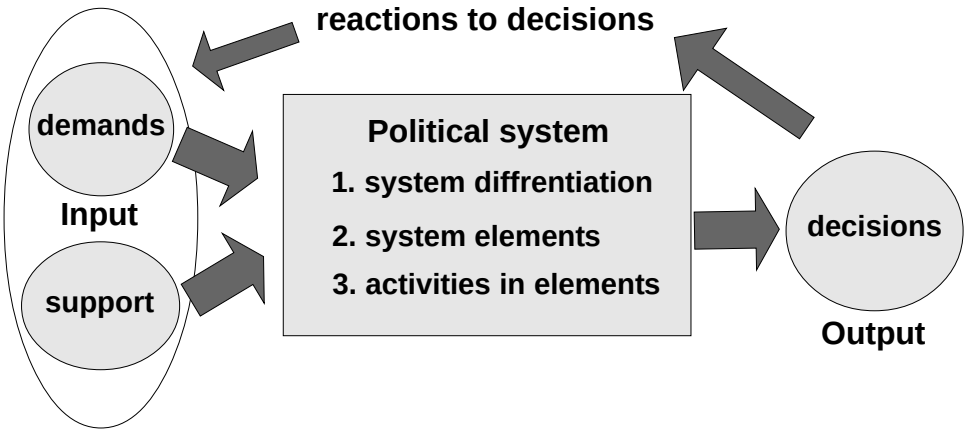

Figure 1. Structural-functionalist view of the political process.

Introduction

It is quite common to refer to "the forest policy" of some state, meaning a specific document which outlines the objectives of the forest authority, and the means that are to be used in order to achieve the said objectives (Westoby 1989:212; Goumandakoye 1996). As defined by Pal (1997), however, policy is a course of action or inaction chosen by public authorities to address a given problem or interrelated set of problems. An action in this context can hardly be the publishing of a policy document. Governments not always do what is stated in such documents. Therefore, a policy by many analysts (e.g. Dye 1976) is taken to be the actual behaviour of some authority, and the objectives that can be inferred from these actions. The discrepancy between expressed policy and actual behaviour may be due to a number of reasons, some perfectly justifiable – others tend more in the direction of deception.

According to the structural-functionalist view (Parsons 1951; Almond 1960), the political process transforms demands and support into decisions (Figure 1). I shall discuss forest policy; consequently I am interested in decisions concerning conservation and use of forest resources. Direct agents like private forest owners, forest company directors, loggers, farmers, villagers or recreationists make most such decisions. However, since we are interested in the policy of governments, we must study how the authorities make decisions and take action – often in order to influence decisions made by direct agents. As illustrated, the political system requires inputs like demands and support in order to formulate policies, make decisions and implement them. Stakeholder participation is partly a matter of who is active in feeding such demands and support to the decision-making system. In addition, the structure of the political system is important. We need to look at which stakeholders are integrated elements of the political system, and what type of decisions they are involved in making. The totality of such involvement is the topic of my discussion here.

Stakeholders in forest policy are individuals or organisations with an objective interest in the management of forests. A problem occurs when some who consider themselves interested are not recognised by the decision makers or policy makers. Another problematic situation arises when some who have objective interests in forest management, are not aware of this.

The recent interest in stakeholder involvement in forest policy formulation probably results from the observation in several states that such problems have hampered the development of forest policy (e.g. Smith 1995).

The problem

We would like the political process to be democratic also in the forest sector. This is a normative statement, which means that people should be able to participate in policy making in a just way. What is just in this context is often defined in two different ways. One line of thought says that a group should influence a case proportionally to the number of people in the group. Another idea is that a group should influence a case proportionally to its interest in the matter. It is fairly easy to define democracy technically in relation to en electoral system and proportional representation in legitimate decision-making institutions. The latter idea is not equally easy to implement, but is still a fundamental principle behind much stakeholder involvement. From a structural-functionalist point of view, one could look for the functions of democracy in maintaining a certain society – the need for social support, the need for efficient policy, or the need for creative and innovative policy ideas – in order to find more objective arguments for democracy, but that would just shift the normative issue to the need to maintain this particular society. It seems less obscure to make a normative point about the desirability of democracy.

When it comes to forest policies, some are decided in a Parliament or a similar body at the regional or local level. The details of the policy, and the implementation of it, are normally decided on by a public bureaucracy, though. Quite often the preparation of forest policy documents and statements is made by a public forest agency. Stakeholders are sometimes invited to participate in the elaboration of such documents, or they are asked to comment on proposals made by public servants. Stakeholders thereby function both as suppliers of demands and support to the political system, and they may be part of the political system. In democratic political systems, the problem with undemocratic stakeholder participation is normally found in the way different interest groups participate in the supply of demands and support.

A common way of organising stakeholder participation is by corporative organs (Rokkan 1966). The authorities may invite various NGOs to be represented in permanent or ad hoc organs dealing with forest policy. It is often up to the authorities to decide which NGOs should be represented in such organs. Sometimes public servants even decide which person should represent a specific NGO. In such cases one may question whether the process is really democratic.

Stakeholders themselves may act as lobbyists without invitation from the authorities. Some NGOs have access to resources that may be used to lobby for certain policies, while other NGOs have small means to influence bureaucrats and politicians. The resources available to different organisations may not reflect their interests or legitimate claims in a particular case. Some stakeholders may be poorly organised, thereby getting less influence than they deserve. Similarly one may often wonder whether there is a silent majority that is sidelined in the political process by more vocal and influential pressure groups. It poses a great challenge to the authorities to strike a just balance between various stakeholders in such cases.

Environmentally concerned NGOs often refer to principle # 15 of the Rio Declaration (UNCED 1992):

> *"Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation"*.

This principle clearly applies to many situations encountered in forest management. The principle is, however, somehow one-sided. If taken to the extreme, any doubt about the consequences of an action may lead to the conclusion that nothing should be done. Obviously, human progress has been achieved as a result of decisions made under uncertainty, also about environmental consequences. We should not exclude ourselves from the same possibilities in the future. The difficult and political issue is to balance the uncertain benefits against the threats of damage to the environment. This balance can only be found in a process involving various stakeholders and by institutions with sufficient democratic legitimacy.

To verify whether stakeholder participation in a particular case is democratic is not easy. First, a given political process may not simply be democratic or non-democratic. There are degrees of democracy, and most cases are somewhat democratic, although not perfectly so. Second, what methodology should be used to test the hypothesis that a particular political process is democratic – or measure the degree of democracy? One would have to measure to what extent different groups are given the opportunity to present their views and to what extent they participate in decision-making. Still the questions of which interests are legitimate and how they should be weighted remain. In the market place some property rights are defined, and then goods and services are traded. In such cases the purchasing power and preferences of different consumers determine the allocation of resources. In the political arena it is more difficult to define rights and quantify influence and interests, but there are obvious parallels to exchange in the market (Blau 1964).

In the following I shall not attempt any kind of formal measurement of the degree of democracy in stakeholder involvement, but discuss rather loosely some observations on stakeholder involvement in forest policy formulation. I shall take my examples from some Norwegian and some African cases. This is because of my personal experiences (Hofstad 1997), and not because there are particular similarities between the political process in these cases. One may notice, however, that there are interesting general features of forest politics in such different societies.

Two African cases

I shall use two African cases to illustrate a few points. Alden Wily (2000) describes a wave of new forest policy in eastern and southern Africa. She observes a common trend towards greater devolution of rights and responsibilities outside government. Uganda is included in the group of states following this trend, but Zimbabwe seems to be a different case.

Zimbabwe

The first example relates to my work as a woodland management advisor to the Forestry Commission in Zimbabwe. The commission tried to introduce the concept of sustainable management of natural woodlands for multiple purposes to a number of villages in the so-called Communal Lands[1] (Bradley and McNamara 1993). The policy of such management was supported both by the Ministry of Environment and Tourism under which the commission sorted, and by the Ministry of Finance, Economic Planning and Development which

1 Communal Lands is the category of land in Zimbabwe which is neither commercial farms, small private farms, state owned land, or gazetted as Forest Reserves or National Parks etc. All citizens of Zimbabwe use Communal Lands freely, although under some control both by the modern political system and the traditional ethnically based system of chiefs and headmen. During colonial rule the African majority of the population was confined to the poorest parts of the land – then called Native Reserves, now the Communal Lands. Since then population density has increased significantly in these areas in spite of urban migration (Moyo 1987).

administered the Danish assistance to this project. From meetings with villagers in different parts of the country I was very often given the impression that the people would be interested in managing their woodlands on a communal basis if allowed to do so. In spite of these and other limitations, we found that the village was the appropriate social unit for the management of woodlands as production systems. The inhabitants of the village were a sufficiently well defined group of people with some subjective consciousness of unity and common destiny. This group would easily reach the conclusion that they had some land and other natural resources in common, and that these resources were theirs exclusively. There would be disputes with neighbouring villages as to the exact user right to which resources belonged to each village, but there would be a common understanding that such exclusive rights existed. Of course, there would be other stakeholders in the management of forest resources in Communal Lands than those living in a particular village:

1. People living in neighbouring villages would sometimes use the same woodland for collection of fruit or firewood, or for grazing their cattle.
2. Many villagers would have members of their extended family living in the city, and quite often these non-resident family members kept domestic animals grazing in the woodland.
3. If valuable minerals or precious stones were found in Communal Lands, the law dictates that this is state property.

Both the Government of Zimbabwe and many donor organisations have recognised that people living in Communal Lands are stakeholders in forest policy. As mentioned, villagers were consulted at the local level, but at the national level such participation was not so easy. Representatives of local authorities such as District Councils and District Administrators would often be present when forest policy was discussed. One would also find that Chiefs and Headmen were sometimes represented. Most prominently, there would be a strong representation of vocal non-governmental organisations (e.g. Zimbabwe Energy Research Organisation or Association of Zimbabwean Traditional Ecologists). One may still ask whether any of these organisations represented the proper interests of the villagers who directly use the woodlands, and who are probably best placed to undertake the management of woodlands in Communal Lands. Based on my experiences in Norway, I am used to finding forest owners represented in the forums of forest policy discussion, not as traditional NGOs (e.g. Det norske Skogselskap or Naturvernforbundet) or through municipal authorities, but in their own respect as forest owners (Norges skogeierforbund, Viken skogeierforening etc.) with legitimate business interests. Such formal structures for representation of civic or commercial interests are not as common in poor countries as in our affluent societies. Instead you may find that similar stakeholder concerns are channelled informally through a system of kinship and barter of services. This does not have much impact on formal forest policy statements, but such statements may not be of the same importance in Zimbabwe as they are in Scandinavia. This is not to say that there are no discrepancies between Scandinavian policy statements and actual political behaviour, but it seems to me that African policy statements are often less realistic. This may be so precisely because many stakeholders are not represented in the formal policy making process, and because they still have some significant influence on actual government behaviour through informal channels. There may be other reasons for such discrepancies in Africa as well, which I shall return to in my next African example.

However, we noted that the political system in Zimbabwe, from the appropriate Ministries to the involved District Councils, did not allow villagers to acquire formal tenure rights to woodland resources in Communal Lands. Our attempts at transferring the de-facto responsibility for sustainable resource management from central and local political systems to village committees in charge of non-cropped village land were obstructed by political authorities using legal rules to protect their own powers. Mandondo (1999) noted that there

has been little progress in allowing local communities to set their own rules, generate revenue from local natural resources and democratically elect their own representatives. CIFOR (2001) has also found that African states often use rules of colonial heritage to protect the interests of central government against those of local farmers in forest matters. It is natural that various interest groups struggle for control over resources, woodland resources included, but the informal organisation of certain stakeholders in Africa and other poor countries makes it easy to tip the balance in favour of the ruling elite. The World Resources Institute has urged African countries to strategically decentralise control over its natural resources as a means of strengthening democracy and protecting the environment (WRI 2001).

Uganda

I have had the opportunity to follow the development of a new forest policy in Uganda over the few last years. Forest operations are still governed by the Forest Act of 1988, but the Cabinet adopted a new Forestry Policy[2] in March 2001. Work is in progress to rewrite the Forest Act and the intention is to get the new act passed by the newly elected Parliament later this year or early 2002. Over the last years, the Government of Uganda has introduced a number of policy reforms: decentralisation, divestiture[3], civil service reform programme, economic recovery programme and poverty eradication action plan.

Decentralisation represents an important background to present forest policy debates in Uganda. All gazetted forest reserves were decentralised in 1995. The right and responsibility to manage these reserves were transferred to District Councils, but the financially strapped councils liquidated the assets of "their" forest reserves without understanding how to harvest the forests sustainably, or appreciating the need to reinvest in planting or encouraging regeneration. The government then realised the necessity to recentralise some reserves to stop widespread forest destruction. The Forest Reserves (Declaration) Order of September 1998[4] declared central forest reserves as well as local forest reserves. Since then the Ministry of Local Government and Uganda Local Authorities Association have not come to terms with the Ministry of Water, Lands and Environment (MWLE) and its Forest Department.

A Forest Sector Umbrella Programme was developed in 1997–8 by MWLE with British (DFID) support. As part of this programme a Forest Sector Co-ordination Secretariat was created in 1999. The new forest policy was developed on the initiative of the secretariat, and with important technical assistance from the staff of the secretariat. A new way of working with forest policy issues in Uganda was introduced. Workshops and consultations with a wide variety of stakeholders were undertaken in a manner never experienced in the country before. This inevitably created great expectations among stakeholders that their points of view would be reflected in the final policy documents and in the priorities of government. The policy document adopted by Cabinet in March is fairly broad in scope and not very precise in establishing priorities. In this respect it is a rather typical policy statement of any government. No single group of stakeholders could claim that their views have guided the government in forest policy, and no one could claim that they had been totally overlooked. My only critical observation in relation to that process must be that just as I found in Zimbabwe, private forest owners and users of customary land[5] were not represented in their own interest as proprietors and economic agents, but rather through NGOs with religious or environmental ideologies.

2 A written statement. The actual performance of the government remains to be evaluated.

3 A policy of divestment of all non-core functions of government, which aims at separating the policy and delivery functions so that effectiveness and efficiency gains might be achieved.

4 Statutory Instrument no.63.

5 Private and customary lands contain 38% of tropical high forests and 78% of woodlands in Uganda.

As usual, the real conflicts surfaced during the stage of policy implementation. The MWLE wanted to establish a so-called National Forest Authority (NFA) to run the central forest reserves as a statutory corporation instead of the existing Forest Department. A particular act to establish the NFA was proposed. The employees of Forest Department, who feared for their employment[6] and were also concerned about some of the public services hitherto supplied by the department, managed to stop the forwarding of the act to Parliament. The rather formalist argument was that the establishment of the NFA should be part of a complete new forest act. Consequently, the secretariat had to start formulating a new draft forest act. This is an example of a quite important fact that is not always well understood: public servants in forestry are often one of the most powerful groups of stakeholders in the sector. Another observation to be made is that several groups of stakeholders are now beginning to express their frustrations about the draft forest act because their points of view from the process of consultations are not reflected there. Saw millers are afraid that the NFA will get a monopolistic position in log supply, while many NGOs are afraid that the NFA will not deliver seed, seedlings, expert advice and other goods at subsidised prices. As pointed out earlier, such disappointments can hardly be avoided. It is difficult to determine whether such frustrations result from a lack of democracy, or from a just loss of privileges.

The Norwegian case

There is a long history of Norwegian forest politics (Tveite 1964; Vevstad 1992), but I shall use the most recent developments to illustrate stakeholder participation. When the Minister of Agriculture presented the white paper on forest policy (Landbruksdepartementet 1998) to Parliament in December 1998, this was the result of a political process that had taken a couple of years. On page 10 is stated that the document "is elaborated through a wide and open process, where care has been taken to involve forestry, forest industry, organisations of employers and employees as well as recreationists, environmentalists and sports". Up till about 1970 forest politics had been the domain of rural and industrial interests. Forest owners, farmers and forest workers discussed forestry matters with industrialists, employees of forest industries and public administrators. However, in the early 1970s, urban interest groups like skiers, berry pickers and general recreationists started to make themselves heard over forest policy issues. Their interest was primarily focused on road construction and clear felling in Oslomarka, but also concerned forest areas surrounding other towns. Later other issues like acid rain, conservation of forest biodiversity, sequestration of CO_2, and certification of forest operations and forest products have come to dominate the political agenda. Therefore, it would have been impossible for the ministry to work out a forest policy document at the end of the 1990s without consulting with environmentalists in particular. It is my impression, though, that recreational interests are behind many environmental issues. There is a better legal basis and more popular support for environmental concerns than for recreational interests. Consequently, environmental issues can be used as a shield for recreational interests in the political debate.

The white paper was titled "Value added and environment – opportunities in the forest sector". This title reflects the two main preoccupations of Norwegian forest policy right now: (1) How can forest resources be used in order to generate more value added and higher incomes in rural areas? (2) How to ensure that forest management is sustainable, particularly in relation to the conservation of biodiversity? The two objectives must be achieved

6 The NFA is proposed to employ around 250 people, while FD at the moment employs five times as many.

simultaneously. In the white paper the government proposed to widen the use of the Forest Trust Fund (Øistad 2001), to tax timber trade in support of forest research and development, to facilitate and subsidise local initiatives to increase value added in wood processing industries, to introduce specific environmental regulations in forestry to be administered by forest authorities, and to elaborate a new forest and forest protection act to be forwarded to Parliament.

During the process prior to the presentation of the white paper, various environmental NGOs commented on the proposed measures, particularly the introduction of new environmental regulations. They argued in favour of introducing such regulations, but gave several suggestions on how the rules should be made more specific in order to better secure conservation of old growth and other ecologically valuable forest types. One question of democracy here relates to which organisations were invited by the ministry to comment on these proposals. There is also a question whether all stakeholders were properly organised so that they could be heard. End consumers of wood and paper are not organised as a pressure group, but might have interests different from those of environmentalists. Environmentalists may want the general taxpayer to cover the cost of sophisticated environmental protection, while the majority may be satisfied with the present state of forest environments and prefer allocating the resources to quite different services. This majority would probably not be organised as a forestry stakeholder group. Another question relates to the way the ministry used the comments received from various stakeholders. I have heard environmental activists complain that "we forwarded several good proposals to the bureaucracy, but we saw none of them reflected in the white paper itself". One might always hear such comments as long as government does not accept all partisan proposals. Therefore, it is difficult to use them as yardsticks of the degree of democracy. If there are many such feelings, however, frustration and lack of future involvement may result.

While the parliamentary committee considered the white paper, several groups lobbied actively in favour of their particular interests. My impression is that the Forest Owners Association did a very good job with the Labour Party (A). The Conservative Party (H) traditionally listens carefully to views of forest owners, but the Labour Party is normally a more difficult party for them to convince. The views of the Progress Party (Frp), normally a liberalist party in economic matters, were taken almost literally from Norskog – an association of large forest owners. Since the white paper was discussed by the Standing Committee on Business and Industry, environmental interest groups had more difficulties making their views heard during the parliamentary discussions.

All measures proposed by the cabinet were approved in Parliament, except the proposal to introduce environmental regulations. A majority constituted by the Labour Party, the Conservative Party, and the Progress Party rejected this idea of the minority cabinet. The majority argued that a system of certification had been agreed between forest owners, environmental NGOs and the forest industry that made public regulations redundant at least for some time to come. The system adopted voluntarily by forest owners resulted from a project called "Levende skog" (Live/lively/living forest) that had been generously funded by the government. A set of criteria for sustainable forestry was agreed by all participants (forest industry, forest owners, environmentalists, and recreationists), and used as a basis for certification according to the ISO 14001 standard. The same system has been agreed upon by many European forest owner organisations under the term Pan European Forest Certification (PEFC). Afterwards, both WWF and other environmentalists argue that the criteria adopted are too vague to be used for certification, and recommend the FSC system in stead. An attempt made earlier this year at more detailed specification of the criteria for certification according to the "Levende skog" agreement did not succeed. The environmental NGOs broke the negotiations (Andersen 2001) when the forest owners refused to accept that "natural forests" should be identified on publicly available maps.

During the preparation of a new draft Forest Act, the Ministry of Agriculture has hired a former director of the Forest Owners Association, Mr Egil Molteberg, to participate as a member of a small working group formulating the draft. The two other members are public servants permanently employed in the ministry's forest department. Undoubtedly, the composition of the group facilitates the lobbying of forest owners during the preparation of the draft, but it remains to be seen whether this tilts the formulations of the act against environmentalist interests. Many stakeholders have been engaged in the discussions on the draft act. Employees of the public forest service have been treated as one such stakeholder group. It is my impression that this group argues in favour of fairly detailed regulations of silvicultural investments in order to enhance timber production to be included in the Forest Act. One may easily interpret such concerns as a defence of the bureaucratic tasks presently undertaken by this group. In order to secure their future employment and influence in the sector, these employees are eager to have their tasks specified by law.

Conclusion

Stakeholder participation in forest policy formulation has been a popular concept for quite some years. It has become a requirement of development assistance to the forestry sector of poor countries. This is a positive development, which contributes to making forest politics more democratic. In affluent societies like the Norwegian, stakeholder participation has been a long tradition of forest politics, but the rather narrow view of which interests should legitimately be involved in forest policy formulation has been challenged. At present, a broad spectrum of stakeholders participate in Norwegian forest policy discussions. This is also a development towards more democracy in the sector.

So far, so good. Stakeholder participation is, however, no guarantee that forest policy will be formulated with due consideration of the views of all participants. In fact such a goal may be a social democratic fictitious construction. It may be impossible to identify the common good, the optimal and undisputed compromise of differing interests. If the sector consists of stakeholder groups with objectively conflicting interests, the unavoidable task of politicians becomes the weighting of these interests against one another. Politicians have to make a stand and defend their position that the interests of some stakeholders are more important than others.

Stakeholder participation is even less of a guarantee that governments will implement the policy statements they have adopted. In order to be re-elected democratic governments tend to write sector policy statements that offend as few as possible of the public concerned with the sector in question. Normally, implementation reveals more clearly the actual priorities of government. Therefore, it is just as important that stakeholders have channels for expressing their views on policy implementation as it is for them to participate in policy formulation. The possibility to criticise implementation of forest policies requires free media and a politically conscious public.

The role of the public forest service is interesting in both Uganda and Norway. In both cases public servants act like a group of stakeholders, and exert a certain influence over policy formulation. In both cases future employment seems to be a primary consideration underlying the standpoints of this group. Forest owners and industrialists did not easily give up their monopolistic influence over forest policy in Norway. Aggressive environmentalists have forced them to retreat. Central politicians and their clients in the districts of Zimbabwe have little intention of giving up their control of natural resources in communal lands. Quite the opposite, they are in the process of extending their control into the commercial farmland. A much broader democratic process is asked for than limited stakeholder participation in

forest policy formulation, in order to shift the balance of forest management in the direction of poor farmers.

To compare forest politics in northern Europe and eastern and southern Africa is a task of serious research, rather than the type of brief observation reported here. Obviously there are cultural and institutional differences that can explain why forest authorities operate differently in those societies. Still there are many functions that must be taken care of in any society with forest resources. Ownership and user right must be defined and maintained, a certain degree of law and order must be maintained, semi-finished products and consumer goods must be distributed etc. In spite of structural differences, there are many functional similarities between forest politics in Europe and Africa. One difference seems to me most important, though, the poorest strata of the population can be exploited more brutally in Africa than in Europe – and this has implications also for the exploitation of forest resources. Right now the need for more democratic forest politics is more urgent in Africa than it is in Europe. If this is to be achieved, better participation of rural producers in the political process is just one element among many that needs improvement.

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‘The Living Forests’ Process – the Perspective of Forest Owners

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Abstract

The Living Forests project and process successfully completed a consensus among 13 stakeholders on 23 performance level standards for sustainable forest management in Norway – ‘the Living Forests Standards’ on 27 March, 1998. This was the main outcome of a thorough and comprehensive development project and process, where all relevant stakeholders, including forest owners, forest industries, the government, the trade unions, the consumers, recreational-, women- and environmental organisations participated. Today almost 90% of the wood supply from the Norwegian forests comes from suppliers with ISO 14001 certification combined with the Living Forests Standards. This combination was endorsed by the Pan European Forest Certification (PEFC) in May, 2000. No other business sector has run a similar process, inviting all relevant stakeholders to join a process to agree on how the sector should be managed to help achieving sustainability, and committing itself to implement the agreed recommendations.

Keywords: Living Forests, Norway.

Introduction

In this paper, I will present some news on the Living Forests process from the family forest owners’ perspective. First of all, I am actually proud of the Living Forest process and what we have achieved. No other business sector has run a similar process, by inviting all relevant stakeholders to join a process like we did, with the objective to agree among all the stakeholders on how the sector should be managed to help achieving sustainability. And, furthermore, while making the consensus, as we did, the forest owners also made a commitment to implement the agreed recommendations into the forestry sector. No other sector has run a similar process or made a similar commitment.

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The Norwegian Forests

About 37% of the surface area of Norway is covered by forests. The forestry occurs typically on a small scale. 80% of the forest area is owned by families, mostly farmers, with an average wood lot of 50 hectares. Altogether, there are 125,000 forest properties in Norway. Taking into consideration that most families include couples who both have ownership rights, we have more than 200,000 forest owners.

At the turn of the last century, the forests of Norway consisted of sparse residual stands as a result of centuries of intensive over-exploitation. Since 1920, the volume of forest resources as well as the annual growth have doubled. For years the forest owners, as well as the government, believed they made a pretty good job, managing the forests in a long-term and responsible way.

However, during the 1980s, we realised that even if the volume had doubled, which, of course, was most important, that was not enough to ensure sustainability Therefore, we started to focus more on multiple use. Among other things, the long-term management planning procedures were further elaborated, and important improvements were made within the management of the forests, to balance economical, ecological and social interests.

The environmental and out-door recreational organisations continued to help the society and us to increase awareness on multiple use, as well as landscape design and biodiversity aspects. A number of initiatives were taken to meet these challenges. The Living Forests project is a part of this history.

The history of Living Forests

After one year of planning, a broadly based project and a process called Living Forests was launched in Norway in 1995, lasting for three years.

The development of a set of performance level standards on sustainable forest management was the main challenge for Living Forests. The project also included surveys on market demands, competence building, information and, finally, certification.

Living Forests was finalised within its budget of almost 3.5 million •, half of which was financed by forest owners and forest industries, and the rest by the Norwegian government.

Why Living Forests?

Why Living Forests? The project was launched for two reasons: Firstly, the forest owners' own awareness of the importance of long-term forest management and their willingness to further improvements, based on science rather than emotions. Secondly, Living Forests was a result of the increasing focus world-wide on sustainable forest management, through political processes, environmental NGOs, forest industry competitors, other industrial competitors (substitute industries) and the increasing awareness among customers and, end-consumers, to some extend, about forestry issues.

Objectives

The main objectives of Living Forests were to:

- help create international confidence in the forest industry based on sustainable and

environmentally-friendly Norwegian forest management; and
- demonstrate the will and ability of Norwegian forestry to conduct long-term, sustainable resource management through research and development, competence building and information.

Broadly based project

The project initiative was taken by the forest owners and the forest industries back in 1994. Living Forests became a broadly based project, and all relevant stakeholders participated, including forest owners, forest industries, the Norwegian Ministry of Agriculture, the Norwegian Ministry of Environment, the trade unions, the consumers, recreational-, women- and environmental organisations.

Strategy

Living Forests followed a defined strategy by first concentrating the work on defining how to manage the Norwegian forests sustainable, and thereafter addressing the documentation issues.

The project stated that the process had to be based on facts rather than emotions, to ensure that the outcome would be trusted and implemented afterwards. It was also stated that it was not only the final results of the project that counted. A successful process was seen as even more important.

Project structure

All in all, about 80 people were actively involved in the project work. In addition, about 200 representatives of the stakeholders on the national and regional level were invited to meet at the Advisory Committee twice a year, to receive information about the progress, and to discuss provisional results and further plans.

Consultations

Moreover, distribution of information on a broad basis to a wide range of stakeholder organisations and others, was emphasised throughout the project to keep the Living Forests process transparent.

Consensus

All in all, 13 stakeholders representing economic, environmental and social interests, participated in the process and contributed to the final consensus on the Living Forests Criteria, Indicators and Standards.

The Working Group of Living Forests concluded by agreeing on a set of performance level Standards, as well as Indicators, based on the six 'Helsinki Criteria'. The development process of the Living Forests Standards, also took into consideration the 10 principles set by the forest certification system called FSC, Forest Stewardship Council.

The negotiations successfully resulted in consensus among all 13 stakeholders on 23 performance level standards for sustainable forest management in Norway – 'the Living Forests Standards' on 27 March, 1998. The Standards will be reviewed and, if needed, revised after 5 years.

Thorough process

Without doubt, the consensus was achieved based on a thorough and comprehensive development process, including research projects, full-scale test areas in various parts of Norway, and thorough studies.

The preparatory work went on for two and a half years, resulting in comprehensive standard documents, presenting alternative performance level standards for each standard area, and analysis, showing economic, ecological and social consequences for each alternative performance level standard.

Transparency and involvement

The draft standard documents were openly distributed and discussed. The members of the Living Forests Advisory Committee gave constructive comments, and the representatives from the different stakeholders got mandates from their parent bodies as a basis for the negotiations that was to come. At least, that was the case for the representative of the Norwegian Forest Owners' Federation, which I now represent. This kind of transparency and involvement was of most importance, as it did not only involve the forest owners' representatives at the national level during the preparations, but also their representatives at the county level. Even single forest owners were invited to get involved in the preparations as members of local associations. This was quit important to prepare for a successful implementation of the final outcome of the process.

The Federation's representative got a certain mandate and knew that if he kept within this mandate, the forest owners organisation had committed itself to follow the agreed recommendations that came out of the negotiations.

Competence building

As earlier mentioned, long-term management planning, multiple use and environmental improvements have taken place in Norway for several years. None of this actually started with Living Forests. However, since its very beginning, the Living Forests project believed in competence building as a key to successful implementation of the Living Forests Standards in Norwegian forest management. In addition, as the Standards were directed towards the individual forest owner, being the responsible decision-maker, the strong involvement of forest owners into the Living Forests process would strengthen the possibilities of implementation of the outcome of the process.

The process to ensure that the forest owners understand the reasons for the changes and have faith in the scientific foundation for the recommendations has been of most importance. The Norwegian forest owners will **not** dare to follow new ideas without knowing the effect, as **they** are aware that they are managing their forests with a hundred years of perspective. Remember that you are now in a country with rather tuff climatic conditions, far north. The recommendations may vary over time, while the consequences may last for a century or more.

Recommendations don't last for ever

In the 1960s and 1970s, when the forest owners cut down every single tree on a clear-cut, while harvesting Norwegian spruce, it was done because the scientists had told this was the best way to ensure re-vegetation. That way the sun would heath up the ground and make the seed and small plants able to survive. Very well, also the government's policy supported this message, so this was the way the harvesting took place in those days.

However, new scientific results has explained us, that, unfortunately, the former way we made this clear-cuts was not that good, after all. Because of the concern for biodiversity, among other reasons. Therefore, the Living Forests Standards recommends to leave an average of 5–10 wind-resistant trees standing per hectare as eternity trees, possibly in groupings, in the harvesting process. Also large windfalls that have been on the ground for more than 5 years must be left in the forest, according to Living Forests.

I can assure you that without knowing that this kind of actions will benefit insects, birds, fungis and so on, the forest owners would never have followed these recommendations. They would feel that the clear-cut looked ugly and had become a mess. And what about the conditions for the regeneration?

Another example: Until recently, the harvesting could take place next to a river, road, lake or similar. The forest owners believed that was a correct way to harvest the forests. But not anymore. The Living Forests Standards advises border zones to be left in all these cases. The documentation explains why.

The most successful study programme ever

I am pleased to inform you that, in addition to comprehensive competence building programmes among staff members and contractors within the sector, as many as 20,000 forest owners have followed a new Study Programme to help with the implementation of the Living Forests Standards, the highest participation ever. An excellent basis for a successful implementation of the Living Forests Standards.

Third party independent certification

As already mentioned, Living Forests followed a defined strategy by first concentrating the work on defining how to manage Norwegian forests sustainable, and thereafter addressing the documentation issues. Therefore, certification was not an issue until 1997, when a Certification Committee was set up in agreement with the environmental- and recreational organisations in Norway, as part of the Living Forests project.

One year later, the Committee made consensus among all its stakeholders on how certification could be organised in Norway, regardless of certification system. The Committee describes how the Living Forests Standards can be followed, both in connection with the ISO and EMAS environmental management systems, as well as the FSC (Forest Stewardship Council) system. It was not within the mandate of the Committee, to give any priority between the alternative certification schemes.

The Committee put much emphasis on how one could take the small-scale family forest ownership structure into consideration, to find cost-effective, but credible forest certification models for Norway. Three group models were recommended in addition to individual certification.

At the time when the Living Forest project concluded in 1998, only FSC and ISO were the existing international certification systems. However, Pan European Forest Certification (PEFC) was launched one year later, with the aim to create a new international forest certification framework for mutual recognition among national schemes, and with a special focus on the needs of the small scale family forest owners. The Norwegian Forest Owners' Federation has taken actively part in the development and further elaboration of PEFC, willing to share experience from the Living Forests process with countries that are at the starting point of developing similar processes.

Today's certification figures

The successful implementation of the Living Forests Standards is the current goal. I am very pleased with the enthusiasm we see nowadays within the forest owners district associations, who play a key role to get the Living Forests Standards implemented in Norway.

Today, more than 9 million hectares of forests or approximately 86% of the wood supply from the Norwegian forests comes from suppliers with ISO 14001 certification combined with the Living Forests Standards. This combination was endorsed by the PEFC May, 2000.

Globally, forest certification endorsed by FSC accounts for some 22.5 million hectares, while forest certification endorsed by PEFC accounts for some 36 million hectares by June, 2001.

If you don't do your homework…

If you are the holder of an ISO 14001 certificate stating that the management has to take place in accordance with the Living Forests Standards, while the auditing thereafter shows that you do not meet the Living Forests Standards in a satisfying way and you are not able to make the needed improvements within a certain time frame, then your certificate will be suspended or lost. We got that demonstrated during the spring of 2000.

I think it was an excellent lesson learnt from that exercise. There will never be such a thing as a 100% perfect forest management in accordance with the Living Forests Standards all over Norway. Some mistakes will take place today as well as in the future. However, a certified unit has to do its very best to meet the Living Forests Standards, always. That means that you have to have your heart, your deep believe, with you in your efforts to achieve this goal. Both will and ability must be accompanied by your heart; systems and words on a paper are not enough.

The third party independent certification is one of the tools to help achieving sustainable forest management in Norway. The auditing will discover if you have not done your homework. The auditing may also discover that some of the Standards may be open for misinterpretation into practise.

Additional process to prevent misinterpretations

June 2000, the Norwegian Forest Owners' Federation took the initiative to set up a new working group with the objective to ensure similar understanding on how the Living Forests Standards should be operating in practise. The Federation wanted to prevent possible misinterpretations and, by this, prevent operations from being non-consistent with the Standards. All stakeholders participating in the Living Forests process concerning standard setting and certification, joined the working group.

A need of some written, additional explanations to certain standards which had shown to open for possible misinterpretations, were identified. Seven of the Standards were given priority, recognised as needing some assisting explanations; not to reword the standards, but to ensure the correct interpretation of the standards.

The working group has agreed on the specifications for six of these seven standards. The seventh one concerns biological important areas. Three environmental organisations stepped out of the discussion at this point, while the other 11 stakeholders wished to continue to develop the explanation to this last standard, as well.

The Living Forests Standards are not revised due to this additional discussions. However, this additional process demonstrates the commitment the high number of stakeholders have to respect a serious approach and to accept the need for continuously improvements based on new knowledge and understanding.

The competitive climate for wood

I take it for granted that we work hard to achieve managing the forests in a sustainable way, not only in Norway, but world-wide. So what about the strength of this renewable resource compared to products made out of plastics, steel, aluminium and other non-renewable resources?

In 1996, the Living Forests initiated and was deeply involved in an international study on the competitive climate for wood products and paper packaging, focusing on the promotion of sound use of wood and other forest products. The study was performed by the Subgroup Substitution Project of the Joint FAO/ECE Team of Public Relations Specialists in the Forest and the Forest Industries Sector, with the overall objective to promote increased international co-operation within the sector. The study was finalised in 1998.

Let me summarise the strengths and weaknesses of the different industries from an environmental point of view, made by Jaakko Pöyry Consulting on the request of the FAO/ECE Team of PR Specialists, as part of the study. This environmental bench marking semaphore compares forest industry to plastics, aluminium, steel and concrete. The light grey colour illustrates strength, the white says it's okay, while the dark grey colour expresses weakness.

The figure reminds us that as far as the end use and recycling are concerned, the forest, aluminium and steel industries all have strength, while the concrete industry on the other hand has problems.

Secondly, the forest sector has the best story to tell in terms of energy consumption, while the opposite is the case for primary aluminium.

Thirdly, as you see, processing, health and safety are commented as okay for us and concrete, while the others have problems.

But then comes our weak point: The raw material procurement. Even if this could also be commented as a problem for the plastics and the steel industries, have you ever heard any demand for Oil Stewardship Council or Mining Stewardship Council?

So, even if we are the Number 1 in terms of renewability, as seen in the figure, and we have an environmental advantage throughout the life cycle, as illustrated, we still have one problem: The harvesting.

The forest certification may help us getting rid of the only dark grey box left.

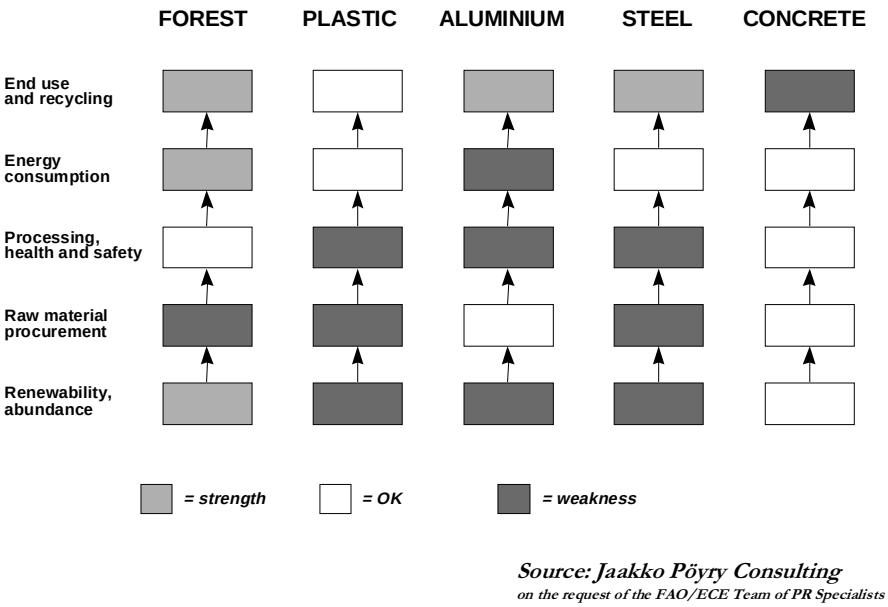

Figure 1. Environmental benchmarking semaphore.

Concluding remarks

The Living Forests project resembled a meeting place for various forest-related interest groups in Norway, where not only the project results, but also the process itself was a part of the goal. The main challenge ahead will continue to be the implementation of the Living Forests Standards in practical forest operations, to ensure that sustainable forest management is conducted in Norway.

The family forest owners are truly aiming at managing their forests in a responsible and long-term way. As parents they want to hand over their forests to their child in an even better condition than they received it from the previous owner; the forest owners father. That has to do with responsibility and pride. But please do not forget that sustainability means to balance both the economic, ecological and social aspects.

When planning any sort of certification system, the reason for all this should not be forgotten: to make sure that the forests are managed in a responsible way, balancing these three aspects.

Keep in mind that no other business sector has run a similar process, inviting all relevant stakeholders to join a process to agree on how the sector should be managed to help achieving sustainability, and committing itself to implement the agreed recommendations.

Referring to the environmental bench marking semaphore; it is a pity, that for decades, the dimensions on the environmental debate have completely failed to include the long-term aspect of renewability with regard to nature and society.

Our ambitions should be, to change the dimensions on the environmental debate concerning forestry within the next 10 years, so that the strength of our **renewable** resource, and forest products being a better choice than plastics, aluminium, steel and other competitors in the context of climate changes, are recognised and become in focus. I wait for the environmental- and recreational organisations to support this ambition. The forests and the environment deserve that.

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“The Living Forest” Process Seen from Recreation Perspectives

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Abstract

This paper discusses the Living Forest-project from the newpoint of an association for outdoor recreation – Friluftsrådenes Landsforbund, FL. FL promotes outdoor recreation and free acces to forest within the framework of sustainable forestry.

Keywords: Living Forest, Friluftsrådenes Landsforbund, Norway outdoor recreation

1. Organisations for recreation

Among the 13 stakeholders in the Living Forests Project, two organisations represented the interests of outdoor recreation; National Association for Outdoor Recreation (Friluftslivets fellesorganisasjon, FRIFO) and The Assosiation of Intermunicipal Outdoor Recreation Boards (Friluftsrådenes Landsforbund, FL). FRIFO is an association of 13 voluntary organisations with about 400 000 members. FL is an association of 17 intermunicipal outdoor recreation boards. Its members include about 150 of the Norwegian municipalities and 140 organisations. The members accept all its decisions and actions, thus creating the guidelines of the association. One of the “friluftsråd”, Oslo og Omland Friluftsråd, on forest management, and its main subject since its foundation in 1936, has been the establishment and protection of the border of the forest called Oslomarka.

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2. The platform

In addition to the basic work for biological diversity and sustainable forestry, our platform in the Living Forest negotiation consisted of four main elements:

1. Outdoor recreation is important
2. The basic elements for outdoor recreation
3. The qualities that are important to outdoor recreation
4. The possibility for practising recreation (paths, ski tracks etc.)

2.1 The importance of outdoor recreation

Outdoor recreation is an important activity for most people in Norway and it has become a significant part of the Norwegian culture. About 90% of the population practise outdoor recreation. Walking tours and hiking (more than 90%), cross-country skiing (about 40%), fishing (about 50%) and picking berries and mushroom (45%) are among the most popular recreational activities in the forest.

In the spring of 2001 the Norwegian government published a white paper concerning outdoor recreation, giving priority to the work with outdoor recreation. Outdoor recreation is important for understanding of the nature and biological diversity, as well as for the health. For children and youth the possibility for outdoor playing and activity is seen necessary.

2.2 The basic elements for outdoor recreation

For outdoor recreation it is important to have:
1. the areas for recreation; 2. the access to these areas; and 3. the qualities these areas have.

2.3 The qualities that are important for outdoor recreation

When we ask people about their reasons for using time on outdoor recreation, 87% answer “experience the silence and peace of nature”, 85% “get out in fresh air, away from the noise and pollution”, 79% “get away from stress”, 73% “be together with family”, 58% “enjoy flowers and trees” and 51% “enjoy birds and animals”. This is important background information for the FL in the negotiations for the Living Forest Standards.

In addition we have emphasised:

- Variation in the landscape
- Possibility to experience nature and enjoy
- Possibility to cultural experience monuments

2.4 The possibility for practising recreation (paths, ski tracks etc.)

It is constantly discussed how much the nature should be modified for recreation purposes; some wish to experience nature with no tracks from other people while others need a road for wheelchairs or prams. We want to accommodate the users’ needs while keeping the work to a minimum in order to not to disturb the nature.

3. The totality

In addition to our primary responsibility for sustainable forestry and outdoor recreation FL, like all the participants in this process, have to regard the totality. Some concerns are:

- The forest is a renewable resource and it is not harmful to the environment like many of the substitutes.
- Forestry is an important industry.
- In Norway there are a lot of landowners who owns small parts of land, we have no wish of changing this through forest certification.

4. Collaboration

In the negotiations FL has had the nearest collaboration with the organisations for nature conservation. There were meetings and common demands were formulated. But FL has had a good relationship with all the parties of the process, and could in some questions contribute in finding compromises.

5. Results and important standards in Living Forest

In my opinion, Living Forest has made an important contribution to a better forest management for outdoor recreation. I will point out some standards that are important and have grouped them in three:

1. Standards to promote the fundamentals for outdoor recreation
2. Standards for making the forest passable – forest paths
3. Standards to promote the nature experiences

5.1 Fundamentals for outdoor recreation

Standard 3 is a statement about the protection of forest land. It states about the same as our laws on planning and forest, but it is an important signal that the protection issues are stated in one of the standards.

Standard 7 concerns outdoor recreation. In Norway the free access to forest and other outlying field is stated in our law of outdoor recreation. Compared with the Norwegian law and usual rules for good forest management there is a little new, but again it is important that the issue is started in the standard, and it gives an important platform for more detailed rules in some of the other standards.

5.2 Making the forest passable – forest paths

Standard 11 says that felling waste should be kept out of paths and ski tracks. Also in standard 16, standard 18 about forestation, standard 21 about transportation and standard 23 about waterprotection paths are mentioned and their care-taking is seen as important.

5.3 Nature experience

The possibility for nature experience is clearly related to the variation in landscape and biological diversity. Most of the standards deal with this theme and it has been the main subject in the Living Forest project. Here the conservation and recreation perspective will be very similar. I will only mention some of the most actual or controversial standards.

Standard 4; biological important areas, is the most controversial standard. For many people it is very important to have the opportunity to experience virgin forest or forest similar to virgin forest. The lack of virgin forests is one of the main complaints against modern forestry. This standard is general, there is a need for more concrete advice. We thought that we had a satisfactory progress in the negotiations on this field and also had to wait for more information, while the nature conservation organisations chose to stop further negotiations in June 2001.

Standard 11; harvesting methods. From a recreation perspective, modern forestry uses too much clear-felling and the big felling areas are large. We want more closed logging. The standard underline more variation in felling and felling areas. We are satisfied with the formulations in the standard, but the important is how this will be practised in the forest. If we cannot register any change in practice, the alternative will be more rigid rules about felling areas.

Standard 19 is about roads in the forest. For recreation it is important to have the variation from the virgin forest with small paths to the forests with some roads for bicycling, skiing and walking. But we very seldom need the broad roads for timber-transportation for recreation. They are alien substances in the forest nature and from our point of view it is important to limit them to the necessary. We hope that the formulation will contribute to reduce construction of new roads, but I guess this will be one of the controversial questions also in the future.

6. Conclusions

We are satisfied with the general process in the Living Forest; all parties were heard. But sometimes we found it hardly worth all the time spent. The standards are results of compromises. We think that this was the best we could attain at that point of time, and that the standards will contribute to better forestry for recreation interests.

The most important issue now is to incorporate the standards in the practical work in the forest. In some years we can say if we have succeeded. This work has to be continued. The society will change and we will get new knowledge that must be used to make the standards better and more precise. For recreation the forests near to the cities are extremely important. I wish that we get a law for forests so we can have special rules for forestry in this forests and give preference to recreation interests here.

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The “Living Forest” Project and Forest Conservation

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Abstract

The ”Living Forest” agreement will be of great importance for the conservation of forest biodiversity if the goals of the agreement are reached. We question whether the means are adequate for reaching these goals. The new method (MIS) developed for mapping areas and elements (e.g. logs) important for the survival of red-listed species has several unfortunate properties. Forest engineers without sufficient competence in forest ecology will be responsible for recording important forest biotopes. Therefore, only «technical» and easily measurable variables are recorded. Recording threatened species or indicator species is not a part of the method and will not improve our generally poor knowledge of the distribution and biology of red-listed species. The method tends to lead to very small key biotopes (on average 0.67 ha), which leads to large edge effects and insufficient regeneration of dead wood. The “Living Forest” agreement focuses on restoration biotopes, but also this important field of forest management is omitted. Finally, the «Living Forest» standard does not mention problems with the introduction of alien new forest tree species in Western and Northern Norway. This process indisputably leads to massive changes in ecosystems and to the eradication of species and habitats, as considerable areas of diverse deciduous forests are transformed into monoculture spruce stands every year.

Keywords: ”Living Forest”, key biotopes, biological competence, red-listed species, introduction of new species.

The “Living Forest” agreement – good aims, but what are the means?

The “Living Forest” agreement lists a number of important actions to be taken in order to preserve biological diversity.

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- Key biotopes, areas with concentrations of species in need of conservation, shall be found and conserved.
- Naturally occurring forest types not represented or scarcely represented as key biotopes shall be recovered.
- The qualities of old-growth forests shall be conserved.
- Closed logging is to be carried out in a number of forest types.
- Special care taken in the border zones between forests and lakes, streams, bogs and other open areas.

There is no doubt that if these actions were implemented in forest planning and activities, they would be important tools for preserving and enhancing forest biodiversity in the future. However, an agreement on paper does not in itself create a "living forest". The success depends on the attitude and qualifications of forest owners and contractors, registration methods and certification processes. In this paper we will discuss to which extent the aims in the "Living Forest" standards have a fair chance to be reached. The following reflections are based on forest registrations over the past ten years (covering more than 500 000 ha forest), and on the last two years' experience with a new registration method.

MIS – the new registration procedure

In 2001, a new procedure developed by the Norwegian Ministry of Agriculture has been incorporated in the forest planning process. It has taken four years and more than 30 million NOK (3.9 mill. €) to develop this procedure, and we will briefly discuss some of its major features. This new registration tool will be referred to as MIS (Norwegian: "Miljøregistrering i skog", i.e. "environmental forest registrations").

Who will find and evaluate the key biotopes?

Until now, the registration of key biotopes and the interpretation of biological data has been a job for trained biologists. However, MIS is to be used by forest engineers with a two-day course in how to use the method. In our view, recording key biotopes cannot be done using

Box 1. The aims of the research part of the MIS study are (Gjerde et al. 1997).

(1) To study the spatial patterns of species richness and rarity of several taxa (vascular plants, bryophytes, macrolichens, polypore fungi, birds and land-molluscs) within a mosaic woodland landscape.

a) Are richness hotspots for one taxon richness hotspots for other taxa too?
b) Are rarity hotspots for one taxon rarity hotspots for other taxa too?
c) Are complementary areas for one taxon also complementary areas for other taxa?
d) Are richness hotspots for one taxon also rarity hotspots for the same taxon, or other taxa.
e) Are species assemblages within different taxa spatially concordant?
f) To what degree is the identification of key habitats a successful method for maximising species richness, rarity and complementarity in forests?

(2) Is it possible to efficiently identify areas valuable to conservation by the use of variables such as: habitat characteristics, forest history and indicator species?

(3) Do the patterns of species richness and variation in species assemblages found at one scale coincide with patterns found at other scales?

Main purpose for the MIS project (Gjerde 1997): Develop and test tools for use in forest planning processes by registration and monitoring qualities for biological diversity.

some mechanistic or mathematical procedure; it always involves some degree of qualified documentation and interpretation. We believe that both biological education and field experience is necessary to interpret the variation seen in the field, and that scientific results must be used to create guidelines for forest management and not registration forms to be used by persons without the right skills in biology and forest ecology.

The new tool has been intented be incorporated in the forest planning process. This intention does not imply that forest engineers are the most qualified group to manage the registrations. Experience from the registrations in 2001 and the managers’ demand for better documentation must lead to an evaluation of the qualifications needed for the mapping of biological diversity. The “Living Forest” says that persons with biological competence shall perform the biological registrations (Levende Skog 1999).

How will the key biotopes be evaluated?

Since the MIS method is designed to be used by personnel without sufficient biological competence to evaluate key biotopes, only easily measured variables of forest structure are registered and used to evaluate the conservation value of each forest patch. Examples of such variables are the number of logs of two age classes, the number of standing dead trees, etc. In other words, MIS assumes that the conservation value of a forest patch is completely described by such simple measures. We do not share the belief that the biology of the red-listed species is so well known that their presence can be predicted on the basis of such variables. All experience with these species indicates that two similar-looking forest stands may contain a completely different biodiversity. The reasons for these differences are not fully understood, although forest history and spatial relationships appears to explain some of the variation.

Documentation

The MIS method relies heavily on knowing the relationship between structural variables and a biotopes conservation value, i.e. its importance for threatened species. Presumably, elucidating this relationship has been the most important task for the development project. However, the method has been implemented before any scientific reports from the development project have been published. The public and the scientific community are therefore unable to assess whether there is a sound scientific basis for the MIS registration. While MIS wants to give the impression that their method is more objective and scientific than previous methods, their method has no scientific credibility in the present situation.

The MIS project will for certain be able to document that rare wood-inhabiting species lives on dead wood and that there is a marked species turnover along the gradients of humidity and soil richness. This is, however, not new knowledge, and we hope that a multimillion project has more to offer both the “Living Forest” process and forest management in general. We want answers to questions like: It is possible to take a snapshot of nature and base management on today’s qualities, or do we have to bring the future into present registrations? What is the adequate total area of conservation biotopes when we still do not know how clear-cutting over the past 50 years has influenced species diversity? Forest management needs guidelines for locality size, density of localities and restorations needs in different parts of the country.

The registration costs for MIS seems to be 2–3 times higher than for former registration methods. So far, conclusive evidence that the MIS method is superior to former methods has

not been made public by MIS. Thus, we have not yet seen convincing arguments that defend the high cost level of MIS.

Will the MIS registrations improve our knowledge of red-listed species?

In Report to the Storting 42 (2000–2001), the Norwegian government states that better knowledge of Norway's biodiversity is an essential future task. Especially, the Ministry of Agriculture concludes that the knowledge on which the realists are based on must be improved. For the same reasons, a national program for mapping and monitoring Norway's biodiversity is being established, including the establishment of a Threatened Species Unit («artdatabank»). However, the MIS registration programme does not include registration of species. It seems somewhat strange that the Ministry of Agriculture, which is worried about the quality of the red list, organises a 12 mill NOK per year registration programme without identifying red-listed species. Thus, close to 100 million NOK (12.9 mill. €) will be used for forest registrations that are useless when it comes to improving the red list.

How large are the protected biotopes?

The MIS handbook states that there should be a clear division between the registrations and management, i.e. that recording forests biological values is a purely descriptive work where no management decisions are made. However, the registration guidelines inevitably influence how nature is described, which again influences management decisions. The guidelines tend to split up forest stands in to very small pieces. While the average size of key biotopes in Norway registered by biologists is approximately 3 ha, the average size of key biotopes mapped by MIS was approximately 0.67 ha (see Figure 1)**.** This means that at most 14% of the forest patch is more than 25 m away from the edge (Figure 2). The difference between 0.67 and 3 ha is not so much because MIS and biologists pick different biotopes, but because a biologist also has management in mind when the borders of the key biotopes are drawn. When the biologist encounters an area with a high concentration of key elements, he/she will draw the borders in the field based on the actual field situation, and for instance include areas with lower concentrations of key elements in the surroundings areas in the key biotope. We doubt whether the forest dynamics in the MIS areas are adequate to create new substrates in the long term for threatened species, and for long-term conservation of species in need of stable environments.

How much of the forest area should be protected?

A serious shortage in the «Living Forest» agreement is that no goal or advice is given regarding the total area of key- and restoration biotopes. Should the key biotopes and restoration biotopes total one, three or five percent of the productive forest landscape? The number has to be seen in relation to forests protected as nature reserves. Preliminary results from the registrations shows that the total area including nature reserves in Norway will not exceed 2% of forested land. We believe that this level is far from enough for long-term conservation of biological diversity in Norwegian forests. The MIS project states that key biotopes with an area of 1% is not enough to preserve all read listed species (Gjerde 1999b). However, they have not announced how many of the red-listed species that are found in the most species-rich 3% or 5% of the landscape, or how much key biotopes that would be

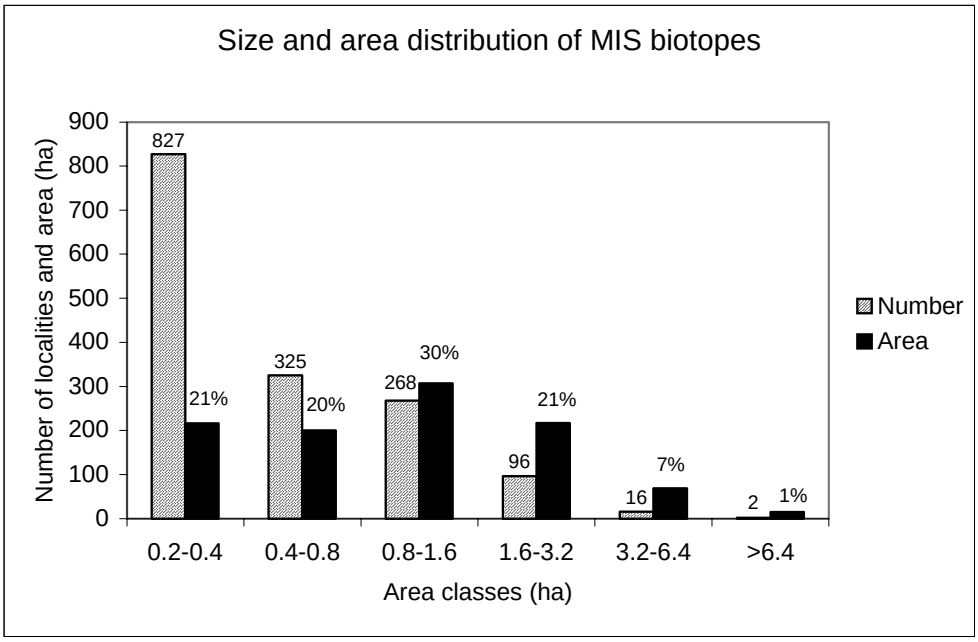

Figure 1. The number of MIS biotopes in different size categories (grey columns) and their total area (black columns). The numbers are based on pre-selection biotopes; the land owners choose a selection of these biotopes for conservation (which may change the size distribution). The areas does not include buffer zones (since buffer zones are not considered during registration). The registrations were done in the counties of Hedmark, Akershus and Oppland, and the total area investigated was approximately 80.000 ha. The average biotope size is 0.67 ha.

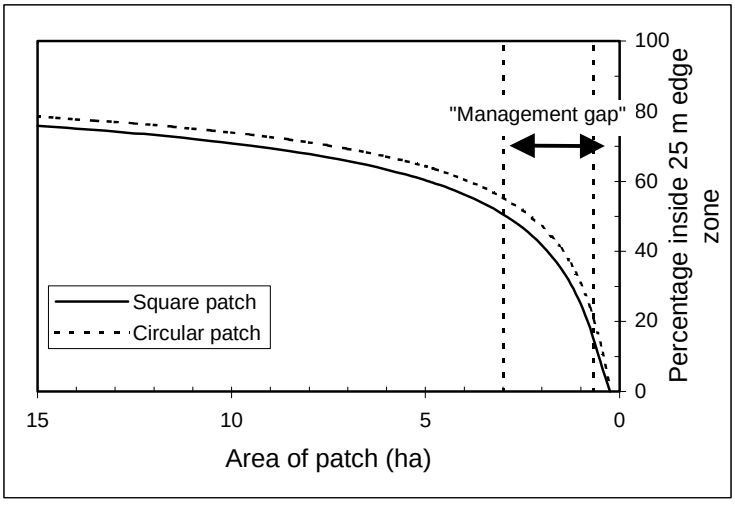

Figure 2. An illustration of edge effects depending on patch area. Negative effects of edges certainly also depends upon topography, exposition and the forest type. The vertical dotted lines show the typical size of key biotopes registered by biologists (3 ha) and the typical size of MIS key biotopes (0.67 ha).

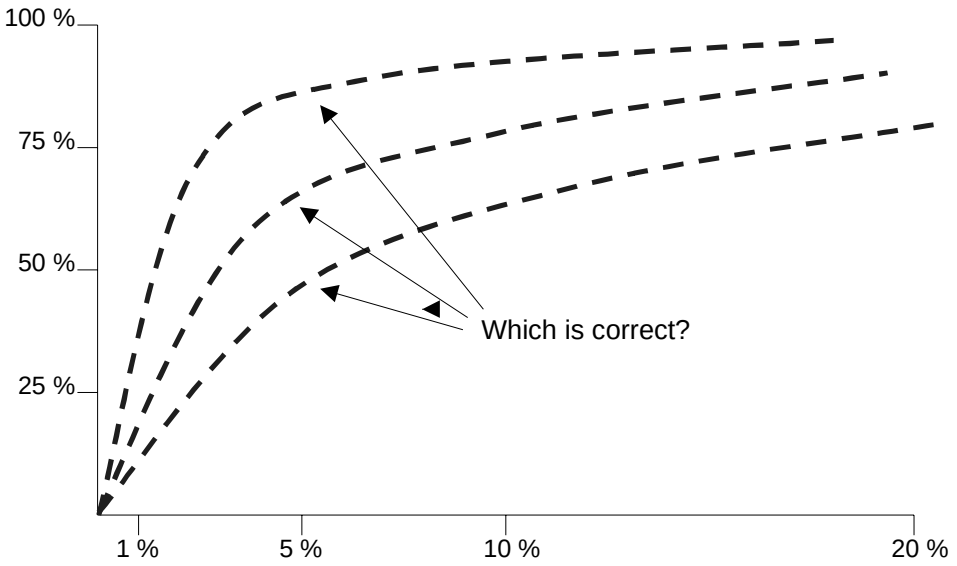

Figure 3. How is the relationship between the area of protected area (given that the best areas are protected first) and the number of red-listed species enclosed within the protected area?

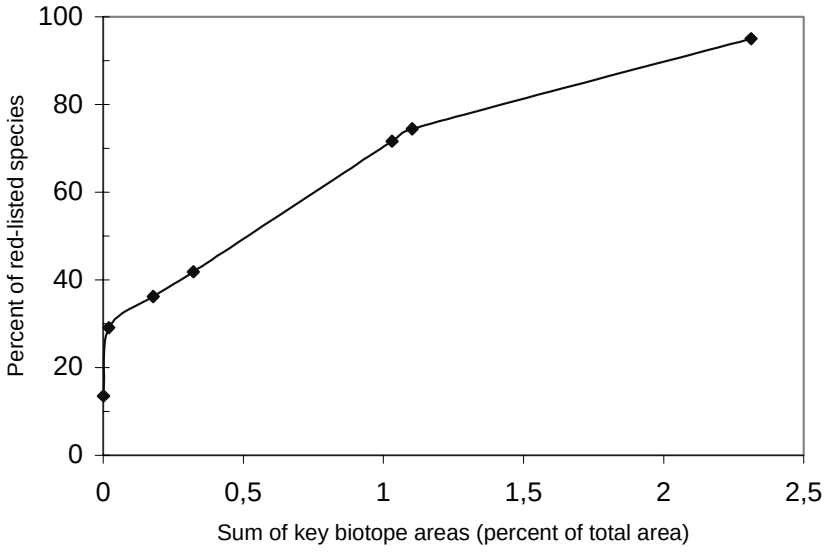

Figure 4. The maximal number of red-listed species plotted against the cumulative area of combined key biotopes. The example data are taken from municipality of Oslo. “Percent of red-listed species” is the total number of species found in a set of key biotopes divided by the number of red-listed species with at least one mapped occurrence is included in the (141 species from a variety of taxa). The area is given as the percentage of the area of Oslo municipality excluding built-up areas and agricultural land. For instance, by selecting key biotopes covering 1% of the total area, 70% of the mapped red-listed species can be included.

needed to include for example 80% of the red-listed species (Figure 3). It would be of great help if the result of the MIS project could be used to generate a species/area curve to reveal a qualified estimate of the area needed for conservation of biological diversity (see Figure 4 for an example).

What about restoration?

The «Living Forest» standard states that restoration of “valuable environments” should be done in areas where such forests are scarce. The MIS method doesn’t deal with this important part of forest management at all. In parts of Norway that have been intensively logged, there is a lack of concentrations of elements and environments upon which narrow niche species are dependent. In such areas, it is necessary to include restoration in forest management in order to select and develop the right biotopes for the future. An important principle in restoration ecology is that the potential value of a locality may often be a more important factor than its present value (in terms of the amount of dead wood etc.). As long as the restoration potential is not covered by the MIS method, using it will lead to violation of one of the most important standards in the Living Forest agreement.

Old-growth forest areas

The MIS method does not include old-growth forest as a category for registration; instead, typical elements of old-growth forest (such as concentrations of dead wood) shall be recorded. As mentioned, this leads to a fragmentation of the old-growth forests. In addition, pine forests at low growth rates (soil quality 6–8) are not covered by the MIS registrations and are therefore deemed worthless by this method. In contrast, the “Living Forest” agreement states that old-growth qualities shall be preserved. A rather obvious start for reaching this goal would be to initialise registration of such qualities.

Spread of introduced species

Through international agreements, Norway has committed itself to prevent introduction of alien species that threaten ecosystems, habitats or species. Despite the «Living Forest» agreement, introductions of alien tree species are taking place on a large scale in Western and Northern Norway. A range of original forest types are transformed into plantations, usually of Norway Spruce (*Picea abies*), massively changing the natural ecosystem, and inevitably removing natural habitats and associated species. It has been shown that the different alien tree species are spread by natural regeneration in the natural forest ecosystems. This threat is arguably one of the most serious threats to biological diversity in Norway today, but despite of this, this issue is not taken seriously enough the agreement (see Box 1). The Ministry of Agriculture does not view spruce as an introduced species, apparently because it is not spread from outside the Norwegian border. However, we find that the definition of introduced species should depend on ecological, not political borders. This view is supported by the Ministry of Environment, which specifically mentions that spruce should be regarded as an introduced species in Western and Northern Norway (Ministry of the Environment 2000). The standard also allows for the use of species originating outside Norway, with only the weak conditions that «Norwegian species shall have the priority» and that «species with large or uncertain dispersal powers shall be avoided».

Box 2. The “Living forest” standard states that species replacement (here, replacing deciduous trees and pine with spruce and foreign species) creates valuable resources and is an effective way of binding CO_2. However, change of species shall *not* be applied in:

- pine forested bogs in western Norway,
- wetland forests,
- warm-loving deciduous forests, except in oak forests of low and medium productivity,
- lime pine forest and lime birch forest and
- border zones along rivers.

The standard also states that one should emphasize making "soft transitions" between the spruce forest and the surrounding areas.

Conclusions

There has to be accordance between the “Living Forest” standards and the tools used to fulfil them. “Living Forest” has to follow international conventions ratified by Norwegian governments. “Living Forest” should evaluate all scientific papers implementing forest management, not only the MIS results. The precautionary principle also applies to forestry. That means that when there are good reasons to believe that species are threatened by forestry, cost-effective measures should be taken to protect these species, also when the threat is not (yet) scientifically “proven”.

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Experiences and Recent Developments in US Forest Policy Related to Balancing Ecological and Economic Interests

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Abstract

Just before leaving office, President Clinton issued a regulation that prohibited road building and most timber harvesting on 23.4 million hectares of National Forest land. This regulation is known as the "Roadless Rule." This is nearly one-third of the National Forest System, and is 2% of the land area of the United States. Over 1.6 million people wrote comments on the regulation while it was in the proposal stage. Several state governors opposed this designation of land, and have filed lawsuits to terminate this regulation. The Bush Administration has announced its intention to amend the regulation, and it currently gathering comments from the public. Congressional interest in the issue is high. This issue is the latest in a series of controversies over the management of the 77 million hectare National Forest System. As people's incomes increase, and more live in urban environments, conflicts over active forest management, and extracting resources from the forest to support rural economies, continues to grow.

Keywords: Roadless rule, regulation, social conflict.

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Experiences and recent developments

The National Forests of the United States have always been surrounded with controversy. From their beginnings in 1897, when the first forests were reserved from the public domain, the debate has been for what uses these lands should support. The first controversies were, of course, whether these lands should be reserved for public use at all. Settlers in the West felt it was their right to harvest timber and graze cattle, without restriction, on the public domain lands. Since that time, the controversies have been about the authorities of the Federal government to regulate uses of the forests, what quantities of timber to be harvested, at what price the timber should be sold, whether reductions in water or air quality should be allowed, and how to best protect endangered species.

Beginning in the early 1960s, controversies arose over what lands should be reserved as wilderness, where no motors or other modern machinery can be used, and where primitive recreation is the primary use. The Forest Service began setting aside areas for primitive recreation much earlier, in 1936. Congress typically reacts to major national controversies over the National Forests, and in the case of wilderness, passed the Wilderness Act in 1964. This act set aside 9.4 million acres, after 8 years of debate, 16 Congressional hearings, and 66,000 pages of testimony and studies. Compare these statistics to those I will present below, for roadless area designation.

However, in evaluating which additional undeveloped lands should be recommended to the Congress as wilderness, the Forest Service created an inventory of “roadless” areas of 2,000 hectares or larger. This first of what turned out to be two efforts was called the “Roadless Area Review and Evaluation,” or RARE. Because of the controversy this first study caused, a second study, logically called RARE II, was done. Over 23 million hectares of land was evaluated for primitive recreation and other characteristics. This amount of land represents 31% of the National Forest System. This study ended in 1979, but we are still dealing with its controversies. Just as social controversies followed the creation of the first National Forests, so did legal challenges. The first case involving the Forest Service to reach the Supreme Court was decided in 1911, involving the authority of the government to regulate the grazing of sheep on the National Forests. However, court challenges over the uses and management of the National Forests were relatively rare until the 1970s. In that decade, the Congress passed several laws directly modifying the management goals and decision-making processes for the National Forests. The three pieces of legislation the have the most influence on the goals and management of the National Forests are the National Forest Management Act (NFMA) of 1976, the National Environmental Policy Act (NEPA) of 1970, and the Endangered Species Act (ESA) of 1973. Currently, the Forest Service is sued about 100 times a year, where the plaintiffs cite the failure of the agency to meet the requirements of these three acts. It is against this backdrop that the current debate over the management of the roadless areas occurs.

In October 1999, President Clinton directed the Forest Service to undertake a process to “provide appropriate long-term protection for most or all of these currently inventoried ‘roadless’ areas, and to determine whether such protection is warranted for any smaller ‘roadless’ areas not yet inventoried.” The inventoried roadless areas are spread throughout 120 National Forests located in 38 States and the Commonwealth of Puerto Rico. The agency responded rapidly to this direction from the President. A team of people was established to provide the analysis and write the environmental impact statement, which amounted to nearly 2,000 pages summarizing the analyses and presenting the results (USDA Forest Service 2001a). This process took only 15 months, with over 600 public meetings, and 1.6 million comments from the public. The decision set aside 23.4 million hectares from road building and timber harvesting, with certain exceptions (USDA Forest Service 2001b). This represents over 30% of the National Forest System, and about 2% of the United States land area.

With an allocation of land this large, controversies, both social and legal, are bound to be large, widespread, and intense. News organizations, including television, radio, newspapers, and magazines, have covered the issue extensively. State Governors have criticized the rule, saying they were not sufficiently consulted. Other individuals and groups assert they had insufficient time and information to comment properly. Environmentalists point to the 1.6 million comments, the great majority of which support the roadless rule. Eight lawsuits were filed against the roadless rule, involving six states in four federal district courts.

On May 10, 2001, the District Court of Idaho preliminarily enjoined the roadless rule, which temporarily suspends it, while the Court considers its ultimate decision. The Court schedule is to have all briefings and motions completed by January 4, 2002. It is probably safe to say that whatever the decision of this District Court, it will be appealed to the next higher level, the Ninth Circuit, located in San Francisco. The appeal process will take another 9 to 12 months, so the decision as to whether the roadless rule is legal, will not be decided until early 2003, which raises the possibility it will be an issue in the next Presidential election.

The Administration has stated its intent to amend the roadless rule, to fix the defects cited by the Governors and others. However, it is difficult to make amendments while the rule itself is in litigation.

This situation I have been describing to you at some length, is reflective of two issues concerning the National Forests of the United States that have essentially remained unresolved since the 1970s: to what uses should these national resources be put, and what are the goals for management. Prior to the legislation of the 1970s, the purpose seemed relatively clear: for the economic benefit of the nation, and in particular, for those people close to and within the National Forests. At the same time, the recreational and aesthetic uses were also to be accommodated. With the passage of the National Environmental Policy Act, Congress began changing the purposes of the NFS. This change continued with the passage of the Endangered Species Act. A former Chief of the Forest Service, Jack Ward Thomas, has stated that the governing legislation, taken as a whole, has produced a new goal for the NFS, that being the preservation of biodiversity. Significantly, his claim has remained unchallenged, by any subsequent Administration or the Congress.

At the same time, we have an issue of the complexity of the decision making process of the Agency. We have begun employing a new technique, called business requirements analysis, which helps to analyze complex processes. Essentially, a business process, or for us in government, a decision making process, is broken down into its smallest logical components of work. A division of IBM, in England, in the 1970s, developed this technique. Over 200 large companies worldwide have since utilized it. One result of using this technique is a chart of the process, with a series of linked boxes, each of which describes a part of the work to be done to reach the objective, in this case a resource management decision. A chart of the work needed to reach a decision on a timber sale, according to agency handbooks (which dictate processes and steps deemed necessary), is over 40 meters long! The agency is taking the first steps to simplify and shorten this system of overly complex requirements. However, it is not in the interests of some groups who oppose human activities on forested lands to simplify the process, and change will be difficult.

The economic impacts of this setting aside of 23.4 million hectares are difficult to gauge. Because of the difficulty of the decision making process, and the strong opposition of some groups, harvesting timber in roadless areas has generally been avoided. Over the next four years, the Forest Service had planned to harvest about 7% of its total, or 519 thousand cubic meters. Nearly half of this harvest is on the Tongass National Forest in Alaska. Total jobs affected are estimated to be 1,054 (direct, indirect, and induced), representing about $48 million in income.

Minerals, including oil and gas, phosphates, and coal, probably represent the largest economic impact of the roadless rule. It is difficult to estimate the amount of minerals, since

Table 1. Roadless areas by State.

State	Area (1000 ha)	Percentage of total
Alaska	5 912	25.3
Idaho	3 729	15.9
Montana	2 559	10.9
Colorado	1 773	7.6
California	1 766	7.5
Utah	1 605	6.9
Wyoming	1 303	5.6
Nevada	1 274	5.4
Washington	806	3.4
Oregon	786	3.4
New Mexico	639	2.7
Arizona	470	2.0
Subtotal	22 623	96.6

Note: 26 other States, and the Commonwealth of Puerto Rico, comprise the remaining 784 000 ha, and 3.4% of roadless areas.

the deposits are not well known, and sometimes simply projected, based on what is known about the geology of an area. But some estimates have put the value forgone by prohibiting exploration and development at over $100 million.

The roadless rule illustrates an interesting dichotomy in America's social environment. The large majority of supporters of setting aside this large land area are from urban areas, while the largest economic impacts rest on those populations in rural areas, close to the National Forests. Over half the 23.4 million hectares are in only three states: Alaska, Idaho, and Montana. Over one-fourth is in Alaska, where the impacts from timber harvesting reduction are the greatest.

Resolution of the issue may take years, or it may be resolved with the courts' decisions this winter, and with the Administration's response. History would suggest the former. Hope argues for the latter.

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Economic Policy for Sustainable Forestry

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Abstract

The paper addresses the problem of the choice of policy instruments for sustainability in a privately operated forestry industry. Sustainable forestry affects many aspects of operations. Sustainability conditions are exogenous to project appraisal and should appear as constraints on project design. As applications of broader policies, sustainability requirements do not possess a monetary value independently of the policy they are derived from. Efficient instrument choice entails a trade-off between control and compliance costs. Marketable instruments are unlikely to be efficient in forestry. Where policy failure results in irreversible effects, the Polluter Pays Principle should not be applied. Efficient instrument choice in the presence of irreversibility requires that the agent be rewarded for contributions to achieving the policy objective.

Keywords: Sustainable forestry, economic instruments, principal-agent

1. Introduction

The problem that I am going to discuss is that of choosing policy instruments to achieve sustainability for a privately operated forestry industry. The industry may own or lease the land on which the forests are located or it may operate concessions in state forests. While the issue of ownership of the land will affect the details of instrument choice in a number of ways it is not important for the level of generality used in this paper. In either case instrument choice can be viewed as a principal-agent problem. The principal, the state, wishes to induce the agent, the forestry industry, to manage and exploit the forests sustainably. The agent's interests diverge from those of the principal and in the absence of the use of instruments by the principal would not choose sustainable forestry.

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2. Sustainable Forestry

The reasons for retaining a level of generality lie in the diversity of situations that exist in European forestry and in the complexity of the notion of sustainability. Sustainable forestry is a broader concept than the traditional notion of sustainable yield forestry. Sustainable yield is achieved in plantation forestry after L years with a constant annual planting rate equal to A, the area of mature timber that will produce the desired yield. L is the desired age of trees on felling. The plantation area for the sustainable yield is then AL. This simple model can be modified to allow for risk factors such as wind-throw, disease and fire. In the same spirit formulae can be derived relating the sustainable yield to the area and the regeneration rate for natural uneven aged forests. These formulae and modifications of them can be found in many textbooks of forestry economics, e.g. (Price 1989). I will not discuss them here.

Sustainability is a much broader concept then sustainable yield. It is concerned with maintaining life support systems for future generations. There is a plethora of definitions of sustainability and sustainable development. Here I am following my own interpretation in Bowers (1997). Thus, as well as providing for current and future consumption of timber and perhaps other consumer goods (wild fungi, game, recreation), a sustainable forestry policy might be concerned with the role of forests as carbon stores in a strategy to limit climate change, with watershed management and controlling soil erosion, and is likely to be an important component in policy to conserve or enhance biodiversity. These broader social concerns are externalities with the characteristics of public goods. They will not be given sufficient weight, if indeed they are given any weight at all, in the decision making of a private forestry industry. Hence a commitment to sustainability entails market failure that provides the reason for state intervention.

A commitment to sustainability could cause the state to wish to intervene in many aspects of forestry. Specifically it could be concerned about:

- Cutting policy – the areas to be cut; total volume of cut; age of cutting; species composition; selection of trees to be cut.
- Planting policy – volume; species composition; density; location of plantings.
- Management of growing forests – treatment of scrub and understory; thinning; pest control; use of chemicals.

The precise requirements of sustainability, which may be expected to vary from country to country, will determine the details of the instruments to be used. Here we discuss some general principles.

3. Instrument Choice for Sustainability

The standard (neo-classical) economic model of the environment views the social costs and benefits as Pigovian externalities (Pigou 1920). In this model, depending on the allotment of property rights in the missing market, the decision maker, in our case the private forestry industry, is induced to internalise the externalities, by the levying of a tax or the payment of a subsidy equal to the difference between marginal private and marginal social costs at the optimum level of the externality. By general convention property rights in the environment are allotted according to the Polluter Pays Principle. Thus the industry would be subsidised where it conveys a social benefit and taxed where it imposes a social cost. If the rate of planting were below the social optimum the industry would receive a planting subsidy; if the rate of felling were above the social optimum then it would be taxed.

The practical application of this approach uses a cost-benefit analysis to determine the appropriate level of the externality. Sustainability (strictly weak sustainability, which is the appropriate definition for the neo-classical model; strong sustainability recognises limits to factor substitution) is achieved if all costs and benefits, including intangibles, are valued and included in the cost-benefit analysis. What is to be measured is known as total economic value, defined as the sum of aggregate use value and non-use value. Once that is determined the choice of instrument to achieve that level is treated separately and a variety of instruments are considered.

In general, regulation backed by legal sanctions, often known as command and control, is seen as economically inefficient, in the sense of not meeting the environmental objectives at least resource cost when compliance costs differ between the firms. Many commentators also consider regulation to be dynamically inefficient in providing no incentives for innovation in reducing the costs of meeting the control. It can also constitute a barrier to new competition.

Uniform ad valorem taxes (Pigovian taxes) have the appropriate efficiency properties but have prohibitive informational requirements if they are to be correctly set. Trial and error in setting such taxes carries potentially serious social costs. A further drawback is the need to adjust the tax level for inflation.

The modern fashion is to look for varieties of marketable instruments, such as tradable permits, to achieve environmental objectives. These are believed to combine the advantages or command and control – simplicity in setting and limited informational requirements – with the efficiency properties of ad valorem taxes. Marketable instruments use market processes to achieve environmental objectives. As such they can be seen as in harmony with modern trends in economic management: releasing the potential of the market from the inefficiencies of state control. Command and control suggests the antithesis of this trend; old-fashioned top-down interference.

Thus the conventional paper on my subject would discuss how the externalities should be given monetary valuation to determine total economic value and then seek to fashion the notion of marketable instruments to the particular problems of sustainable forestry. There are several objections to that approach. I am going to concentrate on three elements:

- the feasibility of determining total economic value;
- the assumption of the superiority of marketable instruments;
- the desirability of the Polluter Pays Principle.

4. The Measurement of Total Economic Value

It can be argued that several of the elements in total economic value, including some that are crucial to the notion of sustainability, which cannot be given a meaningful monetary expression at all. Among these I would include the contribution of forestry to the maintenance of biodiversity and to carbon sequestration, both central to the notion of life support services.

An intangible can be defined as something that does not have a use value in the sense in which neo-classical economists use the term. The conventional method of placing money values on intangibles and the method of imputing non-use values on the environment is through stated preference techniques, the most widely used of which is contingent valuation analysis (CVA). These techniques, which can also be termed hypothetical market techniques, apply a questionnaire to a population sample to determine its willingness to pay (WTP) to avoid specified environmental damage or, alternatively, the compensation it would accept (WTA) in the event of that damage occurring. These values can be interpreted as points on

Hicksian Income Compensated Demand Curves and are therefore used to provide estimates of the population's consumer surplus for the environmental 'goods'. WTP and WTA can be evaluated in terms of alternative market goods or, with the preferred technique CVA, in terms of money, in which case the researcher conducts a bidding game with respondents.

In addition to the numerous sources of response bias recognised by proponents of the methodology, which in principle can be avoided by careful research design, CVA has been subject to some fundamental criticisms. An early critic was Sagoff (1986) who argued that the CVA was based on a category mistake, confusing actions appropriate to the role of the citizen with those of the private consumer. Contributors to the Hausman volume (Hausman 1993) provoked by the sinking of the Exxon Valdez in Alaska and the proposal to use CVA to calculate damages concentrated more on the outcomes of CVA; arguing that experiments could not be replicated, that they were inconsistent with consumer preference theory, and, where environmental assets of international or inter-generational significance were involved, the population from which the sample was to be drawn was undefined. The Arrow committee (Arrow et al. 1993) cannot really be said to have addressed these criticisms. Its recommended code of best practice would help in meeting the conventional sources of bias but that is all.

The cause of the fundamental problems of CVA and the reason why it is not a valid technique for placing money values on intangibles rests in a fundamental fallacious assumption. That is that a consumer's ability to assess value in markets in which he or she operates can be transferred and put to use in the hypothetical markets that are constructed for the purposes of the survey. This is not so. Market behaviour is not innate and consumers entering markets for goods with which they are unfamiliar need to learn what values are appropriate. Knowing the value of a loaf of bread is of no help in deciding what to pay for an option in three-month wheat futures. Only once they have done so will they possess a WTP. The channels for learning about value in real markets are many and various; ranging from simple observation of what is on offer at what prices, through talking to those with relevant experience, attending to media advertisements to consulting specialist magazines and manufacturers' catalogues. No channels exist for learning about values in the hypothetical markets of CVA since the markets do not and cannot exist. Markets can only work for things that have use value and for which property rights can be assigned and transferred. Money prices take their meaning from their function in facilitating trade in markets. Hence expressions of WTP in CVAs are simply artefacts of the research process they are derived from. They have no external validity.

Aside from the general issue of the validity of CVA and other stated preference techniques there is another reason why sustainable forestry policy cannot be decided by cost-benefit evaluation. Many of its components will be simply applications of broader policies and will possess no free-standing value of their own. Thus maintaining a stock of old growth natural forest may be an application of a strategy for maintaining biodiversity and has value as part, possibly a crucial part, of that strategy. But the part is not separable form the whole.

The conclusion to be drawn from this discussion is that a sustainability strategy for forestry cannot be derived from a piecemeal application of cost benefit analysis to individual elements of forestry policy. The sustainability strategy is exogenous to those appraisals and is essentially determined through the political process. Every component of the strategy has an opportunity cost and the opportunity cost of the strategy as a whole, as with any other programme to achieve intangible benefits (e.g. the US Star Wars Programme) is an important element in the decision on whether to adopt the programme. The opportunity cost of the individual elements is likely to be an important factor in determining what to include. The objective of instrument choice for components of a sustainable forestry policy is therefore that of choosing the instrument or set of instruments that will achieve the objective at lowest opportunity cost.

5. The Efficiency of Marketable Instruments

No instrument is self-policing. Whatever instrument it chooses to achieve its objective the authority has to monitor the agent's performance and enforce the instrument. This means that ultimately all instruments, and not just a regulation, has to have the backing of the law. With a regulation the authority has to detect breaches and where they are found prosecute. With a tax the authority has to calculate tax liability and collect the tax. Refusal to pay should lead to enforcement through the law. With a marketable instrument such as a transferable permit or entitlement, the authority has to ensure that the permits needed are actually in the agent's possession at the time that they are required. This requires monitoring the agent's actions, calculating the permits needed and checking that they are held. Again acting without the permits would constitute an offence ultimately enforceable through the courts. If the marketable instrument is not monitored and enforced its price would fall to zero; there would be no market. Monitoring and enforcement with ultimate legal back up is equally needed for subsidies whether they are paid before or after the action they are designed to facilitate. Accepting subsidies but failing to perform the actions for which they are paid would, in most legal systems, constitute fraud.

Monitoring and enforcement are the social costs of using an instrument to achieve an environmental objective. The opportunity cost of the instrument is the sum of the private costs imposed on the agent and the social costs incurred by the principal. Social costs are typically at their lowest with regulation. The monitoring requirement is relatively simple and further costs are only incurred when a breach is detected. On the other hand private costs are not minimised because they are not distributed according to compliance costs. Social costs are typically higher with taxation and tradable instruments. Monitoring requirements are normally more complex (Bowers 1997) and there are additional administrative requirements. Thus in instrument choice there is likely to be a trade off between social and private costs. Where there are large differences in compliance costs between agents, minimising private costs is likely to dominate the equation. That is the case with the successful US tradable permits scheme for acid emissions from power plants. However variation in private compliance costs should not be assumed. With forestry operations technology is likely to be fairly uniform and the losses from regulation will be small. In these circumstances the appropriate decision rule will be to minimise the social costs of control.

6. Should the Polluter Pay?

An instrument is designed to cause an agent to modify his/her behaviour so as to achieve the principal's objectives. Instruments of environmental policy are prone to fail from time to time in the sense that the agent does not alter his/her behaviour in the desired way. The reasons for policy failure within a principal agent framework can be classified as follows:

- moral hazard;
- first mover failure;
- adverse selection and
- irreversibility.

All of these sources of instrument failure arise from the presence of asymmetric information: information possessed by the agent that is relevant to the principal's problem of protecting the environment, which the principal cannot obtain, or can only obtain at excessive cost. They are best illustrated with appropriate examples. For simplicity we assume that the chosen

instrument is a regulation.

Moral hazard exists when the asymmetric information concerns the agent's actions. An example might be where biodiversity policy requires specific management of an area of forest in order to conserve a species of plant or animal. The management might entail the control of alien pests, avoiding the use of pesticides, maintaining stock-proof fences, or any of a host of other specific management practices. The management requirements are against the agent's interest, either causing him/her additional costs or reducing timber output. The principal cannot typically observe the management and perforce must infer that it has taken place by monitoring the results in terms of the population of the target species. However the target species can decline for reasons other than the agent's actions: because of climatic change, disease and so on. The agent thus has an incentive not to carry out the management obligations and to blame the decline on exogenous factors, in the knowledge that the principal lacks the proof necessary to enforce the regulation.

First mover failure concerns the information needed to 'set' the instrument. For a regulation to work the penalty (typically a fine) must be greater than the benefit that the agent would derive from committing an offence, weighted by the probability of the offence being detected and the penalty enforced (Bowers 1997). An increase in agent benefits, as a result, for example, of a rise in the real price of timber, may necessitate the resetting of the instrument. If the agent detects the changed circumstances and responds to them before the principal can reset the instrument then we have first mover failure.

Adverse selection arises when the agent has better information than the principal does on the quality of the product. An example might be where a forestry company has a concession on the cutting of old growth forest. The principal requires some proportion of the area to be left uncut to conserve biodiversity. The principal would desire that the biologically richest should be set aside; the agent will wish to set aside the area with the lowest timber yield. If these two criteria diverge then we have a problem of adverse selection.

Irreversibility Most environmental policies fail from time to time. The problem is only of serious concern when the effects of failure are irreversible. Problems of global atmospheric pollution such as the release of stratospheric ozone depleting gasses and those that contribute to global warming are irreversible within an acceptable time-frame but their effect is not perceived immediately and they can be compensated for by adjustments in future rates of release. Equally destruction of timber resources in forests is only reversible with a substantial delay but timber imports and the use of substitute products can mitigate the consequences of destruction. Probably the only truly irreversible effects, where mitigation is not possible with current technology, are the destruction of habitat leading to species extinctions.

In the face of irreversible effects the policy authority (the principal) is highly risk averse. Its objective can then be re-defined as choosing the most economically efficient instrument (i.e. that with the lowest opportunity cost) to achieve the policy objective subject to the constraint of an acceptable risk of failure.

One way of reducing the risk of failure is to introduce a safety margin into the instrument setting, imposing tighter environmental standards than would be needed in the absence of irreversibilities. Safety margins however have resource costs, both for the principal (in a requirement for a higher level of monitoring) and for the agent. While some safety margin is likely to be part of an optimum policy package it does not obviate the need to look for instruments with lower failure rates. How does one reduce the risks of moral hazard, adverse selection and first mover failure?

Instrument design to reduce failure To avoid moral hazard and adverse selection the principal needs to 'bond' the agent by sharing with him/her the rewards from the successful implementation of the policy. This in effect means that the policy instrument package should include a payment to the agent dependent on the achievement of the policy objectives. Thus

if the objective is to maintain or increase the population of endangered plants or animals as part of a biodiversity strategy the payment would be related to the size of the target population as revealed by monitoring. If the population is subject to risk factors outside of the agent's control, then in bonding the agent shares not only the benefits but also the risks.

To avoid first mover problems a positive feedback loop is needed, so that, in the event of changed conditions that make it in the agent's interest to breach the policy, he/she seeks to renegotiate the policy settings rather than exploit the loophole. A regulation does not have this property: if a forestry company finds it profitable to ignore a regulation and pay the fine, it will not instead ask the policy authority to increase the fine so as to make it a deterrent. Equally neither taxes nor tradable permits offer positive feedback. Indeed no policy instrument that imposes a penalty on the agent for non-compliance will possess positive feedback. Positive feedback requires two things:

1. a bonding payment to the agent, as with the other sources of instrument failure and
2. flexible (i.e. re-negotiable) compensation to the agent for the opportunity costs of conforming to the policy.

Management agreements can be designed to have these properties (Bowers 1999).

Where social costs exceed private costs and the need is to control agents' performance – by reducing felling rates, inducing environmentally friendly management practices, etc. the Polluter Pays Principle requires instruments that impose costs upon the agent. Such instruments offer no positive feedback and provide no protection against the sources of failure that we have listed. Hence in the presence of irreversibilities sustainable forestry requires instruments that conflict with the Polluter Pays Principle.

7. Instrument Choice in Practice

Planting trees is an investment decision with a very long pay-back period. Private individuals often plant trees as part of managing their tax affairs and as a means of transferring assets to their children. These characteristics mean that it is possible to utilise the difference between individual and social rates of time preference in order to reduce the resource costs of ensuring sustainable rates of afforestation and sustainable management of forests. This has long been the practice in the UK and in other parts of Europe. How this should be done will depend on the details of the direct tax system in the country concerned.

8. Conclusions

The requirements for sustainable forestry cannot be determined by the piecemeal application of cost-benefit analysis to individual forestry projects. The sustainability strategy needs to be determined exogenously as part of the political process. Once that is done sustainability requirements become constraints on decision-making and, within the context of individual project appraisal, have an opportunity cost but not a measurable monetary benefit. Some of the requirements for a sustainability policy are determined by international treaty obligations but even within these there is considerable freedom for interpretation. Some of the components of the policy cannot be given a meaningful measure of monetary benefit but the policy as a whole, and the individual components of it, will have an opportunity cost.

The instruments chosen to achieve sustainability objectives should be those with the lowest resource cost defined as the sum of the costs of the control authority (the principal) and the organisations subject to control (the agents). The conditions for the superiority of marketable instruments will probably not apply in forestry in which case the instrument with the lowest control cost should be chosen.

In the presence of irreversible effects of failure of policy the Polluter Pays Principle should not be applied since it is incompatible with the design of policy instruments to minimise the risk of failure. In these cases the agent should be viewed as making a positive contribution to sustainability and should face a reward for that contribution. That reward should at be greater any costs incurred from compliance. The first mover problem means that there should be provision for renegotiating the compensatory component of the payment in the event of changes in the market opportunities facing the agent.

Since individuals use forest creation, ownership and management for purposes of tax planning and intergenerational asset transfer there may be opportunities to use the difference between private and social rates of time preference to reduce the resource costs of a sustainable forest programme.

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A Spanish Experience: The Forest Plan of Catalonia and its Consequences for Private Forest Management

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Abstract

The experience of a selected Spanish region (Catalonia) after the devolution process in the early 1980s with regional forest plan is presented in relation with the use of incentive instruments in order to promote forest management planning. The list of the applied measures and frame conditions is related before analyzing the outputs of the process. In 7 years after the approval of the forest plan, some 164 000 ha had been subjected to management plans, a unique figure in comparison with other Spanish regions in private forests. Finally the figure of the Forest Ownership Board as a participatory public body responsible of the approval of the management plans is analyzed.

Keywords: forest incentives, Spanish forest policy, regional forest policy, forest management planning

Introduction

There is not enough experience at the European level on National Forest to give examples on the achieving the identified objectives and the efficiency of the defined instruments. The experience of those exceptional cases where a national or regional forest program has been in use in the past 5 or 10 years becomes of key relevance in comparative forest policy research.

Spain had no prior experience in national forest programs despite the afforestation plan of the late 1930s that conducted the historical afforestation process of the following 3–4 decades, achieving an area of ca. 3 million ha (Ortuño and Ceballos 1977). Following the regionalization process of the early 1980s, the most self-conscious regions elaborated regional forest programs (Ministerio de Medio Ambiente 2001).

One of the regions, Catalonia, that approved its plan for the period of 1994–2004 in 1994, has been selected in order to analyze the use of incentive instruments to achieve the goals of

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the plan. The passed period since its approval (7 years) and the fact that most of the main instruments were included in the regional forest law of 1988 seems to be a sufficient time period for this analysis.

Methodology

The region to be analyzed was selected from the data on the currently active regional forest plans (Ministerio de Medio Ambiente 2001). Catalonia was selected because of its natural and socio-economic conditions, the significant use of incentive mechanisms, as well as the time period passed since the approval of the plan and the information available.

After choosing the region, the natural and socio-economic and political conditions were described followed by an analysis of the policy process undertaken before, during and after the elaboration of the regional forest plan. This information was gathered from the representative stakeholders by an independent expert. Afterwards the measures undertaken to achieve the planned goals and the outcome of the process were analyzed. The study is finished by a discussion of the conclusions.

Forest conditions in Catalonia

The main features of the forest conditions in Catalonia are listed in Table 1.

Table 1. Main features of the forest conditions of Catalonia[1].

Socio-economic conditions	Natural and forest conditions
Spanish region located in the NE	High forest cover (1.4 mill. ha, 44%, in many areas > 2/3)
High degree of political autonomy	¾ Mediterranean forests, ¼ Alpine forests
Relatively developed region	High fire risk during the summer in the Mediterranean forests (average 600 fires/year, 1000–60 000 ha/year)
High population density (200 inhab/km^2)	>80% mountain forests
High concentration of infrastructures (roads, electricity lines, etc.)	80% private forests, predominantly medium size (25–200 ha) in trend from rural to urbanized also by new owners (high land prices)
Strong services oriented economy (tourism)	High recreation (mushrooms, tourism) and landscape value
	Strong fall rainfalls (up to 200 mm/day)
	Neglectable plantation area (1–2%)
	High level of protected areas (40% of the forests)
	No profitability for last 20 years
	Progressive abandonment
	High soil prices signalizing the tertiary process of forest estates

1 See DARP (1994), Centre de la Propietat Forestal, forest statistics, etc.

Forest policy process

In 1980, the central government devoluted the forest competences to the first two Spanish regions, Catalonia and the Bask Country. Later on, the other 15 regions followed.

The situation in the 1980s at the time of the devolution could be described as following:

- Common forest law of 1957 design for a centralistic and authoritarian regime becoming increasingly obsolete[2]
- Each forest felling had to be approved explicitly
- Forest incentives on low level (35%), though highly used in the relatively still profitable forests (Rojas 1995)
- Investments on public (municipal) forests on low-medium level thanks exclusively to central government expenditure and the legally compulsory reinvestment of 15% of the wood income
- Low linkage with the rural Catalan society of the forest service (language problem)
- Start of the declaration process of protected areas
- Increasing intensity of forest fires
- No tradition in forest management planning in private forests and abandonment in public forests.

One feature that explains considerably the political agenda in forest policy has been the forest fire regime. Years with fires with a high social impact (1986, 1994 and 1998) have always forced the forest policy development.

In general it can be stated that the forest service of that time was limited to fire extinction, extensive public forest management and control on private forests, mainly felling licenses (Rada 1964, Ortuño and Ceballos 1977).

The following period since the devolution may be resumed by the following features:

- Forest fire extinction joints the fire man in the Department of Interior together with the regional police and civil protection
- Start of a land covering network of forest fires self defense local associations (1986)
- Celebration of the I Catalan Forest Congress with some 1000 assistants (1988)
- Approval of the Forest Law including some innovative aspects together with continuity obliged by the still in force national frame law (1988)
- Creation of the Private Forestry Board (1990) which main function is to promote forest management plans in private forests
- Creation of the Department of Environment. Functions limited to regulations of protected areas (1991)

Table 2. Correlation of important forest fires and forest policy agenda

Year	Forest fires	Following political agenda
1986	Montserrat, Albera (60 000 ha)	I Catalan Forest Congress (1988), Forest law (1988)[3], Forest Ownership Board (1990)
1994	Bages-Berguedà, Montseny (60.000 ha)	Forest Plan of Catalonia (1994)
1998	Bages-Solsonès (20 000 ha)	Forest Ownership Board law (1999)

2 Participation e.g. was not included as an issue in this law as well as the freedom of the private and communal forest owner in the management of their land.

3 The Forest law of Catalonia was the first regional forest law to be approved in Spain after devolution.

- Approval of the protected areas network that covers 20% of the land are and serves as bases for Natura 2000 network (1993)
- General Plan of Forest Policy (Regional Forest Program 1994–2003)
- Breakdown in the forest subventions (1996) due to the high costs of restoring of forest fire areas of 1994 and lack of specific forest budget financing sources[4]
- Law of the Private Forestry Board (1999) giving the Board a much broader autonomy including a specific private forest fond
- Forestry and nature protection leaves the Agriculture department for Environment (1999)
- Forest rangers move for some months to the Department of Interior and returned back to the Forest Service in the Environmental Department (2000)

In a general view it can be stated that the Forest law and Plan foresees the shift from a defensive management and policy to a proactive management promoting the elaboration of forest management plans.

Measures adopted

Coming back to the policy analysis in the specific field of incentives, following measures have been identified as significative[5]:

- Simplification of felling in the case of forest management plans (1991)
- Specific regulation for private forest management plans (1991, 1994, etc.)
- Forest subvention schemes increase from 60% to 80% the maximum aid level for the case of management plan (1993)
- Derogation of felling licenses for all forests (1993)
- Exemption of land tax except in fast growing species on federal level (1988 and 1995)
- Wealth tax exemption for main income source on federal level (1994)
- Exemption of a second land tax for hypothetical social insurance on federal level (1995)
- Reductions in inheritage tax on federal level (50% in general, 75% with management plan, 90% in protected areas) (1995)
- Forest subventions released from taxation on federal level for forest with management plans (1996)
- 30% release in the notarial and registration costs for transactions of forests with management plan on federal level (1997)
- Forest insurance system established (first time in Spain) only for forest with management plan (1998)
- Increased reductions in inheritage tax for forest with management plans (95%) (1999)
- Forest management plans are enlarged also for the smaller holdings between 10–25 ha and approved directly by the Private Forestry Board (1999)
- Forest are included into the module tax system (13% or 26% of the gross income is supposed to be the net income, 20% released for management plans) on federal level (2000)

Whereas the mot fiscal measures are on federal level, it should be remembered that the most of the tax exemptions have been pushed forward by the Catalan government mainly through its parliamentarians in Madrid being the 3rd political party frequently needed for completing week majorities.

4 The private forest budget was never devoluted to the regions and was substituted in 1993 (15 million •/a) by the afforestation program for agricultural land of the EU.

5 If not noted, the measures related are specificly limited to Catalonia.

Table 3. Forest management plans approved since 1991.

Year	Number	Area (ha)
1991	3	215
1992	9	1182
1993	23	2549
1994	52	6586
1995	87	11 246
1996	163	24 626
1997	175	25 242
1998	213	34 553
1999	157	30 200
2000	166	28 003
Total	1046	164 402

Source: The Private Forestry Board of Catalonia (2001)

Outcome

Following outcome of the process may be identified:

- More than 1000 forest management plans in 10 years in private forests (including the plans in the pipeline 20–25% of the potential area). Unique experience in Spain that due to general tax releases drops over recently to other regions[6].
- Institutional framework favors a cooperative approach in forest policy between the regional government and the main target group (forest owners).
- Cooperative approach allows that all the stakeholders (incl. ENGOs) participate in regional certification scheme under the umbrella of the Private Forestry Board.
- Pressure from other stakeholders to enlarge this model to the communal forests and to go further into a Forest Agency (Profor 2001).
- As a consequence of the Forest Ownership Board, the budget for private forests has considerably been enlarged and stabilized as it is approved separately by the Parliament.

Conclusions

The cooperative model established by the Private Forestry Board is innovative for the spanish public administration and obliges to arrive to consensus between the target stakeholders. It is ruled by a Board elected both by forest owners with management plan and by representatives of the regional government. Whereas the chairman is a forest owner, the director is appointed in agreement with the regional government. Forest police and regulations are kept by the Environmental department. The trend to abandonment both of forests and forest policy in Mediterranean regions is turned mainly due to the strong potential of this model, especially if it has vis-a-vis a strong power like in the Catalonian case.

It is an interest example as well for federal structured countries and/or countries with a high percentage of non-state forests. In fact, comparable figures exist in France and Finland. Matters of public interest on private land are not left to the limited capacity and restricted interests of forest owners associations but assumed by a public financed and controlled board

6 Mainly Andalusia. As forest management plan is a prerequisit in the PEFC-Spain certification scheme, it is supposed to take over in the rest of the regions.

where a significant number of stakeholders may be included as the process allows it. Participation in this model goes further than dialogue and transmission of proposals and enters a participative ruling model that could be of a high potentiality for the future forest policy.

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Survey on Existing and Foreseeable Forest Incentives

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Abstract

With the falling forest revenues and the growing environmental awareness of the public, the risk of an insufficient financial allocation to assure sustainable and multifunctional forest management is an actual issue, especially in forests with a high level of protection functions (Alpine, Mediterranean forests). The different options for improving the forest review are first identified, then analysed including the pros and cons. The conclusions advocate for a flexible policy mix of different instruments supported by efficient forest statistics and research in order to adapt interactively the process.

Keywords: Forest incentives, forest policy, subvention, environmental economy, environmental primes.

1. Introduction: The socio-economic frame of forestry in Europe (see Rojas 1999a)

The socio-economic frame of forestry in Europe may be characterised by a decreasing level of relative wealth creation capacity in the whole forest chain (owners, labour, professionals, industry, etc.). In all the European countries, the forest sector seems to have been unsuccessful in keeping the pace of development of the rest of the economy. Nevertheless, this period overlaps with an increasing social awareness of nature and forests in particular that generates more and more demands without a market instrument that assures the needed reinvestment (economic sustainability).

This situation requires not only to keep the forests in a high level of quality far away from what would be suitable due to present levels of profitability but also to succeed in each new demand that challenges forest sustainability. Whereas a classical vertical sector has to follow a very a limited number of overlapping elements, the new cross-sectorial nature of forests makes them grow exponentially, overcoming the political and social strength of the classical forest sector that has to assume the costs alone.

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But this also has a key economic consequence. Whereas in negative externalities like pollution, due to macrodecoupling, the more the externalities grow, the more the misallocation of resources increases by generating an unreal profitability charging others with the costs of the produced externalities, in the case of positive like forests assure, the inverse process called microdecoupling is observed (Mendes 1999). The higher the degree of produced externalities like in the Mountain or Mediterranean forests, the lower the allocation of resources through the market works. Consequently, the forest abandonment clearly observed through the continent is more generalised in those forests where the importance of their externalities should get a higher degree of attention.

In the specific case of the Mediterranean forests the threat of forest fires, which are clearly linked to land abandonment should be taken into consideration (Mendes 1999, Vélez 2001).

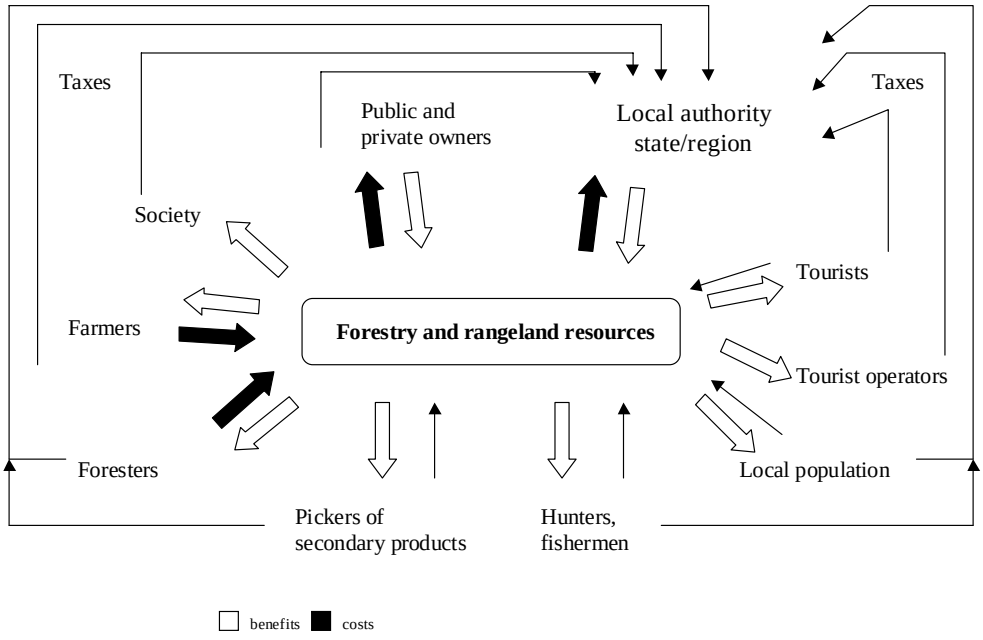

Figure 1. The costs and benefits of forests (Merlo 1999).

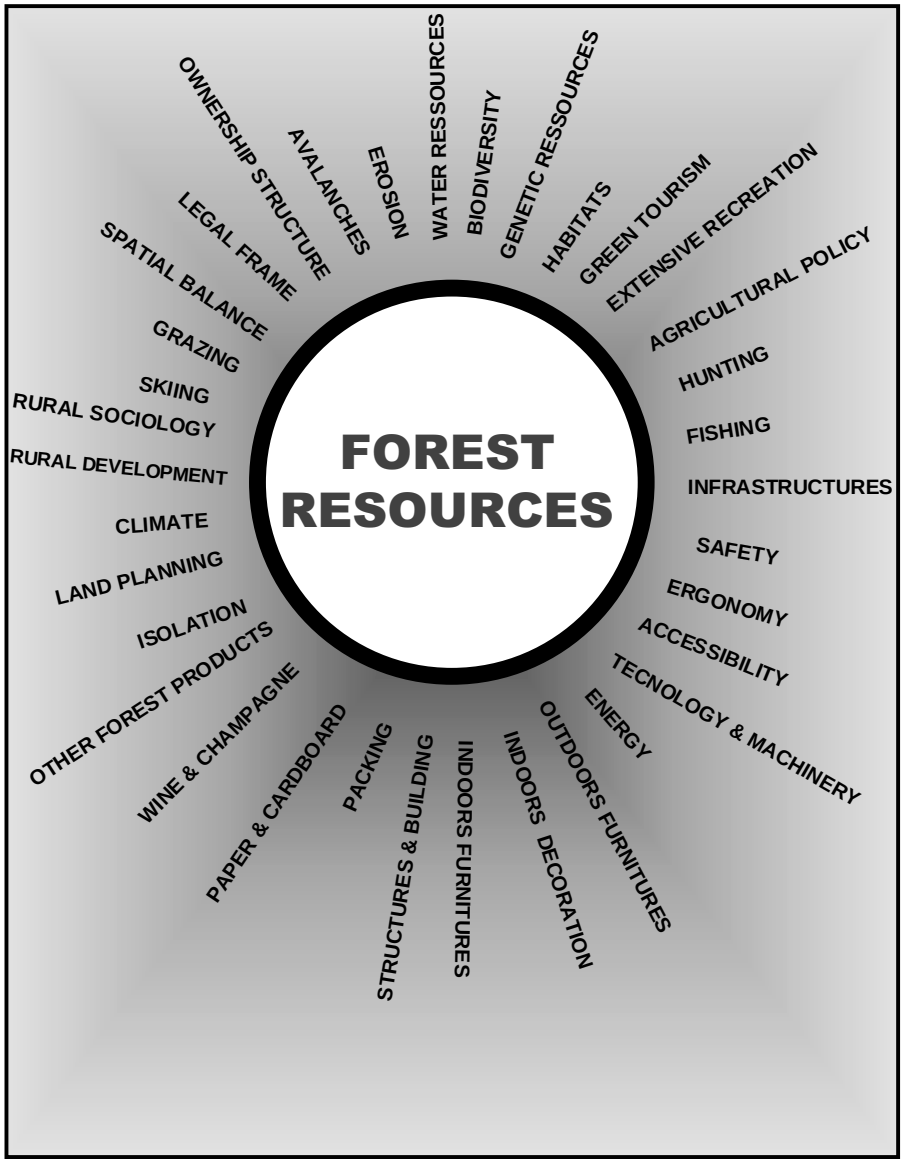

Figure 2. Forest resources linkages with other activities and social interest fields.

2. Methodology

The different theoretical options of incentives are identified and described including applied examples. A general overview includes the pros and cons of each of the discussed options to draw some preliminary conclusions.

3. Options for incentives

If action should be taken, two options exist. First the use of regulatory mechanism, and secondly the use of incentive ones. The first option has been strongly used in the past decades and has not solved the problem as an active management cannot be forced by regulations if forestry is not profitable (Rada 1964, Ortuño and Ceballos 1977 and Mendes 1999).

In the case of incentives, the theoretical possibilities are presented in Table 1.

Table 1. Theoretical options for land management including forest incentives.

FR = LH x UP - (RC - SRC) - (I - SI) - (FC - IC) - T - (R - CR) + ERS + EP

FR: Forest revenue
LH: Level of harvesting
UP: Unit price
RC: Running costs
SRC: Subvention to running costs
I: Investments
SI: Subvention to investments
FC: Financial costs
IC: Incentived credits
T: Taxes
R: Risks
CR: Compensations of risks
ERS: Environmental and recreational services
EP: Environmental primes

4. The pros and cons of the different incentive types

Table 2 presents the different types of possible options of incentives including examples.

5. Conclusions

Table 2 shows the complexity of examples and options for forest incentives. This opens the possibility to adapt the incentives to the specific conditions and objectives in forest programmes. In any case, successful strategy will always need to include a flexible and adaptable policy mix not only of incentives but also of other forest policy instruments like regulatory, administrative, planning or informative ones. An efficient forest information system (statistic, inventory, etc.) and an applied research activity may help to adequate interactively the combination and intensity of the incentives used in order to increase their efficiency by learning from the experience.

Table 2. Pros and cons of the identified incentive options (see Rojas 1999b).

Type of incentive	Pros	Cons	Observations
Increase level of harvesting	• Low level of fellings in Europe (<65% of growing) • Risks by wind and fire	• Unsustainable on the long run • Important volume available but mainly in non-profitable dimensions (small dimension wood)	Market approach
Intervened market (increase of forest product prices	• Easy to handle (reductions of transfers)	• Impossibility by the present EU and WTO regulations • Highly inefficient (incentives high productive locations) (Table 3) • Does not solve the problems of the most threatened forests (Alpine, Mediterranean, protected areas)	This track has been followed by by the agricultural poliocy of the EU and many other countries with extreme high dysfuntions and is now under major revision
Subvention of running costs	• Keeps easily the revenue situation for some time acceptable • Most common incentive model in other fields (social, sanitary, education)	• Insufficient for threatened areas • Prefinance policy • Strengthens productive aims more then multifuntionality • Strong difference between dense and wealthy populated areas and rural areas (Maslow)(see Figs 3 and 4) • Difficulties to prioritise forest subventions in front of other priorities (social, infrastructure, cultural, urgent agricultural troubles, etc.)(e.g. situation in France after the EU court decision to derogue the tax on wood that financed the Fond Forestière National, see Bianco 1998) • Brakes rationalization and keeps too labour intensive practices • High transfer costs and low efficiency • No subjective right • High dependence of private forestry in Europe from external factors (EU-CAP)	Most usual option in forest (Germany, Switzerland, UK after 1988, etc.)

Table 2. continued.

Type of incentive	Pros	Cons	Observations
Subvention of investments (see subvention of running costs)	• Needed element in order to ensure high costly investments (afforestations, road construction) in non-state land		• The difference between running costs and investments not always clear • Examples UK after 1988, Spain, France, Germany, etc.
Incentived credits	• Needed instrument in situations of difficulties in the credit system (high inflation, etc.)	• Less importance under normal circumstances and low interest rates • Long lasting credits needed	Model used in France for long years (credits 25-30 years and 0.25% interest rate), interesting for CIT and developing countries
Tax release a) Reductions of tax level	• Needed instrument in order to avoid overtaxation of forests (high ratio capital/revenue, externalities, risks, social commitment, etc.) • Land and wealth tax are generally a duplication in comparison with stock market investments • Takes into account the social commitment of forest ownership	• Insufficient alone except in existing capitalized productive forests • Lacking figures to incentive non ownership linked´ investments in productive forestry (funds) • Less important in countries with low direct taxation	• Priority: Inheritage and land tax. Income tax has to take into account the difficulties to calculate previous investments and the exceptional duration of forest production periods • Example: Germany, Spain (recent evolution)
b) Overall release for non-forest incomes	• Independent from forest service budgetary restrictions • Attracts external capital	• Low potential with falling income taxes • Land tenure changes as prerequisites • Forest owners on the long run very social restrictive class • Does not take into account externalities	• Instruments strongly used in the UK between 1950 and 1988

Type of incentive	Pros	Cons	Observations
Compensations of risks a) Fire	• Risks are in general highly important restrictions for private forest management • Fire in the Mediterranean Region reaches a level that has negative influence on forest management (abandonment, premature felling) • The causes of the fires are external	• Could favour the fires if too generously designed • Insufficient to mobilise the managment alone	• Damages identified: loss in wood quality and price, regeneration cost and revenue loss. • Two options are applied: a) Direct forest fire risk compensation by the forest service (Germany) either in the form of incentive or compensation right b) Incentive of a part of the insurance costs (agriculture, Catalonia) • The first option brings a high degree of uncertainty and fluctuation to forest budgets after big fires, whereas the insurance allows to keep costs even • Different examples show that a common insurance in this issue may drop importantly the costs

Table 2. continued.

Type of incentive	Pros	Cons	Observations
Environmental primes	• Most efficient option to include pure externalities in the forest management • Progress in certification (criteria and indicator) may help to gather the information and to apply it for the point system (see Rojas 2001) • Low transfer costs in a running model • Does not incentive productive forestry • No prefinance needed • No change in ownership asked • No additional demands on forest budgets if financed by environmental tax revenue	• How to weight different externalities between them • If not adequate design, very high cost in building up the model	The new agricultural policies strengthen this kind of option. The options are: a) Subventions b) Contractual solutions[9] c) Strict primes on the bases of points

Table 3. Distribution of the CAP expenditure between EU countries (1996).

Member State	Agricultural area (millions ha)	Cost of the EAGGF-Guidance (Millions •)		Cost/ha EAGGF-Guidance (•/ha)	
A	3.428	1.212	123	353	36
B	1.373	1.146	40	835	29
DK	2.721	1.355	29	498	11
D	17.335	6.048	805	349	46
E	28.619	4.047	695	141	24
F	30.215	9.558	526	316	17
FIN	2.215	648	102	302	48
GR	5.163	2.817	328	546	64
IRL	4.530	1.700	261	375	58
I	15.071	4.220	428	280	28
L	0.126	20	4	159	32
NL	1.969	1.535	27	780	14
P	3.957	645	379	163	96
S	3.190	622	65	195	20
UK	15.858	3.468	116	227	7
UE (12)	127.938	36.626	3.640	286	28
UE (15)	136.699	39.108	3934	286	28

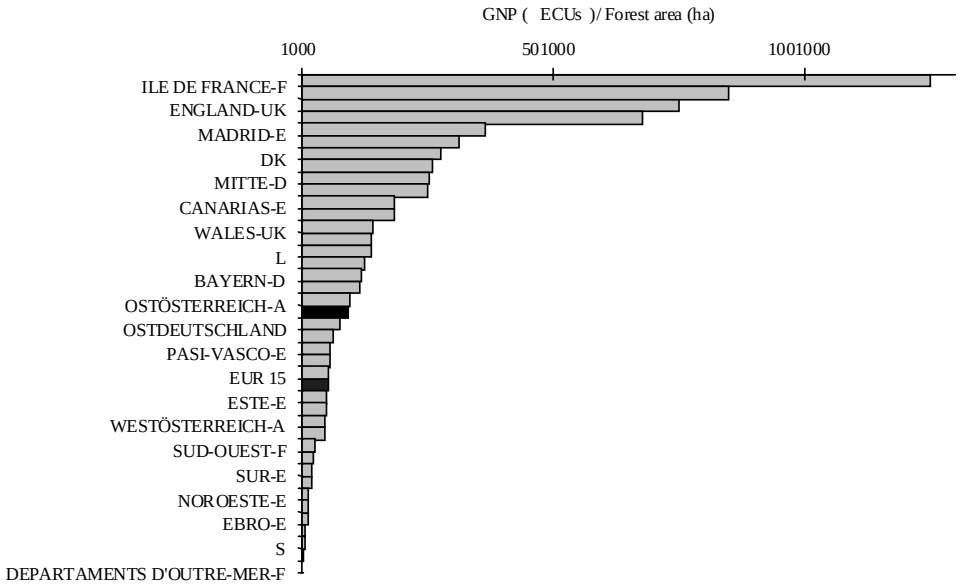

Figure 2. Ratio GDP/forest area in the EU regions (1996). Source: Eurostat en bref: Région, num 1, 1997 & REGIONS – Statistical Annuary – 1996. Theme 1: General statistics, Serie A: Yearly Annuary and statistics.

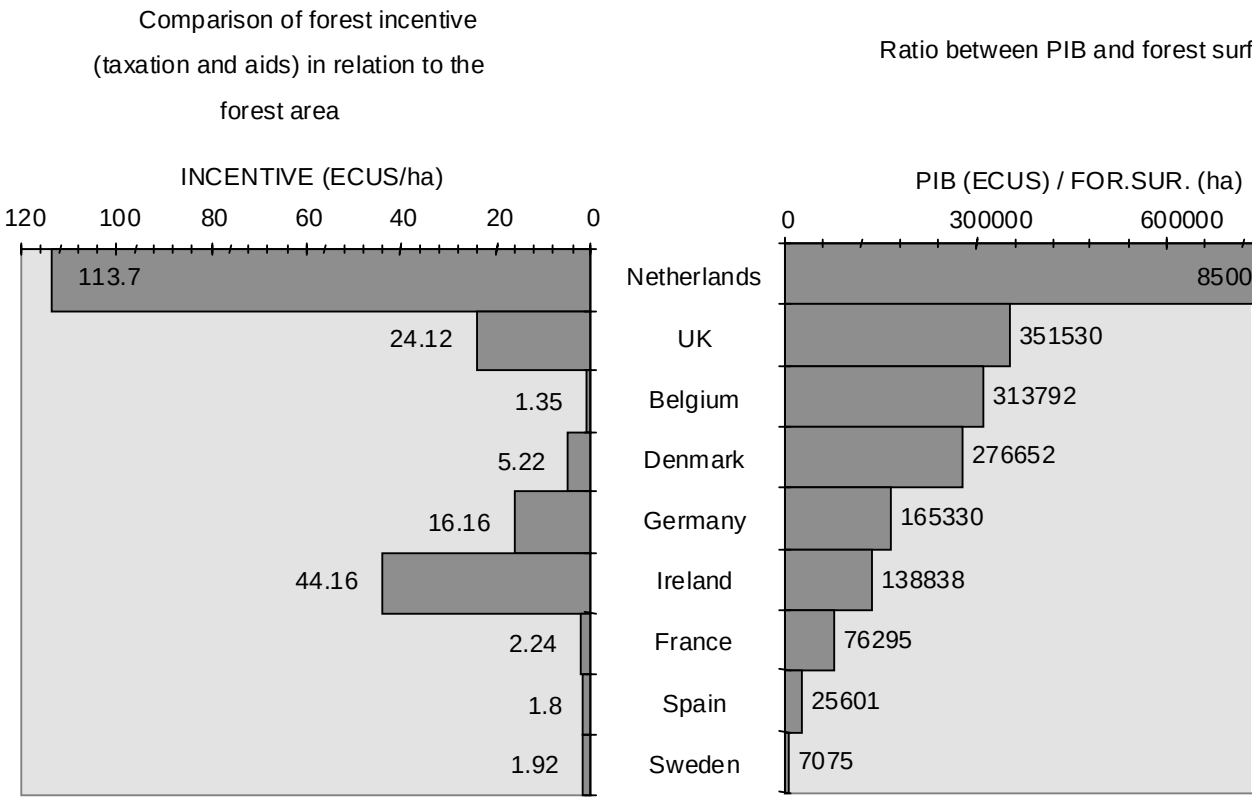

Figure 3. Comparision of forest incentive (taxation and aids) in relation to the forest area. Ratio between PIB and forest surface. Source: Euroestat en bref: Region, num 1, 1997 & REGIONES – Anuario estadístico – 1996. Tema 1: Estadísiticas generales (azul oscuro), Serie A: Anuarios y estadísticas anuales.

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National Forest Policy in Norway – An Overview

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Abstract

This paper presents a brief overview of the Norwegian forest policy in the context of international and European development with regard to national forest programmes, NFPs. Some key facts on forests in Norway are included as a background for the policy framework. The White Paper on forest policy, approved by the Parliament in 1999, is the primary focus of the paper. Ongoing revision of the Forest Act and a development program for timber utilisation are outlined as important follow-ups of the White Paper. Further, environmental efforts, economic means, research and development, and participation in international processes are described. Finally, current discussions on the need for a revision of the Norwegian NFP, as well as relevant matters in that work, are briefly considered.

Keywords: forest policy, national forest program, forest act, value-adding activities

1. Introduction

The national forest policy in Norway is presented as a case for consideration in the work of COST Action E19 'National Forest Programmes in a European Context'. The linkages to international and European developments on the concepts of national forest programmes, NFPs, and some key facts on forests and forestry in Norway are described. Some highlights from the White Paper on forest policy and the follow-up are presented, with special emphasis on the new concept of participatory processes.

2. NFPs in the International and European Context

The Intergovernmental Panel on Forests, IPF, and the Intergovernmental Forum on Forests, IFF, have been important in shaping the concept of NFPs. The IPF (1995–97) recognised the

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importance of NFPs for achieving sustainable forest management (SFM), and agreed that NFP is a generic term for a wide range of approaches to SFM. The IPF further urged countries to develop NFPs and use them as basis for international co-operation, as appropriate. The IFF (1997–2000) encouraged implementation of the IPF proposals and confirmed the relevance of NFPs. The United Nations Forum on Forests, UNFF, established in 2000 with a five-year mandate, has as a principle function to facilitate and promote implementation of IPF/IFF proposals for action. In the UNFF's Multi Year Program of Work NFPs are identified as one of the items to be dealt with at each session.

In Europe, the Ministerial Conference on the Protection of Forests in Europe, MCPFE, has a key role in cooperation on forest issues. In 2000 the MCPFE agreed on a work programme on the follow-up of the third ministerial conference, convened in Lisbon 1998. National forest programmes are identified as one of the elements in the working programme. The MCPFE has discussed important elements of the NFPs in a European context, and invited COST Action E19 to give input on possible future actions. NFPs will most probably be an important topic at the next Ministerial Conference, in Vienna, April 2003.

3. Key Facts on the Forest Sector in Norway

Norway's land area is approximately 32 million ha, out of which 37% is covered with forests. Of the 12 million ha of forested area, 7 million ha are productive forests. The annual growth is app. 20 million m^3 and the annual removals app. 10 million m^3. 80% of the forested area and 96% of the properties are family owned, often by farmers. There are approximately 125 000 decision-makers with different objectives for their ownership and management of the forest holdings. More and more forest owners get their main income from outside the forests.

The gross production of the forest sector in 1999 was around 40 000 million NOK (4.5 bill. USD) and the export value 15 000 million NOK (1.7 bill. USD). The forest sector's share of continental GDP was around 1.6%. The sector has more than 30 000 man-years, out of which forestry accounts for approximately 5000.

4. The Norwegian Forest Policy – The NFP

The current Norwegian NFP consists of several parts. A White Paper on forest policy presented to the Parliament in 1998, and approved by the Parliament in 1999, is the main component. In addition, counties and municipalities where forests play a role have their own forest or land-use strategies. These strategies reflect the link to national policies, and highlight challenges and priorities in the different counties and municipalities. The process of developing the local strategies differs over time and from place to place, with participation varying from civil servants dominated processes to broad involvement of relevant stakeholders (e.g. forest owners, forest industry, and recreational and environmental organisations). This paper focuses on Norway's forest policy at the national level.

White Paper to the Parliament on Forest Policy (1998–99)

The White Paper to the Parliament, titled "Value adding and environment – possibilities in the forest sector", was created in a process chaired by the Forest Department in the Ministry of

Agriculture. Representatives from forest owners, forest industry, labour and employer organisations, and recreational, environmental and sports organisations participated in a reference group. The group discussed a number of important issues, e.g. development and future challenges in the sector, private versus public responsibilities, and the need for changes in existing measures. In addition to the open process, other ministries with relevance to forestry gave their input on different issues, e.g. Ministry of Foreign Affairs, Ministry of Environment, and Ministry of Finance.

The White Paper stated that the aim of Norwegian forest policy is to contribute to sustainable development, and that this implies a continuous balance between environmental, economic, and social and cultural aspects of forests and forestry. The forest sector's contributions to an overall goal of more sustainable production and consumption patterns were highlighted. The White Paper focuses on possibilities and challenges in the sector, and summarises this in two main goals:

- increased value adding in forest-based enterprises
- contributions from the forest sector to meet environmental challenges.

The Parliament debated the White Paper in the spring of 1999, and agreed to most of the proposals by the government.

Some important issues for the follow-up of the White Paper at the national level are described in the following. It should be noted that monitoring and assessments are not dealt with in this paper, because other Norwegian speakers covered it during the seminar.

Revision of Forest Act

The aims of the current Forest Act are to promote forest production and reforestation, and protect forest lands, and at the same time to secure other functions of the forests. Other functions that are listed are recreational values, importance for landscape images, habitat for plants and animals, and the forests as arena for fishing and hunting. The Act is based on the principle of forest owners' "freedom with responsibility". It applies to all forests and all forest owners in Norway.

The Parliament approved a revision of the Forest Act as suggested in the White Paper, and preparation of a new Forest Act is ongoing. The aim is to clarify the rules for environmental responsibility, to reflect new knowledge and current priorities, and to make regulations less detailed. The principle of "freedom with responsibility" will remain, while the forest owners' responsibilities for long-term resource management and environmental values will be reinforced.

The process of preparing a new Forest Act is the responsibility of the Forest Department. In the work, the Ministry of Agriculture cooperates closely with other relevant ministries, and has invited input from County Governors and a reference group. The County Governor is the forest authority in the counties, thus they have first hand information on critical issues for the revision. The reference group includes stakeholders like environmental NGOs, recreational NGOs, hunting and fishing organisations, working and employer organisations, forest industries, forest owners, and agricultural organisations. A proposal for the new Act is scheduled for debate in the Parliament in 2003.

Development program for timber utilisation and processing

The other main proposal in the White Paper was a five-year development program to increase domestic timber utilisation and processing. The aim corresponds with the over-all goals of the

White Paper: to increase value adding and enhance contributions to sustainable development from the forest sector. Among other objectives, the program will focus on possibilities in product development and innovation, design and architecture, and to promote wood as an attractive material with a wide range of applications. The program also aims at improving communication along the value chain from forests to markets.

The Norwegian Industrial and Regional Development Fund is running the program under the supervision of the Ministry of Agriculture. The Ministry of Agriculture is responsible for annual budgets, the overall activities in the project, etc. The ministry has established an advisory group of stakeholders from the private sector to get input on critical issues to meet the goals. The need for public spending over the five-year period of the program, launched in 2000, is estimated to be around 100 mill. NOK. It is made clear in the program that private contributions at the same level are expected. One element in this is a research and development tax on harvested timber, implemented in 2000.

Environmental efforts in the Norwegian forest sector cannot be thoroughly presented in an overview paper, so the following describes some selected topics.

A research program on registration of environmental values in the forests, including biological diversity, has been a priority for the last three years. The goal has been to investigate further on the location and potential 'grouping' of environmental values in the forests, and to reflect this new knowledge in the relevant management advise in practical forest planning, i.e. forest management plans. A comprehensive group of researchers specialized in relevant topics, as well as people dealing with the practical implementation of the planning processes, have been involved in the 30+ mill. NOK program.

The share of forests classified as strictly protected is lower in Norway than in many other countries. Work in Europe on standardizing definitions may alter this picture. The term protection forest is used in Norway for forests along the coast and at higher elevations. More than 20% of the forest land is classified as protection forest. Specific regulations apply to management in protection forests, and this also influences environmental values. Regardless of the share of forests under protection, the area of forests under administrative protection and outside economic interests are increasing in Norway.

Special grants are developed for various environmental considerations in the forests. Some grants aim to compensate for specific costs with regard to environmental values, while others ensure better integration of environmental values in forest management. In their approval of the White Paper, the Parliament supported changes in the forest trust fund to improve the functions with regard to environmental adaptations.

Economic means in Norwegian forest policy include cost-share programs and grants, and the forest trust fund. Cost-share programs and grants are provided to ensure long-term investments in silviculture, road constructions, and forest management planning. The supports to various activities are mainly decided by county authorities, reflecting the forest situation and local priorities. Public support in the forest sector averages 30–40% of the total long-term investments. The forest owners' responsibilities for long-term investments in their forests were highlighted in the White Paper and also by Parliament.

The Forest Act establishes the forest trust fund, a compulsory tax on all timber sales. The forest trust fund is maybe the most important measure in financing sustainable forest management in Norway, as the money must be reinvested in the forests. The Act specifies which activities the trust fund can be used for, and which activities that are eligible for tax reductions. All forest owners are required to place 8–25% of the gross value of timber sold in the forest property's trust fund. The percentage chosen will depend on the forest property's need for investments and the forest owners' financial situation. Individual forest owners do not receive the interests from their forest trust fund, as the Act specifies that any interest be distributed annually among the Forest Department, forest owners' organisations, and County

and Municipality forest agencies. Still, because of tax deductions and the overall positive effects, the forest owners support the forest trust fund. (For more information on the Norwegian forest trust fund, please see http://www.cifor.cgiar.org/fsfm/Papers/24Oistad.pdf).

Research and development is regarded as important means to further develop the forest policy in Norway. Research can give objective input to ways and means to meet challenges and possibilities in the sector, and to policy formulation, evaluation and development. The research project on environmental values in forests, and elements of research and development in the program on timber utilisation and processing, are examples of important contributions from research to the forest policy arena.

The main funding for forest research is still public budgets, but also private contributions are emphasised. The research and development tax on harvested timber from 2000, mentioned earlier, is one important way to increase private research funding. The overall goals with increasing private contributions are to strengthen the financial basis for research, and to improve the cooperation between researcher and private actors to further enhance the relevance of research.

Participation in international processes relevant for forests and forestry is given high priority in the Norwegian forest policy. Participation is seen as a way to promote sustainable forest management globally, a means to influence and fulfil national commitments, and a channel to promote acceptance for our management from the international society. For the time being, priority is given to the following conventions and processes: The United Nations Forum on Forests, the Convention on Biodiversity, the Framework Convention on Climate Change and its Kyoto Protocol, the Ministerial Conference on the Protection of Forests in Europe, Nordic Cooperation, and the work in FAO and ECE.

Revision of the national forest program, the NFP

Norway is currently considering the need for a revision of our NFP. The revision will take into account the recommendations from the UN process (IPF/IFF/UNFF), ongoing work in the MCPFE, and input from COST Action E19 and other relevant bodies working on clarifying the concepts of NFPs. Important aspects in a revised Norwegian NFP will most likely be an evaluation of the existing program, further elaboration of participatory processes, improving communication of forest policy to society at large, and raising awareness of the forest sector and its diverse values to society.

Forestry Monitoring in Norway

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The National Forest Inventory of Norway has supplied information for forest policy- and decision-making since the beginning of the 20th century. The NFI of Norway is assumed to be the first institution in the world carrying out a modern statistical forest resource assessment on a national level.

There was a great concern about the state of the forests of Norway around 1900. The forest resources had been heavily exploited during several hundred years, and little effort was made on regeneration and forest management. Predictions were that the forest resources would decrease to a minimum if no action were taken. These predictions were controversial, but there was a common understanding of the need of a National forest inventory as a basis for the new forest policy.

Results from the first National Forest Inventory showed that that forest areas in some regions of the country was overexploited, but most important the inventory documented a low growing stock compared to the production potential.

Legislation for protecting the forest was adopted in the 1930s. During the century focus shifted from protection to production and utilization of timber. New National Forest Inventories were carried out, making it possible to evaluate the success of the measures taken to fulfil the national forest policy.

Until now, there has been carried out seven national forest inventories in Norway. From 1986 permanent field plots have been established all over the country. The permanent plots allow a monitoring of the development on the specific sites, in addition to the collection of forest statistics. Today's system is a continuous inventory/monitoring of the forest areas; with field registrations carried out on more than 2000 permanent plots each year.

In the past century, the growing stock and annual increment has more than doubled on the forest area. Area classified as forest has also increased. There is little doubt that this is a result of measures taken to achieve the goals of the forest policy, a policy that has been depending on the National Forest Inventory for proper information about the state and potential of the forests of Norway.

The NFI is designed to give information on national and regional levels. On issues covering smaller areas, the resolution of the National Forest Inventory cannot provide information with the necessary accuracy. Therefore target specific inventories are carried out to assess and monitor the results of forestry activity. There has been a special focus on the regeneration in

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the last years. Depending on the level of harvesting a certain number of harvested areas are inspected every year. The data from these inspections gives, in combination with data from the National forest Inventory, a good picture of the level and quality of the regeneration after harvesting. Neither the level nor quality is satisfying according to the last reports and this is at present an issue of concern for the forest authorities.

In addition to providing information for developing, evaluating and revise forest policy and measures, the forest inventory and monitoring are important tools for international reporting and negotiations. Data from the NFI is regularly reported to the UN for international forest resource assessments, the NFI is participating in the European forest-health monitoring programme and has been used for developing the Norwegian positions in the international process for reducing greenhouse gas emissions (Kyoto protocol).

Forestry Planning on Regional and Property Level in Norway

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Abstract

Prevista is a leading company in forest management planning in Norway and we are in the forefront in the use of aerial photos for photogrametric inventory. Prevista does 60–65% of the total photogrametric inventory and 35% of the total management planning area in Norway – an annual area of 300 000 hectares.

The planning process starts with a master plan on the county level with local projects on the municipality level. The forest owners are included in organising the local projects.

The main product is forest management plans on the property level. The total cost is 200–400 NOK per hectare. The forest owner pays 30–40% (50–100 NOK per hectare) and grants finance the rest.

We meet challenges that can combine higher accuracy and lower total cost. We will develop planning methods with more use of remote sensing (airborne photographs – also infrared, airborne laser scanner, other airborne sensors), but no use of satellite in the near future.

Keywords: Forest management planning, remote sensing, forestry planning

Prevista as

Prevista as is a limited company that was founded 1 January 2001. The history of Prevista dates back to the year 1893. For over hundred years, under different names and organisational set-ups, we have developed maps, conducted forest inventories, forecasted wood harvesting levels for owners of forestland and the public authorities. Our owners are two forest owner associations and the Norwegian State Forest Corporation. We are today the largest forestry and land use-planning enterprise in Norway with 80 employees and expected turnover of about 45 mill. NOK this year.

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Our priority markets are:

- The forestry sector – private and public
- Land developers
  - Land use authorities
  - International development institutions

Prevista is in the forefront in Norway within forest inventory and forest management planning. We have 25 years of experience in photogrametric inventory and in this period we have covered an area similar to 45% of the total productive forest area in Norway. During the past 5 years our activity was 65% of the total in Norway.

We are the largest enterprise in Norway in forest management planning and we have done management planning for decades. In the last 10 years we have done 1.3–1.4 mill. hectares. In year 2000, we did forest management planning at 100 000 hectares – 35% of total planning area this year.

We have our markets primarily in Norway. Our goal is to enter the international markets on forest management planning. Our competence in photogrametric forest inventory is not yet tested on a large scale abroad. Researchers on forest management planning believe that our competence is valuable also in other Nordic countries.

Forestry planning in Norway – background and objective

Forest area and planning area

Total productive forest area is 73 000 km^2. In addition we have large areas with no-productive areas. Total forest covered area is maybe 120 000 km^2. Total area inventoried is 64 000 km^2, some of the area is inventoried 2–3 times. We still have forest areas with no forestry registrations on the property level.

The political aim with forest management planning was originally that all forest area should be covered by a new management plan every 10–12 years. This is now changed. In 2000 the planning area was 3000 km^2 or 4% of total productive forest area. This indicates that new management plans will be available every 15–25 years.

Brief planning history

Forest management planning on the property level did not gain ground until after the Second World War, when the Forest Owners organised themselves in associations. Prior to that, planning took place on a few larger forest estates. In 1971, a public funding mechanism was put in place spurred planning further. The government viewed good management of the wood resources as a means of achieving economic growth for the rural households and the society as a whole. Systematic regional level forestry planning started in 1980.

Main goal: sustainable forest management

Offering all forest owners a tool for sustainable management of their forestland has been and still is a main objective of forest management planning. Furthermore, the regional level forestry surveys contain valuable information for strategic sector development both for the public and private sub-sectors.

The market for forest management plans has developed, and still does, according to political objectives. The goal of being able to offer plans to most owners of forestland has

been achieved mainly because both the public (state) and the forest owner organisations have contributed financially.

Legal framework

The Norwegian Forestry and Forest Protection Act of May 21, 1965 with amendments, latest by L 10.01.1997 from March 1, 1997 and the regulation on Public Funding of Forest Management Planning of 22 April, 1999 set the legal framework for planning. Forest management planning at property level is in general not compulsory. There are exemptions to this rule. For example, the Act makes management planning mandatory for owners of forestland, who through neglect or ignorance have eroded the forest capital beyond recovery by natural processes within a reasonable time (paragraph 30).

The objective of the regulation on public funding mentioned above is to support an active, viable utilisation of the forest resources in the short and long-term perspective while conserving biodiversity-, landscape-, cultural heritage- and recreational functions.

In order for a forest owner to receive public grants for a forest management planning, the product has to contain information of certain forest characteristics. The legal text outlines in detail the various forest parameters, level of accuracy, and inventory and planning method.

The Ministry of Agriculture has recently called for a review of the regulation opening up for tailoring the scope of the plan according to the specific needs of the customer.

Forestry Planning – a public/private partnership

Local user participation and control

Regional level forestry planning is organised as a project where the scale and scope of registrations, planning products, etc. is carefully described at inception. It is advised that the projects establish a planning board with representatives from the forest owners organisations, the County Governor and the municipal forest officer communicates with the forest owner association and reaching out to the individual owners. The forest officer is the natural choice as the leader of the project board in his/her municipality.

The role of the Forest Owners Associations

Currently, forestry planning is conducted by commercial planning enterprises wholly or partly owned by the associations. The associations themselves function as the link between the forest owner and the planning project. For example, during the initiation of a forestry planning project, each forest owner is offered a management plan for his/her property. Through extension services and member meetings, information about the planning is given and the owners are motivated to ordering the plan.

The role of the municipal forest officer

The municipal forest officer is responsible for surveying the forest politics in his/her district. Control and survey of the forest resources is also a part of the objectives for the local forest officer.

The role of the County Governor (Fylkesmannen)
The County Governor is responsible for the master plan for forestry planning on the regional and property level. The master plan is the basis for budget priorities and a tool for prioritising and co-ordinating regional projects within the county and determining level of state financing. The County Governor is collaborating with other institutions such as the State Mapping Authority, Norwegian Institute for Land Inventory, the planning enterprises and the forest owners. The office manages grants flowing from the Ministry and makes sure that the final planning products fulfils the requirements outlined in the regulation and guidelines.

The planning enterprise
The planning enterprises are responsible for all components of information management from data collection to analyses and presentation of results. Quality monitoring is an integrated part of the production. The enterprise is also responsible to keep control of the planning costs according to the budget.

Planning methodology

Aerial photography
In Norway, we use normally aerial photos in scale 1:15 000–1:18 000, most often in black and white. We can also use colour photos or infrared colour photos. Aerial photography takes place in the spring in early leafing and in broad daylight. This enables good ground visibility and avoids shadow effects appearing during stereoscopic interpretation.

Forest inventory
The first stage is a photogrametric interpretation of the forest condition. Remotely sensed data on aerial photographs provides the basis for a stratification of the forest into stands according to age-classes and species. The inventory includes both construction of forest stand map and measurement of the forest conditions.

Fieldwork – stand-wise inventory
Fieldworkers control the stratification and the photographic inventory, do some new measurement, register treatment proposals, and register vulnerable forest habitats. The fieldwork is a combination between systematic measurement and stand-wise inventory. The systematic measurement is normally use of field trial plots, but many projects do not include such measurements. The methodology is a result of a process in the local planning board and discussion with the County Governor.

Database construction
The enterprise constructs databases on the project and property levels. Parallel, a mapping database is developed for the presentation of geo-referenced information.

Analyses
In the further planning, the data are analysed, described and stored. The forest conditions are described and prognosticated.

Results
The results are presented in the form of maps and reports in a loose-leaf file. Forest management PC-systems are increasing, and we want to develop a web-system for forest management planning.

Mapping of vulnerable forest habitats
Recently, the Ministry of Agriculture initiated a comprehensive mapping of vulnerable habitats on productive forestland. This came partly as a result of international market demands for sustainable management of Norwegian forests. Following a thorough methodology debate, the mapping exercise is being incorporated into the forest management planning.

Planning Products

Forestry planning on the regional level implies the inventory of all forested properties. The registrations are carried out systematically and in time-intervals of 12–15 years according to the county master plan.

The property level management plan
The main product is forest management plans on the property level. These are individually plans based on the forest conditions and also on the forest owners' requirements. The forest authorities receive a copy of the plans on condition of public grants to the forest owners.

The plan contains a descriptive and a quantitative representation of the forest condition with proposals for silvicultural measures and harvesting operations. These proposals are based on a cost-benefit consideration and fit to the ecological conditions with respect to, e.g. regeneration.

The product is delivered in the form of a loose-leaf binder with an associated theme map representing the forest condition with stands drawn and numbered linking the data tables. The processing of the plans are done in GIS-based systems integrating inventory and geographic referenced data.

Following the introduction of the personal computer in many forest owner households, the plan has been made available digitally in a PC-based system for managing information. Still, relatively few interested individuals with internet- and MS Office skills have taken the system into use. The demand for the management plan on the PC is, however, steadily increasing. The management information systems facilitate continuous up-date of the plan as activities are initiated or change in external factors for affecting forest management.

In the plan, multiple use elements are mapped and described. A management proposal includes the conservation of biodiversity-, recreational- and cultural heritage values. Information on these values collected in the field is supplemented by available data sources, e.g. from the wildlife management authorities.

At the property level, information on total area distributed on vegetation type, productive forest area distributed on site indexes and age-classes, volume distributed on species, site indexes and age-classes, increment and percentage increment of standing volume, productivity are included. At the stand level, the plan contains data about area, age-class, site index, standing volume, age, species, tree density, and proposals for silvicultural operations.

Included are also a stand map of the property and a theme map based on cutting classes. The maps are normally in scale 1:5000.

The forest survey

A forestry planning project is being organised and implemented before knowing the share of property level management plans of total planning area. The forest survey is a brief survey of forest properties where the owners don't want to have a forest management plan. The forest authorities use the forest survey in their forest administration work. These are financed wholly by public grants.

The forest survey contains as detailed stand information as the forest management plan but less information on property level.

The regional level forestry plan

The regional forest survey is a brief summary of the forest conditions in the region and a summary of the treatment proposals. It contents also prognosis for annual cutting quantity on the regional level. The product is aggregated from the property level surveys.

The main part of this product is often the theme maps. This product is well suited for use in a forest management PC-system. The survey is a valuable tool for assessing sector development potential and tailor policies accordingly. Other public authorities have access to the information in the resource survey.

Planning costs and financing

Planning costs

The planning process with detailed registrations in small stands is expensive, approx. 200–400 NOK per hectares, which is more than forest owners are willing to pay. Remember the earlier information about small scale forestry with an average property size on 50 hectares and the average stand 1 hectare. This pushes the planning costs.

Financing

A forest management plan is an important tool for the forest owner. The forest authorities think similarly, and the plans are important tool for the authorities as well. Based on this, the forest authorities give grants to the forest owners. The grant is 50–70% of total costs depending on the project, and on the forest area on each property. The grant is from the Agricultural Development Foundation and is channelled to the forestry sector through annual negotiations between the state and the farmers' organisations. The annual amount of grants is 40 mill. NOK. The grants are administrated of the Norwegian Ministry of Agriculture and the County Governor.

In most of the projects there are different local grants, in order 5–10% of total costs. The forest owners normally cover about 30–40% of total costs, and price is in the interval between 50 and 100 NOK per hectare.

Accessibility and property rights to information

The public has no access to the part of the information from which property economic value and viability of forestry can be derived. Neither are locations of vulnerable or endangered species revealed. However, stand level information is publicly available. The land consolidation judiciary and the forest authority have access to all property level information. We anticipate that in the future more information will become publicly available if generated through projects receiving public financial support.

Management planning – challenges

We meet a lot of challenges with regard to forest management planning, which affect our way of developing methodology, production and products:

- the demand for higher accuracy (stand volume, clear cut volume, volume for sale);
- the demand for timber quality prognosis;
- the demand for simplifications of registrations, at the same time we also meet demand for more ecological registrations; and
- the demand of lower prices, the forest owners have a low ability to pay.

Management planning – future costs and finance

We can add up the demands with regard to economic as such:

- reduced costs
- reduced state grants, the state grants are also aimed towards concrete objectives:
  - forestry condition, utilisation of resources
  - sustainable forest management (economy, ecology, recreation, cultural heritage).

Our aim is lower cost with no less accuracy: we want to reduce total cost with 50%, that demands a total change in the process and the methods. We think that the forest owners' cost should be reduced from 100 NOK per hectare to 50–70 NOK per hectare. To manage this we have to start developing all our production.

Management planning – development

We think a planning method with such contents and priority:

- Increased use of remote sensing
  - Still use of aerial photographs, but also infrared
  - Airborne laser scanner
  - Other airborne sensors, e.g. radar, multi-spectrum / multi-range
  - Satellite
- More efficient field analyses and planning process, and more concrete aimed:
  - Including the knowledge and demands from the forest owner

- Build upon the results of the remote sensing
- Priority of registration of vulnerable forest habitats, treatment proposals and multiple use registration in valuable areas and areas with conflict between commercial forestry an environmental values
- Distribution of data and plans, and communication with customers via web and Internet.

The Role of Stakeholders in National Forest Programmes in Spain

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Abstract

Since the approval of the 1978 Constitution, the Autonomous Regions of Spain have had the power to draft their own laws and programmes on forestry and nature conservation. This paper is an overview of the role of different stakeholders in experiences with participatory processes in the formulation of National Forest Programmes in 8 Autonomous Regions in Spain. A questionnaire was sent to those responsible for forestry issues and stakeholders and some interviews were done. The results illustrate a wide range of different experiences from 1989 to 2000.

Keywords: stakeholders, participatory processes, national forest programmes

1. Introduction

Participation can be defined as providing an opportunity (for somebody) to take part in a process in a structured manner (Hyttinen and Niskanen 1999). However, this wide definition considers those processes in which stakeholders contribute directly to the decision-making process and its implementation as well as those processes in which debates or seminars are organised to obtain data, perspectives or values on selected topics (Yosie and Herbst 1998).

In Spain, until very recently, the Government applied "exclusive professionalism" (nobody without technical training or specialization must be listened to) and nowadays there is a deep debate about the increase in democracy in the Administration (Brugué and Gallego 2000), but this increase in participation in policy formulation must be closely observed given the risk of participation being used as an alibi.

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2. The Comparative Framework

A descriptive and comparative framework that determines and lays down both the dependent and independent variables that condition the result was established. Its empirical application was based on the questionnaire, interviews and Programmes contents. This paper describes three of the variables considered. The information is mainly based on qualitative and descriptive variables and it should be borne in mind that the results are the product of the interpretation made by the respondents and by the author of the compilation.

Stakeholders who were asked to participate in the process were analysed (Table 1), taking into account eleven categories that can be grouped in the following:

a) Internal stakeholders: staff in the forest administration or in other departments.
b) Directly involved stakeholders: forest owners, professional associations in the forest sector and industry.
c) Indirectly involved stakeholders: recreational associations linked to the natural environment, conservationist groups, universities, research and educational centres, rural area inhabitants associations, etc.
d) General public associated and non-associated general public.

The dependent variables focus on: **Type** of participatory process, classifying it (Yosie and Herbst 1998) as 'informational' when stakeholders are asked to comment or provide data, general perspectives, or specific input on an issue or problem, 'consultative' when stakeholders are asked to comment or provide input on policy choices that others will decide or 'decisional' when stakeholders participate directly in making final choices and helping to implement them.

Phase in which participation took place. Six phases were distinguished:

1) Description of the current situation (diagnosis)
2) Formulation of the objectives and analysis of alternative scenarios for the future
3) Identification and analysis of alternative measures
4) Decision making
5) Analysis and evaluation of the decision
6) Implementation.

Participation technique used a) reception of points of view or ideas, declarations or contributions by letter, e-mail or telephone; b) joint meeting with the policy-makers and other stakeholders (together); or c) joint meeting with the policy makers. (Figure 1)

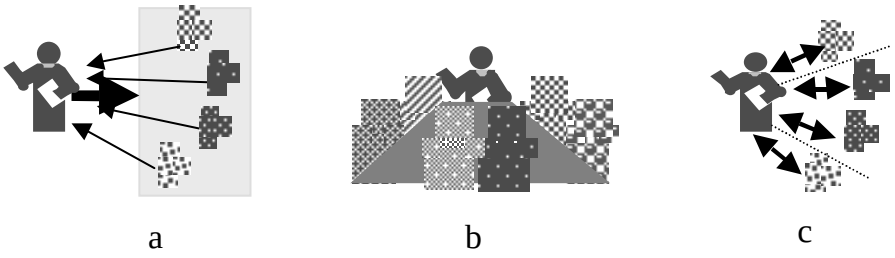

Figure 1. Participation techniques.

Table 1. Stakeholders considered and main type of participation

Stakeholders / Autonomous Region	A	R	I	L	M	Ca	G	N
Staff in the Forest Department (e.g. forest wardens, field technicians, etc)	D	D	C	I		I	C	D
Staff in other departments of the Administration/ Government	C	C	I				I	D
Forest owners	C	C		I	I	C	C	C
Professional associations in the forest sector and industry	C	C		I	I	C	C	C
Recreational associations linked to the natural environment (hunting, fishing, excursionist groups, etc.)	I		I	I		C	C	
Associations of inhabitants in rural areas	I	I		I	I	C		C
Non-associated rural area inhabitants			I			I		
Universities, research and educational centres	C	C		I	C	C	C	C
Conservationist groups	C	C		I	C		C	C
Associated general public	I			I	I			C
Non-associated general public	I			I			I	
Technique mainly used	b	b		a	C	C	b	b

I: Only informational C: Consultative D: Decisional. Autonomous Regions Ca= Catalonia, G= Galicia, R=Aragon, A= Andalusia; M=Castile La Mancha; L= Castile and León, I= Canary Islands, N: Navarre. Technique: a) reception of points of view or ideas, declarations or contributions by letter, e-mail or telephone b) joint meeting with the policy-makers and other stakeholders (all together) c) joint meeting with the policy makers.

3. The role of stakeholders – overview and discussion

In the eight National Forest Programmes analysed, stakeholders rarely played a decisional role (Table 1) and participation was considered much more in those Autonomous Regions in which the NFP has been drawn up with the assistance of external companies or consultants. The most widely used technique was the joint meeting with the policy maker and other stakeholders in a final meeting, but during the intermediate phases, the meeting of the policy maker with only one stakeholder group (c) was more frequently used.

Internal stakeholders: In those Programmes where internal participation has been non-existent, this has been indicated as a factor 'to be improved'. This is the only group that participates in the implementation and decision making phase.

Forest owners, professionals and the industry sector: This group has been taken into account in almost all Autonomous Regions (except for the Canary Isles where the Forest Programme is considered as an essentially internal document). However, their participation has never been decisional. In general, forest owners have been taken into account much more than the other groups (Note the high rate of private ownership in Spain, with an average of 64%).

Public indirectly involved: Ecologist groups and recreational associations have participated in almost all processes (Catalonia did not consider environmental groups, but an informant has suggested that at that moment all 'forest culture' in Catalonia was imbibed by the ideas of this movement). On the other hand, local inhabitants (whether associated or not) have not generally been explicitly borne in mind. The limitation of reaching those people who are often not associated has been mentioned. The role of Universities has been significant in those Autonomous Regions where prior consultation to the evaluation of the decision was undertaken, especially in the diagnosis and objective phase (Figure 2).

The general public: They are not very widely contemplated, regardless of whether they are associated or not.

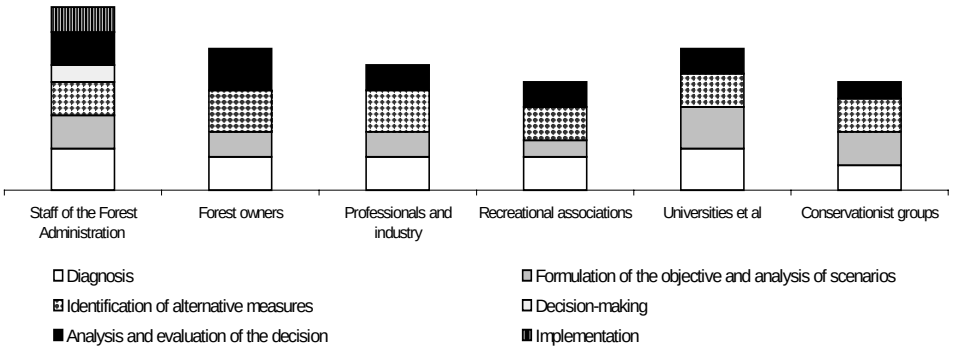

Figure 2. Frequency of participation by some stakeholders in every phase.

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Co-Ordination in Multi-Level NFP-Processes – Learning from Problems and Success Stories of European Policy-Making

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Abstract

The concept of National Forest Programmes (NFP) calls for the integration of multiple levels of government as well as the integration of private actors into programming, implementation and evaluation of measures to promote sustainable forest management. But systems of multi-level policy co-ordination are threatened by overload and deadlock owing to high numbers of levels, arenas, and actors. This paper examines mechanisms which may cause these problems, and aims at suggesting potential escape routes from imminent deadlock. In order to achieve this, I discuss the problem-solving capacity and limits of different modes multi-level co-ordination against the background of NFPs. After problem description, the aim is to learn from real world policy processes how they handle the problem of multi-level co-ordination, and how they possibly evade dangers of overload and deadlock. The examples are taken from European social and employment policy, from regional development policy and from rural development policy. They show that specific patterns of arranging policy arenas and negotiations can provide viable solutions. The proposals range from governance by hierarchy to structures of more or less autonomous arenas which are loosely coupled by policy brokers. Beyond that I argue that two EU regulations already embody the core of our current understanding of NFPs, namely the Regulation on the Support of Rural Development in combination with the Structural Funds Regulations. Hence, their implementation provides instructive examples for comparison and reflection about the likely development of NFPs.

Keywords: Multi-level co-ordination, National Forest Programmes

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1. Introduction

This paper deals with multi-level governance, in particular with the problems of inter-level co-ordination and proposals for their solution. The concept of 'National Forest Programmes' (NFP) calls for co-ordination, both among sectors and the different levels of government within the countries involved. Furthermore, there are discussions and ongoing processes of co-ordination on the concept of NFP itself beyond the national level, i.e. at the UN level, the pan-European level, and the EU level. International efforts to achieve the programmatic goal to enhance the ecological, social and economic sustainability of forest management face a number of problems, e.g. lack of national capacities, lack of problem awareness, intensifying competition in international forest product markets exerting downward pressure on environmental and social regulations. As a consequence, there is an urgent need for transnational co-ordination in order to cope with common and cross-border problems.

The necessity for vertical co-ordination and collaboration in developing and implementing NFPs is broadly endorsed, but policy-making striving to co-ordinate the increasing numbers of levels and arenas runs the risk of getting caught in pitfalls. The challenge of a successful co-ordination is even aggravated by the fact that the concept of NFP explicitly postulates the participation of private actors. Theory and empirical observation show that there is often a trade-off between the scope of co-ordination and the problem-solving capacity of governance structures. However, both the scope of co-ordination and the problem-solving capacity depend on the institutional design of the governance structures.

My limited aim is to unravel the patterns of multi-level policy co-ordination by learning from theories about multi-level governance as well as from empirical findings from the field of forest policy and others areas. The focus is on the different modes of co-ordination and on their relevance and likely effects in the NFP context. The central idea is that findings on the effects of different institutional settings are of exceptional practical value, simply because institutional settings are under consideration when starting novel initiatives like NFPs.

Prominent actors of domestic forest policy domains ask questions like 'How should we set up the process? Who should be on board? Who should be granted decision-making power?' etc. Of course, these questions are essentially political. They cannot be answered by scientists without reference to the actors' individual preferences. Instead, I want to provide some useful propositions based on theoretical reflections and empirical observations that could provide sound arguments for the actors' choices.

2. Arenas of co-ordination and governance beyond the national level

A lot of co-ordination about the NFP concept has already happened. It was defined in the course of the UN Intergovernmental Panel on Forests (IPF) in terms of 'basic principles' and 'elements' and was seen by its successor, the UN Intergovernmental Forum on Forests (IFF), as a vehicle to implement the IPF's proposals for action as well as forest-related obligations and work under other existing instruments and mechanisms, e.g. under the Convention on Biological Diversity, the UN Convention to Combat Desertification and the UN Framework Convention on Climate Change. Accordingly, the IFF encouraged the implementation of NFPs in all countries.

NFPs have also become a central topic at the *pan-European level* in the last three years, namely in the course of the Ministerial Conference on the Protection of Forests in Europe. Some workshops and meetings were held and a common understanding of the concept, its basic elements and its significance was achieved. Recently it was formally agreed that the

'issue of National Forest Programmes is of considerable importance and should be presented at the 4th Ministerial Conference', in 2003 (MCPFE 2001:4).

At the *level of the European Union*, the concept of NFPs is already anchored in forest related documents and legislation, e.g. in the Council Resolution on a forestry strategy for the European Union (1999/C 56/01) and in the Regulation on Support for Rural Development (Council Regulation (EC) No. 1257/1999). In the EU Forestry Strategy, rather vague, national or sub-national forest programmes are identified as a tool to implement international commitments, principles and recommendations. Article 29(4) of the Regulation on Support for Rural Development literally specifies 'national or subnational programmes or equivalent instruments …' as the basis of supporting forestry under this regulation.

In a nutshell, co-ordination efforts concerning NFPs have gone well beyond the national level. Analytically spoken, the processes at the UN level, the pan-European level and the EU-level can be looked at from two perspectives: On the one hand, their outputs constitute basic conditions for national NFP processes, on the other hand, they are themselves processes of multi-level co-ordination. These co-ordination efforts concern more or less the concept itself, in terms of specifying its principles and elements, as well as considerations about the applicability of the NFP concept in different national contexts. Within the national sphere, in contrast, multi-level co-ordination in the course of NFP processes is more about concrete programmes, budgets, measures for implementation, etc. The overall picture is quite complex but interesting because of the simultaneity of these interdependent processes at the different levels. Nevertheless, for further considerations we can analytically distinguish between the intra-state level and the international levels of co-ordination. Undoubtedly the arenas at the different levels are interdependent, but the applicable modes of co-ordination may differ between the tiers at which multi-level NFP processes occur.

3. Some problems of multi-level co-ordination

In recent years political scientists introduced terms like '*multi-level system*' or '*multi-level governance*' (Marks 1993), in particular to describe the polity of the European Union. The multi-level governance perspective emphasises power-sharing between different levels of government, with '... no centre of accumulated authority. Instead, variable combinations of governments on multiple layers of authority – European, national, and subnational – form policy networks for collaboration. The relations are characterised by mutual interdependence on each others' resources, not by competition for scarce resources' (Hooghe 1996:18). Multi-level governance does not portray the levels of government in a hierarchical order, but policies tend to be developed in a joint system of actors from different territorial levels and in an interplay of arenas at these levels.

This multi-level governance approach is a realistic perspective on modern polities, but there is nothing like 'the theory of multi-level governance' yet, not even a comprehensive analytical concept. The approach rather suggests to refer to theories of joint decision-making, to international relations theory and more generally to analytical concepts concerning interaction and co-ordination of governmental units at different levels.

3.1 Obstacles to the international co-ordination about NFPs

Proceeding on the assumption that there is a need for co-ordination, both among nation states and among levels of government within states, I will first discuss three standard modes of

international and multi-level co-ordination, namely – in the order of increasing supranationalism – 'mutual adjustment', 'intergovernmental negotiations', and 'joint-decision making' (cf. Scharpf 2000:2). I will discuss the problem-solving capacity of these modes and present some considerations about the role they may play in multi-level NFP processes.

3.1.1 Co-ordination of NFPs by mutual adjustment

The default minimum mode of co-ordination is '*mutual adjustment*'. In the NFP context we could expect this mode primarily at the supranational levels, i.e. at the UN level and the pan-European level, provided that the actors' efforts aren't more ambitious. National actors adapt their own procedures and programmes in response to or in anticipation of the choices of other states. Depending on the constellation, the outcome may be mutually beneficial, e.g. because of mutual learning from foreign examples, some may gain at the expense of others, or all may be worse off in the end, e.g. because of downward pressure on national standards caused by fierce economic competition on the world markets. That is, a general assessment of the problem-solving capacity of mutual adjustment cannot be made.

One might expect that countries observe each other's activities in order to learn from successes and failures. We might also assume that countries engage in forms of 'systems competition' striving to promote and transfer their own NFP model to the international level in order to avoid domestic adjustment costs and to secure their competitiveness (e.g. in the competition for scarce funding resources). In conclusion, one could expect that the international co-ordination of NFPs by pure mutual adjustment has certainly its limits where the competitiveness of economically relevant national forest sectors is concerned. The more the markets for forest products and investment capital become integrated, the more national governance faces constraints.

One might expect that in response nation states strive to move beyond mutual adjustment, trying to prevent the negative effects of systems competition, e.g. downward pressure on environmental or social standards, through the co-ordination and/or centralisation of governing functions at a higher level.

3.1.2 Co-ordination of NFPs by intergovernmental agreements

Then, the lowest level of institutionalised co-ordination among governments (regional or national) is the mode of 'intergovernmental negotiations'. Again, in the NFP context this mode primarily applies to the supranational levels, but it may also apply to intra-state relations within federal systems. In any case, territorial entities keep full control of the decision-making process – none can be bound without its own consent – but their policies are co-ordinated by common agreement.

With respect to its problem-solving capacity, the mode of intergovernmental negotiations is limited to results which are preferable to the status quo from the perspective of each involved. Side payments and package deals may broaden the room for agreement, however, solutions are often blocked by serious interest conflict. Accordingly, the mode of intergovernmental negotiation also offers little promise in situations where certain countries benefit from competition at the expense of others and when the likely loss resulting from an agreement cannot be compensated through side payments (e.g. when low environmental standard producers profit from the cost advantages at the world markets at the expense of producers in high-standard countries and cannot be compensated for raising their standards). Accordingly, co-ordination efforts striving to agree on a common operational conceptualisation of NFPs,

which touch salient issues of e.g. economic competition, are likely to face serious problems at the pan-European level or the EU level and end up in symbolic politics if limited to pure intergovernmental negotiations.

3.1.3 Co-ordination of NFPs by joint-decision making

The 'joint-decision mode' represents the next stage along the continuum of the centralisation of governing functions. It combines aspects of intergovernmental negotiations and of hierarchical direction. Such combinations can be observed at supranational levels as well as at the national level.

The EU mechanism of decision-making provides an example from the supranational level: it usually requires an initiative of the EU Commission and the adoption by the Council of Ministers, the latter representing the Member States. The policy output essentially depends on the strategies and resources of supranational actors as well as on the convergence of preferences among the Member States. In case of strong opposition because of essential but divergent interests, common agreement is likely to be blocked, negotiations may end in deadlock (see below).

In such settings the position of centralised actors is most significant in situations when the preferences of decentralized units diverge but are not too important to them; and in situations when there is on the one hand disagreement on the substance of a policy, but broad agreement on the other hand that a common solution would be preferred over the status quo. This are the constellations where the problem solving capacity may benefit most from the agenda-setting function of central actors and also from the input of expert working groups.

In summary, however, the joint-decision mode also only leads to common solutions when they are supported by broad consensus. Otherwise common solutions are blocked and problems are left to be resolved by lower level governments. Winners of deregulation, for example, are usually not interested in having their competitive advantages levelled out by common rules. In addition, the co-ordination of harmonization may be blocked by conflicts about national (or regional) differences with regard to economic development, political culture, institutional structures, etc. Standards on sustainable forest management considered necessary and appropriate in Denmark or Germany may be not appropriate to other countries and/or may simply not be affordable in other less prosperous countries.

3.2 Risk of deadlock in multi-level polities

So far, my focus was primarily on the problems of international co-ordination, partly also touching some interrelated national-level aspects. But when taking national level processes and polities fully into account, the overall picture becomes even more fragmented and complex.

One way to look at such fragmented systems of policy-making is to emphasise linkages and interlacing between levels and arenas. Generally, the increasing number of arenas and linkages is said to entail two negative consequences: First, the growing opacity of policy processes accompanied with a lack of political accountability result in an often criticised democratic deficit. Second, and more important in our context, situations of many interlinked arenas of policy-making are said to result in an increasing risk of deadlock, analytically captured by the concept of the 'joint-decision trap' developed by Fritz W. Scharpf (1988). The central hypothesis of the joint-decision theorem claims that fragmented multi-level systems like those of Germany and the EU are likely to produce inappropriate policy outputs

and that they are, at the same time, unable to change the institutional conditions responsible for the deficiencies. Polities prone to lead into such a deadlock are characterised by the following features:

- Policy-making is negotiated by *governmental actors* who are primarily oriented at party competition. These actors represent and promote primarily the interest of their specific constituency and electorate, but unlikely common welfare interests beyond that. This, in turn, significantly reduces the leeway for agreements among them which can often only be achieved by avoiding salient issues and by finding solutions which minimise conflict.
- The inversion of that point is that actors who are not oriented at party politics do not play a significant role. Otherwise such actors could take the role of '*brokers*' or '*policy entrepreneurs*' and promote innovative decisions.
- Third, actors in such settings are institutionally obliged to achieve a collective output, they cannot act unilaterally, there are *no exit options* from the negotiations.
- Finally, the model of the joint-decision trap assumes that policy-making is performed in a *multi-lateral setting* which increases complexity and transaction costs compared to bi-lateral modes of co-ordination.

At its core, the problem of joint decision-making can be described as follows: Decision-makers operating at two levels of co-ordination have to comply with two basic considerations: on the one hand they have to co-operate in decision-making in a given arena and to strive for commonly acceptable solutions. On the other hand, they have to pursue specific interests in this arena which are defined by their responsibilities or their constituency. Then, agreements in one arena may reduce the chance for consent in other arenas because of the actors' commitment to previous deals. At worst, interdependence may lead to a deadlock.

To enhance the chances for achieving agreement in such situations, actors tend to refer to conflict-avoiding strategies. Agreement is often found on 'soft norms' preventing to interfere with relevant interests. Usually, compromises alter the status quo only marginally. Therefore, systems of joint decision-making tend to favour the beneficiaries of the status quo and are quite resistant to reform. Thus, the challenge is to co-ordinate negotiations in different but interdependent arenas in a way that actors are not caught in double binds.

To analyse interactions in multi-level settings, Robert Putnam (1988:435f) suggested to apply a simple two-level scenario: Representatives of two organisations meet to negotiate an agreement, subject to the restriction that any tentative agreement must be ratified by the respective organizations. Then two levels of bargaining can be distinguished: bargaining between the two chief negotiators (level I) striving for a tentative agreement, and bargaining within each organisation about whether to ratify that agreement (level II).

The two levels could be, the international, the pan-European, or the EU level vis-à-vis the national level; or the national level vis-à-vis the sub-national or the intra-organisational level. Applying the latter example, central decision-makers (representatives) engaged in national level negotiations must be simultaneously concerned with national level pressures and intra-organisational demands. At the organisational level, members and functionaries pursue their interest by pressuring central decisions-makers to represent their policy positions. At the national level, decision-makers try to maximise their own ability to find agreement while satisfying their constituencies' demands.

The likelihood of getting caught in the joint-decision trap depends on the so called '*win-set*' of the actors involved. For a given organisation in our scenario, it is defined as the set of all possible national level agreements that would gain the necessary support for ratification. The win-set for the whole scenario is then defined by the overlap of the two organisations' win-sets. Accordingly, a simple straight forward proposition is that the larger the individual win-sets, the more likely they are to overlap and the more likely an agreement can be achieved at

the national level. The same applies of course to a scenario combining national and sub-national levels of government, as well as to scenarios comprising international and national level forums.

Another reason why the (relative) size of the win-sets is important is because it affects the distribution of joint gains or losses (ibid:440): The larger the perceived win-set of a negotiator, the more his position can be moved by the other negotiators at level I, i.e. at the national level in our example. In that sense, a narrow domestic win-set strengthens the chief negotiator's bargaining position, provided that his domestic constraints are perceived and believed by his counterparts.

Since the win-set is a central variable with regard to the likelihood of agreement and the distribution of gains in multi-level processes, it is important to understand which factors affect its size: Putnam (ibid:442) points out some general principles, for instance: the lesser the expected negative consequences of non-agreement from the point of view of the actors involved, the smaller the win-set (ibid.). Furthermore, in real world processes the range of active actors participating in policy processes varies across domains and issues, but it also depends on the degree of politicisation. Politicisation of an issue may activate groups less worried about the consequences of non-agreement, entailing a reduced overall win-set (ibid:445).

So far another assumption of the joint-decision trap theorem was that negotiators deal with only one issue at a time. Allowing *multi-issue negotiations* has significant analytical consequences. Negotiators are faced with tradeoffs across different issues. Adding the possibility to make *package deals* may very much extend the common win-set. Thus, the probability of agreement on substantive results within an NFP process will differ, depending on whether forest issues are dealt with separately or together with issues of agriculture, industrial development, recreation, etc.

4. How to cope with the problems of multi-level co-ordination

The discussions above have pointed out some serious obstacles in achieving effective trans-national and multi-level co-ordination. From that, we would have to be quite pessimistic. But empirical findings show that policy-making in the EU multi-level polity does not necessarily get caught in the joint-decision trap, not at all. Besides cases of deadlock, empirical research has demonstrated dynamic cases and a problem-solving capacity in diverse fields. The following subchapters aim at learning from selected results from empirical studies on EU multi-level policy-making. The idea is to draw preliminary conclusions for NFP processes and their institutional set-up by comparison.

4.1 Learning from European employment and social policy

I have argued that the standard modes of multi-level co-ordination remain limited with regard to their problem-solving capacity. Starting with the problems of co-ordination at the international levels, the question is whether and how co-ordination efforts at the EU level or at the pan-European level can help to cope with common and cross-border problems at the national and sub-national level? The first two hypothetical approaches are (i) the *formulation and enforcement of common standards* and (ii) applying *procedures of open co-ordination* (cf. Scharpf 2000:24).

Applying the first approach to the NFP context might mean the formulation of minimum standards as regards principles and elements of NFPs as well as the enforcement of

compliance to them. In principle, such standards could be formulated at the EU level or by the Ministerial Process for the Protection of Forests in Europe. At the moment, international 'enforcement' is, strictly speaking, only partly realistic, i.e. when the European Commission has to approve the forestry chapters of the national programmes on the support for rural development (see below). But a kind of 'soft enforcement' could be implemented by an agreement on and the establishment of common monitoring and evaluation procedures.

The second proposal – 'procedures of open co-ordination' – is borrowed from the EU employment and social policy. It combines the characteristics of 'intergovernmental negotiations' and 'mutual adjustment'. Although national policies are not formulated and implemented in isolation, governing competencies remain entirely at the national realm. Beyond features of mutual adjustment, there has to be an agreement that the issue at hand, e.g. promoting sustainable forest management, is of common concern and that actions should be co-ordinated mutually. An outline of applying this pattern to the pan-European level could read as follows: Representatives of NFP processes (or countries) establish a central administrative unit or committee (let's call it '*pan-European Forest Programmes Committee*' EFPC) and provide it with the mandate to forward proposals concerning guidelines for national programming and to comment on national implementation. Furthermore, the General Assembly (GA) of participating countries acting on the proposal from EFPC adopts guidelines for national actions. Subsequently, national members regularly submit reports on their actions taken to implement the common guidelines. Moreover, national reports are evaluated by a high-level committee of national representatives and by the EFPC, which may then propose recommendations to the General Assembly. Altogether, such an institutional setting would establish a recursive process of multi-level co-ordination comprising joint problem analysis and goal setting, self-commitment, self-evaluation, as well as common benchmarking, monitoring and evaluation (see also Scharpf 2000:25).

Is it illusory to consider such an arrangement possible? The crucial question is whether such a recursive multi-level co-ordination approach would really increase the overall effectiveness of NFP processes. The answer will depend on how well defined the procedures and goals of the common guidelines are, and on the potential effectiveness of the established evaluation and monitoring mechanisms. Beyond that, the answer will also depend on whether those who co-ordinate themselves can benefit from cross-border 'policy learning'. As a hypothesis, the potential gains from policy learning will be more effective if more countries with similar policy legacies and institutions and comparable natural conditions and problems co-operate in solving their specific forest policy issues.

Another crucial point might be that the actors in charge of national decision-making and implementation have to be actively involved in international co-ordination efforts. Otherwise, the final result might be that national programmes merely restate what would have been done anyway and that the learning effects induced by the exercises at the higher level remain limited to the international liaison officials.

To conclude, the mode of 'open co-ordination' could provide a useful approach to prevent the potential negative effects of systems competitions, i.e. unintended races to the bottom. But it is hardly predictable whether it would have real effects on the outcomes of national processes or would remain at the level of symbolic politics.

4.2 Learning from European regional development policy

EU regional development policy provides another instructive policy domain for our purpose: First, structures and procedures are close to the current understanding of the NFP concept. Second, it points to ways to effectively co-ordinate multiple levels of government. Last but

not least, the EU Regulation on Rural Development, which is the Community's main instrument to support forestry, directly refers to the core elements and procedures of the regional development policy (cf. Chapter 4.3).

The empirical basis of this chapter stems primarily from two sources: from studies of Arthur Benz and Burkard Eberlein (cf. Benz and Eberlein 1998 and 1999) and research results published by Eiko Thielemann (2000). Both studies analyse co-ordination in European Structural Funds policy-making in less developed regions of Germany.

The European Regional Development Fund (ERDF) is one of the Union's Structural Funds. Council Regulation (EC) 1260/1999 laying down the general provisions on the Structural Funds introduces goals and elements to multi-level policy-making which remind us of the concept of NFPs: It aims at improving vertical intergovernmental co-ordination. It stipulates that Community actions shall be drawn up in close consultation (referred to as the 'partnership') between the Commission and the Member State, together with the regional and local authorities, with the economic and social partners, and with other relevant bodies. 'Partnership' shall cover the stages of preparation, financing, monitoring and evaluation. Thus, with respect to the actors, two aspects of the partnership principle can be distinguished: first, it provides to integrate the sub-national levels of government, and second, it determines the participation of semi-public and non-state actors.

Unsurprisingly, the demand for 'partnership' and its devolutionary implications cause tensions in centralised polities. But even federal states with a corporatist tradition like Germany have substantial difficulties with its implementation (cf. Thielemann 2000), since 'partnership' means the formal involvement of sub-national actors and social partners in decision-making processes where their role has formerly been a consultative one.

The main questions in the context of this paper are whether and how actors managed to cope with the need for vertical co-ordination which is inherent in this EU regulation, and which role actors from different levels have played within the multi-level polity.

4.2.1 Impacts of the 'partnership principle'

Following the example of Germany, the Federal Ministry of Economics is formally in charge of developing national programmes for support of regional development and also in charge of negotiating them with the EU Commission. In real terms, however, planning is done at the Länder level. Länder governments submit regional development programmes to the Commission via the Federal Ministry, which merely performs the role of a mediator.

The implementation of the EU regional development policy was complicated by a serious conflict between the Länder and the Federal Government. This case is informative with regard to the Commission's interpretation of the partnership principle. The deeper root behind the dispute has been the exclusions of Länder ministries (i.e. exclusion of all the Länder ministries except the Ministries of economics) from EU Structural Fund decision-making and from the distribution of the Fund's financial resources (ibid:12). The exclusion was institutionalised by coupling EU funding with the domestic programme of the 'Joint Task for the Improvement of the Regional Economic Structure' (GRW).

The EU Commission strongly supported the position of the Länder. The Directorate General in charge of 'Regional Development and Cohesion' refused to approve the German programme 1994–1999 and insisted to allow to spend EU funding outside the GRW scheme. Finally, some Länder could de-couple parts of EU funding from the domestic programme. Consequently, EU Regional Development Fund assistance was no longer exclusively managed by the Ministries of Economics. Now, depending on the individual project, other ministries also participate in EU regional development policy implementation. In sum, the

enforcement of the partnership principle by the European Commission has significantly strengthened the position of sub-national governments in EU regional development policy planning in Germany.

Furthermore, implementation of the partnership principle at the level of the Länder allows to draw conclusions regarding the Commission's interpretation of the provision to integrate the economic and social partners in the course of implementation, monitoring and evaluation. 'Monitoring Committees' are the primary institutions for conducting partnership at these stages. Such committees also exist at the Länder level ('monitoring sub-committees'), where most of the operational decisions are taken (ibid:16).

As a general rule, the representatives of Länder governments have employed their positional influence as chairs of the monitoring sub-committees to prevent non-state actors from gaining substantial influence. Initially, their general position was that economic and social partners should not be represented in the monitoring sub-committees, co-ordination would be conducted by means of informal contacts anyway. As a consequence, the Rules of Procedure initially adopted by the monitoring sub-committees did not provide for the direct participation of social partners (ibid.).

Again, the EU Commission made its point of view quite clear: The Directorate General in charge of Regional Development expressed its concern in particular with regard to the newly-formed German Länder which constitute the major part of the national Structural Funds programme. The Commissioner intervened, both via the media as well as in direct contact with the Prime Ministers and criticised the weak participation of economic and social partners (ibid.). These interventions caused irritations at the Länder Ministries, but finally within one year the economic and social partners were granted seats in the monitoring sub-committees in all new German Länder. For example, Thielemann (2000:18) reports for Saxony-Anhalt that 24 organisations had been granted a formal seat, 'ranging from the Trade Unions, the Chambers of Trade and Industry, the representatives of districts and municipalities to a large number of environmental and social interest groups'.

But strictly speaking, this was only a partial 'success': the Rules of Procedure of all these monitoring sub-committees still do not grant formal voting rights to economic and social partners. They are members in a consultative function and have no right to veto. The influence of the none-state actors was further restrained by the fact that central tasks of programming, such as the selection of projects, are not part of the responsibilities of the monitoring sub-committees, but under exclusive control of the Länder Ministries. Nevertheless, in sum the 'partnership principle' certainly challenged domestic procedures by legitimising direct contacts of sub-national actors with the Commission and providing a formal role to non-state actors in European policy processes.

4.2.2 Ways to prevent multi-level processes from deadlock

Based on the 'partnership principle' the German regional development polity comprises the EU level, the Federal level, and the Länder level, but also sub-Land authorities as well as economic and social partners. In view of the high number of interlinked levels and arenas the question arises whether this political structure is predestined to end in the joint-decision trap?

Obviously, EU regional development policy-making is not caught into deadlock. The first line of explanation emphasises specific patterns of interlinked arenas and tasks. One such pattern is *hierarchical-sequential ordering of negotiation processes*, either following a top-town or a bottom-up approach. 'Sequential ordering' means, that negotiations in different arenas take place one after another whereby preceding decisions taken in one arena provide binding corridors for subsequent ones. This determines a hierarchy among the arenas or

levels of decision-making. However, these strategy might lead to the centralisation (if the sequence is top-down) or decentralisation (bottom-up) of policy-making, each associated with well known problems and limits. The problems associated with centralisation are due to the lack of information of central decision-making bodies on specific situations in the target-regions, due to the disposition of central governments to implement sector-specific solutions, and last but not least, due to the decline of the citizens' influence and difficulties to find acceptance for decisions taken at a central level. On the other hand, there are well known limits of decentralisation which are primarily caused by external effects, which spill over the territory of a responsible government, by the existence of common resources, which are co-controlled by different governments, and by the allocation of resources or costs and benefits of developments, which may lead to inequalities between territories.

Preconditions for applying 'sequential ordering' are that the overall task can be broken down into sub-tasks, that upper levels have the competence to set the preconditions for sub-ordinate levels, and that upper-level decisions leave reasonable room for co-ordination and decision-making at the lower levels.

In the case of European regional development policy there is a relatively clear separation of decisions-making powers distinguishing different stages and aspects of institutional design, budgeting, programming and implementation. It allows a considerable degree of discretion for decentralised institutions within the multi-level system. General policy goals (e.g. the reduction of welfare disparities,), principles (e.g. 'partnership') and the distribution of EU funding among the Member States are decided at the EU level, more concrete national and regional goals and the operational programmes are elaborated at decentralised levels, and national proposals are scrutinised for compliance with common goals and principles in negotiations between the Commission and the national governments.

It is important to emphasise that this kind of distinction between the arenas and their sub-tasks partly implies a *separation of arenas dealing with distributive issues from arenas dealing with development aspects* as such. Inter-regional conflicts about distributive aspects are partly decided upon ex ante at the EU level. Only then national actors strive to develop common programmes by joint efforts, namely within the predefined distributive conditions. This kind of arena separation is a well known institutional strategy to promote the actors' overall orientation towards problem-solving (cf. Mayntz 1996:487). Furthermore, and in combination with that, the *threat of losing European funding* if regional and national actors fail to agree on viable programmes raises the willingness to co-operate at decentralised levels significantly.

The second pattern of arena linkage which Benz and Eberlein (1999) empirically observed is also characterised by '*decoupling*' of arenas, on the one hand, but combined with patterns of '*loose coupling*', on the other hand. The latter is performed by actors who provide linkages and facilitate co-ordination between simultaneously operating arenas. This role can be played by high-ranking national civil servants, by interest group representatives or by other experts who are participating in several arenas. 'Instead of resorting to binding mandates or externally defined bargaining positions, they mediate between institutionally separated arenas and foster the exchange of information and informal contacts' (Benz and Eberlein 1999:333). Here, policy-making in different arenas is primarily linked by the exchange of information but not by hierarchical direction. Thus, decisions taken in one arena do not determine subsequent decisions in other arenas, rather 'policy-making in one arena sets the context for negotiations in other arenas' (Benz and Eberlein 1998:12). Accordingly, the logic of interaction is shifted from control and direction to information and persuasion.

According to Benz and Eberlein (1999:333), this mode of co-ordination provides some significant advantages: it enables actors to evade the rigidities of formal decision-making procedures; it increases the chance that innovative policy ideas prevail; it gives expertise-

based policy entrepreneurs a better chance to overcome conflicts; and it can introduce an element of competition between different arenas, thus encourage policy innovation.

With regard to the latter aspect, one must bear in mind that EU funding rules merely determine whether a region is eligible or not, but the amount of funding allocated to individual regions also depends on the quality of their programmes. The concurrence of differentiation and loose coupling promotes policy competition among arenas: differentiation provides relatively autonomous arenas, allowing to generate new policy ideas. Loose coupling provides channels for the diffusion of ideas to other arenas.

Whether the *mode of hierarchical sequencing* or the *mode of loose coupling* or another mode of co-ordination will prevail in a concrete case is likely to depend on both the institutional preconditions as well as on the preferences and on the relative power of the relevant actors. However, Benz and Eberlein (ibid.) conclude that the regionalisation of EU development policy created arenas of negotiation, intensified communication, and stimulated learning. The specific dynamics and structuralisation processes provided avenues to evade situations of stalemate. They could not completely resolve the tension between the need for more integration and co-ordination, on the one hand, and the pressure for differentiation among arenas, on the other hand. But they point to strategies to alleviate this tension. In the concrete cases discussed here, a mix of different modes of governance allowed to prevent deadlock: Co-ordination by negotiations within arenas and 'loose coupling' between arenas was effectively complemented by competition and hierarchy.

The observation of the 'mode of loose coupling' which depends on the existence of policy brokers who provide linkages between different levels and arenas already indicated that 'there is little reason to expect strict joint-decision-trap style of deadlock of the kind denounced by Scharpf' (ibid.). Accordingly, the second line of explanation is based on the fact that institutional structures do not resemble Scharpf's joint-decision trap model in detail. Thus, some further suggestions to avoid the systematic problems associated with multi-level co-ordination in the course of an intended NFP process simply refer to the avoidance of the particular conditions which constitute the joint-decision trap:

- *Allow 'policy brokers' and 'policy entrepreneurs' who are not primarily oriented at party competition to participate.* Taking regional development policy as an example, EU policy making is not only performed by governmental actors but also by others who cannot be assumed to be oriented primarily at party competition. Although EU Council decisions are finally taken by the representatives of the member governments. EU policy-making is influenced by a lot of other actors, e.g. the Commission, representatives of interest groups and enterprises, who are more independent from party-politics. Such actors typically occupy boundary-spanning positions and link different arenas and/or levels of governance. Furthermore, high-ranking national civil servants may often also take this role. The case of regional development policy-making in Germany shows that arena linkages between domestic and European arenas are even 'quasi-monopolized' by the Länder Ministries in charge of regional development policy (Benz and Eberlein 1999:337). In this case the strong position of the ministries at the interface between the levels of governance has even entailed negative consequences in terms of a strong tendency towards sectoralization: Strong vertical bureaucratic linkages and professional fraternities between the ministry at the federal level and the ministries at the Länder level determine the policy processes at the expense of inter-sectoral co-ordination (ibid.).
- *Enable actors to co-ordinate themselves via informal routes, thereby providing opt-outs from formal procedures*. Actors in EU decision-making processes are obliged to find collective outputs, but formal arenas are complemented by more flexible and informal forums for interaction and co-ordination. This helps to avoid stalemate.

- *Decrease complexity by performing bi- or tri-lateral negotiations instead of applying a multi-lateral mode.* In the case of national programmes according to the regulations on the Structural Funds, the national proposals are not (only) scrutinised for acceptance in a multilateral setting comprising all fifteen Member States and the Commission simultaneously, but primarily in a bi- or trilateral mode between the Commission, the Member States and the regional authority whose programme is at stake. In the German case the procedure is further simplified by by-passing the Federal level: The formulation of development programmes is left to the Länder governments which are in direct contact with the Commission.

4.3 Learning from European rural development policy

The final empirical chapter shortly outlines another multi-level co-ordination process which has taken place at the national level. The development of the forestry chapter to the Austrian National Programme according to *Council Regulation EC 1257/1999 on the Support of Rural Development from the European Agricultural Guidance and Guarantee Fund (EAGGF)* serves as an example.

This regulation is another interesting and important piece of legislation with regard to NFPs. In several passages the Council Regulation (EC) 1257/1999 refers to provisions of *Council Regulation (EC) 1260/1999* [which is] *laying down the general provisions on the Structural Funds* (cf. Chapter 4.2). It broadly applies the latter's principles and procedures, in particular with regard to programming and national implementation, as well as monitoring and evaluation. In a nutshell this means that the procedural characteristics presented in the previous chapter, which are close to our current understanding of the NFP concept, fully apply to the Community's main instrument in support of forestry.

Going into some details, Article 41(1) stipulates that rural development plans shall be submitted to the Commission 'after competent authorities and organisations have been consulted.' In addition, Article 4(2) postulates some inter-sectoral co-ordination. It states that all 'rural development support measures to be applied in one area shall be integrated, whenever possible, into one single plan.' Whenever several plans need to be established, the compatibility and consistency of the measures put forward shall be ensured. The rural development plans are supposed to cover a period of seven years (Article 42). They have to include, amongst other aspects, a description of the measures and provisions to ensure the effective implementation, provisions for monitoring and definitions of quantified indicators for evaluation, and the results of consultations with authorities as well as with economic and social partners (Article 43). The implementation of the plans shall be accompanied by a monitoring committee, and the member states have to submit annual progress reports to the Commission (Article 48).

Support for forestry is regulated in chapter VIII. It 'shall contribute to the maintenance and development of the economic, ecological and social functions of forests in rural areas', in particular it should promote sustainable forest management and development of forestry (Article 29). A key passage of the Regulation on Support for Rural Development with respect to our subject of NFPs is, however, Article 29(4) which literally stipulates that support shall be 'based on national or sub-national forest programmes or equivalent instruments which should take into account the commitments made in the Ministerial Conferences on the Protection of Forests in Europe.' Certainly, this wording leaves a lot of room for interpretation. But finally the EU Commission (as well as an EU level Committee) has to agree on national programmes before they can be enacted. This implies that the

experiences from the fields of regional development policy (Chapter 4.2) are again relevant here, e.g. with regard to the implementation of the 'partnership principle'.

To conclude on that point, Regulation (EC) 1257/1999 stipulates goals, core elements and procedures which correspond to our current understanding of the NFP concept: the modern concept of sustainable forest management, inter-sectoral co-ordination, multi-level planning, participation of sub-national and private actors in national programming, a medium range planning horizon, and recurring monitoring and evaluation procedures. In view of that, one could even regard Regulation (EC) 1257/1999 as the EU's legal framework for NFPs.

Fact is, that all EU Member States had to deliver their national programmes on support for rural development by the end of 1999. So, how have the provisions of Reg. (EC) 1257/1999 been translated to the national level? If they were taken seriously we should expect to learn a lot from these cases for our object of research, i.e. for the implementation of NFP processes. Unfortunately, to my knowledge, there was no detailed study on that presented so far. Thus, I only discuss a short outline of the development of the forestry chapter of the Austrian national programme 2000–2007.

Regulation (EC) 1257/1999 was enacted in May 1999. Already in January 1999 a national working group on forestry was established to develop the national programme for the implementation of the forestry chapter. It was chaired by the Department of International Forest Policy of the Ministry of Agriculture and Forestry (MAF) and met about seven times, each time for one or two days. According to the need to integrate the forestry chapter into the overall national programme on the support of rural development, the working group on forestry was integrated in the structure depicted in Figure 1.

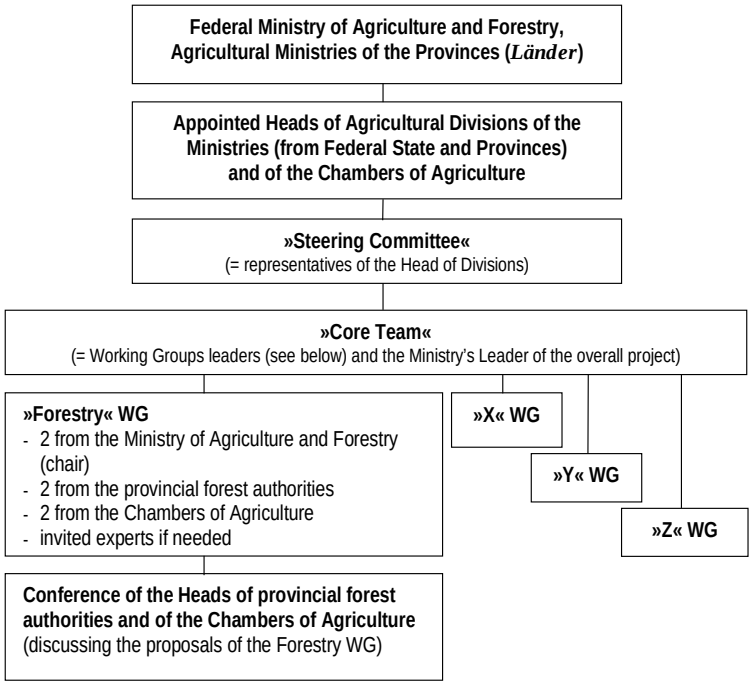

Figure 1. Organisational structure for developing the Austrian national programme in "support on rural development" (as of 1999).

Eight months after establishing the working groups, in September 1999, Austria was the first Member State to submit its National Programme for Rural Development to the EU Commission for verification. Subsequently it had to be forwarded to the 'Management Committee on Agricultural Structures and Rural Development', the so-called 'STAR Committee', for final approval. The latter is chaired by the Commission and its members are representatives of the Member States. By the end of June 2000, the Programme was approved by the STAR Committee.

In terms of multi-level and inter-sectoral co-ordination the published report on the national programme states: 'Of course such a comprehensive programme could not be compiled overnight. It was elaborated since the beginning of 1999 in an Austria-wide discussion process that comprised ten working groups. The Agriculture Departments of the Provincial Governments, the Presidents' Conference of the Chambers of Agriculture, the Chambers of Agriculture were included in this discussion process as well as numerous social and economic partners.' (BMLF 2000:11; translated by the author). Figure 1 shows that the forestry departments of the Provincial Governments and the Chambers of Agriculture have been actively involved at the regional as well as at the national level. Some kind of 'inter-sectoral' links were provided by the working group leaders who, together with the ministry's leader of the overall process, formed the 'core team'. But strictly speaking, this was probably rather a forum for 'inter-sub-sectoral' co-ordination within the agricultural domain.

Furthermore, compared to national processes on programmes to support forestry, the EU multi-level process provided additional points of access to actors interested in that issue, most notably in form of the Commission but also at the STAR Committee. However, the traditional national forest policy community was able to hold its ground, at least for the current programme period.

5. Conclusions drawn in regard to NFP processes

Based on the pieces of theory discussed above and the limited secondary empirical evidence from the case studies, I try draw some tentative conclusions. To this end, imagine someone who is a national representative in an international forum striving to co-ordinate national positions concerning the NFP concept and its implementation with foreign counterparts. Let's furthermore assume that this actors is also in charge of setting up and starting an NFP process in his home country. Beyond that, let's assume that he has an interest that both, the national level as well as the international level efforts are not caught in deadlock but achieving commonly acceptable outputs.

When our anonymous NFP facilitator would consider international co-ordination on the NFP concept by applying the pure mode of mutual adjustment he would have to be aware of the problems probably arising from systems competition; i.e. the potential threat of downward pressure on standards. Co-ordination efforts that only count on the mode of intergovernmental negotiations run also the risk of having highly relevant but controversial issues left aside. In this case, the problem-solving capacity can be enhanced by allowing side payments and package deals, but this usually requires sector-spanning levels of negotiation.

The discussions on the basic modes of co-ordination brought forward some more suggestions concerning routes to co-ordinate the NFP concept. In particular, I tried to outline an application of the mode of 'open co-ordination' as it is known from the field of EU employment and social policy-making. It is rather demanding, but could provide a strategy to prevent negative effects of systems competition. Its recursive approach of goal setting,

programming, implementation, monitoring and evaluation is able to integrate several levels of governance adequately and corresponds the NFP concept.

Furthermore, if our fictitious facilitator aims at ensuring that those who co-ordinate their efforts take full advantage of 'policy learning', he should provide the conditions in a way that in particular countries or regions with comparable preconditions and forest policy problems can exchange information and co-ordinate their effort intensively. Besides that he should make sure that those actors who are responsible for actual NFP implementation should be involved in international or inter-regional processes.

In the case that our fictitious facilitator is the representative of a country which is (or will soon become) a member of the European Union, he should use the time until the next programme period according to the EU Regulation on Support for Rural Development to verify whether domestic mechanisms and procedures for programming, implementation, monitoring and evaluation comply with recent interpretations of the 'partnership principle' by the EU Commission. Adaptations, if necessary, have to be arranged within the overall process of programming national rural development policies.

If an overall co-ordination and the integration of multiple arenas seem impossible, our imaginary NFP facilitator should furthermore consider to divide the overall task into sub-tasks to be dealt with in separated but coupled arenas. This may provide a way to overcome the dilemma of 'inclusions versus exclusion' entailed by the demand for broad participation at multiple levels and arenas, on the one hand, and the limited potential scope of effective decision-making structures, on the other hand. Differentiation can be considered with respect to the hierarchical levels of decision-making (e.g. from general goals and principles down to concrete projects), with respect to regional entities or with respect to issue areas (e.g. forestry, transport, tourism, etc.). In particular, it is promising to distinguish arenas dealing with distributive issues from others which work on substantial problems. For instance, decisions on general goals and principles of forestry funding as well as overall programme budgeting can be made at the EU level or at the national level, whereas decisions on the applicable measures can be made at the regional level.

Another conclusion derived from the case studies about regional development policy is that the willingness to co-operate at decentralised levels often strongly depends on the stimulating effect of funding from the central levels. Accordingly, the readiness of actors in an NFP process to co-operate in elaborating common programmes is likely to be considerably increased when a common funding approach is integrated in NFP formulation, i.e. when there is a clear commitment for financial measures to be provided based on the collective output. The amount and time of funding should depend on the quality of the commonly accepted programme, measured against preset common goals and principles which were developed and agreed upon in arenas different from the one of programme formulation. For EU members, forestry funding based on the national programmes on rural development according to Regulation (EC) 1257/1999 could easily provide the core of such a funding approach, because this regulation stipulates goals and procedures that resemble the concept of National Forest Programmes.

Furthermore, I argue, our anonymous NFP facilitator is well advised to consider carefully all the possible modes of co-ordination and to avoid those attributes that constitute processes and structures resembling the joint-decision trap. The latter implies that he should consider to have actors on board who are not (only) oriented towards party competition but are able to fulfil the role of 'policy brokers' and 'policy entrepreneurs', he should not aim at ruling out potential exit options but provide informal channels for co-ordination, and he should consider to promote also bi- or tri-lateral modes of co-ordination instead of applying a pure multi-lateral approach. In particular in case of the need to co-ordinate a number of sub-national levels within an NFP process, the process's overall complexity could be significantly reduced

by not restricting the process to the multi-lateral mode. Thereby the levels of conflict can be reduced by subdivision, and co-ordination efforts can be more easily adjusted to individual institutional conditions.

The discussion of the factors determining the 'win-set' in multi-level structures suggested that the politicisation of NFP processes may reduce the room for common solutions by activating actors who are less worried about the results of non-agreement. But on the other hand, we can assume that politicisation increases political commitment necessary to ensure funding and implementation. Another conclusion also related to the degree of politicisation is that the broader/higher the levels integrated in multi-level NFP processes, the more possibilities for agreement on inter-sectoral package deals will exist, and the bigger is the common win-set at the top level. But the increasing likelihood of a top-level agreement does of course not necessarily imply that such agreements reflect the lower levels (i.e. sectoral) preferences.

Governmental actors may often take the role of mediators within arenas and at the boundaries of levels and arenas. Then, as we learned from the regional policy cases, they can usually perform this role better, if they can take advantage of the possibility to bring about a decision by hierarchical direction if necessary (benefiting from the 'shadow of hierarchy'). This implies that the national administrations in charge of forest policy-making should carefully consider whether they agree at the outset of an NFP process to abstain from hierarchical direction in case of an imminent deadlock. The potential threat of hierarchical decision-making can provide a powerful last resort to overcome stalemate.

On the other hand, although the strong position of state actors at the boundaries between the European, the national and the regional levels can provide channels for information exchange and mediation among arenas, this strong position of sectoral authorities which are closely co-ordinated vertically might lead to the dominance of one leading sector in an NFP process at the expense of inter-sectoral co-ordination. In this case, additional opportunity structures for inter-sectoral co-ordination would have to be provided (if desired).

Finally, the example of integrating forestry programmes into national programmes according to Regulation (EC) 1257/1999 reminds us not to lose sight of the overall picture. NFP processes may well be part of broader efforts, e.g. towards national programmes to support rural development or towards national strategies for sustainable development. If this is the case, forest sector actors may stick to a wait-and-see attitude or prefer to take a pro-active approach trying to profit from first-mover advantages.

Acknowledgements

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Participatory Planning and Financial Incentives for Forest Management and Planting – Preliminary Results of a Comparative European Survey

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Abstract

The successful formulation and implementation of NFPs by governments has focused, among other elements, on broad participation of all interested parties and the co-ordination of public and private investments to promote sustainability. In times of increasing regional diversity in both socio-economic and forestry conditions, the perceptions of various segments of stakeholders on issues pertinent to participatory planning and financial incentives could be used as a basis for developing an NFP or even a European programme for sustainable and multifunctional forestry. This paper seeks to document local perceptions and experiences from rural areas across Europe as regards to participatory processes and examine the degree that existing financial incentives influence (support or impede) land management and afforestation practices.

Keywords: participatory planning, financing, NFP, Europe

1. Introduction

The issue of financing strategies as an element of national forest programmes, for the mobilisation of domestic and international financial sources, is being discussed internationally including the valuation of forest goods and services. Encouraging partnership and participation of all interested parties are key mechanisms in the development of a substantial NFP (Michaelsen 2000). Those mechanisms should aim at involving all interested

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parties, and ensuring the rights of interventions and fair processes of negotiating and compromising, e.g. through public debate and consulting groups. Up to now participatory mechanisms and financing have been, in practice, very much dependent on standard government processes and practices that often ignore region-specific needs or do not consult people interested in forestry. However, the necessity to include more and more local interested groups and voices in order to make a NFP a broad-base process carried by all sections of society increasingly recognised (Schanz 2000).

To the extent that national forest programmes are both a technical process, in the sense that strategies are based on information, as well as a political process, in the sense that the choice of an option is a function of negotiations, debates and compromises of various actor groups, this study could be a valuable pool of information from various stakeholders as well as a measure of the participants' positions on the issues of participatory planning and financing. Within this context, the paper represents an initial account of perceptions and attitudes of landowners and community inhabitants from preliminary findings of a survey undertaken in rural areas representing different rural and forestry conditions across 5 European countries (Austria, Denmark, Greece, Ireland, Spain).

2. Methodology

The influence of different socio-economic, demographic and biophysical conditions in rural areas formulates region-specific attitudes in a given locality that can be best collected and analysed by means of social survey techniques. For the purpose of the research, each country selected two study areas; one representing traditional forest conditions (tfa) and another with newly evolving forestry as a result of recent or ongoing afforestation (aa). The site-oriented nature of the study implies the use of a common questionnaire directly targeting local people as the most appropriate survey instrument to elicit attitudes and perceptions of landowners and community inhabitants. A common questionnaire translated into target languages was distributed in parallel to each country during the spring of 2001. An explicit sampling and survey design protocol was developed to eliminate sampling bias and ensure that the results are within comparable measures (Elands et al. 2000).

3. Results

3.1 Perceptions on participatory planning

Most landowners tend to share the same vision as regards their involvement in participatory procedures for afforestation measures and forest management practices. Overall the respondents are neither satisfied nor dissatisfied with the existing framework of norms for preparatory action. A similarly neutral attitude was recorded for the role of intruders (non-landowners) to landuse decision making. However, landowners in Greece have differentiated from the rest and declared a relatively high level of agreement to both statements. This however, is at odds with the present situation where institutionalised consultation processes are essentially lacking in Greek forest policy and efforts are exhausted on informing landowners on forest related measures.

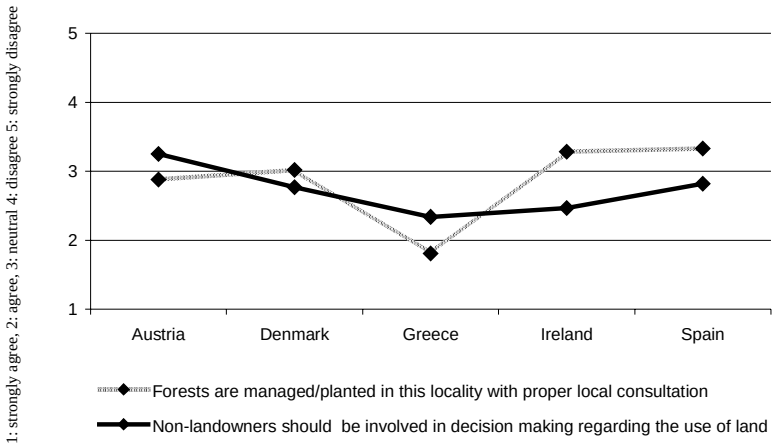

Figure 1. Mean agreement of respondents' on proper consultation and involvement of non landowners in landuse decision making.

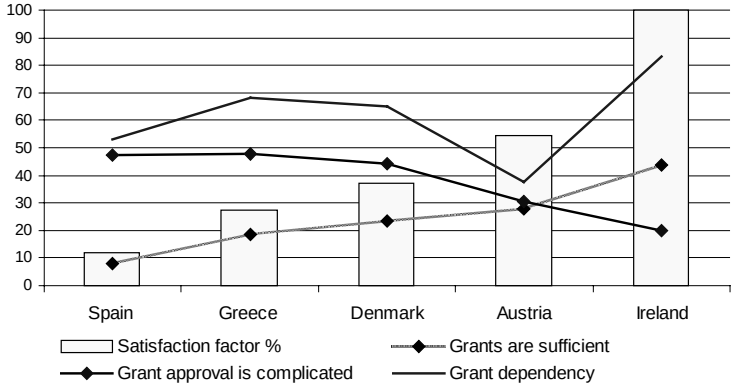

Figure 2. Respondents' perception on grant sufficiency and complicacy, satisfaction factor and grant dependency.

3.2 Grant sufficiency and dependency for management and planting

Results shown in Figure 2 indicate a significant cross-national variation on grant sufficiency for managing or planting forests. Almost 44% of Irish landowners consider the existing grants and subsidies adequate, higher than their counterparts from the other countries. The respective percentage for Spain and Greece reached only a tiny 7.9% and 18.5% respectively. A possible explanation to this would be the existing strong value of fields and agriculture to farmers, the latter being regarded as significant contributors to local income in countries like Spain and Greece.

In an attempt to identify possible factors that could explain the above variation, the views of landowners on the complicacy of grant approval procedure were examined. There appears

to be an inversely proportional relationship between the perceptions on grant sufficiency and grant complicacy displayed by curves in Figure 2. In many cases, the complicacy for approving grants somewhat seems to act as an impeding factor to landowners mostly in Spain, Greece and Denmark.

More illustrative is the satisfaction factor developed as a function of responses on grant sufficiency and grant complicacy and expressed in percentage of maximum satisfaction that is used to signify the synergetic effect of complicated grant approval procedures on the perception of grant sufficiency. In countries such as Ireland and Austria, a high satisfaction factor was recorded as the combined result of less complicated administrative procedures for grant approval and higher perception of grant sufficiency.

In addition, results suggest that, by large, the implementation of afforestation policies at local levels is substantially grant driven, although some variability between countries occurred. Thus, from a low 37.3% of landowners in Austria, who claimed that land would not have been planted without grants, the percentage increases to as high as 83% in Ireland.

3.3 Relationship between grants and land use purposes

The public's preference for grants is likely to be affected by the purposes of landuse management for which grants are aimed at. Results in Figure 3 indicate that, with the exception of Danish study areas, in all other countries both land owners and community inhabitants prefer grants and subsidies to be channelled for purposes related to planting trees, managing and protection of landowners' land rather than managing the land for recreational purposes. Therefore a strong link is apparent between the use of financial sources to generate primarily private profits to landowners, in the form of agriculture, hunting or timber production, against the preservation of land for collective use by recreationists and tourists, despite the overwhelming number of non-farmers (community inhabitants) in the sample.

3.4 Knowledge of regulations and local interest in planting

Low levels of knowledge of regulations and measures that encourage tree planting may constitute a significant constrain in the implementation of such measures. This is possibly true for Spain and Greece where the percentage of landowners being aware of such schemes are the lowest among the 5 countries (30.8% and 48.8% respectively, Figure 4). Unlike Greece, however, the percentage of farmers that are interested to get involved in similar schemes is markedly low in all other countries. The connotation of the above is twofold: first, forest planting schemes are not particularly attractive to landowners in most countries; and second, effective information dissemination procedures in tree planting possibilities for farmers are lacking in countries like Greece and Spain.

4. Policy implications

This research represents an effort to diagnose the existing role of participatory planning and financing in forest management and planting through a European survey. Findings suggest that while afforestation policies at a national or European level are clearly supportive of measures aiming at improving the economic sustainability, ecological and environmental integrity of rural areas as well as the conservation of biodiversity, it is the potentiality and

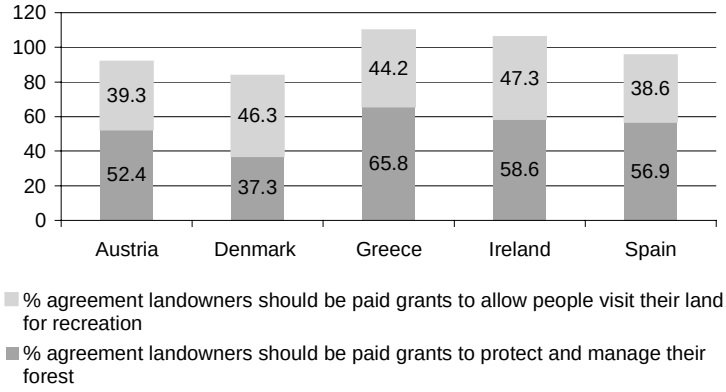

Figure 3. Public's perception on allocation of grants for managing, protecting or using forests for recreation.

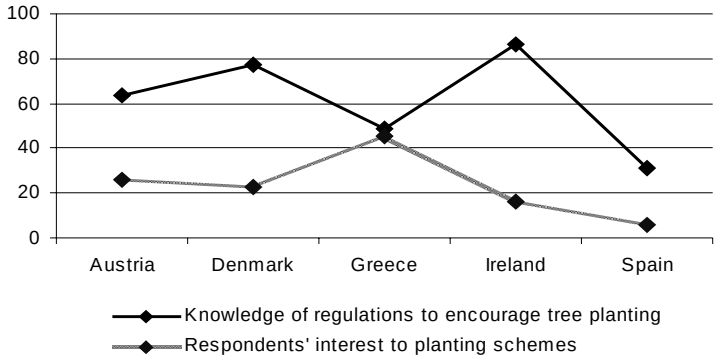

Figure 4. A measure of respondents' level of knowledge and interest in afforestation schemes.

magnitude of derived economic benefits that lie at the core of local peoples' decision to plant their land. Moreover, in most cases, it is not clear how afforestation measures or planting regulations have been used effectively to enhance forest sustainability compared to the economic sustainability.

The research supplied evidence that the participatory process for forest planting and management at regional levels has not been based on a rigorous procedure in most countries. Buttoud (2000) argues that this is due to the necessity for the public authority to base its concrete action on rationalist criteria and procedures, because they give possibilities to deductive follow-up and evaluation.

Country specific procedures relating to grant allocation to landowners are in some countries complicated and often impinge upon national institutional and administrative weaknesses. This may consist an impeding factor towards the adoption of forest measures by the landowner, who is often repelled by bureaucracy, and may also account for differences in the level of policy implementation observed among European countries. Further, countries like Greece and Spain should rectify or enhance the framework of forest-related initiatives and information dissemination procedures on potential forest policy measures.

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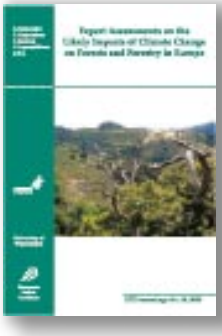

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