The Evaluation of Forest Policies and Programmes

Gérard Buttoud, Birger Solberg, Ilpo Tikkanen and Brita Pajari (eds.)

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Foreword

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Since the beginning of the 1990s, the ongoing international dialogue on forests at the world level has been changing the way the policy aspects of sustainable forest development are addressed by both decision makers and scientists.

New concepts, which are supposed to be conductive to sustainable management of the forests, have been introduced. The new framework progressively elaborated pays more attention to the full value of the forest, to the conservation of biodiversity, to the participation of stakeholders and public, to the inter-sectoral links, or to the iterativity fed by collaborative learning. Criteria and indicators have been set up, promoting a coherent language and defining norms for follow-up, monitoring and certification. In some cases such concepts have remained just as speeches, in some others National Forestry Programmes (NFPs) have been elaborated to take these new directions into consideration. In most of the cases, although NFPs are not established yet, significant changes have been brought in the forest policies at national and regional levels.

Consequently, and in the meantime, the methods and approaches for policy analysis were evolving also. Especially the changes in forest policies have been accompanied with an important involvement of the policy scientists in the discussions leading to the retained solutions. For the first time maybe, the researchers were compelled to participate to the definition of the new concepts, and they effectively played such a role. In the discussions led by the United Nations Forum of Forests (UNFF) as well as in the Ministerial Conferences for the Protection of Forests in Europe (MCPFE), the role of science was considered, and even appreciated. The European Union COST E33 concerted action on NFP formulation gives a very good example of such a joint work. But only the formulation aspects of forest policies and programmes were considered so far.

Now that some NFPs and specific programmes have started to be implemented, the time has come to start with a rigorous discussion about the way to evaluate the results from those changes. How can the modifications be assessed? Do the new concepts developed imply new approaches and methods also for evaluation?

A first discussion on those questions took place in an International Symposium organised by ENGREF (The French Institute of Forestry, Agricultural and Environmental Engineering), EFI (European Forest Institute), IUFRO (International Union of Forest Research

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Organisations) and ENSTIB (School of Wood Sciences and Timber Engineering) in Epinal, France, from June 27 to July 3, 2004, with a strong support from the Local Government of Vosges. In Epinal, 55 scientists and practitioners coming from all parts of the world discussed both theories and empirical cases, in order to draw out the present state of the art of methodological tools and issues, with as an aim to enhance research and networking with decision makers for a better monitoring of programmes based on concrete experiences. A one-day field trip has been especially devoted to a discussion on the French Relief Plan for Forests as implemented in the Vosges, a region particularly affected by the Lothar storm of December 1999.

As resulting from the presentations, most of them published in these Proceedings, the diversity of situations leads to various problems raised.

As D. Humphrey insisted on the role that NFPs will have to play in the future, M. Sinko and I. Kouplevatskaya-Yunusova questioned in theoretical terms the issue of iterativity that may lead to methods for assessment different from those followed before. Various approaches and norms for assessing participation were presented by D. Reeb, R. Murray and S. Higginson, and B.H.M. Elands. The possibility to link assessment with foresight (A. Niskanen and J. Suoheimo) was also part of the discussion, and the issue of cross-sectoral linkages, which is to become important with NFPs implementation, was dealt with by Y. Dubé and E. Verbij.

K. Kaczmarek and A. Ottitsch presented the framework proposed in the EU interventions, and H. Pülzl and E. Rametsteiner an ex-post method applied on the case of implementation of international commitments. J. Croisel and M. Fabra-Crespo addressed the issues raised at regional level with evaluation. Economic analysis was also present with some case studies, by D. Petenella and L. Secco, S. Ziegenspeck, and S. Notaro and A. Paletto. A presentation of the questions raised in Iran (T. Shamekhi) showed that in developing countries, there are big constraints in the evaluation of policy programmes. The examples developed by A.V. Scardina & M.J. Mortimer, and by G. Winkel and M. Memmler, insisted on the difficulty to be neutral in a process where conflicts are prominent.

In addition to these EFI Proceedings, a special issue of the international scientific journal *Forest Policy and Economics* is also devoted to this topic, including the papers presented in Epinal by K. Bisang and W. Zimmermann, A.M.S. Carvalho Mendes, I. Kouplevatskaya-Yunusova and G. Buttoud, M. Krott and N.D. Hasanagas, E. Rametsteiner and G. Weiss, and B. Slee. This set of publications is expected to provide to scientists new guidance for the development of fruitful researches on evaluation of forest programmes, at both national and regional levels.

As a general statement, it can be said that the development of National Forestry Programmes has not led yet to very consistent works in terms of evaluation, except in some few more advanced countries (Finland, Kyrgyzstan, Switzerland) and in international agencies supporting NFPs (FAO). Real concrete evaluation techniques adapted to regional and national levels, and different from what is done in project assessment, are not developed yet. Certainly a lot is still to be done, and the organisers of the Epinal conference are convinced that a continuation of this scientific debate will require some special attention in the future.

Choice of Model for Forest Programs Evaluation: Case Study of Slovenia

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Introduction

If one takes into account the unfavourable conditions for the evaluation of programmes, as defined by Weiss (1998: 24), it seems that Slovenian forestry offers few opportunities for valuable evaluation. Out of four conditions that diminish the value of evaluation, only two are not met: the lack of routines and the stability of the program, and the lack of consent about the goals of the program among those individuals who are part of the program. Forestry programs do have their specific endurance, while those who set up and carry out these programs believe in general goals the program is expected to bring about. The additional problem for evaluation can be vagueness of goals (Knapp and Tschangho 1998: 33).

However, two other unfavourable conditions are met to a much larger extent: firstly, those who place evaluation orders have decisive influence on the subject of evaluation, and seek to exclude some key issues from the process. Secondly, the lack of finances and personnel that can conduct evaluation.

The latter in particular could be a very important feature in the forestry of countries with relatively short tradition of democratic policy making and lingering influence of former beliefs, values and ideologies on professional decisions (e.g. close to nature paradigm, and the dominance of public interest in Slovenia). Lack of human and financial resources, as well as lack of knowledge and experience in the forest policy evaluation field, further reduces the possibility for valuable evaluation.

Despite the problems mentioned above, we maintain that it is possible to conduct a useful evaluation, if its planning and implementation satisfies minimal quality standards. What is meant by the term 'useful evaluation', is primarily evaluation (Weiss 1998: 20), which puts the emphasis on learning and adjustment, and not on making conclusions and judgements about the success or failure of a program. Among basic preconditions for valuable evaluation is careful selection of evaluation model, as well as careful decision about who should conduct the evaluation (internal or external approach). Therefore, this paper shall focus mainly on the

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process of selection between different evaluation models, with respect to characteristics of different forestry programs. We shall point out that forestry programs often bear the characteristics of environmental programs and aim to solve environmental problems, which may influence the choice of a model. Most notably, we will take into account the specific features of the forest policy in Slovenia and the influence of those features on the choice of evaluation model.

Evaluation in this paper is understood as 'careful retrospective assessment of the merit, worth and value of administration, output and outcome of government interventions, which is intended to play a role in future, practical situations' (Vedung 2000: 3). It is important to point out that in view of some authors evaluation is not monitoring, audit or scientific study (White Paper on European Governance 2001: 28).

Within this paper, the concept of 'evaluation model' should not be understood in a mathematical sense, i.e. as type of a model, which is used to set given theories, but as model that specifies theoretical approach of a given author, his or her main concepts and structure of evaluation work (Madaus and Kellaghan 2000: 19). It is understood as an idealized or 'model' view of how to sort out and address problems that emerge during the process of evaluation. Some of the authors use concepts as evaluation 'approach', 'form' or 'framework' (e.g. Stufflebeam 2000: 34; Owen and Rogers 1999: 39), to accommodate for the scope, flexibility and open possibility for evaluation. The terms model, approach, forms and framework are used interchangeably.

Forest program as the subject of evaluation (evaluand) – relevant program characteristics

According to Smith (in Owen and Rogers 1999: 24), a program is: 'a set of planned activities directed toward bringing about specified change(s) in an identified and identifiable audience'. A program has two essential components: a documented plan and action consistent with the information contained in the plan. The aim of a program can be education, consultation, regulation, case management or production of goods and services. Each type of program requires specific evaluation model. A program can also be defined as a set of organized (interrelated), but frequently diverse activities, aimed at achieving predefined goals. Usually, programs operate within given time frame and budget (Nagarajan and Van Heukelen 1997:14). It is sometimes difficult to distinguish between programs and policies. As a general rule, programs are more specific, they define precise measures for the achievement of goals and are carried out 'close to the ground' (Owen and Rogers 1999: 32).

As an example of an evaluand (object of evaluation), we shall later analyze the program of forest management planning and marking of trees for cutting (silvicultural programs). Silvicultural programs influence physical condition of forests – forest development is directed in such ways that higher quality products and services (e.g. biodiversity, erosion protection) are produced. Silviculture enhances forest stability, improves the quality of timber, reduces production risks and guarantees ecological and economic sustainability of forests. The final result of silviculture can be higher quality market products, as well as higher quality services aimed at general public, which bear characteristics of the economic concept of public goods (e.g. aesthetics). Forest services that have strong environmental influences bear characteristics of public goods. The excessive exploitation of forests, unless not accompanied by appropriate measures, could bring about environmental problems. It can therefore be maintained that silvicultural programs can contribute to solve some potential forest-related environmental problems. Because of its influence on environment, the

evaluation of program of silviculture should consider characteristics of environmental issues or problems. For this purpose we could use the overview provided by Mickwitz (2001: 3; 2003: 417). Environmental problems:

- involve public goods and externalities;
- have been formulated as problems through a process where scientists have played a large role;
- have long time frames;
- are complex;
- have a large amount of different effects that are problematic to commensurate;
- involve huge uncertainties;
- concern geographically remote regions; and
- involve stakeholders with conflicting objectives and different belief systems.

The following characteristics were added to the previous ones (Gysen et al. 2002: 10):

- environmental problems have unequal distributions of impacts on different groups in society: and
- the irreversibility and/or the existence of thresholds.

To a smaller or larger extent, all the above mentioned characteristics can be observed with issues that silvicultural programs are directed at, and it seems they must be taken into account when selecting the appropriate model of evaluation. This holds true for the activities of Slovenian Forest Service in the area of forest management planning and marking of trees for cutting, which are the main mechanisms for achieving forest policy goals in Slovenia, and will be analyzed as one single program.

In case of many forest services it is not possible to exclude consumers and consumers rivalry, which is why they have the character of public goods (e.g. biodiversity, protection against avalanches, amenity of landscape). Some of the forest services are not marketable, but they can effect economic success of other economic actors (externalities). For instance, forest and wildlife management may have favourable influence on economic success of those tourist companies that deal with hunting tourism.

Public intervention is feasible, if a condition is defined as a problem (Kingdon 1995: 198) and if it is believed that something has to be done about it. What has to be done is formulated in forest management plans, based on data about these conditions. To describe the physical condition of forests a great amount of data is required. If temporal dimension is also taken into account, the possibility to provide an extensive depiction and interpretation of the conditions remains primarily with the experts. A condition is defined as a problem when it is in disagreement with important values, when comparisons are made with other cases (units) and when classifying in other categories. Value system of forestry experts (e.g. close to nature paradigm in the case of Slovenia) can have an important effect on whether a condition is defined as a problem, which emphasizes the role of experts.

Forest policy is ever more interconnected with other policies in other areas, such as environment, energy, rural development, which increases the complexity of decision-making. Especially within multifunctional paradigm of forest management, when more so-called forest functions are supposed to be implemented simultaneously, the decision-making is more demanding. In the process of forest management plans formulation public and private interests have to be taken into account, as well as short-term and long-term effects of measures taken.

Because of natural and social environment the consequences of forest management are uncertain. The uncertainty of predictions of the development of natural environment is a consequence of imperfect knowledge we have, but above all, it is built into natural

evolutionary processes. Social environment is also unstable. The future condition of market or other social structures can only be predicted at the level of statistical probability. It is, for instance, impossible to forecast what the price of timber or energy will be in 20 years, which is a relatively short time period in terms of forest development.

Wild life management, which is part of forest management planning could be an example of forest-related problems, that decisions in forestry cause to other remote regions. A decision to increase the number of wild animals can, due to its migration, result in problems in other regions and can, for example, endanger natural regeneration of forests. Forestry sometimes has to respond to the decisions of sectors in remote regions, as in case of air pollution. The effects on remote regions are not just physical, but also intangible. For instance, problems in tropical forests indirectly affect forest policy in Europe.

Forest and forestry can satisfy various needs of people. Due to diverse value systems of their users, conflicts emerge about the kind of goods and services, as well as about ways and time-frame of their production. In view of forest owners, products that can be obtained in present can carry higher value, while members of environmental organization may seek forest services that require longer time-frames. Hunters, for instance, value the production of wildlife higher than the production of timber. Some argue, that forest products should be made according to principles of sustainable management, while others believe in close to nature principle.

Forest production has the character of joint production. The production of various goods in services happens simultaneously and in certain proportions. In case of forest owners, who seek to maximize profits, this proportion depends on the prices of products and services. An increase in production of one product in possible primarily by a decrease in production of another product or service. Demands for production of a certain forest service, which is not yet on the market, can result in additional and/or opportunity costs. Especially in the case of opportunity costs, there is an unequal distribution of benefits and costs, because they are more difficult to observe. A requirement by public forestry service for higher wood stock and prescribed ratio between different tree species, aimed to harmonize the structure of forest with the close-to-nature model, may result in increased opportunity costs for the forest owner, who is not allowed to cut wood and allocate income in more profitable investments.

In geographically and geologically unstable areas, effects on forest may also be irreversible. An example are forests that protect soil, and whose removal may cause (a least) short-term or medium-term irreversible consequences, that can only be reversed with huge investments. The perception of irreversibility also depends on the way people perceive time-frames. For example, it is impossible to change the structure of a forest in the time span of 10–20 years, which the majority of people may perceive as a very long period. Forest management decision, which negative effects are estimated to last 30–50 years, may be perceived as irreversible.

A specific problem in the process of evaluation is a long period between intervention in a forest, and its effects that can sometimes only be observed after a few decades. This can have as a consequence a big gap between formative and summative evaluation[1], and may in many ways reduce the importance of both for more effective and more efficient program implementation on the part of state institutions, as well as in the process of forest policy formulation as a whole. On the condition, of course, that there is a certain degree of association between both types of evaluation. The decision between formative and summative evaluation depends on the aims of an evaluator (improvement of a program, or its

1 Formative evaluation generates information, which flows back into the program during the course of its implementation, and therefore helps the program implementors. Summative evaluation takes place either at the end of a program, or at the point when a decision between its termination or continuation is taken (Weiss 1998: 31)

termination). During a period that is required for the program results to be observed, important changes can occur in social and political context, and these changes can affect policy goals. Currently, effects of programs that were set in motion twenty, thirty or more years ago, can be observed. They were not necessarily aimed towards modern goals, such as recreation, biodiversity or carbon sequestration, but in case of Slovenia, rather towards supplying the market of Slovenia and former Yugoslavia with high quality timber and services of general importance.

The question is, which goals are relevant for evaluation in such cases, considering that the evaluation process is taking place under completely different social and economic circumstances. Evaluation is supposed to be an efficient element of information cycle, which should parallel a political cycle (Palumbo in Parsons 1995: 545). However, it seems that in case of forestry, the above mentioned time gap has largely prevented this role of evaluation in political process. The association between goals and outputs is stronger than between goals and outcomes.

A solution for the time gap that occurs between outputs and outcomes is offered by intervention theory, which helps focusing evaluation on various types of outcomes (Mickwitz 2003: 423) since it is often necessary to focus on outputs and reduce evaluation of outcomes. A useful tool for focusing evaluation is reconstruction of intervention theories (Vedung 2000: 139), which provides a description of how a program was going to be implemented and what its functions were. The results of program examination are expectations related to actors, outputs and outcomes. Intervention theory enables us to include aspects, which are based on scientific theories – scientific evidences. The long-term character of forestry does not allow for evaluation of outcomes in the specific present moment, but the intervention theory enables us to specify phases that can be evaluated on the basis of scientific theories and prior knowledge. Like evaluation, intervention theory can also stimulate learning of individuals and groups that differ according to their belief systems and their conflicting understanding of causal relationships (Mickwitz 2003: 425).

Models of evaluation – an outline

The evaluation of public policies is objective, systematic and empirical review of effects of current public policies and programs, with respect to the goals they had set to achieve (Dye after Parsons 1995: 545). In other words, evaluation is the use social science research techniques for assessment of social programs (Kustec Lipicer 2002: 151), which means, it is based on precise methodological standards. Methodological aspects should be defined in advance. Definition of relevant research method (model) is therefore a very important stage in evaluation research. The model is the basic organizational principle of evaluation (Mickwitz 2001: 7). Vedung makes a systematic overview of evaluation models (2000: 36) and divides them into three categories: models of effectiveness, economic models and professional models. We shall focus on models of effectiveness, which are based on analysis of effectiveness. The information they compile is very relevant also for the other two types of models, especially economic models. The selected model can then be the basis for the choice of techniques for systematic evaluation (e.g. before-after studies, modelling, experimental methods etc.), which depend on the goals of evaluation.

The basic model is *goal-achievement model* (GAM), which set up logical starting points (an organizer) for evaluation of goals. Program results are compared with original goals. The main advantages of the model (Vedung 2000: 41) are its democratic character, simplicity and research approach. Its democratic character comes from the fact that the model examines

goals which were formulated in formal process of decision making, and it postulates accountability of decision makers, as well as administration which is responsible for their implementation. Its research approach is based on the use of social science research methods and enables objective evaluation, by empirically comparing goals and results. The model is simple, because it only includes two parameters: goals and results, which is easy to understand and easy to use.

One of the major shortcomings of the GAM model is its complete disregard of costs. Other, substantial shortcomings of the model are ambiguous goals, goal catalogues (large number of diverse goals), unintended effects, hidden agendas and disregard of implementation as potential problem (implementation regarded as a black box). Another problem with GAM is a largely idealized concept of relationship between politics and administration, which is viewed to be a willing implementer of political goals.

Model of side-effects evaluation (SEE) corrects for the problem caused by disregard of unintended effects on the part of GAM model. It is viewed to be particularly suitable for environmental programs (Mickwitz 2003: 432), because of their complexity and contingency of their effects. Goals still remain the basic organizer of evaluation, which is, however, supplemented by examination of side effects. The model seeks to detect expected and unexpected effects, and classifies them according to whether they were achieved within target area, or outside target area. What follows is the evaluation of positive and negative sides of these effects for the targeted area. Attention is also dedicated to the analysis of 'perverse effects' and 'null effects'. SEE, as well as GAM, starts from democratic (parliamentary) understanding of command.

Opposite from these two goal-based models, is the *goal-free model*, which is not concerned with the question of goals, and neither should be the evaluator. The organizer of evaluation is the result. The model is based on a premise, that goals will implement themselves through effects, or they are not relevant. The model takes side-effects into account, but leaves aside the question of costs. Another problem with this method is its lack of democratic aspect, for it does not allow for the transparency of public policy, and does not take into account that goals are defined in democratically established political institutions.

Between these two types of models, there are the 'stakeholder' model and the 'client oriented' model of evaluation. With '*client oriented model*', the basis for evaluation are desires, expectations, concerns and needs of clients or relevant actors of public policy, which the evaluator first detects, and then examines to what extent they are satisfied by the program. The assumption here is that public administration generates products and services for clients in the 'market', where demands of clients are expressed through their attitudes towards services that are offered. This way the quality of services and the satisfaction of clients should increase (Vedung 2000: 66). An important task here is to establish who the client is. This model supplements the previously mentioned models in some important ways, but cannot replace them. The relationship between clients and public administration cannot be viewed as based solely on the slogan 'customer is never wrong'.

Stakeholder model broadens the client-oriented model by including all interest groups and all groups that are affected by the program. The organizer of the model are concerns and issues of people who have interest in the program, or are influenced by it. In an interactive process, evaluator examines attitudes, desires and needs of stakeholders, and classifies them in order of importance for future research. Attention is also given to those charged with program implementation. Because it includes such a large number stakeholders from various public sectors, the model has a holistic character. The main advantages of the model are its employment of stakeholders' knowledge, stimulation of the use of evaluation on the part of stakeholders, and regulation of goals (in a situation where goals cannot be precisely defined). The main shortcomings of the model are disregard for program implementation costs, and

costs of evaluation. The evaluation process here is complicated (Vedung 2000: 75) and resource demanding. One of the major drawbacks for the utility of the model is the fact that stakeholders may adjust their 'truth' in accordance with immediate benefits it brings them.

Slovenian forest policy context

In Slovenia, some elements of evaluation process are not a completely new concept, even though they do not very well correspond with the definition we have used in this paper: 'careful retrospective assessment'. 'Evaluations' of forest policy measures were directed primarily towards the assessment of outputs, and less into assessment of outcomes and administration. Most of all, 'evaluations' were not 'careful', which means, they had many flaws in methodological and research aspects. These defects were both the consequence of lack of social science research knowledge, as well as bias, reflected in a lack of critical thinking in the forest sector – group thinking. The subject of 'evaluation' was in most cases forestry legislation as a whole, and not so much particular measures of forest policy. 'Evaluation' of forestry legislation was typically carried out by those, who had also participated to a large extent in its formulation (university and research institute staff)

Current forest policy and Slovenian institutional system were adopted very early after the commencement of transition in years 1989–91 (Law on forests in 1993 and National forest programme in 1996), when democratic political culture was not yet properly established. Slovenian forestry is involved in the management of more than 56% of Slovenian area, covered by forest. The key characteristic of forest policy in Slovenia after the transition remains close to nature paradigm and relatively centralized forest management planning, carried out by Public Forest Service (Zavod za gozdove Slovenije) for all types of forests (private and state).

Elements of evaluation in Slovenian forestry can primarily be detected in forest management planning, where a concept of 'control' is used (control method). The key premises of this method are more than a hundred years old and are primarily forest oriented (tree size distribution, forest area, timber stock, increment, quantities and diameter distribution of cutting). The process of forest management planning, carried out by Slovenian forest service includes, monitoring of implementation of forest management plans. Both monitoring procedures mentioned above are output oriented. This way an illusion of 'evaluation' is created. In the last period, we can observe an ever greater interest to analyse the effectiveness and efficiency of forest policy measures, but the term evaluation is still not used. There is an initiative to examine the outcomes and impact of forestry programs, partly also because of participation in international projects, such as EFFE – Evaluating Financing of Forestry in Europe – which is co-ordinated at the European Forest Institute. One of the reasons for this increased interest is tighter financial situation in forestry, which calls for rationalization, as well as seeking greater legitimacy for forest policy and forestry institutions in an ever more democratically-aware society. One of the factors is also competition between forestry sector and other sectors for budget resources.

Selecting the most suitable model for the program of silviculture – discussion

This paper discusses selection of evaluation model for the program of marking of trees for cutting, which seeks to achieve general forest policy goals: sustainable, multi-functional and

close-to-nature forest management, goals defined by Law on forests and National forest programme. More specific objectives are defined in the process of forest management planning, carried out by Slovenian Forest Service for both private and public forests. By obligatory marking of trees for cutting, a larger part of silvicultural goals is implemented. Planning and marking of trees will be regarded as complementary programs. The basis for program implementation are decennial (time frame) forest management plans (a 'documented plan'), while marking of threes for cutting is 'action consistent with the information contained in the plan'.

The criterion for selection of evaluation model is the key question that evaluation is intended to give answer to. However, selection is also influenced by characteristics of a program we are going to evaluate, and characteristics of the evaluation model itself. There are also other criteria for the decision. We may choose a model which would in itself influence public political process in a certain way (for instance, we may assume that the 'stakeholder' model stimulates participation of interested groups in the process of public policy formulation, which happens to be the current orientation of environment-related public policies). The models are not mutually exclusive. In accordance with multiple evaluation approach (Parsons 1995: 564), we can combine various models, but this decision depends on the goals of evaluation, and also on available resources (e.g. time, finances, knowledge).

The program of silviculture is primarily directed towards forest-related effects, while society-related goals (forest services) are present only implicitly. In case of GAM, an evaluator would have to examine extensively the definition of relevant goals in time of their initial adoption (several decades ago), present goals, program outputs and outcomes. As pointed out before, time gap between implementation of a program and observation of its effects may reduce the utility of the goal-achievement model. The effects occur 'here and now' and can be evaluated in accordance with current criteria. However, when making an analysis, side effects should not be left aside, for they can sometimes contribute to the positive evaluation of a program. In case of programs that are dealing with environmental problems, side-effects model is one of the most appropriate choices (Mickwitz 2001: 7), and can therefore be the first choice for the evaluation of the program of silviculture. Until now, side effects in forestry programs in Slovenia, unintended side effects in particular, have not been an issue. Unequal impact on different social groups could be counted among significant negative side effects, in particular with respect to the distribution of benefits and costs.

A model where goals are not taken into account (goal-free model) would stand in sharp conceptual opposition with the prevalent paradigm of forest planning, where goals have central role. We therefore estimate this model would not be able to gain enough support on the part of experts in the process of evaluation. The success of interpretation of results would also be under question.

Client-oriented model would be an appropriate tool for program evaluation at the local level, where contact with direct participants – forest owners – 'clients' is closer. A question remains, who is a client in case of the program of silviculture – individual forest owners, or 'the public' (public interest), in the name of which the measures are implemented. Many forest policy activities are being carried out to reduce future uncertainties (e.g. enhanced stability of forests), and are the outcome of concerns on the part of interested groups. These concerns, expectations etc. are precisely the research subject of this model.

Stakeholder model would be especially appropriate in cases, when many parties with conflicting goals and divergent value systems are involved in solving of a particular environmental problem, and when there is substantial imbalance of influence among different social groups. Both conditions are met in those areas of forest policy that are influenced to an important extent by residents of urban areas, who have knowledge and interest to participate in its formulation. The influence of forest owners is less significant, and at the same time, their

expectations from forest exploitation are different. The model would help to define goals and the relation of stakeholders towards forestry activities. It would also help to evaluate the merit of forest management planning. But it is less suitable for evaluation of more specific areas, such as marking of trees for cutting, which has influence on long-term forest characteristics, and the effects are difficult to commensurate. It needs to be pointed out that even though the effects of a program are sometimes not visible for stakeholders, the program can still be positively evaluated, if it contains symbolic value (symbolic policy). An example is the program of silviculture, which embodies concern for forests. This model would be the most suitable choice in cases, where direct cooperation between stakeholders that promote conflicting interests can be organized. Stakeholder model could play an important role in the democratisation of forest policy formulation process (participative approach).

Conclusions

The choice of valuation model depends on the characteristics of an evaluand and on the purpose of evaluation. Both the results of evaluation, as well as its model, can influence the formulation of public policy. In the case of the program of silviculture, various models could be selected and combined at different levels of program implementation.

In Slovenia in our view, the least useful models are the two that are based on the presence or absence of goals. By choosing the other set of models, we would promote the use of evaluation and above all, enhance social learning, which would indirectly contribute to the democratisation of the process of forest policy formulation. The two most appropriate model choices would be the side-effects model, which is suitable for programs that are related to environmental issues, and stakeholder model, which enables the inclusion of a large variety of forest-related interests. To make a final decision on the type of evaluation design and forest programs, we should take into account the influence of the criteria of evaluation, the choice of these criteria and the selected type of evaluator (internal/external), which is a task for future analysis.

Setting evaluation in motion in Slovenian context would require both substantial and formal changes. Resistance towards evaluation is likely, as a consequence of ‘fear of evaluation’ (Solomon 1998: 49), which is particularly characteristic of environmental program officials. Initially, a big problem, would be lack of competent evaluation experts.

System of forest management planning in Slovenia is strictly formalized. This formalization may be a hindrance to changes that advance evaluation, but can also be an advantage, as it already incorporates some possibilities for evaluation. Introduction of evaluation would require changes in forest legislation, i.e. mandatory inclusion of evaluation in forest management planning. Forest management in Slovenia is based on 10 years forest management plans, which are designed according to Regulation on the forest management and silviculture plans. The plans are obligatory in character and are certified by the Ministry of Agriculture, Forestry and Food. Regulation on the forest management and silviculture plans does not require assessment of implementation (evaluation) of plans at the point of their expiry. It however requires that analysis of past management is part of the process of preparation of new plans. The judgement of past management is carried out by those who formulate new plans – (internal ‘evaluators’) and are frequently the same who prepared the past one. The analysis of past management involves an overview of physical indicators, such as felling across various tree species and size categories and silviculture and forest protection measures, as well as judgement of management in the previous period, particularly comparisons between planned and achieved works and their effects, and reasons for any

significant deviations from what had been planned and providing forest functions. Regulation does not outline any methodology for measuring effects, however, their mere mentioning opens way for introduction of side-effects evaluation model. A step in the direction of side-effects evaluation could be the requirement, stated in Regulation, to classify effects into an intended and unintended category. Due to highly bureaucratic nature of the system a more precise definition of various sorts of effects would probably be needed and should be established in cooperation with stakeholders.

Before final adoption, draft version of a forest management plan is subject to public hearing, which is an opportunity for various stakeholders to become involved in planning. The effects of this form of participative decision-making in Slovenia had not yet been investigated. To set up useful and practical evaluation of programs, evaluation of plans should be required at the point of their expiry, and in addition, stakeholders should become involved.

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Programme Evaluation in Public Sector Management Practice

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Abstract

In this paper we review some key evaluation concepts applied in modern programme evaluation practice. In the assessment of forestry policies and programmes, some of these concepts such as estimation of programme effects in the long run and quantification of multiple outcomes would need to take into account special features of forestry. The evaluation of public expenditure programmes is normally required to meet basic standards of good professional practice. The evaluation judgements can be made either at the programme level or with regard to both the programme and the socio-economic problems it seeks to address. Since direct measuring of all programme effects would be too costly and time-consuming, when assessing changes brought about by the programme the evaluators need to use appropriate evaluation designs as well as sound analytical techniques.

Keywords: programme evaluation, evaluation criteria, evaluation design.

1. Introduction

The evaluation of public sector interventions can be carried either at the level of policy, programme or the specific instrument applied. The evaluation research in the field of forest policy analysis in 1970–1990s was mostly focused on policy instruments and specific evaluation issues, such as economic efficiency or effectiveness. The growing activities at EU-level (EU Forestry Strategy, EC Regulations 2080/92 and 1257/99, etc.) as well as those undertaken by individual nation states call for comprehensive evaluations carried out at programme or policy level integrating economic, social and environmental aspects of sustainability.

In the context of increasing need to provide 'value for money' when proposing and implementing public sector policies, the European Commission adopted in 1996 a policy of systematic evaluation of EU expenditure programmes and actions. The policy set three goals

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for evaluation: 1) to improve the design and management of programmes, 2) to enhance accountability and 3) to support budgetary decision-making. Since then, the operational departments of the Commission have been developing evaluation systems including manuals deigned to guide the evaluation of specific programmes. Regular evaluation and systematic use of evaluation findings in the planning and prioritisation of activities became a practice and the Commission services carry out more than a hundred evaluation projects every year.

2. Evaluation in Management Practice

The evaluations intended to be of practical use by informing decisions or providing information about programmes should be designed and conducted in ways that do provide useful information to decision-makers. Such evaluations are also normally required to be analytical (based on recognised research methods), systematic, reliable and issue-oriented (EU 1997b).

The practical programme evaluation will usually comprise the following phases: structuring, data collection, analysis and judgement. In the structuring phase, the effects that are to be evaluated are first clarified and graded. This may often require refining of programme objectives. The appropriate judgement criteria, including specific measurement tools (indicators, target levels or baselines) should also be defined at this stage. The data collection needs to identify the available and relevant information as well as account for the validity of the quantitative and qualitative evidence used. In the analysis stage it is important that the evaluation methods and their limits, as well as the reasoning followed are transparent enough to enable subsequent assessments of the limits and validity of the judgements. In the judgement stage, assessments are made based on the judgement criteria specified in the structuring stage. Finally, the evaluator draws conclusions and provides recommendations on the implementation of the evaluated programme (EU 2002).

In the evaluation practice a clear distinction is made between evaluation and monitoring. The programme monitoring surveys the delivery of programme outputs (the goods or services produced by the programme) to the intended beneficiaries thanks to the inputs mobilised (financial and administrative). Whereas the evaluation is concerned with the examination of particular results and outcomes (effects or impacts the programme induces) at certain stages in the life cycle of a programme (mid-term, ex-post). The results are defined as the initial impacts, i.e. those directly identifiable once the action has been implemented, while outcomes refer to programme's longer-term effects. The information used in the evaluation is collected a couple of times during the entire programme period (using samples, case studies, interviews etc.). The evaluation, however, will often also make use of pure monitoring indicators. The information provided by these indicators can help, for example, in verifying initial steps in the chain of causality, to scale up the impacts that have been identified through analysis of a limited sample (e.g. coefficients linking outputs to effects) or in estimating economic efficiency (EU 1997b; EU 1999). There are also the ex ante evaluations (appraisals) that take place before the implementation of the programme in order to examine the proposed strategy.

Although monitoring should normally constitute a part of all public intervention programmes, monitoring systems are not expected to provide all the information that would need to be used in evaluation (i.e. the evidence concerning results and outcomes). Indeed, such an arrangement would not be cost-efficient since monitoring indicators (i.e. those concerning inputs and outputs) are usually collected more frequently and more intensively (for all intended beneficiaries) than the ad hoc collection of information for the evaluation. Moreover, monitoring indicators may prove to be insensitive to several effects such as those materialising at a later stage or among indirect beneficiaries. The site-specific effects (one

unit of output may have different effects in different natural and socio-economic situations) as well as effects deriving from several outputs (or when one type of output simultaneously contributes to several types of impacts) could also be mentioned here (EU 2000).

2.1 The purposes of the evaluation

The two most common reasons for programme evaluation include improving programme management and identifying its actual effects or revealing the 'value' of a programme.

The assessments aiming to enhance programme management are also known as formative evaluations. This type of evaluation can be both conducted during the programme implementation (mid-term evaluation) and on or after its completion (ex-post evaluation). The mid-term evaluations are often confined to the initial programme achievements (outputs), screening programme implementation in order to improve its delivery mechanisms. They will thus mostly rely on the information provided by monitoring systems. Where the intended effects cannot be fully measured at the mid-term stage (i.e. particular indicators cannot be quantified) the evaluation may at least verify the extent to which the initial steps of the delivery mechanism have been engaged by the programme. Such a situation will be characteristic of public intervention programmes in forestry, which often will not produce all their expected effects in the short or even in the medium term. As the transformation of the inputs to the effects may require several stages, it may take a long time for the impacts to materialise. Nonetheless, such evaluations can still look at the anticipated effects in the long run, for example using yield tables (EU 2000).

In general, when the effects cannot yet be expected to have materialised, it is important to ensure that the necessary procedures (in terms of monitoring and evaluation) are in place to enable answering questions at the ex-post stage. The ex-post evaluations dealing with a systematic analysis of programme impacts may, however, also be limited in the extent to which they can provide a full assessment of the impacts. This is because the information needed to assess programme impacts may not be available until several years after the programme's completion.

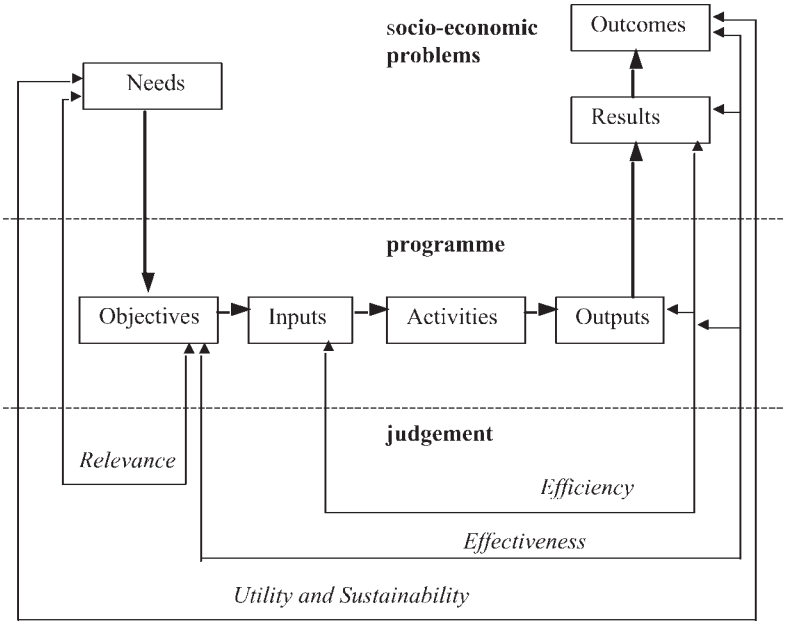
While the formative evaluations are of direct interest to programme managers, the so-called summative evaluations are also conducted for the benefits of those who are not directly involved in the management of a programme. This type of evaluation is concerned with producing judgements on programme's accomplishments. As the summative evaluations help to enhance programme's accountability and transparency they will be of interest to a broad group of stakeholders, including both programme supporters and opponents, as well as ordinary citizens. Such evaluations would typically examine programme impacts, effectiveness, cost-effectiveness or other associated issues such as equity aspects. It should be noted, though, that a general concern with an improvement of the public programme would usually require a combination of both formative and summative evaluation (EU 1997b).

2.2 Identifying evaluation issues

The evaluations of public expenditure programmes will typically address one or more of the following issues: relevance, efficiency, effectiveness, utility and sustainability. The meaning of these criteria is explained in brief below. The relevance is concerned with an assessment as to what extent are the programme's objectives pertinent in relation to the evolving needs and priorities at local, national or international level. The efficiency deals with the question how economically have the various inputs been converted into outputs and results. The effectiveness

examines how far have the programme's impacts contributed to achieving its specific and general objectives. The utility focuses on how do the programme's impacts compare with the needs of the target population, while sustainability examines as to what extent can the positive changes be expected to last after the programme has been terminated (EU 1997b).

Figure 1 below illustrates how the key evaluation issues relate to the evaluated programme. The diagram draws a conceptual distinction between the level of judgements, programme operation and the socio-economic problems. While the analysis at the second level is mostly dealing with the generation of goods and services (outputs) by the programme, the highest level includes consideration of the target population's needs and the particular problems which the programme seeks to address. The judgements may thus either refer to the programme itself (efficiency) or to the programme and the socio-economic problems it aims to address (efficiency, when it compares inputs with results than merely outputs; effectiveness, utility and sustainability).



Source: Adapted from EU-DG Budget, Evaluating EU expenditure programmes – A Guide to intermediate and ex post evaluation, 1997, p. 20.

Figure 1. Key evaluation issues.

2.3 Evaluating Efficiency, Effectiveness and Equity Aspects

An examination of programme efficiency is concerned with questions whether the same benefits could have been produced using fewer inputs or, alternatively, if the same inputs could have produced greater benefits. Such assessments will usually require comparisons with alternative programmes. The two main analytical techniques used in the evaluation of economic efficiency are cost-benefit analysis and cost-effectiveness analysis. Even though

these judgement techniques are more frequently used in the ex-ante project appraisals, they might often be useful in forming judgements in mid-term and ex-post evaluations.

In the cost-benefit analysis, all social (private and external) costs and benefits of a programme are compared in order to determine whether the benefits exceed the costs, and if so by how much. The analytical agenda for the appraisal of the publicly financed programme or project will usually include an analysis of the objectives, feasibility and option analysis, financial analysis, economic analysis, sensitivity and risk analysis (EU 1997c). As the assessment of expected social benefits depends on programme or policy goals, it is important to be clear which objectives the programme or project aims to achieve or influence. These objectives should also be measurable. It can be also mentioned that the investments in forestry will typically result in multiple effects (positive or negative). One of the key difficulties encountered in cost-benefit analysis lies in the valuation of external costs and benefits, which usually will have to be measured by some indirect means and converted into monetary values so that they could be added to the private costs and benefits. The identification of administrative or transaction costs may often create difficulties too. In addition, in cases where it may not be appropriate to use prevailing market prices, the opportunity costs will need to be derived through shadow pricing. Once the monetary values for all the private and external costs and benefits are established, they need to be discounted to a common point in time. This will require choosing the appropriate interest rates.

The cost-effectiveness analysis differs from the cost-benefit analysis in that it does not require transferring benefits into monetary units. The most cost-effective programme will be the one that outperforms other competing programmes in reaching given objective at the lowest costs. This technique is thus particularly useful when the analysis deals with a comparison between alternative ways of achieving the same objectives.

The adoption or rejection of a given project by public authority would usually imply consideration of both efficiency arguments and income distribution judgements. The latter can be integrated into cost-benefit analysis by attaching distributional weights to the net benefits that go to various income groups. Alternatively, the monetary value of costs and benefits can be algebraically summed across relevant individuals or groups of individuals, with the addition of alternative distributional weights left to a later stage of analysis. This approach has an advantage of drawing attention to the trade-off between efficiency and equity by showing when the society may have to pay a price in terms of allocative efficiency for the distributional benefits obtained (Blaug 1996). A novel approach to the analysis of the equity aspects (Distributional Cost Benefit Analysis) has been recently developed by Riera and Nájera (2002).

Even if a programme proved to be efficient and/or having no major adverse distributional effects (i.e. being not expressly biased to aid a favoured group at the expense of every other) it may still be ineffective in reaching all or most of its formal objectives. One of the possible reasons may have to do with imperfections in the programme design. This brings us to the discussion of programme effectiveness, concerned with an assessment of the effects in relation to the objectives (an action is effective when the objectives have been attained). The programme evaluation based on its stated objectives is known in the evaluation literature as the goal-oriented approach (e.g. Stecher and Davis 1987). The use of programme specific objectives as the criteria for determining programme success requires the desired results (objectives) to be expressed in clearly stated, measurable terms. When programme objectives have not been stated sufficiently clearly, the vague or general goals will need to be transformed into verifiable objectives. Once the objectives are clarified, various kinds of measurements can be used to determine the extent to which they have been accomplished.

In the evaluation practice programme effectiveness is often assessed using evaluation questions with criteria and indicators (EU 2001a; EU 2000; EU 1999). This approach is also briefly described below. It should be remembered that the evaluation of programme

effectiveness is only concerned with the expected, positive effects. An assessment of a programme's total impact would require examination of positive, unforeseen effects as well as negative ones (both expected and unforeseen). For example, an alternative to the goal-oriented approach, the so-called goal-free model, focuses on evaluation of the actual effects and their importance in meeting identified needs (Boulmetis and Dutwin 2000; Patton 1997).

The normative goal-oriented approach to the analysis of programme effectiveness (i.e. the one focusing on programme impacts in relation to its officially stated objectives) can be coupled with a positively oriented examination of institutional aspects of policy implementation. Such a positive implementation analysis often helps to better understand and explain programme success or failure.

The construction of an analytical framework for the evaluation of programme effectiveness using the evaluation questions will often require prior development of a programme theory. Such a theory would then constitute a set of assumptions about the relationships between programme treatments (inputs, activities) and particular results or outcomes that are to be achieved. In the evaluation literature programme theory is described and used under various names, such as programme logic model, outcome line, cause map, action theory or means-ends hierarchy (Rossi et al. 1999; Patton 1997; Mohr 1995). For instance, the 'programme logic model' was promoted by Joseph Wholey, who applied this concept to the tracing of events in the analysis of public intervention intended to produce a certain outcome (Wholey 1979, cited in Yin 1994). The 'programme intervention logic', as the programme theory is named in the evaluation practice of the European Commission's Services, explains what the programme is expected to achieve and how it is supposed to achieve it (e.g. EU 1997b; EU 2000). Figure 2 below shows the model conceptualisation of the programme intervention logic, where the outputs correspond to operational objectives and results and outcomes match with specific and general objectives respectively.

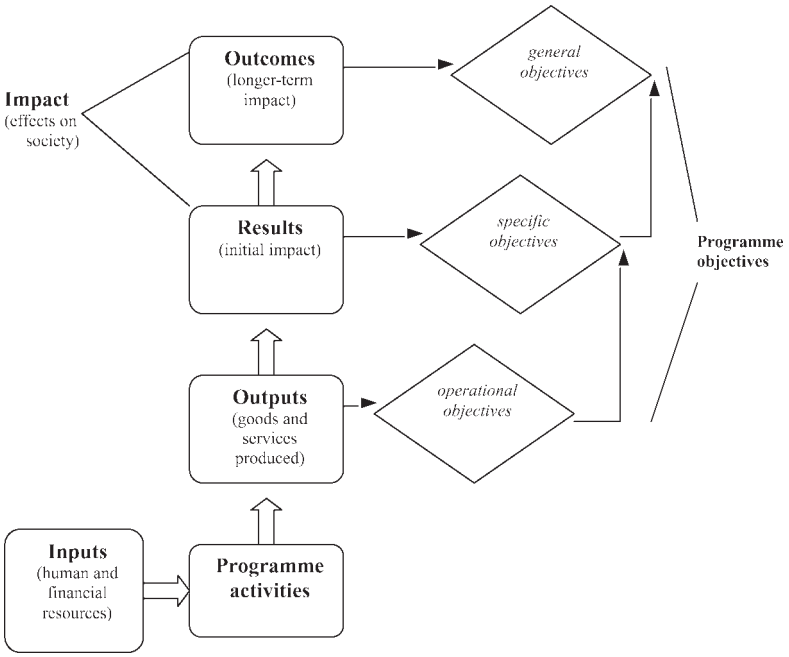


Figure 2. The programme intervention logic.

The examination of programme intervention logic will thus need to answer how the inputs devoted to the programme lead to the various outputs, and how these outputs, in turn, lead to the results and outcomes which the programme is expected to induce. As the programme intervention logic will inevitably contain hidden assumptions about causal relationships between the programme and its expected effects, these assumptions must be identified and critically assessed. While the programme outputs should be directly identifiable (based on information provided by monitoring system), the identification and assessment of programme effects (results and outcomes) tends to be more demanding. One of the reasons is that both the initial and longer-term impacts arise through a series of potentially complex interactions between the programme and society. In addition, programme outcomes may be influenced by some exogenous factors. Since the direct measuring of all programme effects would be too costly and time-consuming, when assessing changes brought about by the programme special attention should be paid to the use of appropriate evaluation designs as well as sound analytical techniques. The brief description of the evaluation designs is presented in the next section.

The procedure followed in the elaboration of evaluation questions is based on the reconstruction of programme intervention logic. The defining of the evaluation questions will thus require identification of the impacts that can be expected from a particular programme thanks to its objectives and means. Answering the evaluation question (i.e. judging whether a programme has met its objectives or not) is then done on the basis of specific criteria and indicators. Some evaluation questions may include a main question that examines results or outcomes and two or more operational sub-questions. A single question may often include more than one criterion and more than one indicator (EU 2002).

For a particular evaluation question the criterion helps to formulate a judgement on the programme performance by linking the indicator to the expected result or outcome. The appropriate indicators are identified on the basis of expected effects (as outlined by the programme intervention logic). The indicators are then used to assess (indicate) whether or not a particular judgement criterion has been fulfilled. The final analysis (including likely cause/effect relations, context and exogenous factors) should ultimately allow formulating a judgement in the form of answer to the evaluation question. The programme indicators (i.e. those concerning part of a population or of a territory that is touched upon by the programme) can be quantified either from the monitoring system or from data collected ad hoc for the evaluation. There can be quantitative and qualitative, direct and indirect, output or impact indicators. In addition, the evaluations will often also make use of context indicators, which apply to an entire territory, population or category. The selected economic, social or environmental variables can thus put the programme into proper perspective. Such a context indicator may, for instance, reveal that a given programme is no longer justified or, on the contrary, that a certain type of aid would be still reasonable even though the relevant programme indicator showed limited progress. Some context indicators may be provided by the monitoring system, while others will need to be collected ad hoc for the evaluation (ibid.).

3. The Evaluation Designs

Attributing and analysing causality constitute the key problems in the design and conducting of the evaluations. First, all other possible explanations for the effects which are to be attributed to a programme need to be identified and eliminated so that it can be claimed that the effects would not have arisen anyway. Furthermore, the existence of the programme may well be a necessary condition for the effects to happen, but it may not be a sufficient condition. Alternatively, a programme may be sufficient but not necessary. Finally, the programme may be neither

necessary nor sufficient. In such case the observed effects would have nothing to do with the evaluated programme. The empirical analysis will thus either support or challenge the validity of programme transactions' logical sequence assumed in the programme theory.

To say that the analysed effects were induced or caused by a programme implies that if the programme had not been there or had been there in a different form or scale, these effects would not have occurred, or would not have occurred at the same level. This brings us to the concept of the counterfactual situation that can demonstrate what would have happened without the programme (EU 1997b).

In an ideal experimental design the counterfactual situation is derived with confidence by comparing two groups which are identical in all respects except that one group (here the programme group) is exposed to the programme whilst the other group (the control group) is not. However, in the real world, such an ideal experiment in programme evaluation will be hardly ever possible, as one can never be absolutely certain that the programme group and the control group are identical in all respects except for exposure to the programme. This potential non-equivalence of the two groups means that counterfactual situation will usually have to be estimated rather than derived. This, in turn, will inevitably decrease validity of any causal inference about the programme.

In the real world situations, where the ideal experiment does not exist and there are potential threats to the validity of any causal inference, selecting appropriate programme evaluation design may help to avoid different types of problems. The main criteria to be considered in determining the choice of evaluation design are internal and external validity. Internal validity refers to the confidence in causal link between the programme and the observed effects. Whereas external validity deals with question whether or not conclusions about certain programme can be generalised beyond the programme itself. External validity will be of central concern for the evaluation design that uses case studies as well as in the evaluation of pilot activities. Some of the main (real world) evaluation designs are briefly described below. They can be divided into the causal and the descriptive approaches to evaluation design.

Where there is a need to arrive at a defensible, often quantitative, estimate of the counterfactual situation (in order to establish whether the observed effects have indeed been caused by a programme), it will be appropriate to use the causal approach. The causal designs derive the estimate of the counterfactual situation either from a group of comparable subjects (control group) or from the same subjects at one or more previous time periods. Among the designs based on the use of control groups, the true experimental designs are those that provide the best real world approximation to the ideal experimental design. They attempt to ensure the initial equivalence of the two groups by creating them through some random process. Such designs, however, may in practice be difficult to arrange. It is then often more practical to employ the quasi-experimental designs. If the control groups are still to be used, these can be created through some non-random process. Here, the so-called comparative change design is the one that relies on the programme and control groups as the two distinct groups drawn from a larger population, while the criterion-population design does even not require the existence of a distinct control group. In the latter design the larger population itself is used as the basis for comparison. The criterion-population design is particularly appropriate when a control group cannot be easily created but there is access to information about the larger population, part of which forms the programme group itself (Rossi et al. 1999; EU 1997b; Mohr 1995).

An alternative option to the use of control groups is provided by the quasi-experimental designs, which examine programme beneficiaries before and after their exposure to the programme. Here, the so-called the before-and-after design simply compares the situation after the programme with the situation beforehand attributing any change to the programme. However, the causal inference in this design tends to be rather weak. There will always be the

possibility for some plausible alternatives, which might explain the effects that would otherwise be attributed to the programme itself. The interrupted time-series design is an improvement on the before-and-after design, as it involves obtaining additional information over time both before and after exposure to a programme. The created time-series of observations should then allow for greater confidence in claiming that a programme has caused certain effects by, eventually, providing evidence that a change after exposure to the programme is a significant departure from changes that were taking place anyway (EU 1997b; Fitz-Gibbon and Morris 1987).

The causal approach may, however, not be appropriate to all situations as it can happen that the conditions necessary for adopting a causal evaluation design simply do not exist. Some programmes, for instance, will have universal coverage (e.g. in the Common Agricultural Policy all eligible farmers are programme beneficiaries). In such cases it would not be possible to use a design based on control groups. It may be then more appropriate to follow the descriptive approach to evaluation design, which can still provide useful information about a programme. Below we briefly refer to designs, which are appropriate to situations where evaluation is concerned with providing a thorough description of the programme and its supposed effects.

A descriptive evaluation design that is frequently used in the examination of programmes with universal coverage is the so-called ex post facto design. It can be applied in situations with only limited options for comparisons where, for example, it cannot be decided which subjects are to be exposed to the programme and which are not (programmes with varying degrees of take-up, e.g. across regions). The use of the term ‘ex post facto’ for this type of design refers to measurements of beneficiaries after their exposure to the programme (EU 1997b; Mohr 1995).

In situations where the evaluated programmes are fairly complex, the evaluation designs will often be based on an in-depth study of one or more specific cases or situations. Where there is no interest in generalisation from the findings (external validity is not required), or where it is needed to examine some instance in detail, it may be appropriate to use single-case study designs. However, when it is necessary to draw conclusions that could be applied beyond the programme itself an evaluation design will usually rely on multiple-case study approach. If the latter design is to be used, the key task will be to arrive at a defensible selection of representative cases (EU 1997b; Yin 1994).

The comparative perspective can be also used in policy analysis to compare programme’s performance with that of other policy instruments. In programme evaluation, both the summative and formative evaluations may benefit from analysing findings across a number of evaluation studies. An analysis of the variation in programme effects across a number of comparable studies can show the degree of convergence or divergence of findings. Most importantly, though, such analyses can examine the relationships between the reported programme effects and the characteristics of the programmes and methods involved in evaluation. As regards the examination of inference validity, for example, the reproducibility (or internal validity) of evaluation design would be demonstrated to the extent that evaluations of very similar programmes yield convergent results. Whereas generalisability (or external validity) would be demonstrated to the extent that similar effects are found over a range of programme variations (Rossi et al. 1999).

4. Conclusions

In the evaluation of public expenditure programmes several standards of good professional practice have to be met, including careful planning and implementation throughout the

subsequent stages of the evaluation process (structuring, data collection, analysis and judgement).

As the monitoring systems cannot provide all the information that needs to be used in the evaluation, an assessment of programme effects necessitates the ad hoc collection of data using samples, interviews, case studies etc.

The reasons for conducting evaluations will determine their focus (formative or summative evaluations), scope as well particular evaluation issues such as efficiency, effectiveness or sustainability. The public intervention programmes in forestry sector will often not produce their intended effects in the short or even in the medium term. In order to estimate the anticipated effects in the long run, proxy methodologies may need to be used, e.g. calculations based on yield tables.

The evaluation judgements can be made either at the programme level (e.g. efficiency) or with regard to both the programme and the socio-economic problems it seeks to address (e.g. effectiveness, utility and sustainability). For better understanding of programme's success or failure it would be beneficial to couple the normative (goal-oriented) analysis of programme effectiveness with a positively oriented examination of institutional aspects of programme implementation.

The development of an analytical framework for the evaluation of programme effectiveness using evaluation questions (with the associated criteria and indicators) requires foregoing formulation of programme theory. As such a theory will inevitably contain hidden assumptions about causal relationships between the programme and its expected effects, these assumptions need to be identified and critically assessed.

The main criteria considered in the selection of evaluation design are the internal and external validity. When the specific conditions do not allow for adopting a causal evaluation design (experimental or quasi-experimental), it may be more appropriate to follow the descriptive approaches (e.g. ex post facto or case studies).

An analysis of the variation in programme effects across a number of comparable studies may demonstrate the degree of convergence or divergence of findings. More importantly, though, the comparative perspective can also examine the relationships between the programme effects and the characteristics of the programmes and methods involved in evaluation.

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A Methodical Tool for the Evaluation of the Implementation of International Commitments on National and Sub-National Levels

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Introduction

In the 1990s a multitude of international agreements were signed in which countries committed themselves to address forest related issues. Some of the most important agreements in relation to forests on global level concern the Proposals for Action agreed at the Intergovernmental Panel on Forests (IPF) and at the International Forum on Forests (IFF), the Convention on Biological Diversity (CBD), the United Nations Convention to Combat Desertification in those countries experiencing serious Drought and/or Desertification, particularly in Africa (UNCCD) and the United Nations Framework Convention on Climate Change (UNFCCC), amongst others. On pan-European level countries agreed to implement the Resolutions signed at the four Ministerial Conferences on the Protection of Forests in Europe, which now amount to 12 Resolutions in total. Within the European Union (EU) member states are obliged to implement a series of EU regulations and directives, including Natura 2000, amongst others.

Over the last decade international forest related agreements have certainly had major impacts on national policies. However, the multitude of forest-related international commitments signed by countries in most cases overburden and confuse administrations that aim to take their implementation seriously. These commitments are too often unrelated, overlapping and sometimes lead to contradicting imperatives for action. The administrative responsibilities concern different authorities with often a limited view of the full range of obligations signed by their governments. International bodies on the other hand request, on behalf of their signatory states, periodic reports on the implementation of the commitments made.

Methodical approaches to conduct a systematic evaluation of the implementation of one or more of these international commitments are widely lacking, both in the scientific community and in practice. We propose in this paper a comprehensive methodical framework for

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assessing the implementation of the various forest-related international commitments. We demonstrate experiences with the application of this method of two practical applications: assessments of the implementation of the IPF (1997)/IFF (2000) Proposals for Action of the UNFF process at the supranational level (EU) and national level and the CBD Expanded Programme of Work on Forest Biological Diversity (2002) at the national level.

Based on these practical experiences in applying the approach, we discuss strengths, shortcomings and possible future improvements for an implementation evaluation tool for policies that link the international with the national.

The proposed methodical approach[1]

International commitments address a broad range of actors and institutions. Still, international negotiated and agreed policy text presents, despite numerous overlaps and interlinkages, a basis for international, regional, national and sub-national action.

The presented methodical framework allows the assessment of the implementation of one or more forest-related international commitments. It allows the identification of overlaps and the evaluation of the relevance of individual commitments for a particular country or international organisation. It clarifies the implementation responsibility, the current form and degree of implementation as well as implementation gaps. The evaluation proceeds in six steps which are shown in Figure 1.

We suggest to start the evaluation process with the analysis of the content of the individual international commitments, then proceed to the identification of the various addressees of the requested activities, ascertain the implementation relevance for the prior identified addressees

Figure 1. Methodical approach to the evaluation of the implementation of international commitments.

1 A substantial part of the methodology has been developed in the course of a study for the European Commission (Rametsteiner et al. 2001). It was further elaborated during the course of two studies prepared for the Federal Austrian Ministry of Agriculture, Forestry, Environment and Water Management (Pülz 2002 and 2003).

as well as establish the policy areas where the implementation of activities should take place. Synergies and differences between the outcomes of international processes could then immediately be established. However, we propose to continue the evaluation process with the identification of the implementation responsibilities for countries or organisations. From there we recommend to carry on the analysis with the evaluation of the implementation form and implementation degree as well as the potential gap and gap size to address the factual implementation side and give information on the implementation process itself. The last evaluation step should finally give information on synergies and differences between individual international commitments as such. In addition it should also discover synergies and differences in the various implementation processes.

The first two steps (analysis of content / addressees and implementation relevance) and the last evaluation step (synergies and differences) of this methodical approach concern the text of international commitments. The 3rd step (implementation responsibility), the 4th step (form and degree of implementation) and the 5th step (gap severity and size of implementation) are addressed a the factual implementation and will give information on the implementation progress of the selected international agreements.

Step 1: Content and Addressee(s) of the text of international commitments

A content analysis and summary of key aspects addressed by each forest-related international commitment have to be done. This content analysis helps clarifying the intention of the negotiated text. The content of some activities may be watered down or may bring together elements that are not necessarily interconnected. This is due to the fact that texts are negotiated within international fora and in order to assure all needs of negotiating parties are met, texts might not always be formulated straight forward. This allows for a wide amplitude of meaning to be attached to, but at the same time it makes interpretation of texts difficult.

The addressees of the activities requested by the international commitments can be assessed in various categories. One has to distinguish between activities, which address: 1) countries only, 2) countries and international organisations, 3) international organisations, 4) institutions and major groups, or 4) which address all together. Some might remain indistinct as no addressee can be assessed.

The output of the assessment of the content and addressee(s) is to be used to identify the implementation relevance and responsibility for/of the identified actors groups.

Step 2: Implementation Relevance

International commitments can be analysed with a view to assess whether the text addresses broad policy areas that are relevant for the respective addressees (country, international organisation, etc.), i.e. whether a commitment falls within its domestic jurisdiction or whether it concerns external relations. In a more refined step more detailed *policy areas* can be identified to which the respective international action might be most relevant. In some cases an activity will be relevant for more than one policy area or even all of them together.

It is important to note that only countries or international organisations themselves can determine whether a certain international commitment is politically relevant from their perspective. This analysis therefore prepares the basis for the political decision on priorities by countries, international organisations and others by showing which international commitments are relevant in principle and which policy areas they address.

Step 3: Implementation Responsibility

Different degrees of implementation responsibilities are to be identified in relation to the various activities requested by international texts. It is distinguished between primary, secondary and no implementation responsibility depending on whether a specific body/ region etc. has an exclusive legal competence or shares competence. Additionally, national or international and internal or external interrelations of countries/organisations have to be taken into consideration.

Step 4: Form / Current Degree of Implementation

To assess the form and degree of implementation the existing national and international legislation and activities related to forests have to be compiled and assessed. It seems useful to include only those activities considered part of larger programmes (e.g. research programmes) and not individual projects. The output presents the basis for the assessment of the present degree and form of implementation. The form of the current implementation should be examined by distinguishing between legislative and non-legislative frameworks.

To complement and verify written sources *qualitative interviews* have to be conducted with administrative staff of national and provincial authorities, stakeholders, NGOs, research community, international Secretariats etc. that have a competency for the policy areas identified. These interviews will help establish which activities are followed in relation to forest matters and how these relate to the activities requested by international commitments.

The degree of implementation can be assessed by using four categories (legal framework in force or under preparation, non-legal framework existing or under preparation). The analysis will show then whether the activities are fully addressed by the legislation and activities in force or under preparation, whether they are largely or only partly addressed, or not addressed at all.

Step 5: Gap Analysis

The gap analysis is based on the results of the analysis of the implementation responsibility and the evaluation of the implementation degree. The task is to reconcile these two and thereby identify the 'implementation gap' – if any – for each activity. The gap analysis covers an assessment of the size of the gap, based on the degree of implementation, and a comment on the nature of the gap – that is, the aspects of the activities that remain uncompleted. In all the analysis a distinction should be made, where appropriate, between national/internal and international/external roles and activities.

The size of the gap can be determined by comparing the outputs of the analysis, which revealed the degree of implementation, with the wording of each activity of the international text. On the basis of this, the degree of implementation falls into one of the categories shown below. The gap size is consequently the inverse of the degree of the implementation score – that is, full implementation means there is no gap. Table 1 shows the correlation between degree of implementation and gap size score. It should be stressed that these are only 'apparent' gaps based on the information available regarding implementation.

Some brief notes can be given on the nature of the gap for each activity. These are intended to identify the aspects which appear not to have been addressed. They therefore provide some explanation or justification of the score that has been ascribed to the particular activity /goal of the international commitment.

Table 1. Allocation of gap size scores to the different degrees of implementation.

Degree of implementation	Criteria	Gap size score
Fully	All was done that could reasonably have been expected to be done. However, there may be a couple of minor deviations or some small aspects not yet completed, or some work still to be finished.	None
Largely	Most, or at least the majority, of the work has been done	Small
Partly	Only relatively minor parts have been completed; or there has been only limited progress across the full range of activities	Medium
In preparation	Plans are actively being developed for implementing the work, but firm implementation has not begun	Large
None	No significant progress has been made; or only preliminary discussions; or very limited aspects implemented	Full

Step 6: Synergies and Differences between international commitments and their implementation

For the identification of synergies/ differences between international commitments, the text of the various international forest-related commitments have to be compared to each other. Brief notes should be given on the nature of the synergies as well as on the differences of the text of international commitments in order to allow others to verify the basis of judgements made. The outcome will facilitate a joint implementation of international commitments through national and sub-national administrations. It will also show overlaps of international commitments and make implementation of more than one commitment time efficient. It will demonstrate political priorities of international processes that have than to be translated into national priorities by policy-makers.

In addition, the analysis could focus on the identification of the synergies and differences of the various implementation processes of countries or organisations. Different meanings of concepts and words of international commitments may lead to implementation difficulties at the national and sub-national levels.

Some results

The previously outlined methodical approach was used and improved in the course of its application for the assessment of the evaluation of the implementation of the outcomes of two different international forest-related commitments: the non-legally binding Proposals for Action of the IPF/IFF process[2] as well as the Expanded Programme of Work on Forest Biological Diversity[3] of the Convention on Biological Diversity (CBD). The IPF/IFF Proposals for Action as well as the CBD Programme of Work on Forest Biological Diversity were analysed with regards to their key contents and a short summary of every activity was

2 The assessment of the implementation of the IPF/IFF Proposals for Action was done for Austria as well as for the European Community.
3 The assessment of the implementation of the outcomes of both international processes was done for Austria only.

prepared. The IPF/IFF Proposals for Action were clustered into 16 categories[4] that were found relevant by the international community during the informal deliberations in February 2001 and at the first session of the United Nations Forum on Forests (UNFF) in June 2001. The activities of the CBD Programme of Work on Forest Biological Diversity were not clustered, but the structure of the original document of the Work Programme was used, where goals, objectives and activities had been identified by the international community. In the following some results are shortly outlined[5]:

Addressees of commitments

The assessment of the IPF/IFF Proposals for Action in terms of their respective addressees showed that more than 40% of all Proposals do address only countries and ask for national implementation. Only about 10% of all Proposals explicitly address international organisations other than the EU[6]. In the IPF/IFF context the European Community can be considered on the one hand as international organisation and on the other hand as "country", where it relies on exclusive competences according to its treaty framework. More than 20% of all Proposals were for some reasons not found relevant for implementation.

Two thirds of all activities addressed by the three Programme elements of the CBD Programme of Work on Forest Biological Diversity are addressed at country level. Some activities have other addressees and therefore should not be implemented by countries.

Implementation relevance

The implementation relevance of the IPF/IFF Proposals for Action was clarified for both, Austria and the European Community: The analysis showed that about one third of the IPF/IFF Proposals for Action is relevant for international action, a bit less than one third for national action and about one sixth is relevant for national and international action. It seems surprising that more IPF/IFF Proposals for Action are actually asking for international action, but from a global point of view it is not. The global forest dialogue deals first and foremost with international forest policy problems that require international approaches.

For the European Community a similar picture emerged: One fourth of the IPF/IFF Proposals for Action demands specific action within the European Community, while a bit less than one third addresses the European Community as an international organisation or donor, asking especially for the provision of additional financial resources, technological transfer and international capacity-building with a view to enhancing international data on forestry.

The analysis of the CBD Programme of Work on Forest Biological Diversity showed that more than 2/3 of all activities are deemed relevant for national action in Austria. Within programme element 1 (conservation, sustainable use and benefit sharing) of the Programme of Work only 3% of all requested activities ask for international action by Austria. Most activities should be implemented nationally. Within programme element 2 (institutional and socio-economic enabling environment) of the Programme of Work only 14% and within programme element 3 (knowledge, assessment and monitoring) only 20% of the requested activities ask for international action. Contrary to the IPF/IFF Proposals for Action most

4 The 16 categories include topics like: national forest programmes, promoting public participation, forest research, criteria & indicators, forest conservation, financial resources, international cooperation etc. For a more detailed overview see: United Nations Forum on Forests (2001).
5 See: Rametsteiner and Pülzl 2001; Pülzl 2002a, Pülzl 2003; Pülzl, H. 2002b; Pülzl and Rametsteiner 2002a; Pülzl and Rametsteiner 2002b.
6 These IPF/IFF Proposals for Action are for example addressed at FAO, WIPO, CIFOR etc.

activities of the Programme of Work are deemed relevant for national implementation within Austria and less for international implementation by Austria.

Policy areas addressed by commitments

The policy areas selected here specifically reflect the institutional structures and competences of the respective administrations. The policy areas constitute important fields where the respective administration is active with regards to forest related activities. This means that the identified policy areas for both cases (Austria and EU) are not the same. Figure 2 shows policy areas of the European Union.

Both in Austria and the EU most of the IPF/IFF Proposals for Action address the policy fields of development co-operation, research, forestry statistics and rural development (see Figure 2).

Most of the activities of the CBD Programme of Work on Forest Biological Diversity address the policy fields: Forest policy, biodiversity and research policy. Other policy areas such as forestry statistics, rural development, development cooperation, trade, forest genetics, and climate change policy etc. are addressed as well.

Implementation responsibility for commitments

Regarding the implementation responsibility of the IPF/IFF Proposals for Action in Austria the analysis showed that for more than 2/3 of them the Austrian federal level has a primary implementation responsibility. About 9% are of secondary implementation responsibility for the federal level. The latter concern areas where implementation responsibility concern provincial authorities or the European Community.

The European Community is deemed to have a secondary implementation responsibility for about 2/3 of all IPF/IFF Proposals for Action. This rather high figure is simply because the most often named policy areas, e.g. development cooperation, research and rural

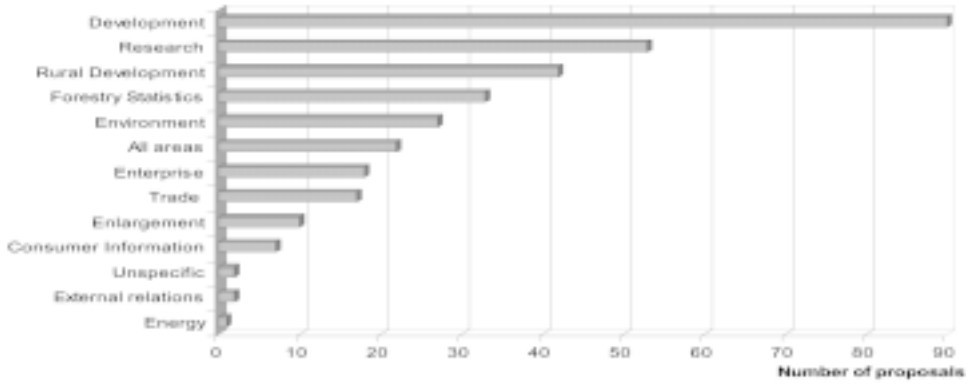

Figure 2. Relevance of the IPF/IFF Proposals for Action for EC policy areas (Rametsteiner, Pülzl, Pryor et al. 2001).

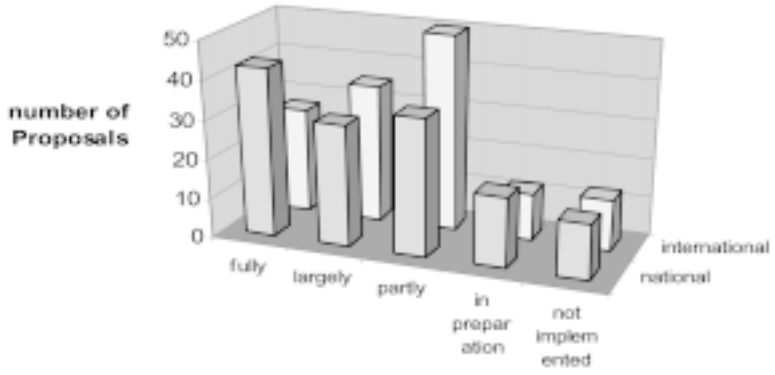

Figure 3. Austrian degree of implementation of the IPF/IFF Proposals for Action (Pülzl 2002).

development, all fall into the secondary implementation competence, both because of shared competence or of the principle of subsidiarity.

The implementation responsibility for the activities of the CBD Programme of Work on Forest Biological Diversity is primarily found at the federal level in Austria. It has a primary implementation responsibility for more than 2/3 of the relevant activities of Programme element 1, for more than 90% of the relevant activities of Programme element 2, and for all relevant activities of Programme element 3. The Federal Provinces and, in some cases, the European Community hold an implementation responsibility for about one forth of the relevant activities of Programme element 1 and for very view relevant activities of Programme element 2.

Implementation degree of commitments

The analysis showed that Austria has already implemented or started to implement a major part of the IPF/IFF Proposals for Action on the national level. Some that demand international action were not as well implemented as those addressing national action. Most of them were only partly implemented. This is due to the fact that no further and additional financial resources that are asked for were provided to developing countries and that so far no assistance was granted for the development and implementation of national forest programmes in developing countries (see Figure 3).

The large majority of the IPF/IFF Proposals for Action, where the Community has either primary or secondary implementation responsibility, was addressed in some form. Only a minor fraction of less than 10% have not been addressed. Most Proposals were partly or largely addressed, meaning that some or most of the aspects are covered through its legislation and/or activities. However, only a small part of the Proposals can be considered to be fully addressed. Overall, only very few activities or legal texts explicitly include references to the IPF/IFF Proposals , such as the Forestry Strategy of the European Union.

The degree of implementation of the activities of the CBD Programme of Work on Forest Biological Diversity varies between the three programme elements. The national implementation degree of Programme element 1 is slightly better than that for programme

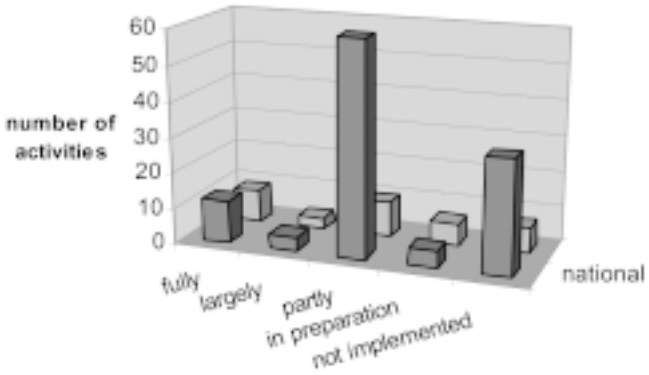

Figure 4. Austrian degree of implementation of the CBD Programme of Work on Forest Biological Diversity (Pülzl 2003).

elements 2 and 3. The implementation degree is lower at the national than at the international level. This is due to the fact that the areas concerned have so far not been a priority in Austrian national forest policy (see Figure 4.).

Gap Analysis on the implementation of commitments

The gap analysis of the implementation of IPF/IFF Proposals for Action in Austria showed that on a national level for a strikingly small number (16) no progress regarding implementation was made. On an international level the implementation for few IPF/IFF Proposals for Action (14) has not started at all. It seems for instance that Austria so far did not support the development and implementation of nfps in developing countries and did not grant new and additional financial resources to developing countries, did not assist them in preparing national forest reports and did not or only on a very limited scale fund forest research in developing countries.

Some of the most significant points of the gap analysis results for the European Community are summarised as follows: There are only very few IPF/IFF Proposals for Action (13) on which there appeared to have been no significant progress, and a further 26 on which implementation is still in the preparatory phase. The analysis identified only one area (traditional forest knowledge) with a notably high number of large or full sized gaps. In general, the level of implementation is significantly higher within the European Community than outside.

The evaluation of the implementation of the CBD Programme of Work on Forest Biological Diversity identified Austrian national implementation gaps in 27 cases. Internationally a small number of implementation gaps were identified. With regards to 8 activities requested by the Programme of Work no progress has been made. This is not surprising as most of the activities are addressed at the national level and implementation should therefore mostly proceed within countries.

National implementation gaps have been identified for instance with regards to the following topics: ecosystem approach, climate change, forest fires, endemic and threatened

species, sustainable use of forest biological diversity, community managed systems, forest genetics, and the fair and equitable sharing of benefits from forest genetic resources, institutional and socioeconomic topics as well as national forest classification systems/maps, specific forest ecosystem surveys, criteria and indicators and, research programmes. Primary international implementation gaps can be found especially in the following areas: ecosystem approach and with regards to endemic and threatened species and in Programme element 3 with regards to the enhancement and improvement of technical capacities.

Synergies and differences in commitments

When evaluating the implementation of the IPF/IFF Proposals for Action and the CBD Programme of Work it should be taken into account that both have been developed in different periods of time. While the IPF/IFF Proposals for Action have been agreed to between 1995 and 2000, the CBD Programme of Work was adopted only in April 2002. Despite their numerous overlaps and interlinkages the IPF/IFF Proposals for Action contain a solid basis for action. They concentrate mainly on international actions, while the CBD Programme of Work should be implemented mainly on the national level. The IPF/IFF Proposals for Action are valid for all types of forests and refer to all aspects of forest policy, while the CBD Programme of Work's main objective is to enhance the protection and sustainable use of forest biological diversity as well as the fair and equitable sharing of benefits arising from the use of forest genetic resources. It further proposes activities for the improvement of institutional and socio-economic structures and it contains activities for the monitoring of forest-biological diversity and research.

The international priorities of both international commitments differ considerably. This is an indication on the level of urgency of those topics. The analysis of the IPF/IFF Proposals for Action showed that trade issues, international cooperation and technology transfer as well as the provision of financial resources and the demand for more research activities rank high on its agenda. The CBD Programme of Work prioritizes not trade issues in general, but puts an emphasis on the need for effective forest law enforcement with respect for forest biodiversity. Furthermore it highlights the role of indigenous and local communities as well as the role of women and the need for cooperation and the identification of synergies between UNFF and CBD (see Table 2).

Many activities of the CBD Programme of Work are also addressed by the IPF/IFF Proposals for Action (e.g. protected forest areas). In some cases the requirements of the IPF/IFF Proposals for Action are more detailed (e.g. traditional forest knowledge, criteria and indicators). In other areas no IPF/IFF Proposals for Action exist (e.g. invasive alien species, climate change, forest fires etc.). The political language of both varied considerably. While some IPF/IFF Proposals for Action do contain overlapping and intertwined issues, the text of the CBD Programme of Work seems to draw more on findings from natural science.

The analysis showed that synergies in implementation processes could be established in Austria as the CBD Programme of Work is addressed by the Austrian national forest programme and a common implementation of those commitments will be aimed at also through the Austrian Biodiversity Strategy. The CBD Programme of Work asks for its implementation following an ecosystem approach. The definition of the ecosystem approach might create considerable confusion among forest owners, national administration and science as different meanings are attached to this concept and some view it as contrary to sustainable forest management. However, the analysis showed that forest biological diversity risks to be confused with diversity of fauna and flora while neglecting other aspects addressed by the Convention on Biological Diversity. Both, the IPF/IFF Proposals for Action as well as

Table 2. International priorities of IPF/IFF Proposals for Action compared to the CBD Programme of Work on Forest Biological Diversity.

IPF/IFF Proposals for Action	CBD Programme of Work on Forest Biological Diversity
- Trade - International cooperation and technology transfer - Financial resources - Research - Rehabilitation of degraded areas	- Effectiveness of forest law enforcement - Role of indigenous and local communities - Role of women - Development and use of criteria and indicators - Cooperation and identification of synergies between the CBD Programme of Work and the Plan of Action (UNFF) - Forest protected area networks

the CBD Programme of Work are not well known by Austrian administrators and forest owners and for a continuation of the implementation process more public attention may be desirable. The relevant information showing all features of the outcomes of both international processes has been made available in an excel-sheet / word document, it will be easy to report in every possible way, the international community agrees to.

Discussion

Strengths and shortcomings of the approach and lessons learned

The overall methodical approach is quite valuable as it allows to split the evaluation process in a series of implementation steps, establishes explicit categories and criteria for judgement before the evaluation process starts, and allows the documentation of each step in the process – which in turn is important for the checking of results and individual judgements by others. The results of the first part of the analysis (content, addressees and relevance of the international commitments) can be used by countries, international organisations and others for their analysis, as this analysis is not country-specific, yet necessary. The transparency as well as its precise documentation for all evaluation steps is certainly a major strength. However, this clear and detailed step-wise approach for the sake of objectivity and transparency comes at a cost: the procedure is time consuming.

Other approaches included the elaboration of summaries of commitments or the clustering of the IPF/IFF Proposals for Action compared to the CBD Programme of Work on Forest Biological Diversity in order to reduce the workload for countries. The method applied here differs from these approaches (see e.g. FAO/UNDP 1999) to cluster, group or aggregate different Proposals for Action in relation to other international commitments (see e.g. Department of Agriculture … 2002) dealing with forest issues into a new and comprehensive text. While clustering allows reducing the number of international activities requested, it makes several aspects more difficult. Not only does it in effect replace the original commitments given by countries, international organisations and others, it also makes an analysis of the addressees, relevance and responsibilities largely impossible or useless. It therefore would also put into question the long and sometimes tiresome negotiations that had led to the identification of actors in connection to various activities. However, summaries of the international commitments were very useful for the evaluation process as such. The summary of the individual IPF/IFF Proposals for Action as well as the activities of the CBD

Programme of Work, while running the danger of misinterpreting the sometimes several aspects recalled, proved to facilitate the communication with administration and interviewees considerably. For the interviews the summary included references of the actor groups and policy fields addressed as well as the implementation relevance and responsibilities (exclusive or shared competences). It is important to keep the original text as the main reference throughout the evaluation process in order to be able to clearly identify responsibilities, relevance's, implementation degree and implementation gaps. It is therefore a strength of the presented approach that might be technically complex to use, but at the same time pays tribute to negotiated text and does not develop new text with new meanings attached to that would further confuse reporting processes.

The presented approach distinguishes between two steps in the determination of implementation relevance: the first looks at the text and determines the relevance as seen from the commitment text. This is a task where science can certainly play a role. The second is to set political priorities within countries and determine the relevance as seen by the country or international organisation. This is not a task for scientist, but of the respective policy makers. The approach clearly stays with the interpretation of the original text and does not establish an implementation relevance as it is not a prescriptive tool. In using the present methodical approach the implementation degree and gaps are made evident. It visualizes the implementation degree and apparent implementation gaps for the stakeholders and administrative staff in charge in the countries or international organisations as the implementation degree and the respective gaps could also be quantified complemented by qualitative descriptions.

Regarding the identification of synergies and differences between international agreements the presented methodical approach suggested to carry out this evaluation step in the end. This means that the analyst would take the forest-related outcomes of one international process and compare it with the outcomes of a second international process, establishing synergies as well as differences for their implementation at the national and sub-national levels. Additional cross-references from other international commitments can then be integrated in a table. This approach allows to use the structure of the 16 elements of the Multi-Year Programme of Work of the UNFF that is requested for national reporting and the thus necessary analysis of each of the commitments of the IPF/IFF process on its own. The same holds true for the CBD Programme of Work on forest biological diversity. One can then use the outcomes for the specific reporting requirements and make cross-references between the evaluation reports.

A possible alternative methodical procedure at an earlier point in the evaluation process would be to establish key words for each of the international activities requested and to set up a data basis that is interlinked to the original text versions. This can e.g. be done by making of use information technology programmes for content analysis. Also this approach can be rather time consuming if it keeps high levels of transparency of the process. The change of meaning of international concepts and words used during negotiations could be taking into account more easily by the analyst.

As international processes are still trying to reorganise their respective reporting procedures and as it is still unclear what the outcome will be, an evaluation approach needs to be open to all possible formats of reporting requests (i.e. individual reporting requests that are close to the specific commitments or possible future joint information requests). This means that the clustering of texts at an early stage, at the very beginning of the evaluation process or before the implementation degree analysis, would make reporting on specific original commitments difficult. We therefore suggest to identify synergies and differences of international agreements in the end of the evaluation procedure. In this sense the original structure of the international document to be evaluated can be maintained and the meaning of actions in connection to their respective headings are not lost either.

One lesson to learn is the need to have a good understanding and be familiar with the substance (here: forest management and policy) and the political language used in the different policy fora. For those commitments whose evaluation were shown here it was essential to have competence and experience in international and United Nations related policy deliberations as well as an understanding in related current forest policy issues.

Concluding remark

The increasing number of international commitments (only two of which were evaluated here), the "soft law" nature of many of these commitments and the increasing emphasis on the implementation of these makes co-ordinated and comprehensive methodical approaches important. This approach is one of several – it needs further refinement and adaptation to individual circumstances. So far, however, the experience in applying the approach in practice has been encouraging.

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The Potential Role of Foresight in National Forest Program Design

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Abstract

Foresight is a systematic, participatory process that involves gathering intelligence and building visions for the medium-to-long-term future. The process is aimed at informing about present-day decisions and mobilizing joint actions. Foresight includes futures studies, strategic long-term planning and networking.

Participative processes are applied in all three parts of foresight to involve and commit different stakeholders such as public authorities, industry, research organizations, non-governmental organizations, etc. to the decisions concerning the future. Foresight helps to identify possible futures, imagine the desirable futures, and define the strategies for achieving the desirable futures. With foresight it is possible to systematically think, debate and to some extent shape the future that is increasingly defined with complex interrelations between science, technology and society and fast-moving scientific and technological change.

The National Forest Program (NFP) is a generic expression for the approaches to planning, programming and implementing forest activities at the national level. In foresight terms, NFPs are guidelines for implementing forest activities that lead to a better future. What is a better or desirable future is negotiated and discussed in the participatory processes. Despite the fact that the NFPs are focused on long-term development in forestry and the forest sector, they seldom include future studies or a foresight process in the program design.

The aim of this paper is to discuss the potentials of foresight in NFP planning and design. The paper uses the Finnish NFP from the late 1990s as an example and draws a conclusion that the NFPs could have a stronger role in analyzing the future and supporting a set of possible, alternative futures rather than one future alone.

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1. Finland's National Forest Programme 2010 – important forest policy instrument

Since the Rio Declaration in 1992, there was a clear need in Finland to change the forest policy from the principles of timber production to the dimensions of sustainable forest management (SFM). In 1998, the Government of Finland decided to draft a new forest programme, in order to guarantee the sustainability of timber production but also to guarantee all other important values of sustainability of the Finnish forests. The drafting process followed the general recommendations of NFPs agreed in Rio and followed also the International Panel on Forests (IPF) and International Forum on Forests (IFF) recommendations. In March 1999 the Government approved Finland's National Forest Programme 2010 (Finland's… 1999) as Finland's forest strategy and an action programme for Finland's forest sector policy until 2010.

Several mechanisms have been used in the programme design in order to balance economic, ecological and social demands; open and participatory drafting process, two impact assessments, three Government decisions as well as the creation of National and Regional Forest Councils. For example, the new institution in the Finnish forest policy, the National Forest Council, was established in 1999 in order to follow-up and develops NFP 2010. It is chaired by the Minister of Agriculture and Forestry, and all major economic, ecological and social interests are represented in the Council. The Forest Council discusses all relevant issues on NFP 2010 and forest policy in general. At the sub-national level there is a corresponding new structure, Regional Forest Councils, with a similar task of following and developing the Regional Forest Programmes. The thirteen Regional Forest Programmes are coordinated with the NFP 2010 and they are aimed to assure that the SFM practises are carried out as a balanced entity also at the sub-national and local levels.

At the beginning of the NFP process the ministerial group of the Government decided the vision of NFP 2010, which describes the desired state of Finland's forests and forestry in 2010. The vision: *Sustainable welfare courtesy of diverse forests* goes beyond traditional sustainable forestry including new elements such as high-quality forestry know-how and active participation in the international forest policy.

With the support of NFP 2010 the Government increased its annual incentives to silviculture by 10 million euro and at the same time forest owners have increased their own investments in silviculture by 40 million euro. As a result the total investments in silviculture have increased annually from 200 to 250 million euro, which is the NFP target. Also industrial use of roundwood, forest sector export value and forest sector employment have increased. It seems that common understanding of all stakeholders and state incentives have encouraged forest owners' investments in silviculture and forestry. On the other hand, roundwood import has increased at the expense of domestic harvesting.

Also strong political commitment and action have been taken place since the NFP such as updated forest legislation and continuous and steady budget funding for forest sector. The management of such a wide programme is a challenge; so far there has been no major political conflicts within the forest sector, but balancing of economic and ecological dimensions has been and still is challenging. Forest conservation areas are mainly in the Northern part of Finland and in the south the share of strictly protected forests is only about 1–2%. Many forest ecology researchers and ENGOs consider that 5–10% of the forests should be protected to guarantee the existence of endangered species in the Southern part of Finland. In 2002 as a part of the NFP Forest Biodiversity Protection Programme for Southern part of Finland was established to promote forest biodiversity on voluntary basis with the help of Government incentives. So far its results have been promising.

Since 1999 the Finnish NFP has been an important forest policy instrument at the Government's policy implementation process. It has common goals, financial commitment by the Government and it has encouraged private sector investments. The Finnish NFP has made clear impacts for the forest sector and for the whole economy in Finland during its first five-year implementation period.

However, for being able to assess the effects of Finnish NFP, a well-defined system of evaluation and feed-back from the last five years when the NFP has been implemented, is needed. Its successful future depends on the long-term and clear vision for the future. And above all, strong commitment of all stakeholders of the forest sector in Finland is required.

Despite the fact that the NFPs, like the one in Finland, are focused on long term development in forestry and forest sector, they seldom include future studies or foresight process in the program design. The aim of the paper is to discuss, in the light of available experiences from the NFP 2010 of Finland, what would be the potentials of foresight in NFP planning and design in the future.

2. What is foresight?

2.1 Key elements of foresight

Foresight is systematic, participatory process, involving gathering intelligence and building visions for the medium to long-term future, and aimed at informing present-day decisions and mobilizing joint actions (European Commission 2002). Foresight includes *planning*, *networking* and *futures research*, but stronger than futures research, combines the achieved research results into decision making processes.

The aim of foresight is not in principal to produce more insightful futures studies like scenarios or delfoi analyses, but to bring together key agents of change and sources of knowledge in order to develop strategic visions to the future. The strategic visions, that are feasible and desirable, can then be used in present day decision making and actions in participating organizations.

The most important elements of foresight process are (European Commission 2002, p. 29):

- Structured *anticipation* and *projections* of long-term social, economic and technological developments and needs.
- *Interactive* and *participative methods* of debate, analysis and study of such developments and needs, involving a wide variety of stakeholders
- Building up new *social networks* on the basis of partnership.
- Building up *strategic visions* for the future that are feasible and desirable and go beyond the presentation of future scenarios or preparation of action plans.
- *Sharing the vision* and recognizing its implications in present day decision making and actions.

Foresight has been successfully used in bringing awareness of long-term changes closer to immediate decision making, and in creating partnership among the participating stakeholders. Foresight is especially applicable in national, regional or sectoral planning, but it can be applied also in a wide variety of other strategy processes.

The three parts of foresight include forward planning, networking and futures research (Figure 1), which all emphasize the participatory approach in creating and making the decisions about the future.

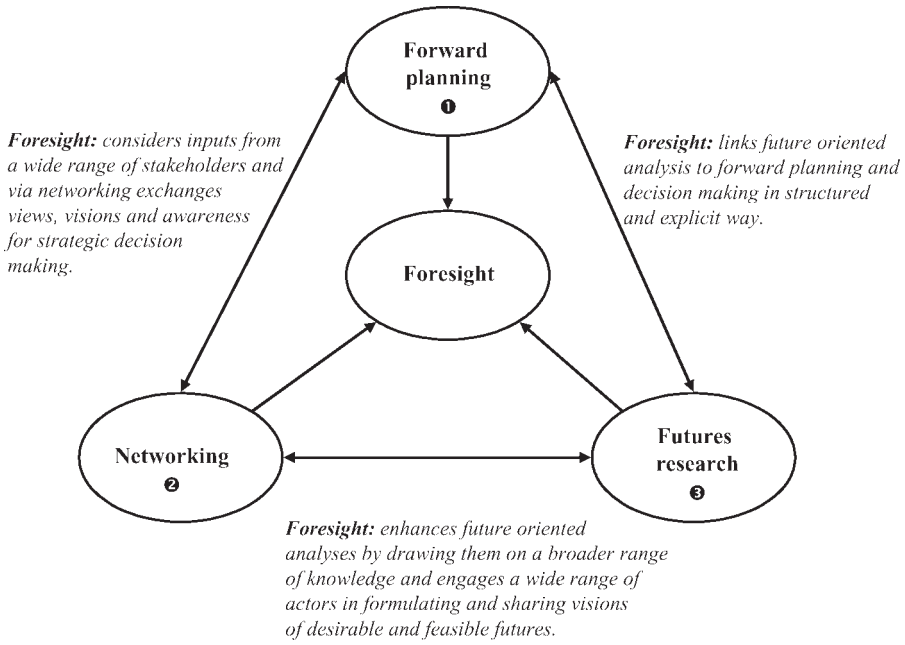

Figure 1. Foresight combines forward planning (1), networking (2) and futures research (3) in participatory processes.

2.2 Forward planning – proactive approach to the future

Planning can be defined as "*to conceive a desired future as well as the practical means of achieving it*" (Ackoff 1970, cf. Godet 2001). The definition emphasizes two principle component of planning: the study of possible and desirable changes, and study of strategic choices necessary to meet the expected or provoked changes.

In planning, future can be seen from five basic perspectives (Godet 2001):

- the passive (accepting changes)
- the reactive (waiting for changes)
- the preactive (preparing for foreseeable changes)
- the proactive (acting to provoke desirable changes)
- the anticipative (combining all above with an anticipative attitude).

The more future oriented planning is, the more preactive and proactive elements are included in it. Often preactive way of behavior towards the future in planning is not enough. It is, at best, a strategy of an insurer who calculates if prevention is worth of cure or not. The proactive manner, on the other hand, requires a lot of emphasize in exploring the future, what alternatives there exists and what would be the necessary actions that should be taken today.

Forward planning requires that four principle questions are asked (Godet 2001):

- what could happen (implementing futures studies e.g. scenario building)
- what can I do (building strategic options)
- what will I do (making strategic decisions)
- how will I do it (deciding action and operational plans)?

These questions illustrate the importance of exploring the future: Without solid and constructed vision of the options for the future (the first question) it is impossible to get reasonable answers for the following questions on strategic and tactic issues.

In forward planning, a move from a rational approach aimed at achieving equilibrium and stability, towards more *evolutionary approaches* have taken place. Earlier, it was assumed that one can grasp the dynamics of social and economic life on the basis of prediction on quantitative changes with stable structures. In evolutionary approaches qualitative changes are emphasized equal to the quantitative (predictable) changes.

Forward planning is a form of strategic planning where the planning horizon is in the long-term future. In forward planning the future is explored, for example, with the help of future studies like scenario or delfoi analyses to define the key elements likely to give rise to sudden deviations or changes in trends. Forward planning is directed towards strategic and tactic issues rather than towards operational questions.

In foresight, forward planning is participatory, aiming to elaborate networking among key actors and to translate prospective analysis into implications for present-day decisions.

2.3 Networking – emphasize in distributed knowledge and participation

In recent years, policy development has been driven from top-down to more *participatory approach*. This reflects the pressures from democratization and legitimacy requirements in policy processes, which call for deeper and wider participation in public decision making. As people's values and society's demographic structures are complex, challenge has been to find ways for participation, which would enable different stakeholders and even individuals to take part in decision making. Networking has approved to be one way to increase participation in public decision making.

Another motivation for increased networking has been the fact that knowledge is often widely distributed. This has raised needs for methods for intelligence-gathering where stakeholders are not only asked their views on ready-made plans or strategies, but are asked to bring their expertise to the planning situation.

In foresight, networking is, on the one hand a result as such, and on the other hand a tool for building strategic visions to the future. With networking it is possible to increase the sense of commitment of those participating in the process.

2.4 Futures research – shift from predictive to exploratory studies

In futures research, a shift of emphasize has occurred from predictive approaches to exploratory studies (e.g. Mannermaa 1999, Godet 2001). In *predictive approaches*, it is assumed that the future development can be predicted on the basis of the past. In reality this is seldom the case especially if the prediction is made far to the future. The predictions of statistical analyses or trend extrapolations, for example, have often failed, especially in questions where social or technological issues have been important. The assumed causal relations behind any prediction may not hold especially if shifts in social or technological development occur during the period of prediction.

The *exploratory approach* to futures research emphasize that the results of the futures studies are not predictions but alternatives that have a probability higher than zero to actually happen. Remarkably rise of the exploratory approach in futures studies occurred in the 1970s when the oil crisis, among other occasions, raised questions on the usefulness of forecasting

Table 1. A simple taxonomy of methods used in futures research (Tulevaisuudentutkimuksen VerkostoAkatemia 2004).

	By technique		By purpose	
Method	Quantitative	Qualitative	Normative	Exploratory
Environmental scanning	X	X	X	X
Cross impact analysis	X	X	X	X
Decision analysis	X		X	
Decision modeling	X			X
Delphi		X	X	X
Econometrics	X		X	X
Futures wheels		X	X	X
Gaming and simulation	X	X	X	X
Genius forecasting		X	X	X
Morphological analysis		X	X	
Participatory methods		X	X	
Relevance trees		X	X	
Scenarios	X	X	X	X
Statistical modeling				X
System dynamics	X			X
Structural analysis		X		X
Technology sequence analysis		X	X	X
Time series forecasts	X			X
Trend impact analysis	X	X		X

in unstable and unpredictable economic and social environment. Since then, the exploratory approaches have been increasingly used in futures research (Mannermaa 1999).

Another shift in the futures research in the 1990s was to involve decision makers in the futures studies rather than simply presenting the results or a set of visions to them. Especially modern futures research literature (Bell 2000, European Commission 2002, Mannermaa 1999), emphasize the inclusion of decision makers into the process of futures studies.

The methods in futures studies include trend extrapolation, delphi analysis, simulation, scenario analysis, applications of system analysis and several other techniques (Table 1). The two often used exploratory futures research methods are scenario analysis and delphi analysis. The roots and origins of several other techniques and methods, may actually lie in another scientific discipline, such as economics, system analysis or statistics – although these methods are applied also in futures research.

In *scenario analysis*, alternative futures are studied from the point of view of whose future is under investigation. The analysis starts with structured anticipation and projections of long-term social, economic and technological developments and needs, followed by the construction and study of possible futures. The number of the possible futures – i.e. the scenarios constructed – should be between two and five in order for them to remain operational.

After their construction, the scenarios are used to identify the critical factors for the desirable future to be realized, or for the undesirable future to be avoided. It is also possible to evaluate how well the existing or planned strategies or strategic decisions of the institution in question work in the alternative futures – preferred or unpreferred.

In *delphi analysis*, experts with different backgrounds are asked to anonymously respond to a set of first-round questions which are then analyzed and synthesized. The second and

following subsequent rounds of questions are based on the results of the previous round. In the end, after three to five rounds of questions, the responses are summarized into conclusions of what the experts believe, in group consensus, to be the factors of change (and their impacts) in the future.

The delphi analysis can be implemented also in a way where group consensus is not directly sought. Rather, the questionnaires in the different rounds of the delphi are modified in a way that sets out the controversial opinions from the responses. Even though in this case the delphi would not be used to find a consensus, it could expose a set of explicit issues on the factors or impacts concerning the future.

It is often recommendable to use different futures research methods in parallel or together. For example, it is possible to apply delphi analysis to find the most relevant variables for the scenario analysis. The scenario analysis then can be used to build up alternative futures using the variables rising up from the delphi analysis. Alternatively, it is possible to further test the results of the scenario analysis with simulations or system models in order to estimate what the consequences of the different futures would be, for example on turnover, GDP or trade – just to mention few of the many alternatives.

3. Foresight in National Forest Programs

3.1 Forward planning and networking in National Forest Programs

The aim of the National Forest Programme of Finland of 1999 (Finland's… 1999) was to create an action plan for forestry until 2010. The programme is an example of the result from a forward planning process, where networking was extensively used to increase participation in the programme preparation.

During the process for preparing the National Forest Program 2010 for Finland (Figure 2), corporate and expert participation was organized mainly through the programme working groups. The working groups of the NFP on forest management and protection, forest utilization and markets, and forest innovation had all together 39 participants from different governmental, non-governmental, research and private organizations. Aside their own work and knowledge, the three working groups heard 38 experts from different disciplines and organizations (Finland's… 1999).

Public participation in the process was supported by open discussions on the NFP in 59 public forums. Approximately 2900 people participated in these forums. Also an Internet site was established and used to open the draft versions of the NFP for comments and dialogue. All together 6800 visitors were recorded to visit the site in 1998 alone.

Regional participation in the process was organized via the preparation of regional forest programs for 13 sub-national districts in close communication with the NFP. In the process for preparing the regional forest programs, the same approach for participation as in the NFP, including corporate and expert participation in working groups and the organization of open forums for public hearings, was followed.

It is obvious that the NFP design was build on transparency and as wide participation as technically was possible. The process of NFP design supported and created functioning structure for forward planning and networking among the stakeholders that were interested on the future use of forests in Finland. Furthermore, especially the role of regional forest programs in NFP design and the ways to open the NFP for public discussion supported the bottom-up approach in the programme design.

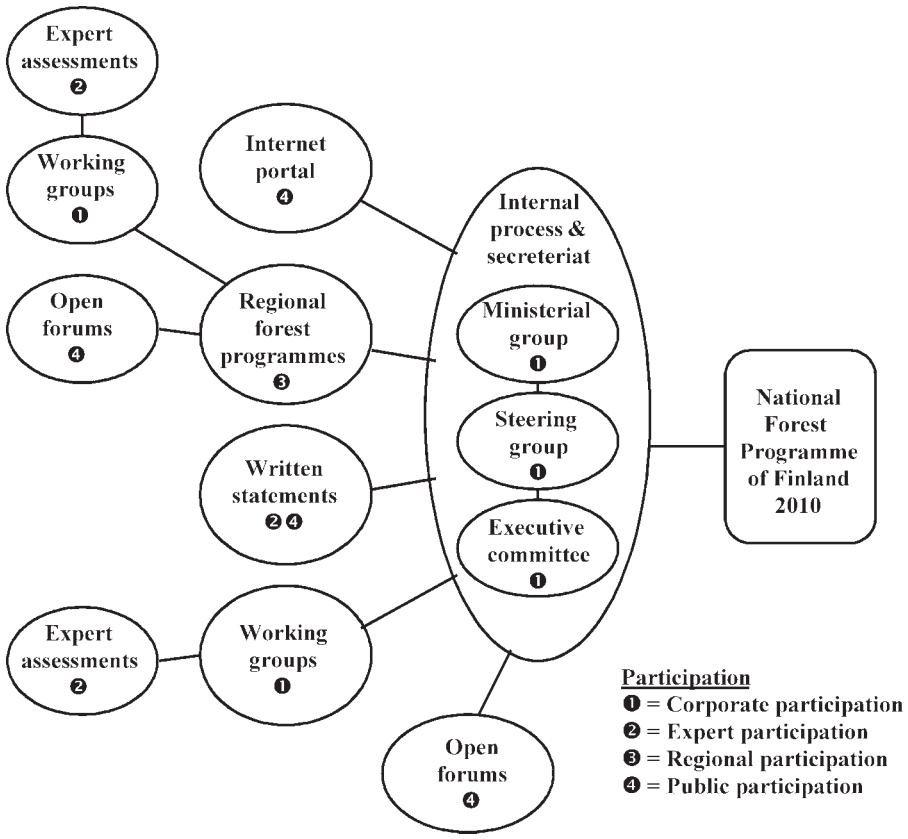

Figure 2. The process and participation in Finnish NFP design.

3.2 Futures research in National Forest Programs

What were clearly missing from the process of NFP design were the systematic analyses on the possible futures from the point of view of political, social, economic, technological and environmental developments and needs affecting the use of forests. Therefore, it can be argued that the NFP represents a target programme for forestry that is based on rather *static view* to the future. It can also be argued that the view to the future was set in the processes rather internal to the NFP design, opposite to what a foresight exercise would require.

Since the NFP formulation process was participated mainly those who had an interest on the use of forests, this obviously had an influence on what signals on the future changes became available and were taken into consideration during the process. Ansoff (1984) argues that the signals of change have to pass a number of so called 'filters' before they result into a change of action. The existence of these filters results into a risk that even the most important signals – if they differ from the experience and prevailing understanding about the future development – do not have an impact to the decisions made for the future. The filters include (Fig. 3):

- *surveillance filters*, which indicate that only some signals indicating possible future change are successful to be considered in the planning process
- *cognitívity* or *mentality filters*, which indicate that only some of the signals passing the surveillance filter will be perceived as meaningful; this increases the risk that only those

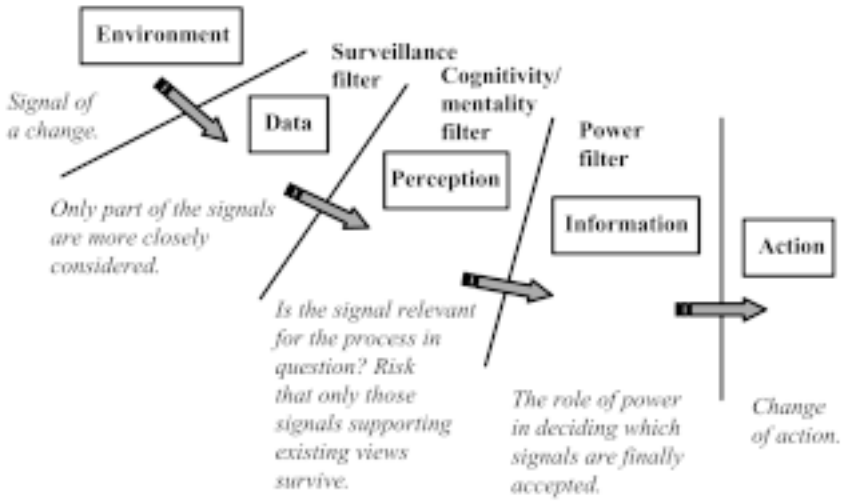

Figure 3. The role of 'filters' in resulting to the change of action after recognizing the signals of the forthcoming change (Ansoff 1984).

signals that supports the existing views are accepted – further strengthening the prevailing attitudes towards the future

- *power filters*, which indicate that only some of the signals that pass the mentality filter survive and result into a change of action; this illustrates the importance of power in making deciding which of the signals are finally accepted and lead to a change in the course of action.

If futures research was included as a part of NFP design, the possible futures and future changes would be explicitly considered. This could glue the knowledge of the key actors interested in the use of forests, and the knowledge of political, social, economic, technological and environmental developments to result the best available understanding on the driving forces for the better use of forests in the future. If the process was made transparent, also the risk would be minimized that the signals of change relevant to the future would be filtered before considering their importance.

With the inclusion of foresight (including forward planning, networking and futures research) to the NFP design it is possible to elaborate the multidisciplinary and multi-stakeholder dialogue to react on the changes likely to occur in the future. The futures research has a critical role here: it is at the first priority to explore the future from the point of today's decision making concerning the use of forests. Without structured analyses of the alternative futures, it is difficult – or even impossible – to build sustainable strategies on the use of forests far to the future. The use of futures research in NFP design was not yet the case in Finland at the late 1990s when the current action plan for forestry was designed.

To partly tackle this problem, and to promote innovations in the forest sector, the Ministry of Agriculture and Forestry of Finland established a special project for the years 2003–2008 that was aimed at exploring the trends and signals of change that may affect the forest sector in the future. This special project, called the Future Forum on Forests of Finland, uses futures research methods and techniques in a participatory manner to foresee especially the changes – often external – that may have strong impacts to the future of the forest sector 10–20 years

ahead (Future Forum on Forest 2004). In this way, the Forum results are expected to support not only today's forest policy development but also the strategic decision making in different forest sector organizations.

Although the Future Forum on Forests provides a tool to systematically look what are the factors affecting and how they affect the use of forests in the future, the Forum work remains still external to the current NFP. This is simply for the reason that the Forum was established *ex post* to the current NFP. At best, such a work where futures research is implemented as a part of foresight process should be incorporated into the NFP design *ex ante*, i.e. at the very beginning of the process.

4. Discussion

At the beginning of Chapter 2, foresight was defined as a systematic and participatory process, involving gathering intelligence and building visions for the medium-to-long-term future, and aimed at informing present-day decisions and mobilizing joint actions. Foresight was considered to include futures studies, strategic long-term planning and networking (Figure 1).

Even though the NFP process at the late 1990s in Finland was not called foresight, it was successful in two of the three key elements of foresight: long-term planning and networking. The third element of foresight, i.e. the structured use of futures research, was however less visible in the NFP design.

More precisely, to support the NFP formulation and impact evaluation, some model simulations to predict forest growth, trend extrapolations of the key variables of the forest sector, as well as future oriented expert evaluations were used. What were missing were the analyses of the consequences of the alternative futures where the political, social, economic, technological and environmental developments change and affect the use of forests during the programme phase. This is why – it can be argued – the current NFP of Finland represents a strategy or action plan which follows a static view to the future, better than a program designed to be operational in alternative futures. One may argue that this is general problem in NFPs, not particularly relevant to Finland only.

The fact that alternative futures or future developments are not explicitly considered in NFP design holds a significant risk to the program. This may, namely, lead to too high emphasize on the most wanted future – the vision – although the probability for reaching such a future would be relatively small. If alternative futures were considered, the strategies suggested in the program would be more flexible, supporting a set of futures instead of one future alone.

For example, the current NFP of Finland is in many parts targeted for the increase of forest growth. This may be called as the most wanted future allowing for more wood processing and more economic welfare for the country. But is the future development dependent on the increase of forest growth? Is this the strategy that the development in alternative futures would call for? Or, is the willingness of forest owners to sell timber even more critical factor for the future development and welfare, as risen up from the work of the Future Forum on Forests looking the alternative futures for forestry? If the latter was the case, the starting point of the NFP design, and the conclusions and suggestions of the program could have been different.

Still one more problem may arise if alternative futures or future developments are not explicitly considered in the NFP design. It is the risk that the assumptions behind the program fail or change. Then also the program itself may fail in many of its central objectives. For example, it is obvious from the recent discussion in the newspapers etc. that one of the central objectives (*vision*) of the NFP of Finland 2010 (*to secure that the Finnish forest are healthy and diverse*) cannot be met at the level the environmental NGOs expected during the process.

This may endanger the reached partnership and consensus, which are important for the program implementation. On the other hand, if the program design had included at the time it was prepared the more in-depth consideration of future developments in conservation, the strategies and actions included in the NFP to secure that Finnish forests are healthy and diverse could have been different. The new instruments for forest conservation were developed under the so-called METSO – program (Forest Biodiversity Programme for… 2004) in 2002, three years after the NFP was prepared. Now it is discussed if these new instruments fulfill the needs, or should the means from the NFP still be implemented.

In principal, strategy development under foresight framework is a matter of forward planning, networking and futures research which all are carried out in a participatory manner (blocks (1), (2) and (3) in Figure 1). In practice, strategy development varies, and at an *organizational* level is often a matter of combining forward planning and especially recently more and more frequently used futures analyses that explore the possible future changes in the organization's environment (blocks (1) and (3) in Fig. 1).

At the National Forest *Programme* level, as at the late 1990s in Finland, strategy development includes often the elements of forward planning and networking ((1) and (2) in Figure 1) but less often the elements of futures analyses ((3) in Figure 1). Due to this, the process of NFP design can result to an incomplete foresight work although the process in general would be rather participatory. To partly overcome the limited future orientation in the NFP design at the late 1990s in Finland and to support forest policy development, a special project – Future Forum on Forests of Finland – was created in 2003 to work with expert networks for analyzing potential changes that the forest sector may face in next 10–20 years ((2) and (3) in Figure 1). The Forum work or similar foresight activities may, however, remain external to the NFP if they are established *ex post* to the Programs. At best, such a work where foresight is used for the NFP design, futures research is implemented *ex ante*, i.e. from the very beginning of the process ((1), (2) and (3) in Figure 1).

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New Trends in Italian Forest Policies: A Shift of the Focus from Mountains to Plains

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Abstract

Only 5% of the Italian forests are located on plains, while 95% are concentrated in mountain and hilly areas. There are three main causes for this: 1) the intensive farming expansion in highly productive flat areas; 2) the urbanization process; 3) the past forest policies, strictly connected to mountain development policies. Since the 1990s, a structural change has been taking place: a shift of the focus of forest policies from the mountains to the plains. This is a consequence of many factors, internal and external to the forestry sector: a general process concerning the wood supply, which is shifting from natural and semi-natural forests to plantations, the provision of public funding for plantations and SRF in the plain areas and for increasing the forest cover for recreation and biodiversity protection in peri-urban areas. Even the implementation of the Kyoto Protocol and the creation of a new EU market for Carbon quotas tend to favor afforestation investments (in plain areas) more than the improvement of management in already existing mountain forests.

The paper analyses these trends and their implications for NFP, pointing out that a strategic vision for a comprehensive development of the forestry sector in Italy seems to be lacking among policy-makers.

Keywords: *forest policies, Italy, plain areas, plantations.*

1. Introduction

After the completion of the decentralization process from the central government to the public local authorities (Regions), Italy does not have a national forest framework policy anymore, but 21 local (regional) forest policies. A national Forest Act does not exist; the

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General Direction for Forest and Mountain Development at the Ministry of Agricultural and Forest Policies has been recently abolished. The State, after two referenda that succeeded in asking the abolishment of the Ministry of Agriculture and Forestry, has separated the limited competences on the forestry sector between two new Ministries: the Ministry of Agricultural and Forest Policies (MIPAF) and the Ministry of Environment and Land Protection. Even though the new denomination of the former Ministry of Agriculture and Forests is clearly referring to the role of the State in policy definition, Italy does not have one NFP or a State policy framework in the sector. No effective institutions for horizontal coordination of forest policies exists. Forest policing with the recently reformed *Corpo Forestale dello Stato* (State Forest Corp) is the sole function maintained by the central authority.

In this context it is interesting to analyze the prevailing trends in forest policies implemented by the regional administrations. The paper tries to demonstrate that, without coordination at the national level, there is a common feature of recent developments of forest policies at regional level: a shift of the focus from mountain to plain forests. The paper is divided into three sections. In the first one, the general framework on forests and their geographical distribution at national level is presented. In the second part, the main driving forces for the recent increase of forest activities in plain areas are described. In particular, two categories of factors, internal and external to the forestry sector, are taken into consideration. Finally, the third section points out, as concluding remarks, the challenges of the new trends in forest policies implementation and their implications for NFP.

2. Italian forests in plain areas

Italian forests are mainly concentrated in mountain areas, as showed in Figure 1. Accordingly with CORINE Land Cover statistical data, the total wooded area in Italy is about 9.7 million hectares, which include forests and other forest vegetation categories such as bushland areas, moors, grasslands and abandoned lands under a natural colonization process by trees, etc. Of the total area, about 8.4 mill. ha are found in mountain and hilly areas and only 1.3 mill. on plains. According to other statistical data (MIPAF, FAO), forests in Italy cover an area of up to about 10.8 mill. ha.

In the last five decades a remarkable expansion of forest cover has been recorded in mountainous and hilly territories: making reference to the data of the Italian Statistical Office, the forest area with dense tree cover has increased from 5.1 mill. ha in the late 1940s to 6.3 mill. ha in 2002 (+1.2 mill. ha) and 2–3 mill ha are now undergoing a process of natural conversion to forests. This is mainly due to the process of emigration of rural population from marginal mountain areas to urban centres, with the associated abandonment of meadows, pastures and cultivated lands and their progressive colonization by shrubs and trees. In the same period the expansion of the forests in the plains areas has been of less than 50 000 ha. The current forest cover rate on plains is 2.1%; it has increased of only 0.1% with respect to 1970 and 0.3% with respect to 1950. In this case, the main limiting factors have been the expansion of intensive farming in the highly productive flat areas and the demand for land for infrastructure development. In the last 50 years the tree canopy cover (forest areas and hedges) on plains, destroyed in the past by the development of the agriculture sector, has been only partially recovered.

These data can explain why past forest policies in Italy have been strictly associated to mountain development policies. Traditionally, the forest public administration has been in charge of providing technical and financial assistance to a broad range of operations in mountain areas in order to support the development of marginal mountain economies (forest management for

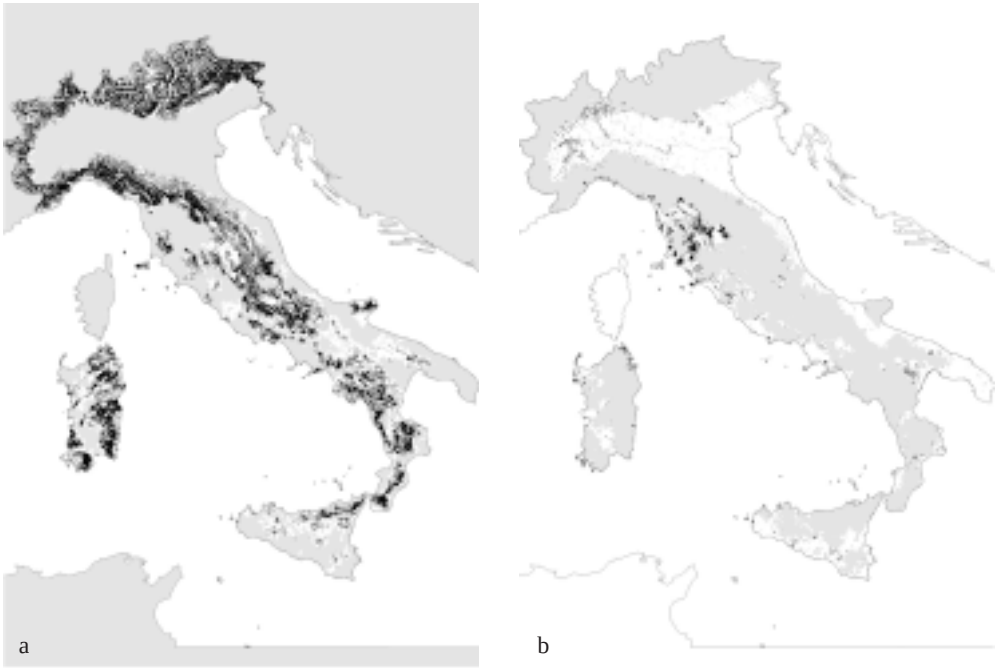

Figure 1. Italian forests in mountain and hilly areas (a) and in plain territories (b). Mountain and hilly areas are coloured in grey.

wood production, but also rangeland management, infrastructural development, watershed protection, soil erosion control, etc.). As a consequence, public spending in the forestry sector has been focused for decades on mountain areas. This situation is now changing.

3. The driving forces for the recent development of forestry in plain areas: external and internal factors to the forestry sector

Two categories of driving forces can be identified in order to understand the shift in forest policies focus from the mountains to the plains: factors external and factors internal to the forestry sector.

3.1 External factors

Among the external factors driving the recent development of forestry in plain areas in Italy at least the following must be taken into consideration.

The European Common Agriculture Policy (CAP) reform in the early 1990s. The reform has encouraged the conversion of cultivated land into forest plantations as a tool for reducing the oversupply of agro-food production throughout the EU. The afforestation measures defined by Reg. EC 2080/92, as well as by the other forestry measures (such as the creation of hedges for traditional landscape restoration) had a positive – even if limited – effect on the expansion of forested areas in plains. In the period 1994–2000, about 104 400

ha (25 000 of which concentrated in Lombardia Region) have been planted in Italy on the basis of these public subsidies (Colletti 2001).

More recently, the Rural Development Programmes (RDPs) worked out by European Regions for the period 2000–2006 in order to enforce the EC Reg. 1257/99 have introduced subsides for several forestry activities, including afforestation, logging, silvicultural operations, forest management planning and road construction. The specific measure for afforestation (measure H) has been implemented, in different ways, by all the Italian Regions but three (Valle d'Aosta, Calabria and Autonomous Provinces of Bolzano). On the basis of the information available – often incomplete or not up to date – the subsidies provided for the creation of new forest plantations in Italy (261.9 mill. € in total, based on an average national subsidy of about 5000 €/ha) seem to be quite low if compared with the total expenses planned by the end of 2006 (1632.0 mill. €) (Cesaro and Pettenella 2003). Most of the public funds (677.7 mill. €) are covering forestry activities for maintaining and managing the "old" plantations, created in the 1990s mainly on plain areas on the basis of the previous financing policy (Reg. EC 2080/92): 72.1% of the total planned expenses for measure H will be used for that purpose.

Measure H provides subsidies for the creation of poplar plantations, of high-value broadleaves plantations, of Short Rotation Forests (SRF) for biomass production and of natural forests. Toscana and Friuli Venezia Giulia have decided to implement Measure H only in plain areas, while in other two Regions the Measure is applied to hilly areas up to a maximum of 800 meters above sea level. However, even in those Regions where this measure applies to the whole territory (plain, hill and mountain), most plantations have been established on plains (Rossi 2002). According to the available data (Table 1), in the Northern e Central Regions up to 59.4% of the EC funds are to be spent for "afforestation measures" – that is for plantations in plain areas, while only 40.6% are to be spent for all the "other forestry measures" implemented in natural and semi-natural forests mainly located in mountain zones.

The increasing attention paid by policy makers to the growing demand for new recreational areas and for landscape restoration in peri-urban areas. In the last two years, two Italian Regions (Lombardia and Veneto) have approved new schemes to provide economic incentives – which are additional to those provided by the measures of the Rural Development Plans – for the creation of forests in plain areas, especially in peri-urban areas. On the basis of these initiatives, Lombardia Region is going to create new large plain forests. This programme – the so-called Ten Large Forests on the Plain – derives from a direct commitment of the regional President and has a strong political support (an average 50 000 €/ ha have been allocated to implement the project): several workshops and an international congress have been organized to present the initiative which is clearly aimed at rising the political consensus among the electors living in the plain areas. In Veneto Region, a new forested area of about 200 ha has been created near the urban area of Mestre, where air pollution due to the heavy traffic along the highway A4 Milano-Venezia is critical. According to the "Forest of Mestre" project an additional 1000 ha will be created in the next few years. Even if the total forest area being realized through these initiatives is quite limited (few thousand of hectares), it will be of high importance for improving the image of the forestry sector among urbanized citizens (and voters). In addition to these programmes, the low quality of the landscape in many intensively used farmland areas has stimulated all the Northern Regions to create special measures to support farmers willing to plant hedges and rows of trees. An example of this tendency is the project "Wooded Buffer Strips (WBS) in rural areas" realized in 1999–2002 in Veneto, along three rivers which belong to the Venice Lagoon catchments. The project, partially funded by the EC through the Life Environment

Table 1. Public spending for "Afforestation" and for "Other forestry measures" planned within Regional Rural Development Programmes 2000–2006 (in mill. €).

	Afforestation (A)		%*	Other forestry measure** (B)	%***	Total forestry measures (C)
	New plantations	Reg. EC 2080/92				
Regions outside Objective 1						
Valle d'Aosta	NP****	NP	0.0	1.0	100.0	1.0
Piemonte	10.8	40.9	65.6	27.1	34.4	78.8
Lombardia	11.3	100.0	88.1	15.0	11.9	126.3
Liguria	0.3	4.3	17.5	21.4	82.5	26.0
Veneto	4.6	16.2	27.5	54.8	72.5	75.6
A.P.Trento	0.1	NP	0.3	18.6	99.7	18.7
A.P.Bolzano	NP	NP	0.0	22.1	100.0	22.1
Friuli V.G.	2.2	23.8	46.1	30.4	53.9	56.4
Emilia R.	3.8	31.5	66.2	18.0	33.8	53.3
Toscana	35.0	47.8	62.4	49.8	37.6	132.6
Marche	5.5	27.6	63.0	19.4	37.0	52.5
Umbria	50.0	NP	74.3	17.3	25.7	67.3
Lazio	23.5	8.3	57.6	23.4	42.4	55.2
Abruzzi	15.3	18.4	77.1	10.0	22.9	43.7
Total	162.3	318.8	59.4	328.3	40.6	809.3
Objective 1 Regions						
Molise	7.4	6.1	48.2	14.6	51.8	28.1
Campania	27.0	31.9	61.9	36.2	38.1	95.1
Puglia	21.6	8.7	37.5	50.4	62.5	80.7
Basilicata	5.7	55.5	42.2	83.7	57.8	144.9
Calabria	NP	91.8	77.8	26.2	22.2	118.0
Sicilia	24.8	112.4	47.3	153.1	52.7	290.3
Sardegna	13.1	52.5	100.0	NP	0.0	65.6
Total	99.6	358.9	55.7	364.2	44.3	822.7
Italy	261.9	677.7	57.6	692.5	42.4	1632.0

Sources: Financing Plans included in the Regional RDPs for Regions included in Objectives 1 and 2 of the Structural Funds and in the Regional RDPs for accompanying measures for Regions included in Objective 1.
(*) The percentage is calculated as (A)/(C)x100.
(**) The "Other forestry measures" in Regions included in Objective 1 of the Structural Funds are reported together with the measures for watershed protection.
(***) The percentage is calculated as (B)/(C)x100.
(****) NP: non planned measure.
A.P. = Autonomous Province

Programme, included the creation of 20 km of WBS, of 2 monitoring stations and of one demonstration heating plant in order to explain how to use wooden biomass as energy source. The total cost of the project was 777 560 € (Veneto Agricoltura and Consorzio di Bonifica Dese Sile 2002).

The need to restore quarries and degraded areas formerly used as industrial sites. A significant example of this kind of initiatives is the "Seveso Forest of Oaks", a urban forest firstly realized in 1986 and then expanded up to about 1800 ha on the area that was completely destroyed in 1976 by the highly toxic chemicals leaked from the ICMESA chemical industry and that causedan environmental disaster. All the local population was evacuated and the whole area decontaminated in the following years, up until the creation of the forest. Actually, the forest is one of the most important areas for recreation and

environmental education in Lombardia Region (Calvo 2004). Furthermore in Italy, a highly populated country with a relatively low rate of differentiated refusal collection, until the recent past most urban solid wastes have been collected in open air landfills that are now, after being planted with trees, under a process of conversion into parks and recreational areas.

3.2 Internal factors

Three internal factors driving the recent development of forestry in plain areas can be pointed out.

The decline of industrial timber production in mountain areas, where coniferous and broadleaves high forests are mainly concentrated and forests are managed for productive functions. This decline is a consequence not only of the progressive abandonment of mountains by people, but also of the strong competition with low-price wooden products imported from other countries. Poor environmental legislation, soft rules for businesses and foreign investors, low control and monitoring capacity of public authorities as well as corruption often encourage illegal logging and favor unfair competition; cheap labor, with related low-price timber production, is favoring the delocalization of Italian wood processing industries. It is remarkable that in Italy, with almost 10 million hectares of forest land, wood harvest is less than 9 mill. m^3 fuelwood removals are almost equal to 60% of the total wood harvest and 65% of the industrial roundwood is coming from less than 100 000 ha of poplar plantations in the plain area of the Po river valley.

The increased competitiveness of tree plantations in plain areas. Timber production with poplars and high quality broadleaves species in flat areas is characterized by increasing competitiveness with respect to mountain semi-natural forests management. Moreover, a substitution process is under way: solid wood products tend to be substituted with engineered products and reconstructed products deriving from recycling and use of wood wastes (particleboards, MDF, etc.). Probably this process is more advanced in Italy than in other European countries: from one side in Italy there is a strong domestic demand for industrial timber by the wood working industry (till 2002 Italy was the first world exporter of furniture; now it is the second after China), from the other side for the Italian companies the only way to be competitive in the market is to reduce the production costs maintaining the high quality of design. Companies need a continuous supply of large quantities of high quality, homogeneous wood and of very low cost raw material; in both segments the supply from Italian mountainous semi-natural forests, characterized by high logging costs, is not competitive.

The worsening problem of market access by Italian mountain producers follows a general trend at the international level: the increasing role of plantations in covering the demand for wood products. About 34% of the total timber yield in the world actually comes from plantations (123.7–103.3 mill. ha of which are productive plantations – or rather 3.5% of the total world forest area), and this percentage is increasing. According to Sedjo (2001), in 2050 about 75% of the wood will be harvested in plantations. Other authoritative international sources (Bull et al. 1998; Brown 1999; Leslie 2001), and the results given by the implementation of econometric models such as the Global Forest Products Model and the European Timber Trends and Prospects show the same trend: the growing relative and absolute importance of forest plantations for wood supply in the international market – both for industrial uses and as an alternative source of energy (biomass).

This trend might also be related to an increase in environmental awareness: environmental organizations, organizations for the protection of indigenous people's rights, consumers and other relevant stakeholders are asking for an end to the harvesting activities in primary, old-

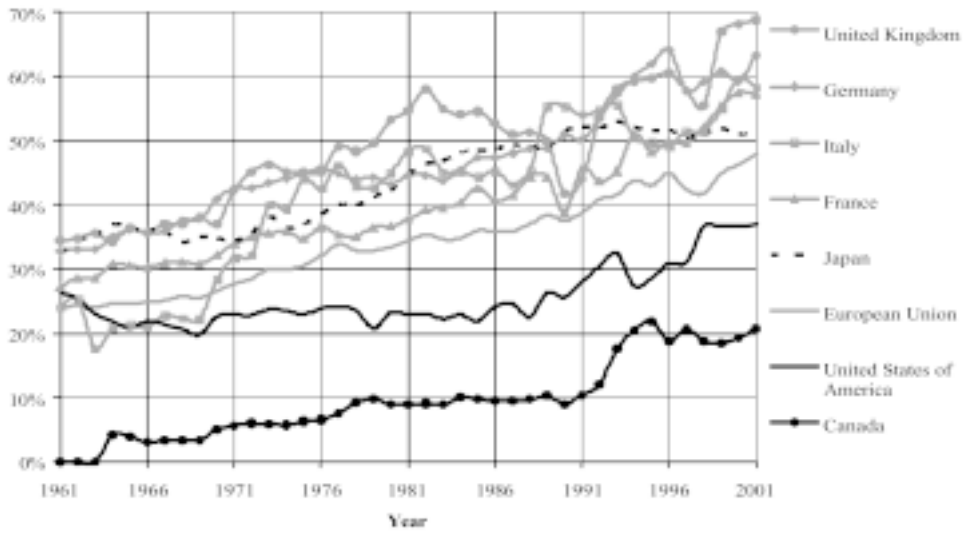

Figure 2. Recovered paper share of total fiber consumption (source: Whiteman 2003).

growth and frontier forests, as well as for a reduction of the human pressure on secondary natural forests. This trend, which is confirmed also by the increasing use of recovered wood products in several countries (Figure 2 illustrates the example of paper), can contribute to the shift of timber production from natural forests to plantations.

Forest owners' search for new markets for environmental and recreational services related to forests. Recreational activities such as trekking, mountain-biking, etc. carried out in well-managed forests can represent in plain areas a long-term economic resource for farmers and for the local community in general. Hotels, restaurants, country accommodations, agro- and eco-tourisms, educational farms, etc. located near forests in peri-urban areas can provide additional incomes to local population and employers.

Similar considerations can be made to the effects of the policies to reduce greenhouse gas emissions in the atmosphere. The implementation of the Kyoto Protocol by the Italian government, in line with a general trend at the international level, will favor the instrument of increasing Carbon sinks through afforestation and reforestation programmes ("Kyoto forests"), while the role of forest management of already established forests will be marginal. In the national plan approved in December 2002 by the Italian Government, 3 millions tons of CO_2 will be sequestered through new plantations (presumably in plain areas). Only 0.66 millions tons CO_2 will derive from improved forest management (in mountain areas), as established in the 7th Conference of the Parties (Anderle et al. 2002). So mountain semi-natural forests will be excluded from an active participation to the implementation of the Kyoto Protocol and the creation of a new market for Carbon quotas.

4. Conclusions

The development of forestry in plain areas and the more extensive use of forests located in mountain zones is forcing forest decision-makers and stakeholders to deal with a range of diverse and new problems, as described in the following points.

- They have to deal with new technical problems, including selection of species, afforestation practices, management practices, etc., which require investments in research, innovations, training.
- A new role of the forestry sector in plain areas has to be defined; forests are a new form of land use in the Italian plains. "In view of the variety of social representations concerning the countryside and its desired future, many different interpretations of the role of forestry to rural development are obviously possible" (Elands and Wiersum 2001). Forests are being created for specialized timber production, for producing biomass for energy production, for re-creating natural environments and to protect biodiversity, for providing multiple functions. Public authorities are heavily supporting the creation of new forests. Traditional instruments of command and control used by the public sector to orientate the use of forest resources in mountain areas cannot be applied on plains. In defining the role of these forests it is important to take into consideration and recognize the increasing importance of stakeholders participation and of external communication.
- Also a new vision of the role of mountain forests has to be developed; actually the abandonment of the forests to their natural development seems to be the implicit policy in many Regions. Some policy-makers associate higher growing stocks and aged forests to the provision of some services: biodiversity protection, water cycle regulation, erosion control, landscape preservation, recreational functions. This attitude by decision-makers (that could be defined as "passive multi-functionality") has several drawbacks: abandoned forests, especially in Mediterranean areas, are frequently exposed to the risk of fire; many forests require thinnings and management interventions (especially aged coppices and the old plantations made in the 1920s and 1930s); even the production of non-wood forest products (mushrooms, truffles, berries, chestnuts, etc.) need some active forms of forest management. Public support to secure a minimum level of intervention is required, but in the last few years regional authorities, under the general pressure to cut their budgets, have seemed to be less keen on transferring money to marginal areas and more oriented to invest in over-populated areas.

As already mentioned, Italy does not have a NFP, but 21 different regional forest programmes. It will not surprise that the shift in the focus from mountain to plain forests can be observed especially in those Regions, mainly located in Northern Italy, where plain areas have a significant role in relative terms. Considering the role of mountain forests, Italy is running the risk of getting back to the ancient idea of forests, as defined by the Latins with the word "*foris*": something that is far from society, a wild environment with few links to the civilized world.

Diverse environmental conditions and diverse regional socio-economic contexts which exist throughout Italy create a very heterogeneous pattern of forest policies at regional level and a lack of governance at the national level is increasingly felt. Due to the lack of a NFP, a comprehensive and strategic vision of the future roles and programmes for mountain forests as well as for plain plantations is actually missing among policy-makers. Under these circumstances, the role of Italy in the international framework of the initiatives for the long-term sustainable development of forest resources becomes weaker and weaker.

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The Analysis of Formal and Informal Objectives of Funding of Forestry in Germany

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Abstract

Recently not only the "right" amount of funds but also the "right" objectives of funding has become a matter of interest in ongoing scientific projects.

This approach attempts to analyse the objectives of funding of forestry in Germany by making use of the method of objective hermeneutics.

In a first step, the formal objectives of funding are analysed. It is found in this step that the main difficulty seems to be that they are only formulated in a very vague way. This immediately suggests that funding strategies build an area of conflict in forest policy – policy decision makers hypothetically had to agree at a very general level.

If it is not formulated very precisely what financing of forestry aims for, it can nevertheless be analysed what it *could* aim for from the perspective of different actors in the policy arena. In a second step in this research, interviews were held to illustrate this potential. Two case studies are presented in this paper. These studies mainly show that while actors do have very precise models about the "right funding system", they seem to be closed minded to other perspectives or at least are not aware of the arguments of other actors. It seems that there is a lack of balanced discourse in the field of policy funding models.

This approach enables and encourages forest policy actors to look for compromises in their decision making. A balanced discourse is needed to lead to well functioning, consistent policy models in the future.

Keywords: objectives of funding of forestry, formal legal objectives of funding, informal funding models, discourse about funding of forestry

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1. Introduction

Financing of forestry is a powerful tool to induce significant changes in forestry. Objectives play a major role in policy models (and in real-world policies), where they are seen as centre-points to impact real-world policy via the administration.

Today, very many private forest owners rely on financial support (Blum and Schanz 2002). The number of evaluation projects in the field of financing of forestry is currently rising. These evaluation processes are fundamentally rooted in objectives. To judge whether the "right" amount of money is spent for the "right thing" in an "optimal way" regarding effectiveness and efficiency always needs objectives as a relevant dimension. The question about the "right" objectives is gaining more and more attention (compare Buwal 2004). Evaluation projects act as indicators that point out the vagueness of formal objectives in the field of funding of forestry.

Often due to severe methodological difficulties, analysis and evaluations of forest funding are apparently rare (compare Ott 1981; Kurki 1991). Furthermore, the assessment of funding policies is especially limited because of the existence of vague and unspecific objectives (compare for example Volz 1989; Thoroe 1994).

2. Policy Questions

The following questions are evaluated in this research:

a) Are the formal objectives for funding of forestry really that vague and how can this fact be judged?
b) What kind of ideas about the "right" objectives exist among different actors? Where do different funding models come into conflict?
c) How can the results be interpreted with regard to a sustainable, future-oriented development of forestry?

3. Method and data

3.1 Method

The method used for this approach is the method of objective hermeneutics which analyses the objective meaning behind certain statements or texts. The method of objective hermeneutics was developed by Oevermann et al. (1979) and has since then been continuously structured and optimised.

According to the actual definition and the procedures of this method, objective hermeneutics starts from the point that the social reality always has an immanent, sensible meaning. Objective hermeneutics is mainly based on the sequential analysis of texts. With this analysis, interpretations of the text are first separately produced in an abductive way and then gradually aggregated to certain "story lines" (Oevermann 1973, 2001; Hajer 1995). This story line hypothesis is then tested with other text material and either falsified or verified (Ludwig-Mayerhofer 1999). Objective hermeneutics is therefore a method that aims at the reconstruction of typical structures of certain phenomena (Oevermann 1996). Ultimately, it leads to the generation of hypotheses.

3.2 Data basis

As relevant data basis for the first step of the analysis the formal texts in the field of funding (e.g. the judical basis of the funding practice) were taken. These are primarily the German constitution (especially article 91a, "Joint tasks"), the federal forest law, the law about the "Joint Task for the Improvement of Agricultural Structures and Coastal Protection" (GAK), the framework plan of the GAK, and its single guidelines.

All formal legal texts are authorized texts, which have been already examined intensively with regard to general comprehensibleness as well as correctness and clarity of the content. They were released for publication only after this procedure was completed.

Expert interviews were chosen as data for the second part of the analysis (analysis of the perspectives of different actors concerning funding models), because the central focus of this study is on the argument that are used to support certain funding models.

For the selection of the interviews, it was not important that the interviewed persons showed a direct link to the existing funding system. What exclusively mattered was the fact that the respective person held a founded opinion regarding the objectives of funding of forestry, which he illustrates through a consistent argumentation and clear patterns which are clearly marked in the text. The interviews chosen were intended to build clear contrasts to each other in the hopes of efficiently outlining the complexity of this research field. Two such examples of argumentation patterns are presented in this paper.

4. Analysis and Results

4.1 The analysis of formal objectives

When looking at the formal objectives of funding programs in Germany, the following can be stated: In almost all framework plans and guidelines that form the basis for funding of forestry, the formal objectives could be described as rather vague or non-existent. This interpretation is derived by analysing the content of the formal regulations.

One example of how this outcome was achieved, can be given by focusing on the framework plan of the "Joint Task for the Improvement of Agricultural Structures and Coastal Protection" (GAK). In Germany, the GAK regulations build an important basis for most of the direct funding programs. By interpreting the complete official title of the GAK through the method of objective hermeneutics, the fact that both the terms "improvement of agricultural structures" as well as the terms "coastal protection" are used simultaneously in one title is especially instructive. The method of objective hermeneutics is meant to analyse the objective meaning behind certain statements or texts and is intended to generate hypotheses.

By its objective meaning the term "coastal protection" underlines activities that do not primarily aim for the creation of economic wealth, but for the conservation and protection of ecological functions. The analysis via the method of objective hermeneutics only focuses on the objective meaning of the term "coastal protection", which has a conservative, preserving, protective character. The analysis does not take into consideration that coastal protection also aims for protection of resources, which can be used to create economic value in the long term.

Juxtaposed with this intention is the phrase "improvement of the agricultural structure". This term implicates an improvement of criteria that are of high importance in regard to the creation of economic wealth. This result leads to the awareness that there might exist a general conflict between different objectives at a high level of policy decision-making.

Given this conflict, the analysis of other official documents also lead to the conclusion that very often two category groups of funding are listed. These belong to one of two groups of objectives: aspects that focus on preservation and conservation of certain structures (mainly social and ecological structures) and aspects that focus on the maximisation of economic benefit.

Understanding these two different objectives is of major importance for funding policies when thinking about the consequences for different funding policies. When aiming for the objective of preserving and conserving certain ecological or social structures, it would be necessary to pay funding to those forest owners that support these goals in a way the general public wants them to. The maximisation of efficiency of forestry would on the contrary not allow for such income payments – if at all – but would take price funding mechanisms into consideration.

It is not clear how these two vaguely formulated, differing goals can co-exist in Germany in a rather "harmonious way". Nothing is said about how such an "integrative policy model" is supposed to function. In the most extreme case, the two directions – stabilization of certain status and maximization of economic efficiency – would exclude each other.

4.2 Results of the analysis of formal objectives

The results are given in terms of a hypothesis and a judgement that could be generated.

Hypothesis: The hypothesis that was generated on the basis of the analysis of formal objectives is the following: funding strategies build an area of conflict in forest policy – policy decision makers have to agree at a very general level. It can be assumed that the vagueness and less clear points are partly due to differing ideas and conflicts.

Judgement: The fact that the formal objectives are formulated in a rather vague way is judged as follows: although the vagueness of formulations could be confirmed in the analysis described, it cannot be judged as excludingly negative. There are benefits as well as risks in it. The formulations leave open a wide scope for activities. This wide scope for activities provides the opportunity to lead to an active, living, balanced funding policy with discourses between different actors, aiming at generating sustainable solution patterns, but also bears the risk of leading to misuse such as corruption. Furthermore, the vagueness of the formulations can also lead to suggest consent where there is none, bearing the danger that the actual conflicts are neglected and not actively reconciled.

4.3 Analysis of interviews that content different policy models of actors: two case-study examples

Even if it is not formulated very precisely what financing of forestry aims for, it can nevertheless be analysed what it *could* aim for – from the perspective of different actors in the policy arena. In a second step therefore, interviews with different actors were held, finding out about their intentions in terms of objectives in policy funding models. The analysis aimed at finding out about different "point of view-patterns" of different actors.

As an example, a few passages out of two interviews and the interpretation of these texts will be given in the following part. The first presentation of a case-study is done in a more detailed way to illustrate the analysis of a specific, individual argumentation and to show how the analysis generates hypotheses.

4.3.1 Case-study example "economic technocrat"

The first interview was held with a manager of a large private forest enterprise about his intentions for funding of forestry.

A: "What is your opinion: How can the existing problems of midsized and small private forest enterprises be solved?"
I: "My judgement is that there is only one possibility. One cannot keep a kind of a "museum economy" upright. Nobody can pay for that. There is only one way, and that is cooperation. These enterprises must enter into forest groupings, so that they can keep profitability. Only the building up of such co-operations should be funded in the beginning. […]"

The interviewee argues in this passage purely economically. He pursues exclusively the economic criterion and pleads for cooperation (without exception) for the reason of reducing costs.

Reasons that refer to common welfare, which could speak for the preservation of the enterprises (e.g. the interest of the society in keeping the landscape open or maintaining the cultural landscape) are not a component of his considerations.

A: "Forest farmers are frequently relatively self-willed and not necessarily ready for cooperation. What is your opinion about this?"

Behind this question stands the knowledge about rural life practices or lifestyles. One dominant element of these life practices is above all a very strongly rooted desire for autonomy (compare Ziegenspeck 2002). This desire can structurally lead to the fact that it is very problematic to agree and to offer compromises with others.

How does the interviewee argue regarding this question?

I: "That is a question of the "suffering pressure". Autonomy is luxury. If I do not want to cooperate, I must accept the higher costs of the non cooperation."

The interviewee argues again perfectly economically. His argumentation does not show interest in for example folkloristic, ethnologic or sociological aspects of lifestyles of rural forest owners. The origins of their (potential) desire for autonomy are not of importance to him.

It can be assumed that autonomy may mean that humans are ready to fulfill their activities very conscientiously even if they get only small wages. Many of these activities are potentially valuable with regard to welfare aspects (e.g. the culture landscape maintenance). The interviewee is not interested in supporting measures focusing on the cultural landscape and referred subsidies. The fact that an autonomous lifestyle of forest owners could be functional for the community – if such people are ready to manage their land even for comparatively small wages – is an important fact in terms of cultural landscape, to which the interviewee is not open.

The concept of the interviewee's argument hinges on the notion that the willingness to cooperate is driven by the power of the market. If forest owners want to have subsidies, then they must be subjected (according to the interviewee) to the economical obligations. Only this is justified in the eyes of the interviewee.

The interviewee relies on a purely economic logic. He does not describe, why and whether cooperation is essential or justifiable independently of cost reasons. This may be necessary though, in order to convince potential cooperative partners. Since the interviewee skips over this point, it shows that he is convinced that there is relevance only in terms of economic costs.

As a technocrat, the interviewee represents exclusively the "economic priority". He only allows the economic components of forestry to be considered as formal-rational lawfulness. The specific obligation is reduced to the profit. Specific obligations of completely different matters (e.g. the recreation value of forests or the aesthetic quality of landscapes) are not taken into consideration by the interviewee – he does not calculate with such values. His technocratic way of thinking eliminates welfare-oriented values from his models. They are not taken into consideration regarding their preservation worthiness and as such they are not relevant variables in his model. This points to the fact that in economic models such values or variables are difficult to express.

In the following part another interview passage will be analysed.

A: "How do you estimate the influence from nature protection organizations on forestry in the future?"
I: "It is so difficult to state this, because this has to be discussed together with the increasingly scarcer means. What happens to nature protection today is, that it has to say good-bye to many "blossom-dreams", because they are no longer eligible for financing. […]"

His statement that nature protection has to be discussed in the context with scarce means implies immediately that nature protection is something which primarily causes costs. The use is not mentioned by the interviewee. For the reconstructive generation of hypotheses this means that no use faces the costs from the perspective of the interviewee. From this point of view, it follows that nature protection ranges in the category of luxury and has to be reduced as resources become scarcer. This fits to the point of view of the interviewee that was already observed before: the interviewee uses again a purely economistic calculation. This calculation however lies underneath the level at which the common welfare in nature protection can be expressed in monetary value. The common welfare remains unconsidered and unaccepted by the interviewee. The interviewee presents himself as an economics expert, who stands in contrast to the irrational "blossom dreamer". This reductionist classification is decidedly shortsighted: one is not automatically a romantic poet or an irrationalist, if one considers "other" than pure economic values.

The only reason for funding according to the interviewee lies in the intention of pushing efficiency (in the sense of profitability) forward. In his funding model, other goals are not forseen.

4.3.2 Case-study example "ecological economist"

As a second case-study example an interview that was held with an employee of a ministry of environment (at *laender* level) is analysed.

A: "What do you think about the necessity of securing the cultural landscape or other non-timber values?"
I: "I believe that these values have to be secured and that the production of such products or services has to be funded. Private forest owners in my opinion have to get a fair payment for the fulfilment of special ecological tasks. Economically-oriented forestry does not serve the ecological needs in a sufficient way. We have to especially secure ecological functions by supporting private forest owners that act accordingly."

The actor states that the maintenance of the cultural landscape and other non-timber values has to be funded. The argumentation shows that the actor has the opinion that it is worthwhile to

support the protection of the existence of values in the field of welfare and ecology, even if the use cannot be numbered. In his opinion, not only cost efficient matters should be supported, but also matters that do not focus on profitability but on other non-economic values.

The interviewed person expresses, that private forest owners should get a "fair payment" for their efforts that go beyond the fulfilment of binding social contributions. This argumentation infers that such efforts cannot be considered to be free of charge. If private forest owners participate in ecologically-oriented forestry, this means that they have less income in the field of timber-selling and in the gain of profit. In the opinion of the interviewed person, on one side the effort has to be honoured and on the other side the loss of earnings have to be covered by financial support.

The interviewee states, that ecology has to be protected by certain special measures and its security has to be funded, because an economic forestry in his opinion does not secure ecological matters automatically.

A: "Do we need forestry in Germany or would it be feasible to let the forest just grow?"
I: "There is a resource-treasure in Germany that we have to make use of because timber can be used in an ecologically sustainable way. In my opinion we cannot afford, also due to reasons of social welfare, to do without this ecologically valuable resource. I think, that any effort towards a reasonable economy that makes it possible to use timber in an ecologically sustainable way should be supported, for example the use of timber as source for renewable energy. Like this, there exist no barrier between ecology and economy."

The interviewed person states that economy and ecology do not have to exclude each other. According to him, it is worthwhile to establish new markets for timber products that are environmentally friendly. Like this, ecological potentials and economic aspects may harmonise. The interviewee has the opinion that timber is a very valuable resource in terms of ecological meaning so that one has to make use of it with regard to social welfare.

A: "Should forestry serve social objectives and if yes, how should this work out?"
I: "I can give an example on this. Right now, our ministry is busy in funding and promoting timber pellet fabrics. With such a funding program, job capacity is increasing. And these jobs are a lot more ecologically reasonable, for example in terms of carbon sequestration, than jobs in relation with oil or gas or charcoal production. Like this we gain jobs and ecological values. If we succeed in building up a market for such a product as pellets, economy and ecology do not have to exclude each other."

The interviewee is able to look at the topic from a very complex point of view including social, ecological and economical dimensions. The interviewee states, that it could be a necessary goal to reduce the number of unemployed workers by setting up jobs in order to ensure sense giving of life for employees, but only if the job is environmentally useful. Such a model does not necessarily have to fulfill the criteria of cost efficiency, so long as the ecological and welfare functions are judged to be valuable.

Altogether, the case-study of the "ecological economist" shows a funding model where the order-legal framework secures an public interest-oriented standard and where ecological special services are supported by funds. The use of the market mechanisms is aimed at, but only exceptionally regarded as sufficient control element. One assumes in principle that the protection of the natural resources can under any circumstances not be reached only by means of the market price. Apart from cost-benefit calculations the model of the "ecological economist" aims at securing certain non-timber values that may not exist as variable in any economic calculations.

4.4 Results of the analyses of interviews

The analysis of the case-studies show, that there exist different ideas about the "right" objectives of funding policy that in many fundamental questions stand in conflict to each other. The fact that there exist conflicting models forms a unique potential: there is a basis of different arguments from which new models may be built in the spirit of compromise.

The main problem is, that different actors are often very much convinced of their own meanings (up to an idealistic degree). The fact that many funding models are "belief systems" that are predominantly characterised by idealistic argumentations lowers the chance of finding compromises. Most of the actors seem to be not really open to other perspectives or are at least not aware of the arguments of other actors.

Hypothesis: It seems, that there is a lack of balanced discourse in the field of policy funding models.

Judgement: The lack of such a balanced discourse has to be judged as negative. A balanced discourse seems to be needed to overcome the existing conflicts and to realize compromises. A balanced discourse should be a process that can be characterised as "culture of the better argument", involving discussions about contents and with a high degree of tolerance.

Development of forestry needs objectives. This is especially true in a period which – not only in the forest industry – is characterized by many structural changes. Straightforward "solution patterns" can rarely be derived very simply, but must be searched by an active discourse.

5. Discussion

The ideas and conceptions of how a sustainable, survivable enterprise has to look like nowadays and how it has to be supported differ a lot. They range from purely economistic models to ecologically-oriented models (Oesten and Roeder 2002).

A discourse about the different models seems to be necessary not only because of new orientation in the field of objectives, but also generally regarding the whole forest policy.

Based on the observations of this research, it can be stated that the forest-political discussion is limited in terms of an exchange over opposite points of views. In contrary it seems like the discussion stresses more the point of finding casual consent.

In the literature it is frequently sworn to the "fact" that forestry-related political requests can only be achieved "together" (compare for example Niesslein 1995). The forest sector is indeed often described by its widespread "corporate identity" (Glück 1988).

Among the consent producing phenomena negotiations about the funding budget are to be ranked. In order to keep conflicts as small as possible, the negotiations orient themselves predominantly according to the results of earlier negotiations that led to consent (Krott 2001). These kinds of negotiations about the budget replace the necessary political discourse. Thus, the chance of setting a new emphasis and adjusting to changing conditions is limited.

6. Conclusion

With the approach presented in this paper it becomes possible to compare different funding models. Knowing about different intentions, it becomes visible and transparent which models

exist, where certain models differ, where they harmonise, or where they get into conflict positions. Because this approach shows different opinions about the "right objectives" of funding forestry, it helps to encourage forest policy actors to look for compromises. Thus, such an approach may help in the future to lead to well-functioning, consistent policy models.

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Economic Evaluation of the Protective Function of Mountain Forests: A Case Study from the Italian Alps

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Abstract

Although the importance at the political level of protection functions of forests is recognised, especially for mountain forests, and its value represents the most part of the Total Economic Value, only few studies attempt to estimate the economic value of the protection function for Alpine forests. Given this state of the art this paper presents the results of an estimation of this function in Trentino, a mountainous province on the Italian side of the Alps. The procedure adopted is to evaluate the Substitution Value of forests that protect against landslides and avalanches and safeguard water resources. Results confirm the huge value this function assumes in the Alpine forests. Finally the usefulness of this kind of methodology is emphasised, both in forest planning and management and in evaluating policies.

Keywords: Economic evaluation; Protective function of forests; Direct protection

1. Introduction

Alpine communities have always considered forests to be an essential part of their way of life, partly because of the protection they provide against natural calamities, making some particularly inhospitable valley slopes permanently inhabitable (Brang et al. 2001; Motta et al. 2003).

Hydro-geological protection is just one of the many functions carried out by forests according to the "theory of forestry functions" developed by Prof. Viktor Dieterich of the University of Munich (1953), the modern conceptual basis of multifunctional forestry.

The protective function of forests has a number of aspects, on the one hand relating to the protection of human beings and communities against natural hazards such as avalanches,

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falling rocks, flooding and surface landfalls (direct protection), and on the other protecting the land against erosion, stabilising the soil and regulating the flow of rivers, and bringing about climatic effects and an impact on the quality of the air we breathe (indirect protection).

Mountain communities have never doubted these functions but policymakers [have been slower to recognise their importance. The first laws regulating woodlands date back to the Middle Ages, generally prohibiting the cutting of trees with special protective functions for alpine villages (Motta and Haudemand 1999). The birth and dissemination of basic principles concerning natural woodlands, as stated by Professor Lucio Susmel (1980), were a fundamental step, in management terms, towards recognising the protective functions of forests. In particular, stress is laid on the importance of investments in woodlands in order to maintain and improve their protective functions. At the political level, the concept of protective forests is formally enshrined in the concept of Sustainable Forest Management (SFM), specifically as directed by the 1st Ministerial Conference on the Protection of Forests in Europe, which took place in Strasbourg on 18 December 1990.

On the basis of these initial considerations, this paper attempts to assess the importance of the protective function of forests not only in physical but also in economic terms, using the Substitution Method, applied to Italian Alpine woodlands of the Autonomous Province of Trento, North-East of Italy. The result is a preliminary estimate of the protection value since it deals with only some aspects and excludes the regulatory function of forests due to the difficulty in quantifying this function economically.

The importance and usefulness of these tools for the economic analysis of forest multifunctionality lies in the need to involve public goods and externalities in the forest program (Sinko 2004) in order to evaluate them as a whole, taking economic aspects into consideration as well as ecological and social aspects. This is a further step forward from the considerations that emerged during the Fifth Environmental Action Programme of the European Commission (1992) concerning the role of environmental valuation for a sustainable development and the need for the "…development of meaningful cost-benefit analysis methodologies and guidelines with respect to policy measures and actions which impinge on the environment and the natural stock".

2. The political perception of the protective function of forests

In order to understand how perceptions of policy and decision makers have changed in relation to the hydro-geological protective functions of forests in the light of the changing needs and interests of modern society, a review of the most important policy documents shows that all – to varying degrees – recognise the importance of this function. The most important documents include:

- The Convention on the Protection of the Alps (1991) in the article 2.2.h states among the main objectives to "preserve, reinforce and restore the role of forests, in particular their protective role, by improving the resistance of forest ecosystems mainly by applying natural forestry techniques and preventing any utilisation detrimental to forests, taking into account the less favourable economic conditions in the Alpine region";
- The White Book 2000 on Mountain Forests in Europe highlights the fragility of mountain habitats and the presence of erosion, flooding, landslides and the risk of avalanches. In this context forestry resources are seen to play an important ecological role acting directly on the dynamics of the land and water, protecting against natural hazards, and producing other general benefits;

- The Ministerial Conferences on the Protection of Forests in Europe (MCPFE) which dealt with hydro-geological protection of forests on several occasions and from a number of different viewpoints:

  (a) The Ministerial Conference of Strasbourg (1990): the protective function is introduced by recognising the role of woodlands in the preservation of the land from erosion and the quality of water resources. Resolution S4 "Adapting the management of mountain forests to new environmental conditions", cites the significant progress made to date in this field and the progress hoped for the future concerning the understanding of how woodlands protect against natural hazards, for the purposes of investing public money more usefully, and fine tuning environmental management in agreement with local partners;
  (b) The Ministerial Conference of Helsinki (1993): interest in the protective function of forests seems a little weaker compared to the interest in other forestry functions (Notaro and Paletto 2004) despite explicit reference at point 6 of the General Guidelines of Resolution H1 which speaks of "maintaining and developing other protective functions of forests such as the protection of aquatic and agricultural ecosystem and protection against floods, erosion and avalanches";
  (c) The Ministerial Conference of Lisbon (1998): the protective function of the forest are treated in the Criterion 5 of the Resolution L2 "Pan-European Criteria and Indicators for Sustainable Forest Management" considering the "maintenance and appropriate enhancement of protective functions in forest management (notably soil and water)" and in 2 quantitative indicators and 3 descriptive indicators;
  (d) The Ministerial Conference of Vienna (2003): in Resolution W4 "MCPFE Assessment Guidelines for Protected and Protective forest and Other Wooded Land in Europe" the protective forests are classified in three types: (i) forests managed with the aim of preserving and improving biodiversity, (ii) forests protecting landscapes and specific natural elements, and (iii) forests managed on the basis of their existing protective functions.

On the basis of this rapid overview of policy statements concerning the protective function of forests, the importance of the topic seems clear, and no longer confined to technical reports (for forestry planning and management), but shared by policy and decision makers.

The strong point of these documents is that they not only recognise the protective function of forests against natural hazards but also encourage planners and managers to take concrete actions to maintain and improve these functions.

3. The protective role of Alpine forests

During the last century, the drastic change in the man-environment relationship has had a deep impact on Alpine regions in social, economic and ecological terms. The most important events affecting these areas (Bertozzi et al. 1994; Raffaelli et al. 2003; Stern 1988) include:

- the population shift from the mountains to large towns in the valleys;
- the shift to extensive farm management;
- the growth of forests and the consequent shrinkage of pasture land and meadows, unlike in the past when forests were cut to make room for grazing land;
- the reduced importance of timber production;
- the alteration in the natural composition of forests by planting more economically valuable species of tree;

• the inevitable reduction of natural areas managed actively by local communities.

Together, these phenomena have directly or indirectly led to an increase in the number of abandoned areas and hence an increase in hydro-geological risk in critical areas due to location, weather and geology.

On the basis of these considerations it is easy to understand why decision-makers have recently been paying much more attention to the protective function of forests, given the "demand" for this "service".

In view of the importance of this function, perhaps it is worth looking at the many aspects covered by the term "protective forests". Starting from the premise that all forests, and mountain forests in particular, have a protective function, it is important to distinguish between:

- **Indirect protection** (IP): forests with a generic protective function in terms of land preservation and the regulation of surface water resources. Indirect or generic protection includes anti-erosion and regulatory functions constantly carried out by forests which contribute to dissipating the kinetic energy of water droplets by the action of branches, leaves and the trunk, or bushes, sheltering the land from direct impact with the rain. This prevents the pounding effect of rain that leads to erosion. Since the soil is very porous, and water seeps in rapidly, rain is quickly absorbed protecting the soil from surface disruption, erosion and flooding. The infiltration of the water underground is another positive aspect of the wood, because it replenishes springs, improving the clarity of the water and regulating the flow;
- **Direct protection** (DP): forests whose geographical location gives them a direct protective role for infrastructures (roads, houses, tourist resorts, industry, etc.) or human activities (skiing facilities, farmland, etc.) threatened by natural hazards (Schönenberger 1998).

Forests are themselves threatened by various natural elements including strong winds, storms, snow slippage, avalanches, the pressure of heavy snow, splitting, and falling rocks (see Table 1, listing the potential effects).

4. The economic evaluation of the protective function of forests

The function of hydro-geological protection by woodlands can be evaluated using various procedures based on the aims of the evaluation itself: costs and benefits related to a given investment, environmental damage (Asciuto et al. 1987), evaluation of forestry policies and programmes related to protective function. The main evaluation procedures are as follows:

- **Cost Value**: this method refers to the costs required for planting, growing and maintaining a wood at current prices, using equipment and techniques available when the estimate is carried out. This method is easy to apply in case of artificial young forests, while the application is more problematic for natural mature forests;
- **Capital Value**: this method is based on calculating the direct (infrastructure, personal injury, etc.) and indirect (in terms of lost revenue) probable damage in the absence of forest protection.
- **Substitution Value**: this is based on the cost of providing the same protection by artificial means, i.e. the cost of engineering works, maintenance and amortisation involved in providing protection if the woods/forests were not present. From a technical point of view substituting a forest with bio-engineering works is not enough. It is therefore necessary to integrate this value with cross-stream works on water courses;

Table 1. Destabilising elements in mountain forests (modified and adapted from Motta and Haudemand 1999).

Destabilising elements	Potential effects on the forest population
Wind, storm	Trunks broken by strong winds, uprooting
Snow slippage, avalanches	Trunks broken by the snow, deformation, uprooting, splintering, cracks, deformation of foliage
Pressure of heavy snow	Deformation, trunks broken
Erosion, splitting	Damage to tree roots, uprooting, deformation, internal alteration
Rock falls	Damage, the deposit of debris above trunks, stumps and fallen trees

- **Contingent Valuation**: this is a direct method for evaluating non-market goods; it is based on preferences, expressed by real or potential consumers. To estimate values, individuals are interviewed and asked directly about their willingness to pay for a particular good (Mitchell and Carson 1989; Gios and Notaro 2000; Carson 2004), in our case the protective function of the forest.

In this paper the Substitution Value is used because it is conceptually simple and does not have the drawbacks of other methods, such as the complexity of measuring damage due to the absence of forest, the difficulty of assessing planting and cultivation costs and the loss of revenue from the existing mature woodlands (Asciuto et al. 1987); the Contingent Valuation Method is also difficult to use because people have insufficient information on the protective functions of forests. As a result unreliable estimates result. (Gios and Notaro 2001).

The first estimate of the economic value of the protection function of mountain forests in Italy dates back to 1970, when Patrone compared the capital value (C) of the most economically efficient private use of the land and the capital value (F) of the land with forest. The opportunity cost of the wood is linked to C and the difference between C and F can be assumed to be the value of the hydro-geological service carried out by the forest. Subsequently other methods were used to estimate the protective function of Italian Alpine forests, including (see Table 2):

- the evaluation of the hydro-geological protection provided by woods in the Liguria region, using three different procedures: Opportunity Cost (bio-engineering works), Substitution Value (where the substitute good is the meadow) and Contingent Valuation (Lalle et al. 1997);
- the estimate, according to the Substitution Value Method, as the cost of a meadow in efficient conditions, of the protection provided by woods in the Friuli Venezia Giulia region. According to the authors the cost of maintaining a well-kept meadow is a good indicator of the hydro-geological protective value of the wood (Marangon and Gottardo 2000).
- the estimate of the protective function of woods in the Village of Oulx (Piedmont) using the Substitution Value Method, with bio-engineering works, distinguishing between direct (extensive and intensive) and indirect protection (Paletto 2002).

It is clear from these works that the final value per hectare of protective forest varies considerably on the basis of the evaluation method used and the type of protection (direct or generic).

Table 2. Economic evaluation of the protective function of forests in the Italian Alps: case studies (data from Lalle et al. 1997, 1997; Marangon et al. 2000; Paletto 2002 processed by the authors).

Geographical area	Method	Economic value per year/ hectare (€)	Updated economic value per year/ hectare (€)
Mountain wood (1970)	Opportunity Cost	190.00	3,377.25
Liguria (1997)	Opportunity Cost	980.73	1,111.17
	Substitution Value	2,287.96	2,592.26
	Contingent Valuation	71.80	81.35
Friuli-Venezia Giulia (1998)	Substitution Value	1,864.50	2,078.92
Village of Oulx (2002)	Substitution Value	183.28	187.31

5. The economic evaluation of the protective function of forests in Trentino

Using the Substitution Value Method, the economic value of the hydro-geological protective function of forests in the Autonomous Province of Trento has been estimated taking into account the cost of the bio-engineering works which would be required if the woods did not exist, distinguishing between extensive and intensive direct protection. This method tends to focus on direct protection, without giving due weight to the regulatory function, linked to the water flow time,[1] which depends on the length and nature of the catchment basin.

The Trentino territory stretches for 620,668 hectares, 56% of which (345,180 hectares) is woodland, with prevalently spruces (59%), secondly European larches (17%) and then silver firs (10.8%). The territory is considered as totally mountainous, since it consists of limited flat surfaces in the valley beds, extensive terraced land and rather steep slopes.[2] About 60% of the surface has an altitude of more than 1000 m, however over 50% of the inhabitants are concentrated in the cities and towns at under 400 m above sea level.

The woodlands of the province were first divided into three different area types according to the main characteristics that influence the protective function of the woodlands (altitude, gradient and morphology of the territory): two areas subject to the risk of landslides of different degrees (HGHR and CA) and one with a high risk of avalanches (HAR) (see Table 3).

This division was necessary in order to foresee the different bioengineering works to be executed according to the type and degree of protection necessary. Their cost, which represents the economic value of the direct protection function, carried out by extensive bio-engineering works that substitute the woodland, will be calculated together with the cost of intensive works in municipal water courses (check dams and sills)[3]. This is because the natural defensive action of the forest over a certain territory is comparable not only to that of the alternative bio-engineering works for soil defence and regulation of water resources, but also to the consolidating and stabilising works of water courses riverbeds and surrounding slopes (Asciuto et al. 1987).

The evaluation procedures adopted for the above categories are based on the choice of the most suitable bioengineering works according to slope, altitude and morphology of the land, and can be summed up as follows:

1 Time elapsing between the moment of the rain or snowfall on the catchment area upstream and the arrival of the same waters downstream.
2 41% of the provincial territory has a gradient of more than 60°, 30% between 30° and 60°, and the remaining 29% of less than 30°.
3 In literature, a check dam is defined as a construction perpendicular to the water flow with a height of at least 1.5 m (or even 2.0 m), whereas a sill is lower than 1.5 m.

Table 3. Division of the protective forest (data provided by the Autonomous Province of Trento and processed by the authors).

Type of area	Description	Woodland surface in hectares
1. Areas with a high geological and hydrological risk (HGHR)	Areas where the risk is very serious and/or of large extension.	58,833
2. Areas with a high avalanche risk (HAR)	Areas where the risk is very serious and/or of large extension.	5,073
3. Critical areas (CA)	Areas involved in hydro-geological upheaval	72,507

- HGHR woodlands: extensive bioengineering works were chosen. The creation of terraces was considered, using palisades in larch wood with cuttings from the local trees. The area will be successively covered with grass using a mixture of different grass seeds suitable to the site. The cost per linear metre of the palisade is € 30.67, including preparation of the terrain, modelling of the slope, provision and storage of all materials and cuttings, while the supply and setting of the grass seed mixture for improving the area and for an initial consolidation of the soil, at a rate of 40 grams/m^2 would cost € 0.52 per m^2 (PAT, 2002).
- HAR woodlands: the construction of avalanche barrier racks was considered the best step. The barriers should be positioned in chequer-board arrangement with 78 racks per hectare, considering an average slope of the terrain of 35° (Benini 1990). The finished work, including the base racks, excavations for the foundations and the panels in reinforced concrete, would cost € 852 (PAT 2002).
- CA woodlands: in this case the choice was for a number of fascines made of willow, alder or other species suitable to the site, with 5 fascines per linear metre, and a unit cost of € 23.12 per linear metre (PAT, 2002). The single fascines would be positioned at distances of 12 m from each other, with a development of about 650 m per hectare.

To update the cost a social discount rate of 1% is used. The choice of the interest rate (a rate of inter-temporal preference) is very important because the use of one rate rather than another may produce divergent results.

In the first place it must be a real rate. It must therefore be cleared of the percentage of taxes paid and of the inflation rate. Evidence from financial markets indicates a real rate that varies between 0 and 4%. The preferences of future generations are also to be considered. If the benefit and cost flows concern only the present generation Freeman (1993) suggests a discount rate that varies from 2 to 3%. Consequently when the benefits are also enjoyed by future generations, the social discount rate must necessarily be inferior. Moreover the present course of financial rates in national and international markets suggests to use a small interest rate (around 1%) in calculating the value of the environmental resources

The value of the protection is equal to € 184.96 per hectare (see Table 4). Considering the data divided according to type of area, it is clear that protection against the high geological and hydrological risk represents for the Trentino forests the major part of the protection value (about 50.5% of the total value of the extensive works). The second greatest value is that of hydro-geological protection in critical areas where low intensity actions are required (39.1%) and this is followed by areas with a high risk of avalanche (10.4%) (see Figure 1).

Table 4. Economic value of the extensive substitutive woodland works (based on authors' work).

Type of area	Substitutive engineering work	Duration (years)	Social discount rate (%)	Economic value per year/ha (€)	Protected surface (ha)	Total economic value (€)
HGHR	Terracing with simple palisade and grass	15	1	216.50	58,833	12,737,344
HAR	Avalanche barrier racks with chequer-board arrangement	25	1	518.20	5,073	2,628,828
CA	Fascines with cuttings	10	1	136.05	72,507	9,864,577
Total value of extensive works						25,230,750
Total value per hectare of extensive works						184.96

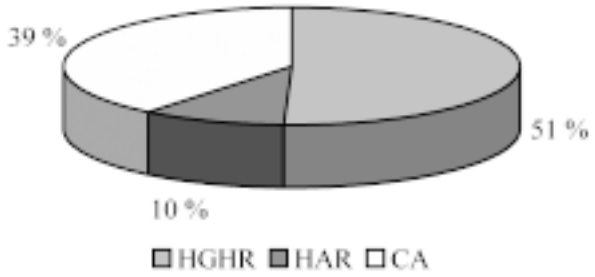

Figure 1. Percentage division of the economic value of the extensive works (based on authors' work).

The value thus calculated has been added to the costs necessary for the construction of a sufficient number of check dams and sills in the main tributaries of the Adige River – water courses (WC) type area – that are within the Trentino territory, in order to substitute the entire protective action of the woods.

The check-dams have mainly been built in stonework masonry or concrete. Their sized ensure that they are capable of channelling solids and floodwaters without being circumvented and without their ends being submerged. The effect of check-dams on the watercourse is to hold the solid material transported by the current upstream of the dam and to thus reduce the quantity of material transported downstream.

The economic evaluation of the intensive works on the rivers was carried out updating the historic costs of the works executed between 1976 and 2002, according to the records of the Technical List of the projects executed by the Hydraulic Works Service of the Province of Trento, concerning the cross-stream works on water courses (see Table 5). The average cost per check dam, using this procedure, was € 226,179.

Table 5. Main rivers in Trentino and cross-stream works carried out in the last thirty years (data from the Provincial General Forestry Plan, processed by the authors).

River	Length in Km	Average gradient	Check-dams or sills built from 1976 to 2002
Adige	73	0.4 %	-
Avisio	89	2.0 %	63
Brenta	63	2.7 %	23
Cismon	27	6.2 %	18
Fersina	30	10.0 %	16
Sarca	82	2.8 %	33
Chiese	47	4.2 %	6
Noce	67	1.4 %	11
Total			170

Table 6. Economic value of the intensive substitutive woodland works (based on authors work).

Type of area	Number of check dams built from 1976 to 2002	Duration of effectiveness (years)	Social discount rate (%)	Annual economic value per hectare (€/hectare)
WC	170	40	1	1.89

The economic value shows that the intensive works in the main rivers represent a modest quota of the overall hydro-geological protection, equal to 1% of the total (see Table 6).
The total value of the hydro-geological protective function of the Trentino forests, estimated using the Substitution Value Method, including the extensive works on the slopes and the intensive works in the rivers, amounts to € 25,230,750. It corresponds to € 186.85 per hectare/year with reference only to the surfaces with specific protection functions. Extending the annual economic value over the whole of the forested territory of Trentino, the value is € 73.84 per hectare/year.

6. Conclusions

This paper shows that within a multifunctional forestry framework, which is generally accepted today, the hydro-geological function of forests is particularly relevant in mountain areas. This fact, recognised by the leading policy documents in the field (Convention on the Protection of the Alps, White Book 2000 on Mountain Forest in Europe and the Ministerial Conferences on the Protection of Forests in Europe) has so far rarely given rise to economic assessments of the importance of this function. This paper aims to point out the main criteria that must be used in this evaluation, without underestimating protective functions, which range from the prevention of landslides and avalanches to the regulation of water resources.

Using the Substitution Value Method, the economic value of the protection function of forests in Trentino – North-East of Italy – has been estimated taking into account the cost of

the extensive substitutive woodlands, bio-engineering works, based on slope, altitude and morphology of the land, adding the cost of intensive water engineering works in the most important rivers. The resulting value of € 186.85 per hectare, considering only the forests classified as protective, ranges within values calculated for other Alpine woodland areas (2,600 and 71 € year/hectare), although it is near the lower bound. This difference is linked to the economic methods used (cost value, capital value, substitution value and contingent valuation) and to the different applications that characterise every single method.

This value reflects some limitations of the Substitution Value Method, here as in other studies. Firstly, the final value is closely related to the choice of substitutive woodland works – meadows or engineering works, kind of engineering works – and hence to the subjective appraisal, skill and experience of the project designer. The final result is also affected by the type of protection involved – direct or generic. This case study focus on direct protection.

Another important factor is the varied nature of the physical characteristics of the land. The method would have produced a more reliable result if the area had been smaller, so that the cost of substitutive works could be calculated more precisely according to the characteristics of the territory. As the area under consideration becomes larger and larger the number of approximate calculations – or average values – increases and these may, of course, be rather wide of the mark.

Consequently, if the method is adopted for concrete forestry programmes based on the protective function of forests, the areas where values are calculated should be small. Following this expedient, this method, associated with an overall evaluation of forest multifunctionality, has the advantage of putting the policy maker in the best conditions for choosing, since he/she is given an organic picture of the situation in terms of the costs and economic benefits deriving from each single function.

For the process of evaluating policies, however, it is important to be able to quantify the value of the protective function in order to identify its weight relative to the other functions of the forest. The calculation for large areas may then be sufficient.

Moreover, this method is particularly appropriate for addressing the choices in forest planning and management, whether conducted according to a rational, participative or mixed model. It is in this last context that economic valuation tools achieve their full potential, in their support role to expert technical diagnosis when negotiating partecipants' assessments. This is a fundamental point of departure in the evaluation of the policy (Buttoud 2004).

Finally, this estimation method allows a monetary valuation to be made of non-market functions, so that forest owners can be compensated for sustainable management practices performed in order to maintain this service (protective function).

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Towards the Development of Criteria and Indicators to Assess the Level of Participation in NFP Processes

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Abstract

The general trend towards more attention for strengthening stakeholder participation in policy processes has gained momentum in the forestry sector. The Intergovernmental Panel on Forests (IPF) principles, which guides the formulation and implementation of national forest programmes (NFPs), explicitly stress the need for participation of and partnerships with all stakeholders in a shared effort to achieve sustainable forest management. Greater stakeholder ownership in NFP processes, thus taking into account civil society's needs, is expected to facilitate the successful implementation of forest policies.

However there is a wide and diversified understanding about what participation means. Many participatory processes are implemented without serious consideration about the implications in terms of planning and resources allocation to support stakeholder participation.

In an effort to improve stakeholder participation in NFPs, FAO and other organizations have set up a "community of practice" (CoP) on "Enhancing stakeholder participation in national forest programmes" to exchange information, build partnerships and collaboratively work on related topics. To have a better understanding of participatory processes in NFPs, the CoP met in November 2003 to discuss the following question: "how to monitor and assess participatory processes in the development of NFPs?".

The participants distinguished different groups of stakeholders according to their role in terms of their importance in and their power over NFP processes. Getting the participation of important stakeholders with limited power is the biggest challenge of participation. For each phase of the NFP participants have identified requirements and mechanisms to conduct the process as well as criteria and indicators as a first attempt to assess the level and the quality of participation. Most criteria related to participation remain similar during the different stages of the process. Beyond the political will and financial requirements, successful participation largely depends on a thorough stakeholder analysis, careful planning and capacity building of the NFP teams and main stakeholders.

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1. Background, NFP and participation

The general trend towards more attention for strengthening stakeholder participation in policy processes has gained momentum in the forestry sector. The Intergovernmental Panel on Forests (IPF) principles, which guide the formulation and implementation of NFPs, explicitly stress the need for participation of and partnerships with all stakeholders in a shared effort to achieve sustainable forest management as part of the five key elements recommended to conduct NFP processes (UN-CSD 1997 in Savenije 2000). In addition a number of specific elements and actions to be considered in developing and implementing NFPs refer to participation such as:

- Appropriate participatory mechanisms in which all parties are involved;
- Decentralisation;
- Recognition and respect for customary and traditional rights of indigenous peoples, local communities, forest dwellers and forest owners;
- Countries are requested to develop management systems which guarantee the participation of indigenous populations, forest dwellers, forest owners and local communities in the NFP process, as well as meaningful decision-making regarding the management of state forest lands in their proximity.

Greater stakeholder ownership in NFP processes, thus taking into account civil society's needs, is expected to facilitate the successful implementation of forest policies and achieving sustainable forest management.

However there is a wide and diversified understanding about what participation means. Many participatory processes are implemented without serious consideration about the implications in terms of planning and resources allocation to support stakeholder participation.

2. What is participation?

In the practice participation can be a vague label which can mean a little or a lot (Ingles 1999). Basically participation can be more accurately defined if it is done in relation with a specific context and intended objective. In a political context participation can become an end in itself when it is used to enhance democratic processes or the empowerment of resource users. In that case what matters is the possibility for the participants to influence decision making whatever the outcome will be. When a specific objective is set, for example poverty alleviation through sustainable forest management, then participation becomes a mean and not an end in itself. This being said, there are still many ways for people to participate. The level of participation can be high or low. At the lower end, participation can be just the dissemination of information to raise awareness about certain processes or outcomes and at the higher end, participation will imply shared decision making power among the concerned stakeholders and joint implementation of policies.

One of the essential aim of participation is certainly to reach a consensus among stakeholders in decision making. Of course this is not always possible as some decisions might lead to benefit or disadvantage some stakeholders more than others. However in this situation participation can at least provide "an overall view of the various interests and conflicts and create a basis for arriving at a balanced solution acceptable to all parties" (Appelstrand 2002).

For the purpose of this paper and in the context of NFPs, participation is seen as a mean to facilitate their successful implementation and will be defined as a process through which stakeholders have the potential to influence and share control over development initiatives, decisions and resources which affect them.

3. Why participation in the framework of NFPs?

Public participation is now widely accepted as a prerequisite to any type of policy, programme or project development. "Government-citizen relations are high on the public agenda. Citizens and organizations of civil society have become increasingly vocal in recent years, bringing forward issues and demands and trying to influence policy makers... Governments also realize more and more that citizen's input can be a vast resource for policy making – especially in an increasingly complex world" (Gramberger 2001).

In the forestry sector the type of public or stakeholder participation is very much determined by the socio-economic context of a given country. Although they are always limitations in categorizing, the development of participation has followed different paths in developing and developed countries while seeking the same objective, a people centred approache.

In most developing countries the management of forest resources is predominantly under the responsibility of the state. The local population is generally excluded from forest management decisions although their livelihoods are partly or largely dependent from these resources. As a result forest management is often characterized by conflicts and illegal activities reinforced by the weakness of forest institutions. The high level of forest degradation observed in the last decades has prompted forest administrations in a first instance to enforce more stringent regulations but to no avail as in most case the capacity of these administrations was far too limited to exercise the requested control. The concept of participation emerged in the 1970s as a way to understand the needs of people and to involve them in the management of forest resources. Today, after more than 25 years of development, participatory forestry is recognized to be a promising alternative. However scaling-up of participatory forestry in developing countries is still hampered by non-conducive policies and institutional frameworks. Despite the successes observed in pilot initiatives in participatory forestry there is still a need to increase the confidence of policy-makers and forest administrations toward the capacity of local stakeholders (FAO 2003a). In response to this identified gap and, in addition to promoting locally based, legally recognized sustainable management of forest resources, recent approaches are now moving from a community focus to support a broader range of stakeholders in implementing participatory processes in forest management. They are as well as addressing overarching policy and implementation issues, such as capacity building of other actors at the local government level and in the private sector and through the development of enabling policies.

"While it is easy to identify the importance of power and control of resources as barriers to the wider institutionalization of community forestry, it is not easy to make concrete suggestions about how to go about addressing power issues" (Fisher 2003). An answer to this challenge is the contribution of participatory processes in NFPs. Through the involvement of key stakeholders, NFPs offer to developing countries the mechanisms to develop an enabling environment to accompany the gradual transfer of authority and responsibility over forest resources to local governments and the rural population.

Much of the development work on participatory approaches which took place in the South to support the sustainable use of natural resources is becoming very relevant for a use in the North which is in search of approaches to respond to civil society's needs (Inglis 1995).

With the exception of countries with a major forestry sector, in "industrialized, largely urbanized and fossil-fuel based economies, forests are often marginal to local people's preoccupation" (Finger-Stich 2002). In these countries there is a clear shift from the productive function of the forest to the protection and conservation functions. However and because of the role of forests in environmental issues and of their importance for recreational activities, not only the rural population is concerned about the management of forest resources but increasingly the urban population. Environmental NGOs, various associations of recreation and individuals

are concerned stakeholders who are increasingly interested by the way forests are managed. On the other hand in these countries a significant share of the forest is privately owned by a very large number of owners, mostly small forest owners who are willing to maintain the productive function of their forests. Thus "in contemporary forest management, multi purpose usage must consequently be taken into consideration in the attempts to reach a reasonable balance between overlapping but also conflicting interests" (Appelstrand 2002). To reach this balance public participation is a mean to understand the diversity of opinions to work toward a consensus through a transparent and equitable process. Today there is without doubt "a growing demand from society for more consultation and involvement, and more transparency and accountability within forestry-related institutions" (FAO/ECE/ILO 2000).

Despite the diversity of socio-economic conditions of countries throughout the world "it becomes evident that the attention has to focus less on trees but on the societies being the actors in forestry" (Liss 1998) and that "public participation can be a tool to help meet the need of integrating management strategies with democratic processes and contribute to enhancing sustainable forest management" (FAO/ECE/ILO 2000).

The need for public participation is sustained by the raising level of education, dissemination of information and awareness about environmental issues among the civil society. The media are playing a major role in this awareness creation by being able to reach the public wherever it is and on any type of topics. This is providing the public with access to a vast source of knowledge. With increased capacity citizens are naturally willing and requesting to be involved in decision making processes which affect them. This society's interest in "forest raises the need for enhanced social and political acceptance of forest management" (FAO/ECE/ILO 2000).

4. Current trends

The importance of an enabling policy environment for poverty alleviation and sustainable development is nowadays widely acknowledged. Simultaneously, there is an increasing awareness of the need for active stakeholder participation in policy processes to improve the quality of policies *per se* and their translation into reality. Valuable experiences have been gained in various policy domains with diverse approaches to enhance the participation of all stakeholders in policy processes at different levels.

The general trend towards more stakeholder participation in policy processes has gained momentum in the forestry sector with the recently reinforced international commitment to strengthen the role of forestry in poverty alleviation. The IPF has put forward the NFP as the main vehicle for improving forest policy processes including the explicit need for participation to achieve sustainable forest management (FAO 2000). Greater stakeholders ownership in NFP processes, thus taking into account civil society's needs, is expected to facilitate the successful implementation of forest policies. "Most environmental decision-making process will benefit from introducing a participative structure, because if people affected by a policy, a program or a plan are not involved in the process, the implementation will likely run a greater risk of being contested or flouted" (Appelstrand 2002).

At present, NFP processes have taken off in most countries and valuable experience is being gained with mechanisms to enhance stakeholder participation in different stages of this process. Nevertheless, so far only few of them have managed to effectively include the interests of all stakeholders throughout the process. In many cases, stakeholder participation in the NFP process remains superficial or is restricted to certain stakeholder groups only, and it often dwindles when it comes into implementation.

Several international instruments have been put in place to support countries in their NFP processes. These can be in the shape of direct support from bilateral donors and multilateral agencies. More recent institutional instruments include the National Forest Programme Facility (NFPF) and the Programme on Forests (PROFOR). However, in order for these instruments to provide quality support, it is crucial to strengthen the knowledge and understanding of enabling mechanisms for active stakeholder participation in NFPs. There is a need to learn from experience gained so far to address the question: how efficient and practicable participation in NFP processes can be achieved? This involves identifying approaches, mechanisms and procedures that enable efficient participation, strategies to facilitate the participation of marginalised groups before and throughout the NFP process, and ways to sustain such participatory processes and reduce their transaction costs for stakeholders. These issues need to be addressed to enhance stakeholder participation in NFP processes.

5. The Community of practice

In an effort to improve stakeholder participation in NFPs, FAO and other national and international organizations have set up a "community of practice" on "Enhancing stakeholder participation in national forest programmes" to exchange information, build partnerships and collaboratively work on related topics.

In November 2002 the Forestry Policy and Information Division of FAO, with the support of the NFPF, organised a first technical meeting "Enhancing Stakeholder participation in national forest programmes" at the Organization's headquarter in Rome. The purpose of the event was to define strategic ways forward to strengthen participatory processes in national forest programmes and to build partnerships for action. The following strategic directions for action were identified:

1. Getting buy in and commitment of power holders
2. Building capacity for country driven NFP processes
3. Communication: to raise awareness and understanding
4. Empowering the disadvantaged to participate
5. Ensuring effective and efficient NFP processes
6. Providing guidance for decision making and implementation of NFP
7. Ensuring resources for sustainable and good quality NFP processes

6. Assessment of participatory processes in the development of NFP

During the first technical meeting and in support of the strategic directions identified, the need for an appropriate methodology for assessing participatory processes in the NFP context was specifically identified as a required action to move further. Appropriate knowledge in methods and approaches for the evaluation of participation in NFP processes was further identified as a prerequisite to provide guidance, to increase and optimise participation in NFP processes.

To have a better understanding of participatory processes in NFPs, the CoP met for the second time in November 2003 to discuss the following question: "how to monitor and assess participatory processes in the development of NFPs?".

Although it would seem logical to assess participatory processes in terms of outcomes during the implementation of NFPs, it has been recommended to look first at the qualitative aspect of participation in the formulation process, i.e. if a "good" participatory process did

take place. In the field of participation and community-based development experiences and studies have shown that "facilitators are often poorly trained and inexperienced" and "overall, a naïve application of complex contextual concepts like participation is endemic among project implementers and contribute to poor design and implementation" (Mansuri 2004). This statement shows that more attention need to be devoted to the quality of participation. It cannot be taken for granted that all "participatory processes" are conducted with the necessary understanding and skills. Without adequate qualitative evidence on the way NFPs have been developed it would be difficult to make an assessment and draw conclusion based only on the implementation results.

The evaluation of impact, or of the result of a process, is assumed to be largely dependant of the quality of the process which led to this result. Based on this assumption, the first step was to concentrate on the monitoring and qualitative assessment of the process itself up to but excluding implementation. In other words, participants defined the methodology which will enable practitioners to determine if a participatory process has been successful in involving all concerned stakeholders in the different stages of negotiations and decision making processes. This has been done with the understanding that the ultimate objective and final step will be to assess the impact of participation during the implementation of NFPs.

Methodologies for conducting an assessment focus generally on quantitative measures in terms of number of meetings held, number of participants and other parameters. Therefore the participants focussed on the following series of questions to highlight the qualitative aspects of the assessment:

- How do we assess the quality of these meetings?
- How do we assess the sense of stakeholders ownership over the process?
- How to assess the social and institutional learning that goes on throughout the participatory process (change of attitude)?
- How to we assess the role played by stakeholders?
- Have all relevant and more specifically marginalized stakeholders been involved?

In addition participatory processes and policy processes are complex issues to monitor and evaluate while in-country capacity available to monitor and evaluate is often limited. The participants of the CoP were confronted with the following questions:

- Can we develop practical and efficient methods for monitoring and assessment?
- How do we minimise costs of evaluation?
- How can we assess such processes in a practical way that provides basis for learning and improvement?
- What are the minimal issues we need to take into account in the monitoring and assessment of participatory processes?
- What criteria and indicators can be developed to assess participatory processes?
- Can such criteria and indicators be developed a priori or should they be developed in a participatory way (participatory monitoring and assessment)?

7. Criteria and indicators for the assessment

To facilitate discussions four main phases of the NFP process were defined: organization, sector analysis, programme formulation (policy, legislation, strategy, action plan) and the implementation (monitoring and evaluation) (see Figure 1). Participants looked at the first three phases and determined a number of criteria and indicators. In addition the participants have identified broad categories of requirements needed before starting a participatory

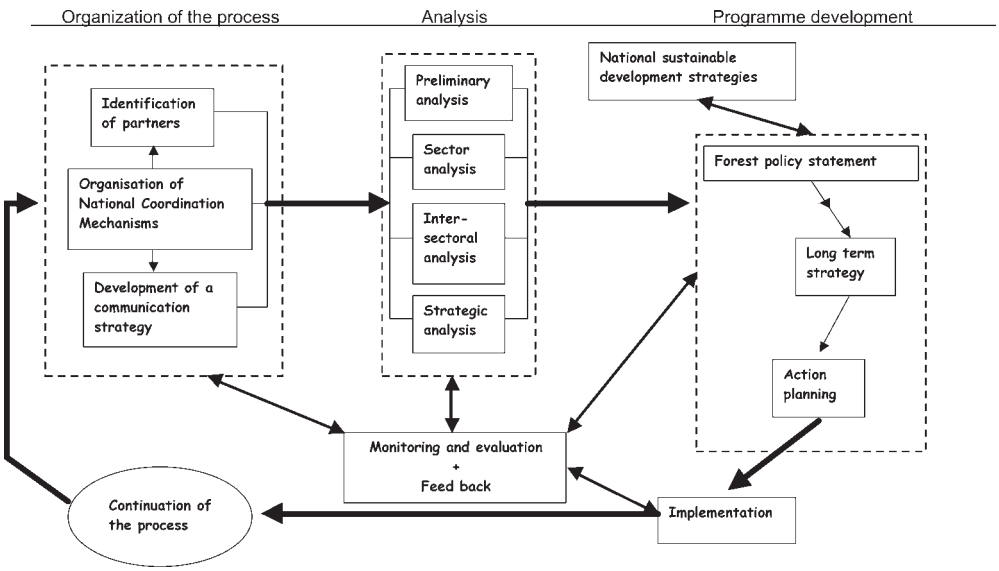

Figure 1. The national forestry programme process. Adapted from the FAO/Forestry/nfp web page.

Table 1. Example of the result of a stakeholder analysis.

Classification of stakeholders according to relative influence on, and importance to the nfp	
A. High importance / high influence • Forest administration • Forest industry	B. High importance / low influence • Small forest owners • Forest villagers
C. Low importance / high influence • Ministry of agriculture	D. Low importance / low influence • Urban population

Adapted from Rietbergen-McCracken (1998).

process and mechanisms which can contribute to meet the criteria of success. These results are a first attempt to assess the level and the quality of participation in NFP processes.

The work was conducted using the following definitions:

- *Stakeholder:* A stakeholder is any individual, social group or institution that possesses a stake (or interest) in the forestry sector. Stakeholders can be thought of as those parties who are affected directly or indirectly by the implementation of a NFP, in a positive or negative way. It includes those who can influence such framework, as well as those who would like to influence it.

  Without going into details, it is important to classify stakeholders according to their importance for and their influence in the process. The matrix hereunder provides an example of stakeholder analysis. For matter of simplification it is not exhaustive, there are many more stakeholders who could be identified. In addition specific stakeholders may of course belong to different categories depending of the prevailing conditions in specific countries, i.e. forest

industry here classified in category A may well belong to category B or D in another country. This classification is normally done after a thorough stakeholder analysis.

While important stakeholders with high influence or power will certainly be very proactive in the NFP process, getting the participation of important stakeholders with limited power is certainly the biggest challenge of participation.

- *Requirements:*In this context a requirement is a prerequisite desired or needed to ensure an effective stakeholder participation.
- *Criteria:* Criteria are characteristics, or dimensions that are used to judge the quality of a performance. Criteria may be holistic, analytic, general, or specific. Criteria defined here indicate what is valued successful participatory processes within NFP.
- *Indicators:*Indicators are quantitative or qualitative data, information, and statistics that measure whether outcomes are being achieved. They can also be statistical measures of performance, intended to gauge progress towards a specified outcome.
- *Mechanisms:* Mechanism is a process or a technique, especially of execution.

The results of the discussions on criteria and indicators are presented in a matrix in Annex 1.

The results of the working groups have been clustered in requirements and mechanisms for stakeholders participation in NFPs and in criteria and indicators for the assessment of participation. The requirements, criteria and mechanisms refer to the implementation of participation in NFP processes while the indicators will serve to assess if the criteria of participation have been met.

The matrix provided in Annex 1 indicates for each main requirement the criteria of success together with their respective mechanisms and indicators. They also refer to the different phase of the NFP excluding the implementation phase.

The mechanisms identified by the CoP participants are listed in the matrix to provide concrete suggestions for the implementers of NFP processes to satisfy the criteria of success. Depending on the situation one or more of these mechanisms can be used to ensure a quality participatory process.

Although still preliminary this matrix can be a useful tool to understand what a participatory process will imply in terms of financial and human resources. It will help to clarify a number of questions about what stakeholders, when and how they will participate. It should further facilitate the planning process by identifying the mechanisms and activities needed.

It can be further observed that once a participatory process has been adopted and supported by the government, as expected significant efforts need to be geared towards reaching stakeholders at local levels, specially marginalized stakeholders, and getting their support.

Although the criteria and indicators were defined looking at the different phases of the NFP, most of them can be used throughout the process.

Finally beyond the financial requirements, the successful achievement of satisfactory participation largely depends on a thorough stakeholder analysis, careful planning and capacity building of the NFP teams and main stakeholders.

The preparation of an assessment of this nature will require a well designed monitoring and evaluation system at the onset of the NFP process.

8. Conclusion

This is only a first step in better understanding about the implications, the potential but also the limitations of stakeholders participation in NFP processes and on how to assess them. It is planned to test this matrix in various countries to assess new or on-going processes in order to

validate the requirements and mechanisms, the criteria and indicators. Field testing will also enable to identify the specific difficulties which can be encountered in assessing these processes and how they can be dealt with. The CoP will play an essential role in identifying opportunities for the refinement of this assessment tool.

This assessment framework will also be used in the forthcoming preparation of guidelines for enhancing stakeholder participation in NFPs. While it is important to develop the skills to conduct participatory processes it is equally important to ensure that an adequate monitoring and evaluation system is also integrated in the design of any NFP processes. Feedback mechanisms for lessons learned are essential for the guidance and improvement of such processes.

Like similar framework developments the success of NFP will depend largely from the quality and level of participation. Participation should come as a complement to science based approach in the forestry and forestry related sectors. However this will require adequate resources and skills. It is hoped that the set of requirements, criteria and indicators and their related mechanisms developed by the CoP will contribute to improve the understanding and professional skills necessary to get public support in the formulation and implementation of NFPs.

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Annex 1

Requirements and mechanisms for stakeholders participation in nfps, criteria and indicators for the assessment of participation

Requirements	Criteria of success	Indicators	Possible mechanisms and activities to meet criteria	Phase of NFP
Political will and financial resources	Process planned prior to launching and based on best practices	• Existing plan and budget	• Training – Capacity building, • Planning exercise	OP
	Existing organizational capacity	• Structure established and institutionalized for NFP process • Facilitators, moderators trained	• Program development structure: working groups, task force • Inter-sectoral ministerial task force • Training, recruitment of facilitators • Vertical relationships kept at a minimum and accountability should be downwards.	All
	Adequate level of financial support to enable the process	• Increased proportion of domestic funding dedicated to NFP • Budget available for meetings • Financial statements backed by budgetary allocation • Budget allocation level for NFP • Audit allocation committed • New financial resources through innovative funding	• Secured (ring fencing) budget allocated • Proper business planning • Line ministry participation in budget negotiations/ allocation • Flexibility (carry over funds over years, timing of funding according to necessity) in budget delivery – including target recipients, e.g. NGOs, civil groups • Land taxation • Develop payment for environmental services (forest schemes, e.g. marketing alternative functions of the forest, e.g. water, NTFP, etc. for watershed management)	All
	Existence of political support for participation in NFP at all levels	• Numbers of new statues and regulations • Number of statements and engagements by ministries, etc. • Publication of policy documents • Hours of parliamentary discussions • Mandate and resources given to NFP coordination unit • Process accepted by society at all levels	• Show the links between the NFP and the development programme for the country • Wider intersectoral approach: link NFP to poverty alleviation strategy/intersectoral issues • Demonstration of benefits of participation • Awareness campaigns • Lobbying • Institutionalized process for actors to work together	All

Requirements	Criteria of success	Indicators	Possible mechanisms and activities to meet criteria	Phase of NFP
Training and capacity building	Qualified human resources available for the process	• Governmental administration qualified to conduct participatory processes • Organizational capacity of stakeholders enables efficient participation • Number of training sessions and trainees in participatory methods for NFP • Number and type of tools, guidelines, etc. on conducting participatory NFP development	• NFP materials, tools plus methodologies tailored to specific audience – organizational skills, policy, law, regulations, conflict management • Contract local expertise to facilitate training process • Training of facilitators in NFP process to reach “high interest, low power” stakeholders • Proper evaluation feedback mechanism to improve training content • Study tours • Parliamentary retreats • Curriculum development in participatory forestry at Universities, technical forestry schools, institutions • Assessment of stakeholders capacities at early stage of NFP process • Improve capacity, skills of stakeholders to participate, to have equal access to information, to take part in decision making	OP, all

Requirements	Criteria of success	Indicators	Possible mechanisms and activities to meet criteria	Phase of NFP
Awareness on the importance of the NFP process and participation	General public's awareness of the process	• Public opinion on the NFP process and SFM • What is in the media • Number of press releases, Information and documentation shared	• Clarify the objectives of the process • Provide information/news to the public opinion which shows the links between the NFP and the development programme for the country. • Opinion papers, scenario analysis • Media involvement • Public workshop/hearings	OP, all
	Stakeholders' awareness of the process	• Stakeholders able to explain objectives of NFP process • Number of stakeholder spontaneously requesting their participation in the NFP process • 70% of stakeholders have access to relevant information • The mechanism of the process is well-known by the stakeholders	• Clear indication of the purpose, objectives and expected results • Define points of critical importance, challenges and limits • Awareness campaign prior to participation	OP, A
	Effective communication and information shared widely among stakeholders	• Access to information is guaranteed • Information generated and disseminated to all stakeholders • Number, location, attendance of meetings, roundtables, etc. • Number of press releases	• Information mechanism that can reach/link together the stakeholders • Effective communication strategy • Roundtable discussions • Promotion of horizontal linkages • Initiate and maintain horizontal relationships • Use "market research" • Study tours • Communication linkage to decision making levels • Multidirectional flow of information • Medias involvement	All
	Guidelines/ mechanisms shared by most partners	• Existing guidelines • Use of the guidelines by officials and civil society • Stakeholders have access to relevant knowledge on approaches to strengthen their participation • Clear understanding of NFP process • The steps to be followed in the process are known by all	• Develop clear guidelines to support participation in the NFP process • Make guidelines available to all stakeholders	A, PD

Requirements	Criteria of success	Indicators	Possible mechanisms and activities to meet criteria	Phase of NFP
Sustained participation and initiative of stakeholders	All stakeholders are identified and contacted	• Mechanisms used to inform, contact stakeholders • List and description of identified groups of stakeholders • Number of inception workshops • All “high importance/high power” stakeholders included • All “high importance/low power” stakeholders included • Most “low importance/high power” stakeholders involved • System of empowerment of low power stakeholders existing • Process is comfortable for new comers • Directly affected stakeholders are engaged and committed to the process	• Identification of stakeholders through meetings with Forest Service, local government, major environmental NGOs, donor community, etc. • Stakeholders analysis, stakeholders profile • Identify geographic areas with major concentration of stakeholders • Conduct inception workshops • Informing all stakeholders on who is participating (give them a reason to participate) • Clarify the cost/benefit of participation vs. non-participation • Ensure that the representatives taking part to the process are really speaking on behalf of their groups • Already engaged stakeholders make others aware of potential objectives, priorities, opportunities, conflicts	A

Requirements	Criteria of success	Indicators	Possible mechanisms and activities to meet criteria	Phase of NFP
	Stakeholders are committed to the NFP process	<u>Level of participation/commitment</u> • Identified needs of stakeholders which are taken care of • Who was absent before and is engaged now? • Who was least heard before and is engaged now? • Active stakeholders • Reconciliation of global – national – local priorities • Most participants attend whole process • Roles of stakeholders are well-known by all • Stakeholders clearly recognize their interest • Risks in non-participation identified and made clear • Stakeholders recognize their role(s) • Long-term incentives for participating are clear • Level of influence in final decision making • Positive perception individuals can influence decision • Number and category of organizations which have formally endorsed Forest Policy Statement (FPS) • Extent of FPS implemented in organizations' programmes • Assessment of the activities implemented (Annual Reports) • Comparative analysis of annual reports and other commentaries to assess extent of change in organization's programmes reflecting FPS • Analysis from annual reports and other reports to assess the level of investment of stakeholders • Higher revenues from the forestry sector, revenues collected by the government from the forestry industry increased - Analysis of tax returns, finance ministry reports • Forest dependent people have a positive attitude towards NFP process	<u>Identification of stakeholders needs (expected benefits)</u> • Design, plan a participatory process, including feedback mechanism/documentation process (who, which level, for what) • Stakeholders analysis, interviews, analysis of stakeholders, issues, recognition of interests by the different stakeholders • Focus on meeting real needs of involved people • Avoid marginalization of different interests in the process • Allocate time, space and resources for discussion, problem analysis and dialogue • Make use of science (University, research institution) for problems identification • Identify specific benefits for targeted participants (and communicate) <u>Roles and responsibilities</u> • Early identification and clarifications of roles of administration and stakeholders • Empowerment of stakeholders through clear definition of roles and responsibilities • Include key stakeholders for implementation since the beginning • Support institutionalization of stakeholders • Encourage stakeholders who can provide funds to initiate the process, and make problem identification • Encourage actions taken by stakeholders <u>Transparency</u> • Government to provide a clear sign of interest to support participatory NFP process • Address questions of forestry related actuality without avoiding critical questions • Identify obstacles for participation and deal with them • Ensure participatory formulation process of NFP • facilitate ownership in the process through regular participation • Integrate and debate contributions of stakeholders	A, PD

Requirements	Criteria of success	Indicators	Possible mechanisms and activities to meet criteria	Phase of NFP

	Fair representation of local stakeholders at national level	• Mechanisms of representative bodies developed/improved
		• Percentage of stakeholder group members satisfied with their group input
		• Number or percentage of group/categories of stakeholders participating
		• Percentage of stakeholder representatives satisfied with the outcomes
		• "High importance/low power" stakeholders recognized by others
		• Number and location of meetings/variety of groups
		• Positive perception that individuals can influence decision
		• Number / importance of recommendations made at local level and integrated in the NFP
			• Strategy to reach marginalized groups
			• Strategy to bring recommendations from local level to regional and national level
			• Support the development of representative bodies (core funds, training)
			• Build capacity of representatives of important marginalised groups
			• Consider gender equity in forestry sector
			• Talk to local leaders (Chief/Mayor, at Area/ Municipal, District levels) to invite village/community leaders (men and women) religious/ indigenous representatives to working groups. (Select representatives)
			• Track origin of recommendations from local level and monitor their integration in the process at national level
			• Select representative sample of villages to conduct PRAs
			• Organize meetings with interest groups (district or national level).
			• Use of an "independent facilitation unit" for fair representation
			• Adequate monitoring of measures:
			  • Minutes of meetings
			  • Number of stakeholder categories identified
			  • Feedback sessions
			• Provide additional support to the disadvantaged groups
			• Ensure equity in benefits and cost
			• Form/manage coalition of interest
				A, PD

	Stakeholders' access to the process	• Each actor knows where to access the process (different actors, different access points) • Trust in having concerns and proposals addressed • Existing parallel informal and formal communication process	• Clear formulation of responsibilities/access points (accountability) • Minutes, documentation – feedback reported and accessible (transparency)	All

Requirements	Criteria of success	Indicators	Possible mechanisms and activities to meet criteria	Phase of NFP
Monitoring, evaluation and feedback mechanisms	Process improved through continuous feedback	• Minutes of the events (processes) • Media program • Procedures for feedback instituted • Documentation of lessons learned • Expert analysis accessible format: (scale, nature, impact of problem and options for change) • Facilitated dialogue on options and issue • Transparency/ Accountability in Programme Development	• Establish regular mechanism for feedback • Define procedures for the feedback (both ways - reporting, action planning, further engagements) • Provide simple and regular progress update • Revisit and review periodically the purpose of NFP • Organize short but frequent meetings	All
	Level and quality of stakeholder participation is known	• Adequate assessment of stakeholders; interests and power and relationship • Long-term commitment of stakeholders	• Plan and ensure consultation with previously involved stakeholders • Record participation of specific stakeholders • Feedback strategy and planning to representatives of stakeholders, including the ones from Area/District levels.	All
	Achievements of NFP are known	• Policy brief, documentation, other medias • Publicity on results of debate and dialogue • Stakeholders satisfied with decision making process • Awareness of general public on NFP achievements	• Ensure a continuous dissemination of results (interim/ final) • Establish feedback mechanisms for social learning based on shared experiences • Establish feedback system to check validity of contributions to the NFP process (feedback on how contributions have been taken up) …no “broken hopes…”	PD

OP: Organization of the process
A: Analysis
PD: Programme development
All: Whole process

Spirals of Forest Policy Development or Transformation of Participation in an Iterative Process – the Case of Kyrgyzstan

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Abstract

The concept of National Forestry Programme, as promoted by the international dialogue on forests at the world level, is basically derived from two central considerations: (i) policy development works in an iterative way along a cycle or a spiral; (ii) stakeholders' participation helps in both defining effective decisions and re-activating the iterative process in order to promote adaptive management of the forests. How do those hypotheses work in practice? What happens from the moment of process design till the definition of needed adaptations, on the basis of an evaluation of the implementation phase? Are the same stakes during the first loop still challenging when the process comes to a second one? What is adapted during adaptive monitoring: decisions; ways leading to decisions; ways the decisions are communicated to the others? What is the role exerted by participation in designing of what should be the process, and the impact of this participation on the content of final decisions? On the other hand, what can be the impact of the process on the involved participants? May it lead to changes in the development of policy formulation? Finally, are the importance, role and type of participation changing in the course of the process at each loop of the cycle, or coil of the spiral? How to maintain iterative interactivity? Does it bring a guarantee for the re-iteration of the process? The experience of the evaluation of a complete cycle of forest policy development in Kyrgyzstan (Central Asia, ex-USSR country), a 6 years case history of implementation of the "mixed model", is used to answer those questions.

Keywords: policy process, evaluation, participation, mixed model, iterativity, Kyrgyzstan

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Iterative aspects of forest policy

Overview of the decision making theories

A short overview of the theories related to policy formulation gives us the following summarized picture.

Instrumental rationality (IR), as a basis of the classical top down planning model, serves for redistribution policy, with the aim of creation and redistribution of economic growth. It explains how the means can be combined in order to achieve given ends, and is mainly appropriate for *goal oriented* behaviour, within a means-ends structured area (Habermas, as quoted by Amdam). In this framework, a decision maker is oriented at the correspondence between the means and objectives to be fulfilled (Buttoud and Yunusova 2002). IR is primarily aimed at industrial sector and, generally, large scale development. This is a very conventional technical approach in the forestry sector. The common interest is derived in extra-societal way, without any consideration of the needs and interests expressed by users.

Communicative rationality, as defined by Habermas (Amdam), is rooted in the interaction of social life, and oriented towards inter-subjective understanding and agreement. The common interest is defined as a consequence of needs and interests expressed by the stakeholders. This theory explains how decision-making is translated into social decisions and serves as a good basis for legitimacy, because it can pertain to the generation of normative judgements and action principles. Although, by itself, this theory can not be sufficient, because it is not applicable for the selection of means to ends (which may be the case for important forestry issues), it neither considers, with a sufficient rationality, the balance in the diversity of expressed social interests of various forest users.

A *mixed model*, based on the policy cycle theory, was proposed as a more appropriate one for the definition of national policies aimed at multipurpose forest management. It conciliates a logical rationalist sequence for identifying and classifying principles, objectives and means (normative and deductive logic) with a negotiation approach in a systemic and inductive process (Buttoud and Yunusova 2002). In this case, a communicative incremental approach leads to bottom-up and self-reliant policies. Although, during the application of such a mixed model in Kyrgyzstan, it became evident that sole mixed model may not be enough, it is good as an entrance. A decision maker needs to be adapted to reality and mixed model is a tool for adaptation to reality, at the same time it is a confrontation of decision-makers to iterativity and adaptation afterwards.

Spirals of policy development

"Muddling through" is a process for a continuous adaptation through small steps instead of fundamental changes. It is aimed at solving one problem at a time, using former solutions until they are proven false. Muddling through is often described as a tactics applied for reaching long-term goals and is linked with an iterative process with different degrees of iterativity. The degree of iterativity depends on many factors attributed to the process (Barstad 2002) including: participation as a dialogue; empowered discourse; knowledge development through the process; continuous need for evaluation.

An iterative need for evaluation at some intervals, in order to see how the goals are being reached and what kind of changes and adaptation is still needed, creates various loops (Barstad 2002) in the policy cycles.

Thus there may be distinguished:

- a *rolling cycle*, when the loops of the process are repeated at certain intervals. The *Rolling cycle* includes: problem formulation, information gathering, vision building, strategy

forming, action implementation, evaluation and again problem formulation (i.e. actions are to be taken according to the realized outcome at the time of evaluation).

- *Inward spiral* is a process characterized by the belief that there is a solution and it is possible to reach it using a step-wise approach. Thus, it includes potentials' analysis, conflict analysis, conflict solution strategies, concept forming, concept implementation, concept evaluation, new potentials' analysis etc, and each next step is made for reaching the pre-defined solution.
- *Outward spiral (continuous learning)*: This model is open to any kind of solution at all stages. There is a willingness to change the goals if it is required by occurred changes. The following steps are included: knowledge, recognition, vision, strategy, action, learning (experience) new knowledge etc. In this case the main moving force is the fact that the knowledge received in the process may lead to a change of the previously defined goals and help in adapting them to a new situation.

All the above three models include adaptation as a basic tool for reaching the expected goal.

Adaptation, as continuous learning, is a process when the actors are seeking for better ways in order to realize their own needs, interests and values, i.e. for the new means to reach existing goals, while taking the achieved results as a basis for defining new goals with consideration of the changed situation.

Why there would be a need for adaptation?

As the policy formulation cycle includes instrumental and communicative aspects, there would be consequent instrumental and communicative reasons for adaptation:

- ***Instrumental reasons:***
  - General changes in the society, including. economic and political aspects;
  - In practice, no applied measures can ever fully achieve the objectives and reach expected results;
  - Some objectives may be clarified only through the implementation of the process;
  - Some of the achieved results may change both previous objectives and means.
- ***Communicative reasons:***
  - Community of interests so much desirable at the initial step of the policy cycle, may be transformed into a conflict of interests at the end of the cycle;
  - Mutual gains, as considered at the initial step of the process, in the course of implementation, may bring to the power redistribution and result in more gains for the initiators of the process;
  - Collaborative learning at the beginning of the process may evolve into experts' facilitation, if participation might get instrumentalised;
  - Open decision taking may risk to turn into political speech (manipulation, hidden agenda) if the results of the process are perverted.

Such changes and transformations become evident and may be assessed only in the course of an evaluation, thus providing necessary information for adaptation and changes.

The case study of Kyrgyzstan

A full forest policy cycle with the steps of formulation, implementation and evaluation as it has occurred in Kyrgyzstan, (a newly independent state in Central Asia, ex USSR) is taken as a case study, in order to trace how theories are working in practice, with the aim of finding answers to the above stated questions.

Why the evaluation of the forest policy in Kyrgyzstan was needed just after 5 years since policy elaboration?

National Concept for Forestry Development, was one of the first strategic forest policy documents elaborated with a very broad participation in 1998, so the evaluation was practically dealing with the achievement of aims and objectives stated in this document.

- *Participatory* process was a new phenomenon in Kyrgyzstan when forest policy formulation was started in 1997. Participants of the process had, within a very short period of time, to learn how to analyze the possibilities, potentials, and risks; how to make strategic plans for the future and how to avoid from getting caught in an endless loop of momentary problems; how to find a possibility for a compromise when discussing opposite points of view, etc.
- Moreover, the political, economic, and social *environment* in the country has been continuously *changing*. Even the organization, which was responsible for implementation of forest policy (at present, State Forest Service under the President of the Kyrgyz Republic) has changed its status 4 times over this period.
- *International programs and projects* started to be active in the different spheres of Kyrgyz forestry sector: starting with conservation of biodiversity, harmonization of legislation and ending up with development of small and medium-sized enterprises engaged in processing of forest products, – thus bringing their own requirements and priorities.
- *Pressure from the international donors* to evaluate what has been done.

From those points of view, the analysis of forest policy implementation already in the first years was of an important significance, since it was namely in the first years when the normative plans have been practically fulfilled and disclosed difficulties or lack of coordination on the way towards realization of previously taken decisions. It has also provided the State Forest Service with concrete suggestions for a better and prompt implementation of decisions at the field level at a time when there was still a possibility for modifications. It is also generally easier at an early stage to develop the rules for a regular analysis of policy implementation, as well as the mechanisms for its adaptation to the continuously changing environment.

Changes occurred in the society, leading to the redesign of the policy concept, as defined through participatory evaluation

On the framework level:

- International dialogue on sustainable forest management and other international processes related to biodiversity had an impact on the forest management practices in Kyrgyzstan.
- General framework within Kyrgyzstan: further transfer to the market-oriented economy and related social and political changes in the society set up new priorities for the forestry sector.
- Initiatives taken in Kyrgyzstan for poverty alleviation and human development urged forestry administration to take corresponding measures.

On the technical level:

- Changes in the structures and institutions during the 5 years period required more precise definitions. They have also caused changes in the objectives and means of the forest policy, which were stated in the National Concept for Forestry Development (approved in 1999).
- Some activities have been already implemented since 1999, or have lost their actuality and there was no need any more to mention them again in the Concept, especially as

objectives. In the cases when no result was achieved and more improvement was still needed, modification of the formulations was required for a better comprehension of the actual situation.
- Ongoing privatisation and decentralisation, land and land use status had an impact on the forest policy and required special consideration in the new version of the Concept.
- There were some issues which have not been clearly formulated in the previous version of the Concept, for instance, all what was related to the independence of *leshozes (*forest management units, consists of forest ranges, is sub-branch of State Forest Service), to the role of the national forestry fund, to the definition of "collaborative forest management", etc.
- Forest Code (1999) was supposed to be based on the lines of the National Concept for Forestry Development, but due to a haste in its elaboration (for political reasons), there was little link between the 2 documents, thus there was clearly a need to state the importance of the Concept as the basis for other legal and political documents of the forestry sector.

On the communication level:
- A broad participation at the policy formulation step resulted in the fact that many of the provisions of National Concept for Forestry Development (1999) had a very short-term vision: reflecting immediate interests' attitude of the people involved, thus a more conceptual broader vision would be needed in the revised Concept.
- The role of the state and ways to involve people (including local authorities, private entrepreneurs and villagers, same as other forest users) into the forest management were not clearly defined in the former Concept of 1999.
- Functions of the forestry service had changed and further changes were to be expected, thus a new framework was also needed to be reflected in the Concept.

Elements, defined through participatory evaluation brought to the redesign of the National Concept for Forestry Development. The main differences between the first policy Concept 1999 and the redesigned Concept 2004 were in the fact that Concept 1999 was aimed at the preferable future: "What do we want to achieve?". Thus it contained 5 strategic goals and 10 directive lines leading to their achievement. Due to a new knowledge and better understanding of both sustainable forest management and concrete possibilities for changes, which have been generated among participants during the implementation step, the revised Concept 2004 has defined principles for forestry development with the focus on 3 corner stones "People, Forest and State".

Basically, the forest policy formulation process in Kyrgyzstan gives an example of a policy spiral, as it is clearly iterative and has a possibility for further continuation (see Figure 1).

Evolution of participation, as seen from evaluation

As related to how participation was evolving over the whole policy implementation period under concern, the following picture comes up:

Beginning of the process: As a first step there was the analysis of current situation in the forestry sector of Kyrgyzstan. For the first time, a participatory approach was introduced in the country, when participation was organized through multiple interviews, discussions at different levels, workshops with the involvement of forestry sector personnel from all the chains of the horizontal structure, together with representatives of the local population and local administrations, from science and NGOs. At this stage, participatory process was certainly introduced, supported and has been strongly promoted by an international donor (Intercooperation, Kyrgyz-Swiss Forestry Support Programme, being implemented in

Figure 1. The forest policy process in Kyrgyzstan conceived as an outward spiral.

Kyrgyzstan since 1995). As there were no clearly perceived stakes at this moment, participation was mainly a resource one, when participants were expressing their own views on weak and strong aspects of the current situation in the forestry sector. Nevertheless, this exercise generated a learning process, when everybody learned that (i) it was possible to participate in the policy formulation and (ii) everybody still needed to learn about how to participate.

This process gave many ideas on how participation could be organized in the post-soviet countries. The technique of cards on board has been employed to promote free expression of ideas, creating a new habit of speaking openly and participating in the policy process. Methodology of "constructive confrontation" was used in order to invoke contestation which was needed due to 2 reasons: (i) the participants had no prior experience of policy discussions and were mainly willing to immediately expose their needs and select means prior to defining objectives; (ii) with transition to the market economy there was a big pressure for rapid concrete changes, and this context was not promoting broad and abstract visions, as it could have proceeded from foresight or environmental mediation techniques.

The experience generated during participatory exercise on the analysis of the current situation was used for the *next step*, preparation of the National Concept for Forestry Development in Kyrgyzstan (1999), as a vision for 20-25 years. Already at that moment participation was applied as a broad general principle, when the involved participants were not acting only as resource persons, but were invited to define potentials, objectives and priorities of the forestry sector. Having learned during the first step, the participants felt freer and were more critical and constructive in discussions. Many new, sometimes unexpected, and important ideas were brought to the table.

The phase of elaboration of the *Forest Code* introduced a first break down in the process: as the law was presenting a very high political interest (before the parliamentary elections) it has been prepared solely by the forestry service administration, within a very short period (6 months), without taking into consideration the richness of ideas brought by the previous discussions. It also showed that the forestry administration could take important political decisions disregarding results of participatory process, but using "participatory" as a slogan while lobbying the draft Forest Code in the Parliament.

The preparation of the *5 years action plan*, so-called "Les Programme", followed the same participatory process as for the Concept elaboration, with a more quality participation when it

was related to technical aspects. The draft plan included not only expected results, but also own potentials, and means for implementation, as defined by the forestry units themselves, the due implementing agencies. The final draft was found too much "revolutionary" and the bureaucratic officials from the administration have approved a considerably emasculated text, which has preserved the proposed structure but not the innovations of bottom up planning.

At this step of the process, the nature of participation has definitely changed, as the stakes became more clear to all of the participants involved: leshozes were interested in having flexibility in technical and managerial decisions while administration had in mind the strengthening of its own position and increase of the forest cover (as a good indicator which could be presented in the reports to the government). Such a contradiction of interests could lead to a conflict within the sector, due to the openness of discussions, therefore the process has been stopped. Thus, there was no logical finalization of the process, no public presentation of the draft and the approved version lost all what was gained through participation during the previous months.

Administrative instrumentalisation of participation

Initially, the forestry administration was rather reluctant about broad participation in the policy formulation. There was no knowledge of what participation could bring to the process, but there were fairs that participatory discussions could raise critic and may be destructive. Another reason for the fairs was the long-time institutional opposition between the forestry service and the Ministry of Environment. The Ministry of Environment was at that time perceived as a strong institution and there had always been a risk that Forest Agency may become a sub-division of this Ministry.

Contrary to that, the participants coming from the forestry sector, brought positive input and new interesting ideas, even if there ware some critical comments, (which were not too strong and more related to the economic aspects or immediate needs). The Ministry of Environment did not take the process seriously, so its representation was very weak and, to a great extent, was disregarded for the lack of input unto the content of discussions. Local population, when invited, was basically mute. At that time practically all the activities of the villagers in the forests were contradicting the law (illegal felling and free collection of firewood as energy sources, unauthorized grazing and hay-making etc. There was little collaboration with the foresters and mutual mistrust. NGOs participating in the process were very few, and focused first of all on the insignificancy of the forest cover in Kyrgyzstan. That fact was very positive for the forestry service, because it was in line with its own priorities and could give a chance for an increase of state budget allocation for forestry purposes.

The highlight of the process was, in fact, the participation of the President of the Republic in the conference organized for the presentation of the results of policy formulation. At this conference the importance of participation was stressed and forest was declared as "the head for everything". Such progress has helped the forestry administration to understand the importance of participatory forest policy formulation.

As a consequence of this new consciousness, the benefits of such an exercise of participatory forest policy formulation were immediately interiorised by the state forestry administration. It started to promote the process and, afterwards, used the results for strengthening its own position.

Even when the results of participation were disregarded in political decisions, as it was the case with the action plan, forestry administration was still referring to it as the common plan for the whole sector, prepared in a bottom-up way. Progressively, utilisation of the results of participation by the forestry administration was gradually leading to restrictions of

participation itself. During the years followed, the decisions tended to be taken basically in a top-down manner, though drafts were sent to the subdivisions for comments, but received proposals were hardly ever considered.

Participation leading to the strengthening of the centralised power?

Participation process during the policy formulation step has brought to the floor the grass-root levels of the public structure, and, thus forest rangers were declared as key persons in the forestry sector and started to be nominated directly by the headquarters, and not by the regional (*oblast*) departments as it was previously the case. *Leshozes* also have become subordinated with reporting directly to the central headquarters. Regional forest (*oblast*) departments, have been transformed into territorial sub-divisions, based in *leshozes.* Whilst doing this, the forestry administration produced an impression of giving a signal of its willingness to improve the institutional structure (though in a soft way, just as a chess castle, without major changes). In practice, all the decision making and controlling power resulted as concentrated at the headquarters level through direct contact with *leshozes*. *Leshozes*, in their turn, were limited to immediate technical work and for each decision of a more general level had to address the headquarters.

On the one hand, this reform was presented as an implementation of a participatory decision, because during the preparation of Concept 1999 there was much critic about *oblast* departments. Thus the elimination of this chain (from the decision-making point of view) directly followed the wishes which have been expressed by the participants of the process. On the other hand, those participants from the grass-root level were not prepared yet for becoming real deciders due to the lack of political, social activeness and, often, even technical knowledge. Besides, daily overcoming of all the economic/management difficulties left no time for their further true active participation in the general decisions.

As far as the local population was concerned, regardless of the trials to introduce collaborative forest management in the South of the country, local population was not yet organized into any type of associations of forest users with common interests and possibility for representation. This fact could be partially explained by the same economic reasons which were curtailing quality participation of the state forest management units, and also, probably, by the lack of the habit for participatory democracy in the political decision making.

Summing up all the above, it can be stated now that, by the moment the evaluation of forest policy implementation was undertaken, the State Forest Service administration had become the sole decision maker in the forestry sector, consolidating all the aspects related to the use, management, control and conservation of forest resources, and, more generally, of wild flora and fauna. Plus, the head of the State Forestry Service was nominated for co-ordination of all international donor projects in the field of biodiversity at the country level.

Back to the question of power…

Broad involvement of various opinions during the evaluation phase, even if the process was facilitated by the experts from the forestry service, sharpened some very disputable aspects. For instance:

Conflict of interests became more evident: how to coordinate the state ownership on forests and increase of forest related private activities, including leasing of forests and collaborative forest management.

Power redistribution: central forestry service was strengthened through participatory policy formulation. Here comes one of the conflicts: how to implement the use, control and conservation through the same state hands, in the meantime when an important part of the forestry sector reform should result from a transfer of all productive activities to the private hands; and when local authorities are becoming more involved into the forest management matters… Discussions during the evaluation gave a new strength to the question of power: *What can be shared?*

Evaluation as a way to brush up participation

In this framework of strengthening of the public administration, it was clear that evaluation of the policy implementation was needed not only for the previously mentioned reasons, but, also, as a possibility to reanimate participation. It had been predefined by the Concept 1999, with the goal to consolidate still more the forestry service's position. At this step, the process was again impulsed and followed up by the same international donor, Intercooperation, SDC, Switzerland. But this time the leadership was immediately undertaken by the State Forestry Service (SFS): a trained core group (represented mainly by SFS experts) has facilitated workshops and discussions all over the country, and all the structural levels of the forestry service were invited. Based on the applied methodology, the evaluation revealed weak and strong points of implementation and priorities for the future. The result was even more instrumental than before, although strictly related to the SFS strategy for consolidating its power. How strategic are those priorities in reality, from the viewpoint of development of the national forests, will be seen from the next evaluation in 5 years, because conditions and environment in the country in transition are changing so rapidly.

For policy evaluation, compared to the policy formulation step, the process was marked by a more active involvement of the local authorities and NGOs. Local forest users and even several private entrepreneurs were invited. Nevertheless, the participants were mainly selected by the state forestry service. The Restrictive selection of the actors was done by SFS with explanation that participants should be at least minimum prepared and know what they were speaking about.

In relation to the learning in the process, it is interesting to note that those participants who had already had some experience of policy discussions, basically as resource participation, especially at the sector analysis and Concept 1999 formulation stages, were giving answers as they thought could have been expected from them, at the same time the have often self-initiated their participation and were often leading the discussions.

If to consider the evolution of participation along the mentioned spiral of policy formulation process, it forms a sort of a *double spiral*, consisting of an *outward spiral*, (as described by Barstad 2002) i.e. continuous learning in the process of policy formulation which, at a critical point, has turned into an *inward spiral* (Barstad 2002), because no solution could have been reached by a step-wise communicative action and participation started to be instrumentalised. It was a transformation of participation from a newly introduced experience to a clearly istrumentalised tool. Analysing the experience from Kyrgyzstan we could see, that *bottom up planning* (or *mixed model* for decision making during the second cycle of policy process) viewed as desirable future situation have not been exactly reached in the course of the process. While under the influence of external factors, participation was getting additional impulse at certain steps of the process, with each new coil of the spiral bringing to a situation, different, if not opposite, from theoretically expected. The knowledge, generated during the process has not only changed the direction of the spirals, but also decreased the time period and length of each spiral.

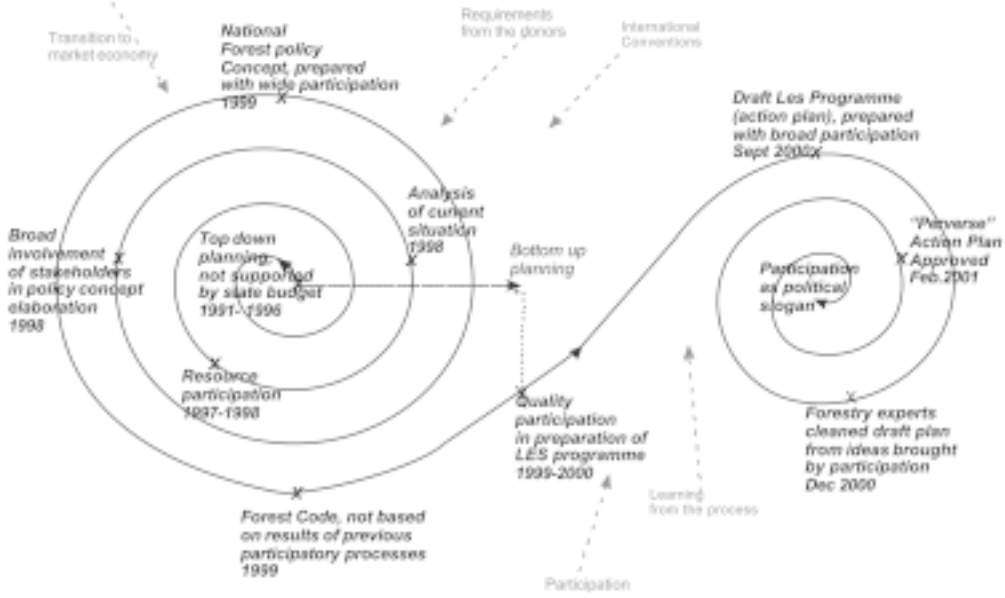

Figure 2. Double spiral of iterative forest policy process 1997–2001.

Conclusions

Without going into details, forest policy formulation in Kyrgyzstan and applied participatory approach could have been presented as a comprehensive process leading to a forest policy which has been elaborated, implemented and evaluated in a true participatory way, because: (i) there was a full spiral of policy formulation cycle implemented in practice and giving a chance for further iterativity; (ii) The National Concept for Forestry Development (1999) was elaborated in a concrete participatory way, evaluated after 5 years of implementation, again in a participatory way, and, as a result, necessary adaptations were proposed for better effectiveness; (iii) The state forest service has improved its status and strengthened positions; (iv) evaluation in a participatory way was a good exercise to get an objective view on the evolution of forestry sector; (v) participation in the forest policy process is not an alien notion in Kyrgyzstan any more.

But, considering how the process has been developed, the following tendency could be traced: starting from a centralized top down planning, theoretically the actions were aimed at creating sufficient knowledge and conditions for bottom up planning. The reality has proved that pure bottom up approach is not sufficient and should be combined with the top down guidelines and frameworks. At a definite moment of the process, a quality participation in the decision taking was achieved but not yet settled. Evidently some of the participants, mainly coming from powerful structures, proved to be learning from the process faster than the others, which brought to a situation when participation started to be used as a political slogan. (see Figure 2)

From the second double spiral (Figure 3) it is seen that the outward part, still under the influence of various external factors, similar to those of the previous stage, was following the

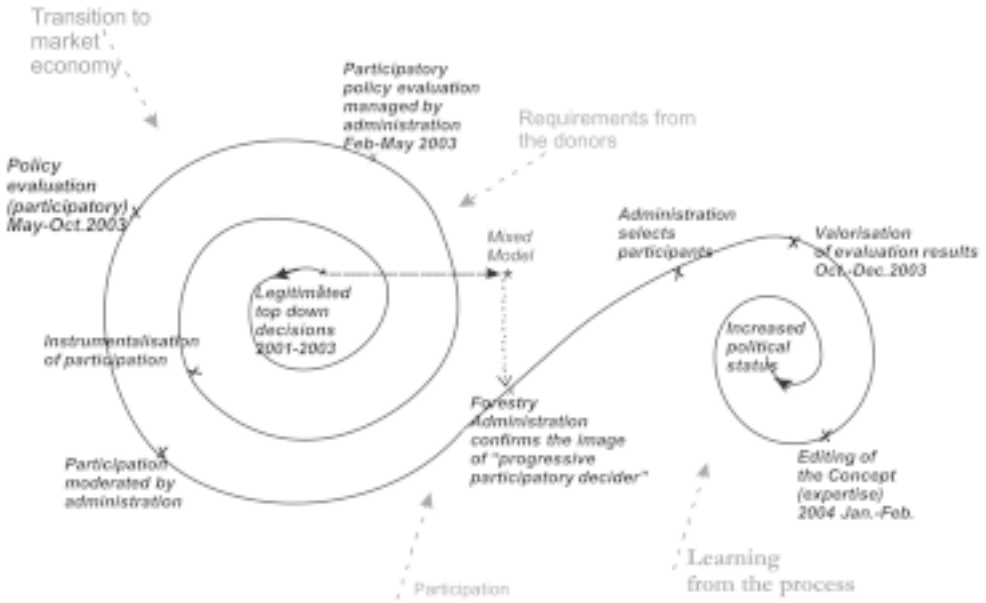

Figure 3. Double spiral of iterative forest policy 2001–2004.

same logic of envelopment, aiming at decision making based on the mixed model. In practice the state forestry service has got considerable gains from the process, through strengthening its status and image due to the fact that they have learnt more from the democracy than the other partners and got from the participatory process a more relevant and cleverer way to proceed in the environment characterized by permanent changes. At this stage of the process it may be considered as a progress, even if even if initially it has not been foreseen this way.

But it is also important to keep in mind, that:

- Evaluation is a political process, itself being part of the changes and bringing new changes. Learning from the process and adapting in the process is an ideal situation, but in practice more powerful actors learn and adapt faster and may instrumentalise the process for getting even more power;
- Adaptation is a product of participation and evaluation, but, finally, what is being adapted? Decisions or ways to decide? In the case of Kyrgyzstan, the second aspect was more evident.
- The spiral of any process by itself is not a technical procedure, it is an intellectual and social procedure in the way it moves. So at some stage it can acquire a different direction and leave no possibility for iterativity.
- As it is characteristic for any political process, interests are modified and new ones may emerge in the course of the process. Thus the stakes of the second loop may be very different from those of the first ones.

Iterativity of the process presupposes permanent changes and learning from the process, that is why the experience of Kyrgyzstan in participatory forest policy development is interesting, providing material for further research.

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Caspian Forests and Grazing: An Assessment of the Current Situation

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Abstract

In Caspian Forests, north of Iran, the Forests, Ranges and Watersheds Organization – Iranian forest service – has been involved in a project of removing of the animals from forest, implementing an important policy decision. The objective of the task, which is planned to continue until the 2010s, is to remove about four million units of animals from forest within a plan of two five-year stages and thus end the traditional right to use forest for animal grazing and implement forest management based on wood harvesting.

This article presents the background of the policy and explains the changes made during its implementation. It also surveys the accomplishments and applications of this policy during more than 15 years and lists the difficulties of the implementation, analyses them and concludes that the main challenge is to reach an agreement by participatory process between different stakeholders. In the current case study there are three main stakeholders: the animal herders, forest service and civil society.

Keywords: herders, stakeholders, participation, forest policy.

1. Background

Since the 1940s when the modern management of Caspian Forests was established, traditional animal grazing has become problematic in its relation to forest management, a lesson learned also from the West European schools of forestry (Saii 1944). I mean that we learned from West European forestry that animal grazing is not convenient with wood harvesting.

One of the means to solve these problems was to reduce animal grazing in the forests and many generations of Iranian foresters approved this practice. The area of country is about 164 mill. ha and only 3 mill. ha of its watersheds contain 2 mill. ha of temperate closed forest, while

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another 10 mill. ha are all open forests. Currently in all Iranian pastures and forests (about 100 mill. ha), animal grazing is allowed and only the 2 mill. ha of closed forest are reserved for wood production. The Nationalization Law of Forests (1963) reinforced the legal basis of this policy by annulling the ownership of herders on land and trees. By the Law of Protection and Exploitation of Forests and Pastures in 1967 (FRO 1993), animal grazing in forests became limited and in harvesting areas of shelter wood system, generally applied in these forests, it become forbidden. Despite of the legal restriction and the policy of Iranian Forest Service, grazing was still practised in Caspian Forests until the Iranian Revolution on 1979.

After the Iranian Revolution, the idea of discharging forests from animals continued with taking into account the public opinion as there was dialogue between the authorities, herders and rural people to find a solution for the problem. During the large transfer of idea and spontaneous participation after the revolution, forest service provided the herders with a questionnaire on their future employment plans in the case that they have to withdraw their animals from forest. 96% of the replies stated that the people would prefer to remain employed in herding or in animal husbandry. Therefore it was suggested that it would be good to try to create a new model for animal husbandry – something between the traditional and the modern forms, and it ensure it would be in harmony with the rural way of life. As such an activity was not within the priorities of the department of animal production forest service engaged itself in the application of this policy.

The result of these efforts was a project titled “Evolution of herder system” which was first implemented in 1989. This project was based on semi- industrial animal husbandry outside or in the border areas of the forests rather than in the forests. The herders sold their animals, and were given agricultural land and facilities for semi-industrial animal husbandry. The forest service gave herders 4000 m^2 of arable land for a maximum of 10 animals, i.e. a maximum of 4 ha of arable land. These calculations were based on the assumption that one herder has a maximum of 250 animals (goat or sheep), 5 animals equal to one cattle in a traditional system and 5 heads of cattle equal to one head of cattle in a semi-industrial system. The government also provided funds, gave facilities and executed the project to create the necessary infrastructure to establish the new system.

After the first few projects were established, the difficulties became clear: the project implementation assumes vast areas of land, great financial subsidies and major co-ordination of different administrations. Discouraged by the problems, the government decided to replace the project with a new one – “Ordering the withdrawal of animals”.

In the implementation of this project government gave arable land as before, but the execution was the responsibility of the herders. This caused problems as the herders took the land, but they did not commit to the project. So yet another change was introduced to make the project simpler and more applicable as the project “withdrawal of animals from forest” was introduced. This project is based on the idea of buying the usage right of the herder by forest service. Government pays herders a sum of money for every animal unit, up to 250 heads and for the value of the animal camps in the forest. So the herders are free to choose their future employment, whereas in two previous cases they remained herders. Today, this project is being implemented and the government has planned that all animals will be removed from the Caspian forests within 10 years.

2. Basic information

The statistics of The Comprehensive Preliminary Management Plan of Caspian Forests (FRO 1986) states the following:

The forested watersheds of Caspian region are 3 million ha, whereof 2 million ha are temperate closed forests, 600 thousand ha pastures and the rest agricultural land and villages. In these watersheds there are about 16 5000 households with a population of more than one million inhabitants, in more than 4300 communities. The sizes of these communities vary from 2–3 households to big villages, but about 60% have a population of less than 20 households. Around 3400 communities, totalling in about 85 000 households, live within forests and the rest live outside the forests in the same watersheds. The livelihood of these people is based mainly on agriculture and animal herding. All the area of the watersheds, except some parts of forest management plan, is under animal grazing. These people have 4.4 million animals managed by herders and another 1.4 million animals kept as by normal households.

This article concentrates on the 4.4 units of animals that consist of 49% of cattle, 49% of sheep and 2% of goats. These form 33 000 management units, 95% of which are managed by the owner of the flock. Animal husbandry in these watersheds is in the form of transhumance, semi-transhumance and sedentary, resulting in about 28 500 animal camps dispersed in the watershed area. The flocks, depending their form, remain in the grazing area for at least two weeks or for a maximum of a year, together with the herder and the shepherd, while their families live in the communities.

3. The Difficulties of the Project Implementation

Having visited the herders in the area, participated in the meetings, and having discussed with the herders and the other stakeholders over the past 15 years of this policy being implemented, the following points can be made:

Weak coordination between the executive authorities. The project was changed three times, which caused difficulties in the implementation, especially during the first project. First it was planned to establish a complex of different units for semi-industrial animal husbandry. Forest service was giving the land and was responsible for arranging the collaboration between the governmental service of electricity and water, banks, the service for construction, some credit from government and taking the permit to have animals and purchase of animals. Primarily it was planned to form a provincial council of natural resources under the supervision of provincial governor to coordinate the activities, but it was not realized. By this plan the council was formed from general directorate of natural resources, agriculture, energy, plan and budget etc.

Weak coordination between the different administrative units of the Ministry of Agriculture (Jihad of Agriculture), e.g. rural development and forest service. The policy of forest service was to limit the infrastructure development in small villages of less than 20 households so they would not stay in the forest areas, while the section of rural development of the same ministry was doing road construction, bringing electricity and other developing activities to the same villages.

Difficulties created because of change of policy within Forest service, to present three projects in less than ten years. The result of these changes was catastrophic and their effects continue till today. When in the first project it was planned to give up to 4 hectares of land for fodder production, the average of agricultural land of farmers was less than this. The accord was for fodder production, the herders are aware that the regulations change over time and that thus they will be able to get what they want. The price of land is increasing continuously and in north Iran having land as capital is more profitable than any other investment. When some example of project had realized, the news has disseminated very quickly, and the herders in many parts of Caspian zone asked to acquire land to withdraw their animals from forest.

Difficulties within forest service to determine land price or some other executive alternatives. In second and third projects that were based on paying the herders for their custom right, it was possible to take land instead of money. Forest service assigned some national land for this purpose. The policy of forest service was to give the land on a price less than market price to help these people; and a committee was formed to determine the price. As there was a market price and a legal committee to give the regional price –that was very low – for the land, this new institution that was not known officially become a target for all kind of influences aiming to decrease the land price.

In 1997, the forest service approved the custom right of one unit of animals on about 12.5 $ and it has not changed till now, provided that, there is an inflation of about 20% per year. Forest service aimed to push herders to leave the forest faster; when they see that if they are late they shall save less, based on prices of 1997. After several years forest service understood that this is not a realistic policy, and the herders who took the money were not able to organize new jobs. Instead, some money was given to the herders by taking into account the herders camp as criteria for compensation.

Environmental services believe that the change of the current livelihood system and focussing on wood harvesting will cause environmental deterioration. The environmental services have a policy for the conservation for Caspian forest and do not wish to see any changes in the region. In the last years, they have declared their wish that harvesting in more than 50% of slope is forbidden and given no permissions to harvesting at all.

If the herders have not managed to fulfil their commitments: the discord between the forest service and herders is referred to the justice system, it is frequent that the court's verdict is in favour of the herders. This is because and as they think that the herders are poor so such a verdict would be more just.

Herder's engagement is by a legal agreement signed between them and forest service. By this signature they receive money or land and they accept to withdraw their animals from forest. Sometimes they or their family members take the animals back to the forest, which leads into legal actions by the forest service.

Currently the collaboration of governors of a neighbouring district or city is not very active: they wish to keep their region calm and they are not committed to the activity of forest service. There is no law that obliges the herders to take off their animals from forest, so, it is not always easy to reach an agreement between forest service and herders. The conflicts can be caused by several reasons, including demands for more monetary compensation or land to be able to make a living in another business than herding. Herders are know to create pressure against forest service by e.g. making the execution of the management plan difficult or by referring to the governors office. In such cases the collaboration of these officials is needed but not often implemented.

The parliament is not always very understanding to the above-mentioned problems: because often the members of parliament are more concerned with the social issues. Many times the parliamentarians with reasoning similar to governors or other social or political arguments have the same position as governors and sometimes they even act in the favour of the herders against the forest service.

As mentioned above, the original project was revised twice due to implementation problems: However, the herders are still asking for the original plan to be used as it offered the best compensation for them. From the point of view of the forest service, the situation was difficult, they were not able to liberate so many lands and not to prepare the credit and coordination.

In a watershed, as a work unit, some of the herders collaborate with forest service and some do not. The negative effects of grazing in forested watershed will eliminated when all the animals leave the area. In every watershed there are different herders, in many cases the

majority of them sign the agreement and take out their animals – but if only one or two insist to remain in the forest the plan is not successfully implemented. It often takes lengthy discussions to persuade them to join the others.

The herders are not quite aware of the process and what they have to do, but nevertheless, they try to attract more possibilities from government: As it is told the withdrawal of animals from forest is based on an agreement between herders and forest service. The price of land increases quickly, and long discussions and bargaining are needed to reach the agreement.

Some of the other people, especially those who don't live in the villages, do not know why the government gave funds or facilities to herders: therefor they have their objections, they see that a group that gets benefits from the government and especially those who get land become very rich. This causes dissatisfaction among the different social groups. The main factor is the price of land. Within recent years a land that was 10000 toomans (about12$) per square meter became 10–15 times more expensive, such land was sold for herders for example at 2000 toomans to a herder, and now 2000 m^2 of this land cost 200–300 mill. toomans (compared with the average wages of a civil servant at 200 000 toomans per month).

Inadequate information flow makes it possible to violate the agreement: after signing the agreement for the removal of animals from the forest, some herders continue grazing the animals, if not in their own name, in the name of one member of their family. When there is such infraction, the government refers it to justice. If the information flow was better by e.g. local newspapers, NGOs or rural information network, the amount of such infractions would decrease.

While the agents of forest service are normally serious in the application of the the agreements with herders: this is not always the case with other actors. To avoid conflict, the collaboration of justice, parliamentarians and governors is necessary.

Inadequate information flow also encourages some to different kind of favouritism: which is a serious problem in Iran. Many things are done by "relation" instead of "regulation". Many people that are not herders try to replace them or they try to acquire more than they are entitled to. A weak development of the social institution is the cause why such procedures prevail.

Some of the people who have emigrated from region are trying return to the area, sometimes only on paper, with the intention of getting some of the incentives offered by government. One of the special forms of favouritism is the case of those who were herders before moving to towns or cities searching other kind of life – as a favour, some of them may have their names on the list of herders.

In many cases, the village council is not satisfied as it has no part in the arrangements: If making the projects was not by a participative process, the execution of these projects should be participative. In the application of this idea, the role of the village council could be important. After Iranian Revolution of 1979 some village councils were created but their activities have not continued. Approx. six years ago by the approbation of the parliament, all cities, towns and rural councils were selected and are now in their second four year rota and it is expected that the project of forest service will be executed with the participation of these councils. However, it should be noted that this was not the choice of the forest service.

The village councils do not know what their appropriate roles would be in the process as they have not been actively included. So even of they wish to help, it is difficult for them to participate. Participation is a process, and it needs a long training to know the different ways of participation and the roles that can be played by different stakeholders. In Iran, it is clear that this problem must be addressed and the definition of roles has been started.

In the villages, the mosque has an important social role, and it could be utilised in the implementation of the program. In Muslim countries, the mosques – especially in small towns and villages – have not only a religious role, but also a social and cultural role, which would make them important players in a participative process. Mosques have the potential of

becoming for training centers or extension centers. Traditionally, the decision making in the mosques is by a participative way. So, together with the forest service, the mosques could be an important source and it is important to note that if the forest service does not use this potential, the mosques can play a negative role only by being absent from the activities.

The NGOs are normally critical about this policy: but if they find the possibility to participate in the process, many of them would be persuaded, because, at least they shall see that wood harvesting will replace another forest exploitation.

In general, NGOs are not in favour of the policies of forest service and for this special policy, they disagree with the withdrawal of animals from forest – a cultural and economic heritage that proved to be sustainable in the time – as well as with forest harvesting which they see as the destruction of forest. It is true that by grazing on the young seedlings, pressing the forest soil and having a lot of wood as a combustible material for warming and preparing the products, some damage to the forest is done. However, not many people perceive these as damage and express they concerns. The execution of the management plan requires road construction, taking out of forest the camions of harvested logs and planting new trees which are all sensible actions – these are seen as serious damage by many people. Every time that forest service has tried to explain the activity of a management plan by a simple scientific way and to describe harvesting as a method of exploitation that is necessary for the country, there has been some success.

Conclusions

In this empirical study we notice that there are at least 3 groups of stakeholders:

- The herders, rural people of same village (landowner or without land), the rural people who emigrated but they have some roots in the village.
- Forest service, environment service, the plan organization, the courts of justice, the district or town governor, the other related departments of Ministry of Agriculture.
- Village council, the related members of parliament, village mosque and related NGOs.

The difficulties of different stakeholders derived from several factors: Some stakeholders do not have enough information, while others have the needed information, but do not agree with the policy. There are also those who have the information, agree with the policy, and if they participate in decision making, accept their responsibilities.

Based on this conclusion, to overcome the difficulties, our main choice is a participatory process among different stakeholders. In this process:

- Information flow should be more effective
- The discussion between the different stakeholders should result in agreement and equilibrate decisions and create a sense of responsibility.
- Transparency should create a social force that controls the irregularities.
- Unreal expectations of different stakeholders should be addresssed.
- The Forest Service, as the main authority, should revise its policies and their implementation.

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Call for Local Say in Forest Policies and Programmes

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Abstract

Public participation is considered to be important in present forest policy planning. Accordingly, policy evaluation should be redesigned to assess the success of it. Results of a survey completed in 16 European rural areas indicate that a substantial group of rural people feel that their knowledge, ideas and wishes are not listened to, respected and integrated by local (forest) planning and management authorities. Because of that, a significant share of them would like to participate in land use decision-making processes. However, these people have an ecological orientation towards forestry and rural development, which is not representative for all local people. It is argued that issues of equity of knowledge and representativity of actor groups should be valued in the evaluation of process-oriented policy approaches.

Keywords: public participation, forestry, rural development, Europe, policy evaluation

1. Problem statement

Forests are highly valued by European citizens (Elands and Wiersum 2003). Apart from their productive potential and contribution to employment and income generation, they are also valued for their amenity, environmental and nature values, and sense of place. Consequently, forests are increasingly considered within a rural development perspective. At European level, in the Agenda 2000, forestry is considered to be an integral part of future European Union policy on rural development. A key issue of European rural development policy is to maintain and improve "rural quality of life" by means of strengthening the rural economy, preserving the natural environment and rural heritage and creating attractive living conditions. It is assumed that forestry can contribute to these aims. A second key issue of rural development policy is that it must be based on participation and community-driven within a coherent European framework (ECRD 1996; EC-DG VI 1997; Buck 2000; Ottitsch and Palahi 2001). This call for participation at local level is not only acknowledged within rural development, but also in e.g. the framework of National Forest Programmes (Elsasser 2002; Schanz 2002).

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Participation, however, is not unproblematic. It has been criticized for potentially reinforcing existing corporatist patterns in decision-making processes (Lane 2003) and for favouring powerful and organized actors at the expense of marginal actors (Caalders 2002). The problematic character of it urges policy scientists to evaluate public participation in policy practices.

In this paper, I will discuss some problems regarding public participation in forest policy. In section 2, some aspects of public involvement in forest policy and management decision-making processes, namely equity of views and knowledge and representativity, will be highlighted. In the third section, the Multifor.RD project is explained. The next two sections present empirical data from rural Europe regarding equity and representativity. In a final section, the main results will be discussed and conclusions regarding the participatory process of forest policy planning will be made.

2. Public participation, policy planning, and policy evaluation

Public participation in policy planning

The idea of public participation is not new, but is gaining political cloud as a response on traditional, hierarchical organised, top-down policy initiatives, that have proven to fail as a governance strategy (Slee 2000; Caalders 2002). Public participation fits within this so-called 'new' policy paradigm, which, according to Glück (1997) and Schanz (2002), comprises also an adaptive and iterative learning process as well as a complex interaction of societal actors. This new policy approach is often theorized from a 'communicative rationality' (Schanz 2002; Kouplevatskaya-Yunusova 2004) or a 'constructivist or interpretivist rationality' (Sanderson 2002). Both understandings stress that social reality is a construction and that all possible stakeholder groups can reach each other only by communication trough the exchange of ideas, perceptions and arguments. This implies that policy should be seen as a co-ordination of action through discussion, and consequently, formulation and implementation have to be considered as intertwined steps (Schanz 2002). This sharply contrasts with more traditional, top-down policy approaches, which are generally instrumental-oriented. Instrumental rationality focuses on the formulation of means in order to achieve specified goals and the phase of policy implementation succeeds the phase of policy formulation. In reality, communicative and instrumental rationalities are often combined in varying degrees; conceptually, they can be considered as two ends of a continuum (Schanz 2002).

Both rationalities acknowledge the importance of the public interest, but have different ways of taking it into account. Based on different motivations to deal with public involvement, Caalders (2002: 70) distinguishes three ideal-typical policy approaches for participatory development (Table 1):

- the *communicative approach* aims at emancipating groups of people which have currently little say over their own future and living environment;
- the *instrumental approach* is directed towards improving the quality of plans and decision-making by means of bringing together relevant knowledge systems (academic, instrumental or experience knowledge);
- in the *strategic approach* efficiency and effectiveness are key issues; the wishes of stakeholders are taken into account in early stages of the planning process, in order to facilitate easy and fast implementation.

If these approaches are positioned along the rationality continuum, the communicative rationality can be linked to the communicative approach, whereas the instrumental rationality

Table 1. Participatory policy approaches characterized and linked to the continuum of policy rationalities (based on Caalders 2002: 71)

	Communicative Rationality ◄——————————► Instrumental rationality		
	Communicative approach	Instrumental approach	Strategic approach
Motive	Legitimacy	Quality/innovation	Efficiency, effectiveness
Issue at stake	Emancipation / democracy (having a say)	Improvement in terms of content (rationality)	Public support
Participation based on	Who has a right? Who should decide?	Who has knowledge or skills?	Who has power or influence?
Actors generally involved	Basis, marginal groups	Carriers of knowledge	Interest groups, actors who possess power to influence processes
Ultimate criteria for success (policy evaluation)	Strengthened autonomy/influence of the target group	Renewed policies/quality improvement of contents	Smoother implementation of policy

can be largely equated with the strategic approach. Largely, as the strategic approach still includes public involvement, whereas instrumental rationality policy making acts 'on behalf of the public' through objective assessment or consultation. The instrumental approach, though strongly associated to the communicative rationality, takes an intermediate position.

Public participation in policy planning: consequences for policy evaluation

The way policy is conceptualised has strong implications for policy evaluation. Whereas policy evaluation within traditional policy planning (instrumental rationality) is goal-oriented, policy evaluation within new policy planning (communicative rationality) is process-oriented (Sanderson 2002). This process-orientation demands specific criteria for policy evaluation. Driessen et al. (2001) distinguish three main criteria for interactive policy-making, that are largely supported by Buchy and Hoverman (2000), Caalders (2002) and Schanz (2002):

- The criterion *'course of the process'* refers to the existence and quality of the process. Two issues are relevant: (a) representativity of relevant actor groups and (b) institutional arrangements that facilitate exchange. The process should be *open* to anyone who is potentially affected. The forestry sector should enclose non-traditional actors into the forestry community. However, as representatives of desired actor groups are seldom ordinary people, their choice should be based on 'acting for' rather than 'being' (Wellstead et al. 2003).
- The criterion *'democratic legitimacy'* refers to the extent in which the outcome is able to show its validity in a wider societal and political debate. The process is legitimate (a) if different types of knowledge (e.g. professional, experiential) are equally valid and dealt with. Local views should be taken seriously and not be overpowered by professional views (equity). Besides, (b) the outcome of the process should not be settled beforehand and a priori restrictions regarding the content of the decision-making process should be avoided
- Within the *'problem resolution'* two questions have to be answered: (a) to what extent have the problem definitions and objectives of the project shifted during policy-making and implementation and (b) are the parties satisfied with the result? Public participation

includes the promise that the public's contribution will influence the decision. At the same time, the quality of the contents has to be guaranteed: the contents should not simply be a product of the need for consensus.

On the basis of a study conducted in 16 rural localities throughout Europe, the course of the participatory process as well as democratic legitimacy of forest policy planning will be discussed with respect to representativity of actor groups and equity of views and knowledge.

3. Methods

The Multifor.RD project

The data, which are presented in this paper, were collected within the framework of the EC-funded '*Multifunctional forestry as a means to rural development*' project. The principal research objective of the Multifor.RD project was to make a comparative European study about the nature and dynamics of landowners' and public's attitudes towards forests and forestry within the framework of rural development. In nine European countries, Austria (AU), Denmark (DK), France (FR), Germany (DE), Greece (GR), Hungary (HU), Ireland (EI), the Netherlands (NL) and Spain (ES) two case study areas were selected, one traditionally forested and another with recent/undergoing afforestation. As Greece did not have any area with substantial afforestation, two traditional forest areas were selected. Although the selection of areas was not based on a predefined set of rurality characteristics and is thus to a certain extent arbitrary, a broad variety of rural conditions in Europe is covered. Further details about the selected case study areas and overall research methodology are given in Elands and Wiersum (2003).

Survey amongst community inhabitants and landowners

As part of the research a comparative survey was carried out amongst both community inhabitants and landowners regarding their opinions on the local meaning of rural life, the local significance of forests, the landowners' perspectives on their enterprise and forest management. The questionnaire was developed on the basis of a prior qualitative interview phase and was implemented in eight countries. In each case study area, a representative sample of community inhabitants and landowners was selected. In total 7,044 people were surveyed of which 4,638 were community inhabitants (66%) and 2,406 landowners (34%). Apart from *farmers* (N=938), landowners with only farming land, we distinguished *farm-foresters* (N=1,259), landowners with both forest and farming land, and *foresters* (N=209), landowners with only forest land. Data handling involved both weighting and grouping the data. As the sample sizes differ substantially from study area to study area (ranging from 119 to 640 respondents) a weighting factor has been developed to correct for dissimilar sample sizes. It has been applied when area data were analysed. Only data significant at $P < 0.01$ level is presented. In order to account for possible differences between countries and types of areas in terms of rurality and forest history, four groupings of areas were identified to be used in the subsequent analysis: country, rural area typology, traditional versus afforestation and Euro-zones. The 'rural area typology' -derived from a cluster analysis on a list of socio-economic and land use parameters- consists of: (i) rural areas with urban characteristics, (ii) rural areas with a diversified economy, (iii) growth areas depending on the agriculture sector, (iv) decline areas depending on the agriculture sector, and (v) remote areas. The remote area class includes only one case study area, whereas the diversified class includes five case study

areas. The 'Euro-zone' refers to a geographical grouping of the countries into three European zones: Atlantic (DK, EI, NL), Central European (AU, DE, HU) and Mediterranean (ES, GR).

Restriction
It has to be clear that the methodological approach did not include an analysis of the process of rural development itself, but only opinions about rural development at the local level. Nevertheless, the results from a large variety of case studies throughout Europe reveal a number of problematic issues regarding (non-)existing public participation practices. These can help to provide a precise valuation of some social issues regarding the contribution of forest to rural development.

4. Public participation: equity of views and knowledge

Public policy – local say
Forest policies and programmes can have a significant influence upon the quality of life in rural areas, both in terms of land use transformations as well as the way in which local values are considered and integrated within these transformations. In this section, several issues with respect to forest and land use policy will be discussed. The question is, roughly, to what extent people feel they are taken seriously by policy makers, when decisions are made on public issues, with possibly far-reaching effects for the rural identity of the community (e.g. afforestation in traditional farming areas or new residential areas being built at the expense of local forests in traditional forest areas). A set of statements (Likert 'disagreement-agreement' scale) with respect to forest and land use policies and regulations has been presented to the respondents. A factor analysis revealed three dimensions (67% explained variance; Table 2):

- *control*: people want to be involved in decisions about future land use in the locality as well as more control over planting and management of forests, e.g. by environmental rules;
- *local voice*: local people are consulted and feel respected by people who are responsible for the planting and management of forests;
- *anti-authority*: people feel pressurised by the forest development plans and therefore distrust local authorities and the Forest Service.

In general, it can be concluded that there is no single opinion about the way forest and land use policies interact with the local community. There are groups who are favouring control by locals, who think the local voice is properly integrated and who do not think the local decision-makers have an authoritarian attitude. However, there are groups of locals who are claiming contradictory ideas. One would expect that there are strong differences between inhabitants and groups and owners. Table 3 shows that inhabitants are significantly more in favour of control than owners are. Next, both inhabitants and farmers are more sensitive towards authority than foresters and forest-farmers are.

Local say and forests' contribution to local quality of life
It can be expected that the opinions of people with respect to local forest and land use policies are influenced by the personal beliefs on the contribution of forests to local quality of life in terms of economic, landscape identity, community and environmental benefits. The research has shown that respondents can clearly differentiate between the positive, negative or neutral contributions of forests to local quality of life: (i) *forests are beneficial*: forests prove good

Table 2. Local opinions regarding forest and land use policies (factorial dimensions, N=6,720)

Control	Local Voice	Anti-authority
People who do not own land should still be involved in decision-making regarding the use of land	Forests are planted/managed in this locality with proper consultation with local people	There is too much pressure from the Forest Service to develop and manage forests in this locality
There should be very strict environmental rules on planting and management of new forests	The Forest Service has a lot of respect for the wishes of local communities regarding the planting and management of forests	The local County Council cannot be trusted regarding land use policies for this area

Table 3. Local opinions regarding forest and land use policies, in general and by target group (N=6,720)

	All respondents (%)			Target group (mean value*)			
	Agree	Neutral	Disagree	Inhabitants	Farmers	Forest-farmers	Foresters
Control	55	20	25	3.5	3.0	3.1	2.9
Local Voice	40	30	30	3.0	2.9	3.4	3.1
Anti-authority	30	35	35	3.0	3.0	2.9	2.9

* 1=totally disagree, 2=disagree, 3=neutral, 4=agree, 5=totally agree. Target group: eta² ($P < 0.01$) control =0 .075, local voice =0.010, anti-authority = 0.002

incomes and employment for local people, create a characteristic landscape, are important for their historical or cultural value, protect air, water and soil, and improve local area attractiveness, (ii) *forests are harmful*: forests are here against the wishes of local people, create a sense of isolation between neighbours, deteriorate the beauty of the landscape, and are a threat for other land use activities such as farming, and (iii) *forests have nothing to offer*: forests are poor in terms of the variety of plants and animals, and provide very few opportunities for recreation and sports. On the basis of these three types of contributions respondents were clustered into forest opinions groups, ordered in a gradual scale from '*enthusiasts*' to '*adversaries*' (Elands and Wiersum 2003). We can conclude that many rural inhabitants are positive about their local forests. However, a significant group of people also see disadvantages. In general, farmers are more negative than inhabitants, forest-farmers and foresters. Besides, people from afforestation areas, especially those that are in decline, or Atlantic countries are more negative about forests than people from traditional forest areas, Central European and Mediterranean countries and urbanised and remote areas. It seems that the longer the forest history of an area, the more benefits that are perceived by local people (Elands et al. 2004).

Opinions regarding local forest qualities are not independent from opinions regarding issues of equity[1]. First of all, a call for control is strongly correlated to both a beneficial and

1 Statistical tests are carried out by means of Pearson correlation: beneficial with control 0.21, local voice 0.29, anti-authority not significant; harmful with control 0.11, local voice not significant, anti-authority 0.29; nothing to offer with control 0.11, local voice -0.08, anti-authority 0.11.

Table 4. Local opinions regarding forest and land use policies by country and Euro-zone (weighted, N=6,559)

	Atlantic			Central European			Mediterranean	
	DK	EI	NL	AU	DE	HU	GR	ES
Control	3.0*	3.9	3.2	2.9	2.7	3.6	4.0	3.1
Local Voice	3.0	2.8	2.8	3.1	2.7	3.2	3.8	2.8
Anti-authority	2.9	3.3	3.0	2.8	2.8	2.7	3.2	3.1

* Mean: 1=totally disagree, 2=disagree, 3=neutral, 4=agree, 5=totally agree. Country: eta^2 (P <0.01) control = 0.180, local voice = 0.152, anti-authority = 0.077. Euro-zone: eta^2 (P <0.01) control =0 .033, local voice =0 .041, anti-authority = 0.053

a harmful opinion on local forests. Enthusiast people want more control for reasons of protection, whereas sceptic people want more control to obstruct further forestry development. Amongst the former group belong relatively more exclusively foresters, whereas inhabitants dominate in the latter group. Next, local voice is also strongly correlated to a beneficial attitude, meaning that people with a positive attitude regarding the local forests think their opinions are well integrated in forest policy and programmes. Farmers form an extreme exception on this rule as they stress the harmful and nothing-to-offer aspects of forests jointly with a discontent regarding the incorporation of local wishes in forest policy and programmes. Finally, the strongest correlation is between an anti-authority attitude and a harmful opinion on the local forests, much more expressed by farmers and foresters than by inhabitants and forest-farmers. The more people perceive the local forests as harmful, the more they speak about distrust and pressure by authorities to develop forests locally.

Country and Euro-zone: the influence of area differences

Local opinions regarding forest and land use policies vary significantly from country to country (Table 4). Both Ireland and Greece have a strong call for more control, whereas it is relatively low in Austria and Germany. The high level of existing public organisation might influence this low wish. Although Greek people would like to have an increased control, at the same time they feel that their local voice is well represented in planning and management activities. The reverse is true for Ireland, the Netherlands and Spain. Especially, Irish people feel distrusted and disrespected by (local) authorities. The lowest level of anti-authority feelings can be found in Hungary, this might be related to the traditional communist system. Regarding Euro-zone, it can be concluded that a call for control is lowest in Central European and highest in Mediterranean countries, that local voice is least incorporated in Atlantic countries, and that anti-authority feelings are relatively low in Central European countries.

5. Public participation: representativity of actor groups

The above-introduced dimension ‘control’ is partly determined by the conviction that people who do not own land should be involved in decision-making regarding land use. It is a quest for representation of ‘ordinary’ people in forestry participatory planning processes. Consequently, landowners are skipped from further analysis. In order to define more precisely what local forests exactly mean to community inhabitants, we considered recreational forest

use. Frequent visitors have a direct interest in public involvement, whereas occasional visitors have an indirect interest. On the basis of local involvement in land use decision-making processes and recreational forest use four participatory groups can be distinguished:

- *Involved, intensive visitor* (28%): these people visit the local forests once every week and would like to participate in land use decision-making processes;
- *Involved, extensive visitor* (26%): although these people visit the local forests not regularly, they still would like to participate in municipal decision-making;
- *Not-involved, intensive visitor* (25%): these locals visit the forests once a week, but do not want to be involved in land use decision-making;
- *Not-involved, extensive visitor* (21%): these residents hardly visit the local forests, nor have participatory needs.

The socio-economic background of these groups differs. The involved-intensive visitor is not particularly an average local. (S)he is an intellectual and well-to-do inhabitant, mainly working as an employee, highly attached to and very enthusiastic about the local forests. The not-involved, extensive visitor has an average education and income level, is working as an employee and less retired. The distance to the nearest forest is relatively large; consequently, (s)he is less attached to the local forests and perceives relatively more harmful aspects.

Table 5 presents for opinions on the way rural localities should develop and the role of forests in it for on the one hand the involved, intensive visitor and on the other hand the not-involved, extensive forest visitor. In almost all aspects the other groups take intermediate positions in.

Rural development is about possible future perspectives for rural areas. The ways in which a rural locality should develop is highly dependent on the commitment of the people who have an (in-)direct interest in it. The study revealed six categories of preferred future developments, which are distributed amongst community inhabitants as follows: agri-business development (9%), secondary sector economy development (27%), tourism development (20%), ecological development (20%), organic-economy development (14%), and finally, development of traditional values (10%) (Elands and Wiersum 2003). It can be considered that both agri-business and secondary sector development can be equated with the traditional approach of *agricultural modernisation*, whereas tourism, ecological and organic-economy development can be equated with the more recent considerations of *rural restructuring*. An increase in forest cover is primarily associated within an ecological development and not with economic functions. A rural restructuring perspective dominates amongst the involved, intensive visitors, which is in sharp contrast to prevailing agricultural modernisation approach of the not-involved, extensive visitors. The involved, intensive visitor prefers above all an ecological development for the area, in which organic farming, nature & wildlife, landscape scenery, and forests prevail as land use activities. If the not-involved, extensive visitor prefers an alternative future, he would like to see an increase in tourism development.

The ecological orientation of the involved, intensive visitor can be noticed regarding his preferred forest functions as well. He prioritises the protective, environmental and aesthetic functions of forests more than the other group does. The same accounts for recreation, though a little less important. The economic focus of the not-involved extensive visitors is also reflected in future benefits of the forests, as they would like to see more business activities as an outcome of local forests. A final remarkable dissimilarity between both groups is the extent to which they support either public access to privately owned forests or financial measures to encourage private landowners to make their forests accessible for recreation. An ample majority of the involved visitors think that –indeed- private owners should make their forest public accessible, although considerable less people support the idea of grant-aiding private forest owners for recreation (50%). The contrast between the right to have public access to private forests and the willingness to support the owners financially is much less for not-involved, extensive visitors.

Table 5. Preferred future, forest functions and opinions on access per forest participatory group (inhabitants only)

	Participatory groups		
	Involved, intensive forest visitor	⟷	Not-involved, extensive forest visitor
Preferred future for the locality	Relatively low support for agricultural modernisation (28%) (especially agri-business development) and high for rural restructuring (61%) (especially ecological development)		Relatively high support for agricultural modernisation (45%) (especially agri-business development) and low for rural restructuring (45%)(high desired for tourism development)
Forest functions activities	Higher priority to nature conservation, landscape, biodiversity, and recreation		Higher priority to business
Public access to private forests	High support (72%)		Relatively low support (48%)
Grant-aiding landowners for public access to forests	Medium support (50%)		Moderate support (40%)

Country and Euro-zone: the influence of area differences

The distribution of participatory groups varies significantly from country to country (Table 6). The involved, intensive visitor is very well represented in the Netherlands. This call for local say is caused by the fact that this country has a high population density with many spatial claims as well as a strong distrust regarding authorities in general. Greek people, although incidental forest visitors, would like to be involved in land use decision-making. This accounts –to a smaller extent- also to the Irish. Though people from Germany and Spain visit the forests frequently, they do not feel the urge to be involved. Inhabitants from Denmark, Austria, and Hungary take an intermediate position in.

In general, it can be concluded that the group of involved, intensive visitor is much larger in Atlantic countries than in the others. This is partly related to the fact these countries have a relatively young forest history, meaning that forest land use transformations have a strong impact on local identity and community feelings of rural areas. Because of that can cause feelings of alienation, which on its turn encourages them to participate in rural land use planning and management. Secondly, there are strong differences at the rural-urban continuum: the stronger the urbanisation pressure, the more inhabitants who visit the rural forests frequently would like to be involved in land use decision-making processes.

6. Discussion and conclusion

The study proves that there is a strong call for local say in forest policies and programmes, which indicates a strong preference for a policy approach in accordance with communicative rationality principles. Decision-making regarding forest land issues should therefore include non-owners into the planning process, respect the local voice and prevent authoritarian practices.

Table 6. Forest participatory groups by country and Euro-zone (%, weighted, N=3,776)

	Atlantic			Central European			Mediterranean	
	DK	EI	NL	AU	DE	HU	GR	ES
Involved, intensive visitor	26	28	51	27	23	17	20	18
Involved, extensive visitor	21	37	26	19	7	36	52	17
Not involved, intensive visitor	27	13	14	34	53	20	6	49
Not involved, extensive visitor	27	22	10	20	17	27	23	16

Country: Cramer's V (P <0.01) = 0.27; Euro-zone: Cramer's V (P <0.01) = 0.16

At the same time, however instrumental rationality fundamentals can be distinguished as well. When foresters and inhabitants express their wish that strict environmental rules for planting and management of forests are needed for reasons of protection of local forests or safeguarding environmental friendly forest management, it is clear that they are not open to mutual understanding and argumentation, but that they are in favour of strong means that support specific goals. The same applies to (forest-)farmers who have a highly anti-authority attitude, expressing anger about favouring the environment at the expense of agriculture and consequently distrust towards (local) authorities. They argue that the land is theirs and that the owner decides about the future use of it.

If forest policy planning should be more communicative, the research results can be interpreted from the perspective of the three earlier mentioned process-oriented criteria for policy evaluation: (i) representativity as part of the course of the process, (ii) equity of views and knowledge as part of democratic legitimacy, (iii) and problem resolution.

The research results indicate that a large proportion of inhabitants of rural Europe are willing to participate in local land use planning processes. Involved visitors can be especially found in peri-urban rural areas, Atlantic countries and Greece. Inhabitants that do not wish to be involved come relatively often from Germany and Spain. The involved, intensive visitors choose for a participation design that is based on joint decision-making. This is often in sharp contrast to many forest owners, who are less willing to involve local people into planning and management practices and, yet if they do, they prefer a form of participation based on 'consultation' (Elands and Uwimana 2002). This observation shows that in forest policy at both national and local level further attention should be given to how to solve the communication gap that exists between different groups of forest users and forest owners.

Next, if participation is based upon voluntariness policy makers should be aware of the fact that this does not automatically mean that they will get a good insight into the variety of local perspectives. People who are mostly involved prefer predominantly an ecological oriented future, in which the local forests and nature areas are an important focus as well as landscape aesthetics. If policy makers want to start participation from an efficiency point of view, this a-representative picture is not really a problem. However, if participation is meant as to be developed from an emancipatory point of view, all local parties should be able to express their ideas about rural quality of life and the role of forests in it.

The research demonstrates indisputable that equity of local and professional views and knowledge is not always achieved in forest policy and management. However, if achieved,

the research shows that there is a strong link between positive ideas about public participation in land use policies and a beneficial opinion on the contribution of forests to the locality. That some people, however, perceive forests as harmful to rurality (see also Elands et al. 2004) has not so much to do with a principle dislike of trees or forests, but much more with the fact they feel disrespected by local and Forestry authorities regarding their ideas about how the locality should develop. To them, forests are a threat to rurality and become a symbol of depravation of the locality. This is especially true for Atlantic countries, and more specifically in afforestation areas where external people invest in commercial timber plantations. Forests in these countries and areas are not as deeply rooted in local history and culture as in the Mediterranean and Central European countries and traditional forest areas. Policy makers should take a very close look at those areas where forests are perceived as a threat and identify means to reassure local anxiety and tension. As policy evaluation based on instrumental rationality fails to take process-oriented issues such as societal resistance into account, it is clear that modern policy planning should adapt its policy evaluation.

Regarding problem resolution, policy makers and (groups of) local people often have a different perception of the problems of their locality. Because of that, it is highly likely that they have different solutions for solving the problems. This means that in public participation processes, problem definition and mutual understanding should precede the formulation of objectives.

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Measuring the Real Benefits of Forest School – Self-Appraisal: A Description of a Stakeholder-lead Approach to Evaluation [1]

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Abstract

Forest school is a way of teaching that is attracting a great deal of excitement amongst education professionals in the United Kingdom. There is anecdotal evidence from teachers and others who have come into contact with forest school that this school in the woods has a profound and positive effect on the way children (and young adults) relate to each other and the world around them. This is often described in terms of their social capital (such as networks of trust and mutual understanding) and human capital (such as personal skills, knowledge and self-confidence), and is in turn linked to their ability to get on and get ahead. This report describes the first stage of an evaluation project that examines the evidence for the effects of a forest school teaching environment on the children who take part and describes a process for self-appraisal (sometimes called "action research") that, through learning and self-analysis, adds value to the project itself.

Keywords: Forest school, social capital, human capital, self-appraisal

Executive summary

Forest school is a way of teaching that is attracting a great deal of excitement amongst education professionals in the United Kingdom. There is anecdotal evidence from teachers and others who have come into contact with forest school that this school in the woods has a profound and positive effect on the way children (and young adults) relate to each other and the world around them. This is often described in terms of their social capital (such as

1 This paper provides an overview of the methodology used for the research **nef** conducted into the impact of forest school. The full report (Murray 2003) can be viewed at http://www.neweconomics.org/gen/z_sys_publicationdetail.aspx?pid=179

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networks of trust and mutual understanding) and human capital (such as personal skills, knowledge and self-confidence), and is in turn linked to their ability to get on and get ahead.

In the UK forest schools are still in an experimental stage, and the impact of this different way of learning on a child's academic performance, behaviour and general well-being is only just beginning to be explored. In a world where only things that can easily be measured are considered important there is a need to look beyond, for example, academic performance as the only measure of success. The potential outcomes of forest school go far deeper, and require a subtler approach to evaluation.

In research carried out with partners in two Forest Schools in Wales, **nef** (new economics foundation) has developed some innovative evaluation tools and compiled evidence demonstrating for two groups of children a link between a range of physical activities carried out in a forest school environment and six specific, positive outcomes that relate to their self-confidence, self-esteem, team working, motivation, pride in, and understanding of their surroundings.

This whole process was done in the spirit and practice of participatory evaluation. **nef** shares the belief with others involved in promoting participative democracy that the process of measuring is as important as the findings. A participative approach achieves the best understanding, insights and attention to detail that relying wholly on external auditors can easily miss. This report examines the evidence and describes a process for evaluating that through learning and self-analysis adds value to the project itself.

Introduction

Over the past 100 years the use of forests in the United Kingdom and the focus of work of the Forestry Commission has changed radically. There has been a progression from its beginnings in the early 1900s as a department in the Ministry of Defence, through to an emphasis post-World War II on the economic value of forests and woodlands. Over the last 20 years the focus has moved substantially towards people and the way they use these resources for recreation, education and relaxation. In recognition of this change, the Forestry Commission supports a number of social programmes. One of these, which has recently been evaluated by **nef** (the **new economics foundation**) is called Forest School.

A Forest School represents an alternative teaching environment that is complimentary to the traditional classroom. The evidence collected for **nef**'s evaluation and summarised here shows that for children taking part there is a link between a range of Forest School activities and six specific, positive outcomes that relate to their self-confidence, self-esteem, team-working abilities, motivation, pride in, and understanding of their surroundings.

To undertake the evaluation we involved Forest School leaders (specially trained teachers) and other education professionals from two Welsh pilot projects in a supported self-evaluation process that aimed to build up the picture of how Forest School makes change. In a series of focus group discussions and workshops between April and November 2003 we:

- Built a up a list of activities and their immediate outputs,
- Explored the possible outcomes and established six propositions (specific outcomes) about what Forest School can achieve,
- Developed a hypothesis (or hypotheses) for how the activities lead to those outcomes,
- Collected evidence to demonstrate that changes had indeed taken place,
- And in the course of this developed an easy-to-use, Self-Appraisal Toolkit for these and other Forest School projects to carry out similar evaluations with less reliance on outside support.

The Context

What is Forest School?

Forest Schools are literally “classrooms in the woods”. They are not meant as fieldwork exercises for nature classes, but as an alternative method for teaching children (or young adults) whose learning styles are more suited to manual and physical activity, as opposed to auditory or visual stimuli. (Smith 1996: 41–43 on learning styles) For example, by taking part in outdoor activities such as building rope and stick structures, or exploring the science of lighting fires and boiling kettles, learning is given a different dimension from that already encountered in the classroom, and individuals who have failed elsewhere in school experience the sense of achievement that comes with successfully completing these tasks.

Forest School represents a way of teaching that is attracting a great deal of excitement amongst educational professionals. There is anecdotal evidence that this ‘school in the woods’ has a profound and positive effect on the way young people relate to each other and the world around them. For some children the change of focus introduces a learning space that is distinct and sufficiently distant from any negative associations with the traditional classroom, whilst for others transferring the classroom framework to the outdoors represents a safe way for children to discover a new and unfamiliar environment.

Forest school originated in Scandinavia in the 1950s as a way of teaching children about the natural world. The concept was brought to the United Kingdom in 1995 through the experience of a group of Nursery Nurses visiting Denmark from Bridgwater College in Somerset. There are now approximately 20 Forest Schools in Wales. The Forest Education Initiative (a UK-wide partnership of eight environmental and educational organisations, including the Forestry Commission, the Field Studies Council, the Woodland Trust, Groundwork and the British Trust for Conservation Volunteers) is the body supporting most of the successful Forest Schools in Wales. (FEI 2004)

Why evaluate Forest School?

Most people who have had anything to do with Forest School agree that there is something special about this radical approach to teaching. They see remarkable changes in the behaviour of those children who do not perform as well in traditional classroom environments; they blossom in Forest School.

However, in the United Kingdom Forest Schools are still in an experimental stage and their impacts are only just beginning to be explored. It is therefore important to understand and formally capture this link between Forest School activities and the impact on the individuals who take part if the Forest School concept is to be accepted by an even wider audience. This study represents Phase 1 in a three-stage project that aims over three years to demonstrate that link.

Duffryn and Flintshire

The two Welsh Forest Schools that were involved in this pilot evaluation are supported by the FEI, and it is hoped that this and subsequent studies will contribute to establishing a recognised and perhaps regulated methodology that can be incorporated into the mainstream education system for the country.

Duffryn Junior and Infant School is situated a few miles outside Newport, Gwent. The area is known for high levels of child poverty and has been designated a Communities First Area

by the Welsh Assembly, which means it is in need of community development. The school is located at the centre of a housing estate, and has established a patch of public woodland next to the grounds that is carefully managed for Forest School activities. Children at the school have been having regular contact time as part of their weekly teaching schedule.

The area around Flint is a part of North Wales where heavy industry has traditionally formed the backbone of the local economy. Although not considered deprived enough to qualify for Objective 1 (European Union) Structural funding, the region does contain four Communities First areas.

Evaluation methodology

Qualitative and quantitative evaluation

When combined, qualitative and quantitative measurement used in a detailed evaluation are complementary and help strengthen the case for causation. The more ways that information can be gathered, the more layers there are to a story; the better a case can be made that an activity or output has led to a particular outcome. This evaluation (Phase 1) relies on qualitative measurement to establish a convincing case for the hypothesis about how forest school makes a difference. Further study is planned (Phases 2 and 3) to test this hypothesis by developing ways to collect and compare numerical data.

Table 1. Qualitative and quantitative evaluation compared.

	Quantitative	Qualitative
Typical method	Surveys and sampling	Interview and observation
Questions they answer	What? How many?	Why? How? What unintended consequences?
Strength	Policymakers like it	Handles complexity
Weakness	Dry	Messy
Use in relation to hypotheses	Test them	Generate them

For evaluation to be a useful tool, indeed for it to be possible at all for small projects, it needs to meet a range of criteria. If possible, it should be integral to the way the project is set up and delivered. For this to happen it will need to be simple, the outcomes must be fully appreciated and understood by those involved, and it should be viewed as a long-term process. The methodology should be robust enough to be used consistently over time, varied enough to collect different layers of the story, and yet accessible enough so that it becomes a part of the culture of an organisation. This is more likely to happen if:

- It is easy to use as part of existing activities,
- It is clearly beneficial for those taking part,
- It has opportunities for reflection and learning to help shape future work,
- It identifies things to celebrate.

Why a self-appraisal methodology?

Evaluation is important beyond the justification to a funding body that their money is being well spent. The learning, inspiration and confidence that comes from those responsible or involved in a project knowing that they have, and can, make a difference is as vital to a project's sustainability as the next funding opportunity.

In her book *Leadership and the New Science* Margaret Wheatley writes, 'In the traditional model we leave the interpretation of information to senior or expert people. Although they may be aware, to some extent, that they are interpreting the data, choosing some aspects of it, and ignoring others, few have been aware of how much potential data they lose through acts of observation. A few people, charged with interpreting the data, are, in fact, observing very few of the potentialities contained within that data.' (Wheatley 1994:64 cited in Walker et al. 2000:12)

By this theory, those best placed to evaluate and collect data are the 'stakeholders' involved in the project. These can be wide ranging and in the case of a Forest School include pupils, school staff, Forest School leaders, parents/carers, school governors, the wider community, funding bodies (current and potential) and other key partners. It is these people who are best placed to understand the changes that they are observing in the course of a project in which they are involved.

The resources and the amount of time available to manage these opportunities will dictate to what extent each of them can be useful for data collection. Sometimes the best opportunities for evaluation occur when it would be difficult or expensive for outside evaluators to be involved. Self-appraisal equips those who are in the best position to collect stories for themselves, especially when trying to collect evidence for a many-layered story.

nef's approach

Our experience tells us that as well as demonstrating how certain activities lead to the less tangible outcomes of improved quality of life and well-being, by being participative, evaluation can add value to a project or community by building the capacity of local groups and people involved. **nef** shares the belief with others involved in promoting participative democracy that such an approach achieves the understanding, insight and attention to detail that relying wholly on an external auditor could easily miss.

Recent years have seen a radical change in the thinking on how to measure the effects of regeneration work beyond just inputs and outputs such as the number of people involved, number of trees planted or pots of paint used. **nef** has been at the forefront of this approach to evaluation, especially in attempting to tell the story of regeneration and renewal work from the point of view of the people who are involved and affected, and most particularly in terms of its effect on local social capital and community well-being (Walker et al. 2000).

How we evaluated Forest School

Overview

The challenge was to develop a methodology detailed enough to capture formally what has, until now, been anecdotal evidence of changes in pupils' behaviour, whilst at the same time being as little as possible of a burden on the time and resources of an already hectic teaching schedule.

Table 2. Approaches to evaluation.

	A conventional, non-participative approach	Participative approach favoured by nef
Approach	Top down, predetermined	Participative, adaptive
Role of local stakeholders	As respondents and providers of information only	Active involvement in all stages of the evaluation
Role of evaluator	Plans, manages and decides on process exclusively	Acts as a facilitator and trainer; democratises evaluation process
Indicators	Measuring the "easy to count" inputs and outputs	Capturing impacts on aspects of social capital (e.g. pride, safety, community well-being)
Rationale	Policing (verification / falsification)	Learning (encouragement / appreciation / celebration)

Throughout the first year (which we have called "Phase 1") there were opportunities for those involved in both pilots to compare and share learning, not only about how Forest School works (the success factors), but to understand and be able to tell others how the Forest School activities make the world a different place.

We held two joint workshops at either end of the evaluation period for Forest School Leaders, teachers and representatives of the Forest Education Initiative (FEI) in order to understand the processes behind delivering Forest School. We also established the all-important hypothesis of how a Forest School makes change (we called it "the story"), and began to explore how that hypothesis stood up in reality.

For both pilots this evaluation was divided into three steps:

1. Establish an agreed hypothesis (or hypotheses) for how we think a Forest School project makes a difference,
2. Collect information in the form of case studies on how that difference was observed in particular children,
3. Look back over the project to check whether the story (hypothesis) unfolded as expected, and to reflect on the process itself.

There now needs to be a fourth step. This would constitute "Phase 2", and is about collecting a combination of qualitative and quantitative data to back up the hypothesis developed in Phase 1.

Establishing an agreed hypothesis

We find that there are different understandings of the language used to describe hypotheses. To be clear, the following Table 3 shows the definitions we are using for this evaluation. Note that "outcomes" and "impacts" are here treated as synonyms.

We established an agreed hypothesis centred on understanding (or being able to "tell the story" of) the link between the various activities undertaken in Forest school and the expected eventual outcomes. We did this by asking the project leaders and teachers: "Why do you think

Table 3. Definitions.

Inputs	The Forest School Process; Resources for an activity, or the activities and interventions themselves
Outputs	Direct products or achievements from an activity, and countable units
Outcomes	Consequences, impacts or benefits for the target group (and sometimes others)

this is worth doing?" It involved clarifying the individual steps from inputs and activities through to outputs and outcomes, to make the task of evaluating how successful those steps have been easier to assess.

The hypothesis itself

The background to the hypothesis is that neither the environment nor the activities on their own necessarily bring about the desired outcomes, but do so when combined. The term "forest school" refers not only to activities (e.g. shelter building, or lighting fires), but environmental factors such as the way leaders are trained, how the sessions are coordinated, and the setting in which the activities take place.

Table 4. Examples of activities, outputs and outcomes.

A Activities in Forest School	B Outputs	C Short and Medium-term Outcomes	D Longer-term Outcome
Building structures	A free-standing shelter made from sticks and rope	Increased self confidence	Improved academic performance
Using tools	Basic tools made from sticks	Co-operative behaviour	Increased sense of well-being
Learning safety routines	Knowledge of tool use	Better motivation	Better behaviour
Making objects	Awareness of safety issues	Pride in the neighbourhood	
Games	Experiences to talk and write about	Environmental awareness	
Small, achievable tasks		Improved skills and knowledge	
Co-operative tasks			

The hypothesis behind Forest School is that specifically chosen inputs (column A) are carried out by trained Forest School Leaders in a particular type of environment. Each of these activities either individually or in combination with other activities, produces certain outputs (column B) such as physical objects, or learned skills and behaviour.

Some of these outputs (again individually and in combination) lead to outcomes (column C), some of which can be observed by changes in behaviour or attitudes amongst the individuals who have been involved. These, in turn, can combine with other environmental and specific factors to bring about longer-term outcomes (column D). In a successful Forest School a learning loop is built in at each stage to allow for Forest School Leaders to reflect on and adjust how subsequent activities are delivered and supported.

Although columns A-D are set out in the order in which they occur, the relationship between the columns is not explained. Just because C and D follow A and B, it does not necessarily mean that A and B cause C and D. So although it may be clear that building structures can lead to a free-standing shelter, how that might lead to any or all of the short, medium or longer term outcomes is not immediately obvious.

In order to understand how they might all be linked we need to describe our hypothesis in greater detail and then test it. This is a complex task, and so with Phase 1 of this evaluation we decided to pinpoint six specific and observable outcomes (in this case, column C) and focus on establishing what the link might be between these and the preceding activities and outputs. We called these specific outcomes "propositions".

Developing the six propositions

Focus-group discussion workshops with Forest School Leaders and other staff from both pilots distilled what forest school does into Six Propositions. These propositions are not the complete picture and deliberately simplify the potential outcomes of the Forest School process.

We concentrated on developing the Six Propositions and hypotheses for how Forest School makes change in order to establish what is generic to Forest School whereas, in reality, each individual Forest School operates in its own way depending on local circumstance and the people who are involved. Nevertheless, it was felt that these propositions went a long way to capture the most easily observable outcomes.

The propositions are as follows:

1. Forest school increases the self-esteem and self-confidence of individuals who take part.
2. Forest school improves an individual's ability to work co-operatively and increases their awareness of others.
3. Forest school counters a lack of motivation and negative attitude towards learning.
4. Forest school encourages ownership and pride in the local environment.
5. Forest school encourages an improved relationship with, and better understanding of, the outdoors.
6. Forest school increases the skills and knowledge of the individuals who take part.

The focus of this evaluation therefore became to explore these six propositions to see if we could find a clear link between activities in column A and outcomes in column C. We then collected data on each of the 6 propositions and laid this out as a **Storyboard** (a table describing the activities, their outputs and how they influence outcomes). A version of this table is reproduced in Appendix 1.

Collecting information

In order to establish how the important elements of the story could be captured, we held two meetings for those involved with the support and running of each pilot project. By observing and understanding what a "day in the life" of a Forest School was like we explored different

ways that Forest School leaders could report on activities and observations in a way that was both useful to them and feasible in the limited time available following sessions.

Over the two pilots we experimented with the following methods:

a) A Reporting Template: This enabled Forest School Leaders to structure observations and comments that related directly to the Storyboard at the end of each Forest School session,
b) Questionnaires: These helped teachers, parents/guardians and pupils ask specific questions about behaviour in and out of Forest School, as well as attitudes towards the school,
c) Unstructured reports: These were used by Forest School Leaders following sessions and contained accounts of the activities and their observations,
d) A large spreadsheet: This was used by the Flintshire pilot to collect comments on individual children for a term's worth of Forest School sessions making it easier to compare observations over time.

In addition, we acknowledged that teachers would also be assessing individual pupils on academic performance, although impacts on this were likely to be observable in the longer term and not easily captured within the scope of this evaluation.

This evaluation was about impact measurement and the methods we used looked only at that. As part of a long-term evaluation, qualitative information collected in these ways would need to be combined with quantitative input and output measures. Some of these may already be available to the teachers and staff involved, and this aspect of a self-appraisal methodology would need to be developed as part of the Phase 2 Evaluation.

Looking back over the project

The final data collection exercise took the form of reflection workshops for the participants in each pilot project. Each workshop took the form of a structured focus group using a poster to record comments and findings.

The poster we used was based on a model originally developed by **nef** and the *Shell Better Britain Campaign* as a way for small-scale projects to evaluate their work in order to get maximum learning and a sense of achievement from their results. A set of instructions and questions takes participants through six stages that collect and explore evidence to endorse or challenge their hypotheses, as well as providing an opportunity to look back on how the project was delivered. The complete instructions for the tool are reproduced in Appendix 2.

Participants are encouraged to focus on different aspects of the project's outputs and outcomes. Traditional quantitative evaluation using "before and after" indicators is usually best for catching intended and tangible outcomes (less so for intangible ones); this Poster Session is designed to acknowledge both as well as to understand some of the unintended and unexpected consequences of the project.

It provides a good opportunity to review what has been learnt over the course of a specific period, (e.g. a school term) and most importantly for this evaluation, explored whether the hypotheses on how the project creates impact stood up in reality. To do this the workshop was conducted with close reference to the Storyboard established at the start of the evaluation (reproduced in Appendix 1.)

Drawbacks of the methodology

In carrying out this evaluation, we realised that the methodology we developed had certain limitations from the point of view of rigour. It was clear from the start that this Phase 1 would be a starting point for further study, and that the main outputs would be two-fold:

1. To establish a mechanism for self-appraisal that was easy to use, and therefore likely to be incorporated into the existing routines of the professionals involved with each individual forest school.
2. Establish a hypothesis about how a forest school makes change as a signpost for developing indicators and a methodology to prove it.

It is therefore important when viewing the summary of the findings outlined below (and indeed the complete version of the results presented in the full report) to bare the following points in mind.

- The individuals selected for the study were not part of a random sample, and so we cannot claim that they are scientifically representative of the whole group.
- Within this study there was not an opportunity for a control group to compare changes in behaviour over time with children who had not experienced forest school.
- There has been no formal adjustment to the comments to account for a "dead-weight" factor. i.e. those children who's behaviour may have changed whether or not they had experienced forest school. However the comments made by forest school leaders were made in the context of their inherent knowledge and experience of the individuals involved.
- The study has only been exploring the hypothesis from the point of view of the positive outcomes of forest school.

It is intended that subsequent versions of the self-appraisal methodology, and the approach for further study will attempt to tighten up these aspects of the evaluation process. So far we have been able to present evidence that is compelling, but not conclusive of the impact a forest school environment can have.

Summary of findings of the evaluation

What did we find out?

The evidence collected for this evaluation and presented in the full report shows that for children taking part there is a link between Forest School activities carried out in a specific environment and six specific, positive outcomes that relate to their self-confidence, self-esteem, team working, motivation, pride in, and understanding of their surroundings.

For each of the six propositions the case studies often demonstrate successful achievement of more than one desired outcome. Further study will be needed to establish precisely if this success was due to a particular activity, or a combination of factors that include other activities, and the overall context in which they are delivered.

The report illustrates the evidence collected for each of the six propositions in greater detail, however, for the purposes of this review of the evaluation methodology, the following two headlines provide a useful context for the observations.

Social and human capital

It is important to try and understand and formally capture the link between Forest School activities and the impact on the individuals who take part if the Forest School concept is to be accepted by a wider audience, and especially if it is to become recognised in the mainstream as complementary to more traditional teaching methods.

The sort of changes that were seen in this study of children attending Forest School are often described in terms of their social capital (such as networks of trust and mutual understanding) and human capital (such as personal skills, knowledge, self-confidence and the ability to build relationships). These are linked to their ability to get ahead. (Putnam 2000 chapters 7–8 and Walker et al. 2000: 19, 83–91) Our study clearly showed the links between Forest School activities and the development of aspects of social and human capital.

Environmental protection

Two of the propositions tested during the evaluation were:

1. Forest School encourages ownership and pride in the local environment.
2. Forest School encourages an improved relationship with, and better understanding of, the outdoors.

Both propositions involve a better understanding of the wider environment. The differences between them are to do with the sense of ownership that comes from revisiting a familiar environment for 1 (a short to medium-term outcome), and the confidence to explore new and unfamiliar environments for 2 (a longer-term outcome).

Many of those involved in Forest School believe that for children, a regular exposure to positive environmental experiences when young is a vital contributing factor in awakening, in later life, people's appreciation of the environment and sense of stewardship of the natural world. The report illustrates that in the judgement of the teachers and Forest School leaders involved in the pilots the Forest School experience both provides this positive experience of the environment and leads to an immediate improved awareness of the world around them.

In conclusion: What still needs to be done

We were asked to evaluate the link between activities undertaken in Forest Schools and outcomes that could only be described in terms of their impact on social and human capital. To do this we developed hypotheses describing this link and then gathered data to see if we could find evidence to back it up. By way of a framework for these hypotheses we worked with those involved in the projects to develop six propositions that describe specific, positive outcomes of Forest School activities relating to the self-confidence, self-esteem, team-working abilities, motivation, pride in, and understanding of the surroundings of the individuals who took part.

Our evaluation methodology reflected **nef**'s belief in the benefits of participatory, self-appraisal methods. Accordingly we helped participants develop appropriate, simple tools that they will be able to use with the minimum amount of outsider involvement necessary.

We recognise that more work needs to be done to strengthen the case for the impact a Forest School has on the self-confidence, self-esteem and subsequently the quality of life for the individuals who take part. At **nef** we believe that this is an important challenge to address, as in a world where many important decisions are made on the basis of single bottom-line (financial) accounting only things that are easily measured tend to be considered important. This ties in with **nef**'s other work, such as questioning whether established indices such as GDP adequately reflect the real health and "progress" of a nation (Jackson 2004). In the same way the potential social outcomes of a programme like Forest School are more likely to be realised and recognised when we look beyond traditional academic performance or financial return as the only measure of their success.

Phases 2 and 3 of our evaluation are currently in development and will explore additional ways of collecting evidence, and secure the link between activities and outcomes by making a stronger case for causality. We recognise, for example, that we require more quantitative data to back up the hypotheses established in Phase 1. We may also think about comparing Forest School with other ways of re-engaging disaffected young people in terms of efficiency and cost effectiveness in order to explore the valuable lessons that are to be learned here too.

The success of social programmes like Forest School rely on active participation and engagement of teachers, Forest School leaders and children in understanding how the process works, and in experiencing it working for themselves; we believe that a robust self-appraisal methodology (i.e. Evaluation "done with" as opposed to "done to") that allows stakeholders to tell their own story is the best way to achieve this.

By the end of our work with the two Welsh schools, we had developed and found evidence for six propositions suggesting that there is indeed a link between Forest School activities and the development of social and human capital amongst these young people. We intend to develop these findings by rolling out the methodology to work with more Forest Schools and discover if these propositions are universal as part of an attempt to demonstrate the real value of this approach to teaching.

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Appendix 1

Storyboard Table: Activities, Outputs and Outcomes (Page 1)

"The World before Forest School" **Issues for individuals that Forest School is addressing:**	**Forest School Activities (A)**	**Specific Outputs (B) So that…**	**These lead to the desired outcomes by …**	***"The World after Forest School"*** **Outcomes and observable changes of behaviour (C)**
1. The need for an increase in self esteem and self-confidence	➢ Low pupil – adult ratio ➢ Tool use: to encourage trust and responsibility ➢ Creating and making things (E.g. Shelter, tools, masks) ➢ Child-led games and activities (E.g. Songs and actions)	➢ More one to one time with an adult ➢ Pupil learns new skills, and can recognise that they have learned something new ➢ A pupil produces physical evidence of work (E.g. Shelter, tool, mask) ➢ Taking part in fun group activities, and having the chance to lead them (E.g. choosing words for a song)	➢ The extra support assists the pupil in achieving goals ➢ Pupil sees what they can achieve and that contributes to increased self-esteem and self-confidence ➢ A happier child who is more independent	➢ **The child learner demonstrates an increased self-reliance/independence** ➢ **The child demonstrates a greater confidence in trying out new things** ➢ **The child appears more confident (E.g. Speaks with eye-to-eye contact, initiates conversations.)**
2. An observable lack of Co-operative working and awareness of others	➢ Establishing safety routines (holding brambles for others) ➢ Sharing tools and equipment ➢ Sharing tasks (E.g. fire making) ➢ Building a shelter	➢ Following safety routines ➢ Making something together as a group ➢ Listening to instructions ➢ Talking to others to share tasks ➢ A visible output of a shared piece of work	➢ Gaining experience of working in a team ➢ Helping others and sharing tasks and tools ➢ A building up of trust amongst peers and towards adults ➢ Understanding and employing safety routines that makes individuals more aware of those around them ➢ Seeing the importance of listening to instructions	➢ **Children speak and listen in turn** ➢ **Children work together and appreciate one another** ➢ **A child demonstrates improved relationship with peers and adults (E.g. identifying shared objectives; "gelling" as a group; making new friendships.)**
3. A negative attitude towards learning	➢ Diverse activities and experiences to suit different children (focussed on individual learning styles) ➢ Small achievable tasks (E.g. stick-sharpening) ➢ Child-led activities and games ➢ Discussions and reflection activities for Children on what they have done and learnt	➢ Opportunities to take part, and do different things ➢ Small tasks easily achieved (a sharpened stick) ➢ The need to communicate, more conversation ➢ First hand experience of the outdoors	➢ Providing experiences that offer the child something exciting, positive and personal to write/talk about in class. ➢ Motivating the child ➢ Improving communication ➢ Wider expectations from teachers ➢ Better concentration because the individual's attention is held by something that interests them.	➢ **The child demonstrates a greater interest and enthusiasm for a subject** ➢ **The child appears more eager to learn and demonstrates improved classroom performance (Also seen as part of a teacher's observation and a pupil's academic results)**

Storyboard Table: Activities, Outputs and Outcomes (Page 2)

"The World before Forest School" **Issues for individuals that Forest School is addressing:**	**Forest School Activities (A)**	**Specific Outputs (B) So that…**	**These lead to the desired outcomes by…**	***"The World after Forest School"*** **Outcomes and observable changes of behaviour (C)**
1. Relationship with the outdoors	➢ The Treasure Tree (Finding a hidden object that becomes the focus for the day's activities) ➢ Mini-Beast hunts ➢ 1-2-3 Where are you? Hide and seek game ➢ Being out in all weathers in different seasons ➢ Doing own risk assessment	➢ Routines in Forest School similar to routines in class ➢ Collection of bugs and insects for classroom nature projects ➢ Exploration of a woodland area ➢ Dressed in suitable outdoor clothing that keep you dry ➢ Follow and understand safety rules (E.g. crossing roads safely) ➢ A realistic understanding of potential risks	➢ Linking inside routines with outside ones to provide safe structure to the unfamiliar surroundings ➢ Demystifying the outside, and becoming more aware of the environment, "bringing the outdoors inside" ➢ Having the freedom to explore "wilderness" in a safe way ➢ Encouraging more independent exploration ➢ More confident ➢ Realising that it is alright to get wet and dirty	➢ **The child learner is visibly "at home" in an outside environment – happy to roam and explore on their own**
2. An observed lack of ownership and pride in the local environment	➢ Planting (E.g. A hedge) ➢ Look after a piece of woodland over time, (clearing scrub and brambles and seeing the results in springtime) ➢ Nature projects ➢ Showing visitors around and involving them in Forest School activities (parents and carers)	➢ Things they make in the woods (E.g. Shelter, planted hedge) ➢ Collections for displays and studies ➢ Photographs and diaries describing activities ➢ Parents and Carers involved in activities	➢ Actively taking care of an outdoor space ➢ Becoming more observant of changes when returning to the same plot over time ➢ Encouraging the recognition of sights and sounds of flora and fauna ➢ Talking to others about their Forest School, being able to share experiences out of school	➢ **Visible ownership of and relationship with and pride in a place** ➢ **Increased instances of observation / noticing things** ➢ **Children demonstrate an understanding of the consequences of their actions (E.g. Not dropping litter)**
3. A need to increase skills and knowledge	➢ Helping to set safety rules ➢ Speaking and listening to others ➢ Writing up and recording Forest School activities (communication, Information Technology) ➢ Making pictures; houses and shapes out of sticks (measuring, problem-solving, creativity)	➢ Made objects (E.g. Tools, and artwork) ➢ Use maths to measure/sort ➢ Opportunities for more communication ➢ Writing and drawing exercises ➢ First hand experience for writing exercises	➢ Expanding use of key skills ➢ Increasing learning ➢ Seeing a connection between abstract concepts and the real world (science and numbers in action) ➢ Becoming more confident to approach problem solving	➢ **Understanding and following rules** ➢ **Demonstrating new skills/key skills (E.g. Improved classroom performance and academic achievement in maths and science subjects)** ➢ **Child enjoys a sense of achievement through solving problems**

Appendix 2

Instructions for Reflection Poster workshop

Introduction

This is the last part of data collection for a self-appraisal of a **Forest School**. It is designed so that those who have been involved in the project can look back over the work and reflect on the impacts it has made and the lessons that have been learnt.

It is a good opportunity to review what has been learnt over the course of a specific period, (E.g. a school term) to explore whether your hypotheses on how the project creates impact stand up in reality. To do this you will need to look again at the *Project Storyboard* (the first document in the toolkit) that was prepared when the evaluation of the project was initially planned.

This tool takes the form of a Poster that structures a 1½ to 2½ hour meeting. Participants are guided through a series of stages each focusing on a different aspect of the project's outputs and outcomes. Traditional evaluation using "before and after" indicators is usually best for catching intended outcomes; this Poster Session is designed to acknowledge these as well as to understand some of the un-intended and unexpected consequences of the project, particularly throughout the process of its delivery.

Preparation for the meeting

Who should come?

The session will be attended by up to twelve participants. These are chosen from the various groups who have been involved with or affected by the project. As well as Forest School leaders, you should aim to include members of the school staff, teachers and one or two parents of pupils who have taken part in Forest School activities. This may also be an opportunity to involve some of the pupils themselves, although the tool would need to be modified to meet their needs. As far as possible select representatives from each of these groups to make up an attendance list.

Who runs the session and what should they do?

The Poster session requires no formal knowledge of facilitation. As part of the effort to ensure the fairness of the findings we recommend that the person chosen to run the session should be an outsider who can provide some independence to the proceedings, and give a different perspective to that of those directly involved with this Forest School project.

The Materials

The Poster consists of four separate sheets. These are reproduced ready for printing out at the end of these instructions. The poster needs to be assembled so that each sheet is reproduced on an A1 ("flipchart") sized piece of paper. This can be done easily by taking the electronic version of the poster to a high street printing shop who can print it out on this large format. Alternatively, print out the four sheets onto normal A4 paper and copy them by hand onto four A1 sized flipchart sheets.

In addition to the poster you will need to obtain a set of Post-it Notes in five contrasting colours, and medium/broad-tipped marker pens for each participant. If different coloured Post-it Notes are difficult to obtain, then make sure that you have at least five different coloured pens.

There are six stages to the workshop. These are numbered in the instructions, and denoted by the large numbers on the Poster. Once the meeting begins, the facilitator needs to make sure everyone keeps to time. Aim to complete the workshop in two and a half hours (including breaks). Not every stage will take the same amount of time, in fact the first three stages may only take a few minutes each, whereas the second three stages will take longer.

Put the poster on a firm flat surface so that everybody in the meeting can see it and can stick things on it. You could put it on a wall, on the floor or on a large table.

Arrange the seating so that everyone can see the poster and each other.

You are now ready to start.

(**Note:** We have added an estimated time to each stage to help you plan your time. The whole session should take between 1.5 and 2.5 hours including a break.)

Introductions (expected time 5-10 minutes)

Why are we here?
Explain why you have come together and what you hope to achieve.

What will happen?
Explain what will happen: how long it will take and how you are going to fill in the poster together.

How long will it take?
Agree the time at which you will finish. Explain roughly how long you have for each stage and ask someone in the group to keep an eye on the time.

Introduce yourselves
Introduce yourselves if needs be. If some people don't know each other very well, you can ask them to say more about themselves than who they are and where they come from. Questions they could answer include:
- where they live
- what they like about living there
- their involvement with the project
- what they hope to get from the meeting

(**Note**: Even if **you** know everyone in the room, they might not know each other.)

Stage 1: Name of project and attendance (expected time 5-10 minutes)

It might be that you want to discuss a whole years' worth of Forest School, or maybe just a few sessions. Let the group decide and then write the name of the group and the title of the Forest School project you are reflecting on (if appropriate) at the top of the first sheet of the poster (by the number "1").

Stage 2: Signing In (expected time 5-10 minutes)

Look at the **Key** at the top of the second sheet of the poster (number "2"). There is a table with five rows of boxes, four of which have been left blank. Assign a different coloured post-it note to each of the shaded boxes on the left hand side of the table. If you are not using different coloured Post-it notes, denote each shaded box with a different coloured marker pen.

Now check how many people are present at the meeting.

If there are four people or fewer at the meeting:
Ask each person to write his or her name in one of the boxes of the left-hand column entitled: **Names**. People don't have to write anything in the column **Group Name**. Don't divide into groups but give each individual a different-coloured pad of Post-it notes (or a different coloured marker pen) and continue as normal. Now go to the: 'Who is not here?' step in this stage.

If there are more than four people at the meeting:
Ask everyone to divide themselves into no more than four groups. As a rule, people should go in the same group if they have something in common in relation to the project.

For example, you might want to divide up into groups made up of Forest School Leaders, School Teachers, School Staff and Parents. If you don't want to give yourselves group names, just divide yourselves into four, equally sized groups.

Once you have agreed how to divide up, ask each group to write down their group name (if they have chosen one) in one of the boxes labeled **Group Name** on the right-hand column of the **Key**. Then ask each person to write his or her name in the 'Names' box in the left-hand column. You can now go to: 'Who is not here?'

Who is not here?
The last group of the **Key** is labeled "Who is not here?" Ask everybody if there are groups or individuals not present at the meeting who may have a perspective different from those that are already represented. Agree on the most important groups or individuals (not more than three) and write their names in the space next to this box. If you have some way of representing their opinions at the meeting, remember to include these (this may include a written note, notes from a prior telephone conversation or someone representing the opinions of the absent party). Be careful of misrepresenting absent people and do note that they were not actually present at the meeting.

(**Note***:* Don't get bogged down in this section! If there aren't obvious groups then just divide yourselves as equally as possible.)

Stage 3: Calibrate the Timeline (expected time 5-10 minutes)

Today's date
Enter today's date in the box labelled "You Are Here" at the right-hand end of the timeline on the second sheet of the poster.

Starting date
Agree the start date of the part of the Forest School project that you want to focus on and enter that at the beginning of the timeline.

(**Note:** If you are in any doubt, go back to the *Project Storyboard* and see what date was entered there as the project start date.)

Between Starting and Today's date
Mark the timeline with some years and/or months so that you can record events in the right place.

Stage 4: Highs and Lows (expected time 35-45 minutes)

Divide up into the groups that you have decided on. Each group must have a different coloured set of Post-it Notes corresponding to the key, and a pen (or coloured pens if using same-coloured Post-it Notes).

Using Post-it Notes
Ask each group to discuss amongst themselves and to agree on the two highest and two lowest points of the project. They could start by noting as many Highs and Lows as they like, but eventually they will need to choose two of each for the poster. Ask them to give each high and low a short title that describes it (e.g. 'First mini-beast hunt'). Write each title on a Post-it Note. Also write a very brief reason explaining why it was a high or low. So, for example, your Post-it note could read "First mini-beast hunt – real sense of excitement in the group".

Presenting group by group
Each group presents its Highs and Lows to everybody else in the room while attaching the Post-it Notes to the poster.

Place the highs and lows (the post-it notes) on the poster at the appropriate date along the timeline. *Highs go above the timeline and lows below. The further away from the timeline, the more extreme the high or low was.*

As a group, decide if there are any potential Highs or Lows for those people or groups you noted in the "Who is not here" box, and attach corresponding Post-it notes to the poster as well.

(**Note:** If you haven't already done so now might be a good time to take a 10/15-minute break)

Stage 5: Connections, Impacts and Learning (expected time 5-15 minutes)

Connections

Now the whole group has a look at the poster and discusses the overall picture. Can you see any connections between different highs and lows, for example where a high or low point has led to subsequent highs and lows? Use a marker pen to link them up with arrows.

Now refer back to the *Project Storyboard* prepared at the start of the project. This consists of two parts:

1. A Theories of Change template describing the original hypothesis about how the project was intended to make change.
2. A Project Planning Timeline on which the line on the left shows the anticipated order of activities and milestones, and on the right (dotted line) the expected outcomes.

Use the spaces on the Evaluation Poster to write down what you as a group notice as the Impacts and Learning from the project. Here are some suggested questions you could use to focus this discussion. If there is not enough room on the poster, summarise your answers on a separate flipchart sheet.

Impacts

1. Where has Forest School worked? (i.e. What evidence do you have that your anticipated outcomes have happened as expected?)
2. Describe any "spin-off" effects from doing this work (E.g. New relationships formed; how Forest School is perceived by "outsiders" etc.)

Learning

1. What have you learnt in the last few months that you didn't already know about Forest School?
2. What would you have done differently during the last few months if you knew at the start of this Forest School project what you know now?

Stage 6: Moving Forward (expected time 20-30 minutes)

You have thought about highs and lows, and you have highlighted some lessons. Now it is time to take a look into the future. Ask the whole group to answer the following three questions and complete the table on the far right-hand side of the poster:

1. **What do we want to achieve next?**

Think about the goals that still need to be achieved. Maybe you want to change the direction of the project, or develop the next one.

2. **What do we need to do in order to achieve it?**

Once you have clarified your goals think carefully which actions will be necessary in order to achieve them. You will probably also want to think about who could take responsibility for particular actions and deadlines.

3. **So that you know you have succeeded…**

…what realistic targets, goals and outcomes would you set yourself for future Forest School projects in terms of:

a) Impacts (i.e. Results - outputs and outcomes)
b) Process (i.e. How Forest School is managed)?

You have now completed the poster. Well done!

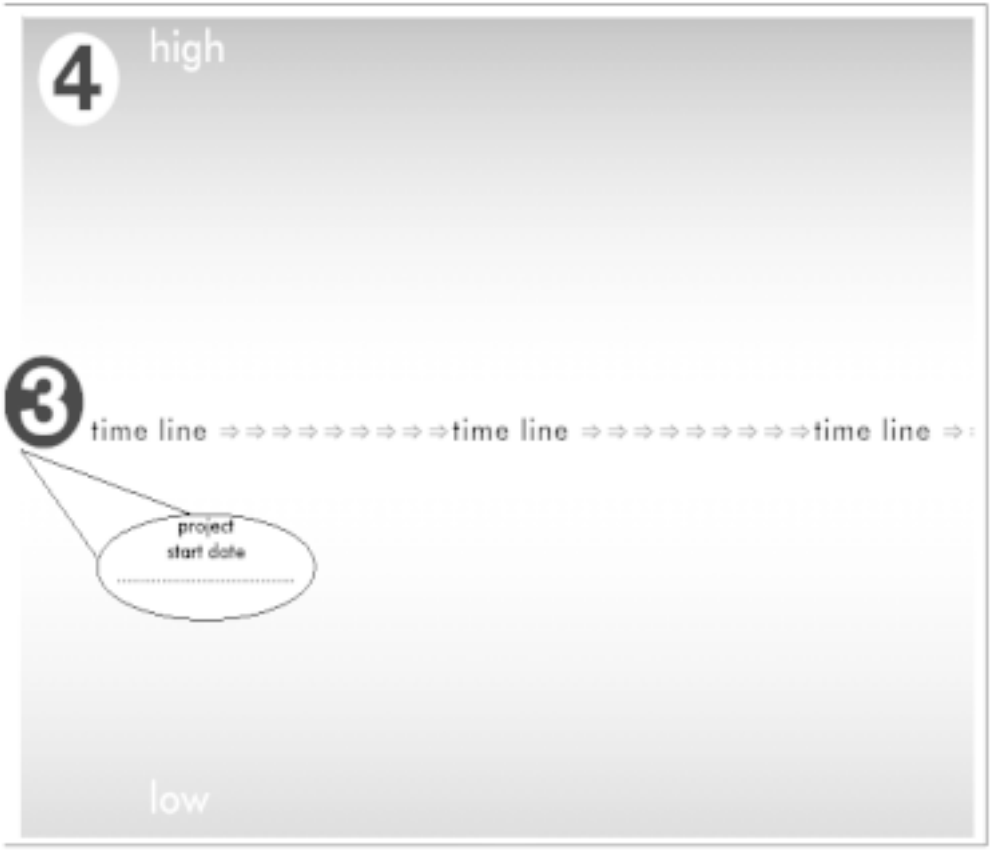
Feeding back

When the meeting is over, it may be useful to take a few moments to transfer the information from the poster onto a separate sheet of A4 paper. This would be to summarise what happened in the meeting for yourself and be useful for telling other people who were not able to attend. It can also form part of a final report.

Forest School Project

1 Name of group: _____

Name of project: _____



Evaluation Poster

2

KEY

Names	Group Name
	Who's not here?

What have we Learned?

IMPACTS

LEARNING

Moving Forward

1. What do we want to achieve next?	2. What do we need to do to achieve it?

3. So that we know we have succeeded..

This tool has been adapted from a poster that was developed by the New Economics Foundation in conjunction with the Shell Better Britain Campaign.

Integrating Legal Conflicts into U.S. Public Forest Policy Analysis: A Shift in Paradigm

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Abstract

Political conflicts over the uses and management of the US national forests are increasingly being manifested in courts of law. Traditionally, forest policy analysis in the US has not adequately addressed the role that these lawsuits play, either in how they affect policy choices, or in how they affect agency behavior. This paper suggests that faced with litigation as a permanent fixture in US national forest management, public forest policy analysis must adopt tools explicitly designed to address the implications of judicial involvement in forest management in order to better provide guidance for policy and decision-makers.

Keywords: Litigation, public participation, national forests, adversarial

Introduction

In the United States, forest policy decisions have been traditionally analyzed by applying sets of criteria designed to identify policy alternatives, to illustrate prospectively whether particular decisions will be successful, and to retrospectively assess whether prior decisions have proven successful. The management of US national forests, however, entails value conflicts that in one important respect have largely been unaccounted for within traditional policy analysis approaches. By discounting the types and effects of these conflicts, particularly as they are manifested in the US judicial system, policy analysts risk failing to offer suitable policy alternatives for public forest managers facing increasing legal disputes over management choices. Public forest policy analysis should explicitly consider legal conflicts and the tools designed to analyze those conflicts and their participants.

Gérard Buttoud, Birger Solberg, Ilpo Tikkanen and Brita Pajari (eds.)
The Evaluation of Forest Policies and Programmes
EFI Proceedings No. 52, 2004

The traditional approach

Forest policy analysis in the US is largely rooted in the rational-comprehensive and rational-incremental traditions of policy development. The scientific and methodological approaches to forest management in the US have influenced the manner in which the political aspects of that same management are both developed and critiqued. Classical approaches typically focus upon applying a series of criteria that describe the factors (Worrell 1970; Clawson 1975), or societal contexts (O'Laughlin 2004), that may impact or impede decision-making. While these approaches, and others, offer important insights into policy formulation and implementation, and certainly help to define the problem a particular policy is attempting to solve, none of these methods explicitly provides for the unique manner in which policy disputes in the US are often resolved. While each of these approaches has room to accommodate the role of legal conflicts, they are not designed to analyze and resolve that particular policy process.

In the US, the court system is often used as an alternative policy forum when other avenues are unavailable or less preferable (Kagan 2001). For example, when the Congress (legislative branch) and the President (executive branch) are unwilling or unable to provide a particular public land policy solution, an individual or group can turn to the court system (judicial branch) for relief. While the use of courts to accomplish policy goals is by no means unique to the US, it is the undue reliance upon the judiciary that is a hallmark of the US public lands system among Western democracies. Federal laws such as the Equal Access to Justice Act (Public Law 96-481) provide incentives for lawsuits by compensating litigants that prevail against the US government. Litigation is a recognized tool for forcing forest policy changes (Jones and Taylor 1995). A victory in a single lawsuit may have programmatic nationwide effects on Forest Service programs.

US forest policy analysis typically considers both the social acceptability and administrative practicality of alternatives. Assessing these two criteria will provide insights into whether policy implementation will likely fail due to divisiveness over either the policy goals or the means of implementation. These analysis filters, however, do not adequately account for adversarial legalism, nor for the specific legal processes that can influence or obstruct agency implementation. Further, the criteria contribute little to strategies or methods for mitigating the effects of adversarial legalism. While economic efficiency is often an analysis criteria, legal efficiency is nearly always overlooked.

One could persuasively argue that the fundamental goal of US national forest policy analysis for at least the last 40 years has been to develop methods to facilitate the management of the national forests in the face of recurrent value conflicts. Those efforts, however, in attempting to find new solutions to these value conflicts have overlooked the fact that value conflicts and legal conflicts are intimately related. One cannot be resolved without addressing the other. So long as the means and the incentives exist to utilize the judicial system, efforts to assuage value conflicts will prove fruitless. For example, in order to meet Forest Service management goals, new policy tools such as *collaboration* and *consensus building* have appeared in efforts to procedurally address stakeholder value conflicts, while eschewing fundamental legal changes designed to curtail the conflicts. Even proponents of collaborative decision-making manage to neglect the barrier that adversarial legalism presents to the viability of any such alternative form of public policy process (Wondolleck and Yaffee 2000). These tools even have the potential to exacerbate conflicts (Walker and Hurley 2004).

For all of these efforts, the shortcomings of the classical analysis paradigm have become apparent (USDA Forest Service 2002). It was recognized a decade ago that increased research into the role that the judicial system plays in national forest policy was warranted (Ellefson 1992). The inability of the Forest Service to resolve or even manage legal conflicts

within the current system, and the inability of policy scholars to offer effective solutions, suggests that a fundamental problem exists in how national forest management is characterized, and how the legal conflicts that the agency faces can best be managed.

National forests in context

The US national forests comprise approximately 77 million hectares of public land located in virtually every state of the US (Figure 1). These lands are managed by the United States Forest Service (Forest Service) for sustainable delivery of a variety of uses including timber, water, recreation, wildlife and fish habitat, and forage. While these uses were established in statutes enacted over the course of the last 100 years, no comprehensive national forest management law has been enacted in three decades. Other national laws affecting national forest management, however, have been enacted such as the Administrative Procedures Act (APA), the Endangered Species Act (ESA) and the National Environmental Policy Act (NEPA). These laws impose conditions and requirements on the Forest Service, though they do not direct national forest management. This amalgam of laws has empowered litigants dissatisfied with Forest Service management. In addition to creating new substantive and procedural requirements for the agency, provisions for citizen-based litigation has been likewise expanded. Each programmatic management plan for even a single national forest has nearly 100 laws and regulations with which the Forest Service must comply in promulgating that plan. Developing such plans can take nearly as long as the plan's lawful duration – ten to fifteen years.

National forest management faces two fundamental problems that compound one another, and continue to confound the Forest Service. The first is that modern national forest management is characterized by personal value conflicts that are in many cases irreconcilable. Fundamental normative questions such as whether commercial timber harvesting should occur on the national forests remain unresolved, continuing to provide fertile ground for policy debates and litigation. The Forest Service, an executive agency with delegated, not original management authority, cannot resolve such value conflicts (Floyd 1999).

The United States Congress is the source of the second problem. Though constitutionally empowered to establish management direction, the Congress has been reluctant to provide specific management guidance for resolving value conflicts (Mortimer 2002). The multiple uses for which the national forests are to be legally managed have thus remained sources of conflict for nearly 40 years. Even today, no agreement exists over whether *ecosystem management* is merely one of, or the premiere management strategy for the national forests (see Meidinger 1997 and Fitzsimmons 1999 for contrasting views).

These conflicts can manifest in two forms: administrative appeals and lawsuits. It is only within the last five to ten years that policy researchers have begun examining the role these forms play in forest policy formulation and implementation. A series of catastrophic wildfire seasons largely provided the impetus for many of those studies (GAO 2001, 2003, Mortimer and others 2004). Though appeals and litigation can have sweeping effects on national forest management, the overall lack of research reinforces the thesis that the judicial components of policy have until recently been largely ignored.

While quantifying the number of administrative appeals and lawsuits affecting the national forests is an admittedly evasive target for a number of reasons, the available data tends to demonstrate several trends. The first is that the number of appeals is remaining fairly constant (Cortner et al. 2003). That constancy, however, masks the fact that though the annual number of project-level appeals averages nearly 1000/year, and as the volume of timber commercially harvested from the national forests has declined sharply in the last decade, appeals have not

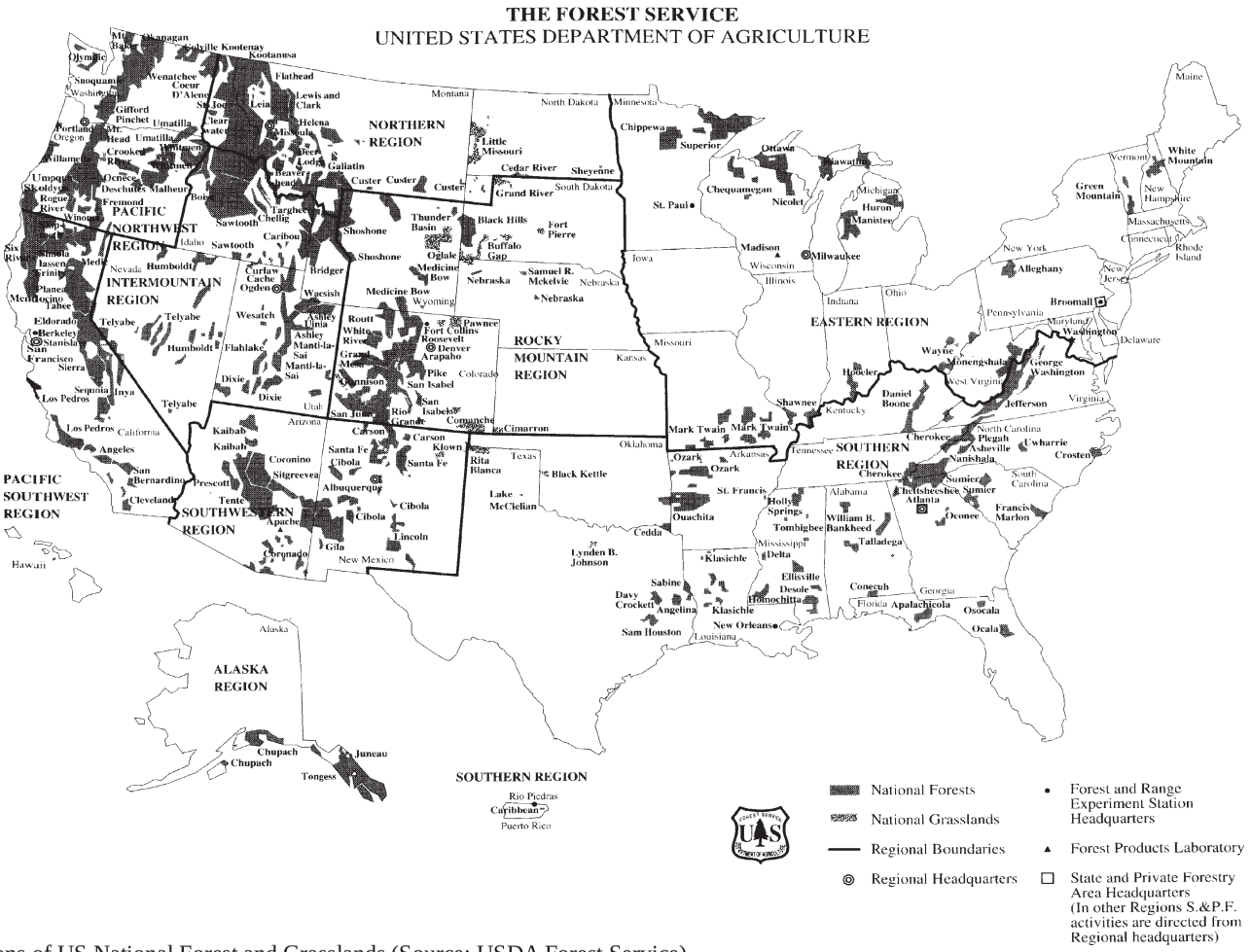

Figure 1. Locations of US National Forest and Grasslands (Source: USDA Forest Service).

likewise declined. The costs and delays attributed to appeal intensity remain points of concern for policy makers and agency personnel at all levels.

Lawsuits have behaved differently. Unlike appeals, available data suggests that litigation is steadily increasing against the Forest Service, though the primary management grievance, timber harvesting, has declined substantially (Malmsheimer et al. 2004; Mortimer 2002). Citizens and interest groups are turning more often to the courts to contest Forest Service decisions with which they disagree. Legal conflicts over national forest uses can be locally manifested, but can also reflect national strategies. Understanding the various uses of lawsuits and the precedential value of those suits is crucial to understanding why the Forest Service has cried "gridlock!" (USDA 2002)

Finally, the overall role that citizens play in national forest decision-making has expanded greatly over the last 50 years. Participation in natural resource decision-making has become a well-established facet of public land management, resulting from both statutory and regulatory institutions. Simultaneously, however, the United States has developed a special-interest political culture (Lowi 1969). Interest group liberalism or pluralism can exacerbate national forest value conflicts by providing both the mechanism and the incentives for political actors to avoid difficult decisions and to pass the effects of vague edicts to the administering agency (Mortimer 2002). The US Congress, with the duty and the means to resolve value conflicts, has ample incentives to avoid doing so. Policy implementation, then, becomes the highlight of the controversy, and that is where adversarial legalism is at its strongest. To illustrate, the two most significant national forest administrative regulations promulgated by the current Bush administration, categorical exclusions for small timber sales and those for fire hazard reduction projects, were immediately challenged in federal courts. Similarly, litigation over former President Clinton's Roadless policies continues nearly four years after their inception. Organized groups with adequate resources have access to policy actors at multiple levels, resulting in often unpredictable forest policy outcomes, and exacerbating the tendency for legal conflict at the implementation level.

Evidence for a new paradigm

Two of the primary federal laws directing national forest management, the 1974 Forest and Range Renewable Resources Planning Act (RPA) and the 1976 National Forest Management Act (NFMA) are tributes to rational-comprehensive planning and public participation theories. In the intervening 38 years, no equally comprehensive piece of national forest legislation has been enacted. It is perhaps no coincidence that national forest policy analysis has likewise been grounded in planning and public participation, to the exclusion of other policy or political science approaches.

Part of the difficulty in assessing the detailed behavior of policy participants in Forest Service implementation is the sheer volume of information. With 155 national forests, each with an accompanying plan, and thousands of individual projects per year nationwide, it is daunting to analyze agency behavior with sufficient resolution to begin to draw conclusions. This impediment has contributed to the lack of qualitative legal research on Forest Service decisions.

In an attempt to illuminate research questions and to clarify policy participant behavior, a study was undertaken in 2003 to assess all of the Forest Service projects that have resulted in lawsuits on the two national forests located in the Commonwealth of Virginia. Preliminary results from that research suggest that litigation plays a key role in how interested parties behave and how the agency reacts. Rather than issues of concern being distilled for the agency to address as the projects progress through the planning process, the process permits

and encourages expansion of issues of concern. Issues are raised at the later appeal stage that were not raised during the Forest Service's earlier environmental analysis and public participation phase. Certainly, this is partially a strategy to prepare for litigation, where matters not raised before the agency cannot generally be later raised in court.

While quantitative assessments of appeals and litigation can provide some information, they do very little to describe the details of the conflicts facing the agency. Difficulties abound with determining whether appellants are individual or groups, as often one individual or group will appeal on behalf of others, preserving the right for any to file a lawsuit, but confusing the question of which parties are actually involved. Many of the interested parties in this study exhibited interconnected relationships that a quantitative study would miss. The study suggests that informal processes to resolve disputes are ineffectual, particularly when the aggrieved parties have very little to lose by litigating, and very little incentive to negotiate.

Finally, the study noted that the only sample lawsuit in which a Forest Service decision was invalidated in court occurred when the litigant managed to initiate the lawsuit in a state different from the state in which the forest project was located. This technique, referred to as "forum shopping," reflects a sophisticated litigant more concerned with a judicial victory than with local participation in dispute resolution.

Litigation in the study sample, on average, doubled the time it took the agency to prepare and implement a project, to in excess of three years. This presents fundamental obstacles for an agency seeking to address exigent problems such as insect infestation, recovering value from standing dead timber, or rehabilitative efforts on fire-damaged sites.

No approach to national forest policy has adequately accounted for the detailed questions raised in this study.

Shaping a new paradigm

For better or for worse, previous forest policy choices have empowered legal conflicts generated by underlying value conflicts over national forest management decisions. If progress is to be made in managing both legal conflicts and routine judicial involvement in public land management, it is no longer acceptable to ignore theories and approaches for understanding legal conflicts. Such approaches, including game theory, negotiation theory, and the attitudinal model of judicial behavior, suggest alternative means for framing the problems facing national forest management. The attitudinal model of judicial behavior, for example, is a political science tool that may better explain the role of courts in natural resource disputes (Malmsheimer and Floyd 2004). What all of these approaches share is a common recognition that legal conflicts are inevitable. These theories are designed to understand litigation behavior, to develop strategies for mitigating legal conflict, and even to maximize chances to prevail in legal conflicts. There is a substantial body of literature addressing the application of these approaches in environmental regulatory settings, in conflicts between a regulating agency and a regulated industry. Thus far, however, applying them to conflicts between interest groups and resource management agencies remains largely untested.

US forest policy analysis has been hamstrung by the notion that management conflicts can somehow be soothed by application of the "right" process or by "sufficient" participation by the appropriate stakeholders. Analysts lulled into seeking such policy panaceas instead of pursuing critical assessments of the manner in which interest groups behave and the effects of judicial involvement have prevented US national forest policy from evolving in a much-needed direction.

As one commenter noted:

> *The ultimate difficulty with citizen participation through litigation is not that it encourages extreme policies – though that sometimes may be the result. The ultimate difficulty is that it invites deadlock and perversity in the conduct of public policy (Rabkin 1989: 259).*

Unless and until the US Congress is willing to correct the statutory basis for national forest management to one with less potential for litigation, or to provide mechanisms to dampen the interest group zeal for litigation, policy analysis must address the fact that such litigation has and will continue to play a pivotal role in national forest policy implementation and Forest Service effectiveness (Thomas 2000). An adversarial analysis paradigm is long overdue.

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Political Science on a Tightrope Walk? Analyzing and Deliberating on the Formulation of a New German Federal Forest Act

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Abstract

In the first part of the paper a case study is presented, in which we applied the Advocacy Coalition Framework to the current dispute about the amendment of the Federal Forest Act in Germany. Political actors can be grouped into two advocacy coalitions, which are characterized by fundamental differences not only in their normative precepts, but also in terms of problem perception and policy preferences. In the second part, we deal with the subsequent difficulties for scientists caught up in such a "struggle for beliefs". By reflecting our role as deliberators we show that our participatory approach failed due to the inescapable binding of knowledge to its political context. As a result, in disputes where core-beliefs are involved we plead for a discourse-oriented understanding of policy deliberation: Proposing independent "story-lines" might help to reshape the policy process.

Keywords: policy analysis, advocacy coalition framework, policy deliberation, science/ policy interface, story-line

Introduction

In many European countries forest policy is determined by ongoing discussions about the ecological quality of forest management and about suitable ways of improving the ecological state of the forests. The elementarity and emotionality of conflicts between involved political actors challenge scientists, because on the one hand their research interest is high and the political actors' demand for policy deliberation is urgent, but on the other hand scientists tend to avoid a close involvement in controversial politics as a potential endangerment of their scientific reputation. All in all, the discipline of forest policy science faces the ongoing

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challenges more or less step by step, and as far as policy deliberation is concerned, the role of forest policy scientists varies largely between reluctance and political engagement.

In the following, we introduce the case of the dispute about the amendment of the Federal Forest Act in Germany. As we give advice to one of the key actors, the development of a highly controversial conflict strongly involved us in the political discussion and notably changed our understanding of policy deliberation. Reflecting on this process the paper addresses the following questions:

1. What are the determining factors in the dispute about the amendment of the Federal Forest Act, and moreover, why is the current struggle so controversial and emotional?
2. What is our role as scientists and deliberators in the policy arena?
3. What consequences can be drawn for further policy deliberation?

1. The Dispute about the amendment of the Federal Forest Act

Germany's forest policy arena is currently troubled by the intention of the Federal Government to introduce a new Federal Forest Act. Core of the amendment is the implementation of ecological standards for forest management (*"Gute fachliche Praxis"*). While ENGOs and the nature protection administration are supporting that goal (NABU 2004), parts of the state forest services and most forest associations are refusing the amendment. The latter founded an "Alliance for Sustainability in the Federal Forest Act" (DFWR and DHWR 2004), which argues against the amendment. The arguments of both sides are controversial and the discussion between the actors is not sophisticated.

We dealt with the first question mentioned above in an empirical study investigating the political constellation concerning the amendment of the Federal Forest Act. Our theoretical approach was the Advocacy Coalition Framework (ACF) of Sabatier and Jenkins-Smith (Sabatier 1993; Sabatier 1998; Sabatier and Jenkins-Smith 1993, 1999). The main assumption of the ACF is that the actors in a policy subsystem can be grouped together in two or more advocacy coalitions. These long-lasting coalitions are held together by complex belief systems, which can be understood as sets of normative axioms, fundamental policy strategies and causal beliefs. These belief systems can be described as a hierarchical, tripartite structure: While the members of the coalitions attach great importance to the persistence of the so called deep-core beliefs (about human nature, relative valuation of individual freedom versus social equality, vulnerability of nature and so forth) and the policy-core beliefs (which comprise basic strategies to achieve core values and causal perceptions across a subsystem), they are more adaptive concerning the secondary aspects of their belief system (e.g. instrumental decisions).

It is now essential that the action of advocacy coalition members is guided by common policy-core beliefs, which are very resistant to change, and not, as it is assumed in the theory of rational choice, driven by short-term and changeable interests (Kunz 1994). Hence, the motivation of the coalitions concerning public policy is characterized by their attempts to introduce as many elements of their own belief systems as possible into governmental programs and instruments. The different advocacy coalitions of one policy subsystem compete in a struggle for ideas, paradigms and elements of political governance, which requires a non-trivial degree of coordinated action. Referring to one of the main points of criticism of the ACF, which is the neglect of collective action problems (Schlager 1995), it is argued that to make political strategies complementary costs would be reduced if actors shared the same policy beliefs and therefore trusted each other. Moreover, findings from the field of social psychology facilitate effective coordination among coalition members (even in

Table 1. Beliefs of advocacy coalitions in the Canadian, Swedish and Indonesian (Elliot 2000) as well as in the German (Klins 2000) discussion about forest certification.

"Timber Production Coalition"		"Forest Conservation Coalition"	
Germany	Canada, Indonesia, Sweden	Germany	Canada, Indonesia, Sweden
Primacy of timber production and therefore resulting measures	Economic development; long-term supplies for industry	Forests are endangered	Environmental protection; loss of old-growth forests and biodiversity
Basic principle of sustainability and therefore resulting measures	Adequate performance; no urgent problems	NGOs have to get involved, as others do not act in forest protection	Clear cutting, impacts of intensive forestry on biodiversity
Primacy of forest knowledge (long-lasting experience)	Scientific knowledge meets the needs	Primacy of nature and natural processes as paragons for forest management	Knowledge incomplete; underestimating impacts of forestry
Basic principle of long-range decisions		Participation in decisions is obligatory	More public participation is needed
Primacy of private ownership	Primacy of forest owners and shareholders		

Source: Memmler 2003

case of severe distributive (interest) conflicts within the coalition), as in high-conflict situations actors tend to perceive their opponents as more evil and more powerful than they probably are ("devil shift", Sabatier et al. 1987). On the other hand, these mechanisms widen the cleavage between the coalitions and lead to emotional and intensive conflict. In addition, the ACF has got significant consequences as to the use of new information (e.g. scientific proposals): Due to perceptions influenced by pre-existing beliefs actors tend to reject knowledge that questions the coherence of their core belief systems (e.g. knowledge, which leads to cognitive dissonances) and try to limit changes to secondary aspects. Altogether these mechanisms lead to long-lasting stable advocacy coalitions within a policy subsystem, which compete in recurrent conflicts (Sabatier 1998, 1999).

At least from the early 1990s onwards the existence of advocacy coalitions in the German forest policy sector is obvious. However, despite of the fact that the ACF is considered to be a promising approach (Glück 2000, Krott 2001) evidence of such coalitions has not been empirically discovered in German forest policy – except for one study of forest certification (Klins 2000). The comparison of his findings with those of Elliot (2000) indicates the transferability to many countries (comp. Table 1).

The contrasting beliefs of "Timber Production Coalition" and "Forest Conservation Coalition" became obvious especially during discussions about standardization of sustainable forest management:

"As long as the concept of SFM [sustainable forest management] remains a vague political symbol, it is acceptable to everyone. Vagueness allows various interpretations; actors can

emphasize those aspects, which are central to their belief systems, and ignore that which challenges them. But conflicts emerge whenever demands are to be incorporated in policies that may introduce further restrictions on ownership rights and challenge the position of the dominant forest policy community, for instance when operational standards of SFM are to be defined with participation of environmental interest groups and agencies […]. Then, the potential influence of actors from outside the traditional forest policy community threatens to take hold." (Hogl 2000).

Thus, the assumption for our study was that the formation and persistence of advocacy coalitions with important differences in their core-belief systems could also be observed in the current conflict concerning the Federal Forest Act and could furthermore explain the heated conflict. To test this assumption twenty-two qualitative interviews with representatives of corporate actors involved in forest and nature protection policy were carried out by Memmler during summer and fall 2003. He used the technique of problem-centred interviews (Witzel 2000) and analyzed the data with the help of a qualitative content analysis (Mayring 2003).

The results give evidence of the existence of two advocacy coalitions within the policy subsystem concerning the conflict about the Federal Forest Act: The so-called "Contra-coalition" (rejecting the amendment of the Federal Forest Act) comprises almost all forest associations and parts of the state forest administrations, whereas the "Pro-coalition" (favoring the amendment of the Federal Forest Act) predominantly consists of ENGOs and the Federal Ministry for the Environment. The advocacy coalitions are characterized by fundamental differences in their policy cores; even their problem definitions vary significantly (comp. Figure 1). Drawing on the ACF, Table 2 gives a good impression of differences in the policy core and the secondary elements of the belief systems of the two coalitions.

The fundamental differences in the belief systems of both coalitions obviously occur in the perception of need for action (overall importance of the problem: economic versus ecological crisis) and continue when looking at other beliefs like the demand for regulation or the adequate level for regulation. All in all, the results confirm the findings of Klins (2000), who described and analyzed the conflict between the different forest certification systems. Obviously the constellation of a Timber Production Coalition and a Forest Conservation Coalition prevails in Germany's forest policy subsystem, although the characterization of both belief systems gives a more differentiated impression of the belief guidelines than for instance Elliot's description of the Canadian, Indonesian and Swedish forest policy subsystems (Elliott 2000).

Of course, basic analytical respectively theoretical questions when applying the belief system concept of the ACF remain complex (comp. Hann 1995): In spite of the existence of fundamental differences in the beliefs of both coalitions, the differentiation of core and secondary beliefs is problematic. For example the essential question whether a definition of proper and sustainable forest management (especially ecological standards) should be legally codified, is a concrete instrumental question and should consequently be of second-range interest. But as this question is (I) subsystemwide in scope, (II) highly salient and (III) has been a major source of cleavage for at least two decades, this firstly secondary question became a substantial element of the policy cores, a so called "policy core policy preference" (Sabatier 1999). That question seems to be of highly symbolic importance for both coalitions. Moreover, it is directly connected with other core elements.

The distinction between rational interests on the one hand and more persuasive elements like beliefs on the other hand is problematic, too. Although emphasizing the integrative potential of the ACF which combines rational and normative-cognitive elements in the belief system concept, Sabatier (1993) points out the importance of long-lasting beliefs, which surpass short-term interests. For example the recognition of the principle of local site differences as an important principle restricting superordinate regulation is surely deep-seated

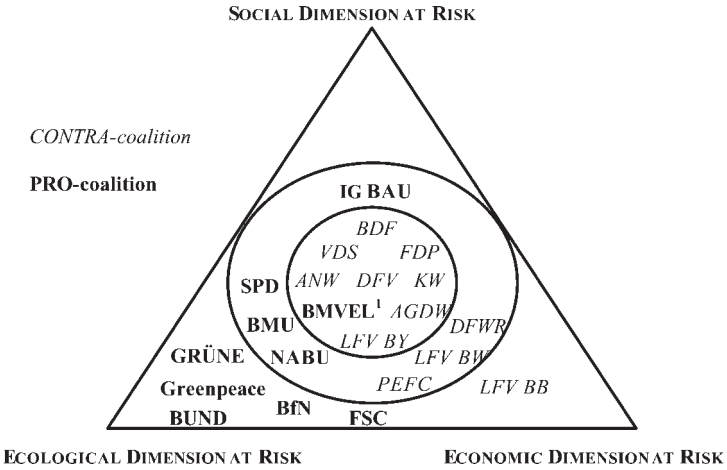

Figure 1. Appreciation of sustainability in German forestry: While members of the coalition which is in favour for the amendment (Pro-coalition) consider the ecological and social dimension of sustainability as insufficient, actors of the refusing Contra-coalition either perceive German forestry as sufficiently sustainable (actors arranged in the centre) or point out the jeopardized economic dimension of sustainability (Source: Memmler 2003).

Legend: Actors which consider German forestry as generally sustainable, but see current demand for improvement in one dimension of sustainability, are to be found in the ring around the centre. Other actors are to be found in the corners of the triangle because they estimate that certain aspects of sustainability are lacking. It should be mentioned that these actors of the Contra-coalition, which see deficits concerning the economic dimension, consider this lack of economic sustainability primarily as a profitability problem, not as an exceeding of forest resources.
1) Because of his belief the interviewee from BMVEL (subsection of forestry) has to be placed in the Contra-coalition. Nevertheless, the head of the ministry, which is officially responsible for the Federal Forest Act, supports the amendment.

Actors: AGDW: Association of German Forest Owners; ANW: Working Group ac-cording to nature Forestry; BDF: Federation of German Foresters; BMVEL: Federal Ministry of Agriculture; BfN: Federal Agency for Nature Conservation; BMU: Federal Ministry for the Environment; BUND: Bund für Umwelt- und Naturschutz Deutschland (ENGO); DFV: German Foresters Association; DFWR: German Forestry Council; FDP: Liberal Party; FSC: Forest Stewardship Council; KW: Communal Forest Association Nordrhein-Westfalen, GRÜNE: Green Party; IG BAU: Industrial Union of Construction, Agrarian and Environment; LFV BB/BW/BY: State Forest Administrations of Brandenburg, Baden-Württemberg and Bavaria, NABU: Naturschutzbund Deutschland (ENGO); PEFC: Pan European Forest Certification; SPD: Social Democratic Party; VDS: German Sawmill Association

in the forester's belief system, but then we found some evidence that the preference of the Contra-coalition for the *Bundesländer* level as an adequate level for regulation could also be motivated by the dominance of conservative and liberal parties at that level of government. Maybe the deep-seated belief that site diversity is important is used by interest-guided stakeholders to mobilize the Contra-coalition against the amendment. Therefore a mixture of beliefs and interests is imaginable. Furthermore, it is surprising that the IG BAU which was considered to be a member of the Pro-coalition (comp. Figure 1) has recently joined the Contra-coalition as the industrial union seems to share most beliefs of the Pro-coalition.

Table 2. Differences in the belief systems regarding the policy core beliefs.

Pro-coalition		Contra-coalition
Policy Core: Fundamental normative precepts		
Ecosystem management	Idea of nature use	Sustainable timber production
Society and non-human living	whose welfare is of greatest concern	Forest owners and forest enterprises
Policy Core: Precepts with a substantial empirical component		
1. Characteristics of the problem		
Sustainability of forestry is not yet sufficient considering ecological and social aspects.	Definition of the problem Overall seriousness	Sustainability of forestry is given, whereas economic aspects are jeopardized.
Silviculture is ecologically insufficient (widespread pure conifer stands).	Basic causes of the problem	Low timber prices (due to natural hazards, weak economic situation, strong competition)
Federal Forest Act is antiqueted. Advanced legal standards are needed to ensure a certain ecological level.	Need for action to address the problem	Federal Forest Act is approved of by the satisfying state of the forests.
2. Proper distribution of authority between government and market		
Conservation of forest area and ecological standards of forest management (to ensure forest functions) should be regulated by law.	Intensity of regulation	Economic self-healing options should be ensured. Conservation of forest area is of primary importance.
3. Adequate distribution of competences between different political levels		
Basic forest management rules can be implemented at federal level, as the variability of sites is also given at the *Bundesländer* level and a nationwide minimum-standardization is required.	Adequate level for regulation Importance of site differences	Due to high variability of sites and local conditions management rules could be implemented at most at the *Bundesländer* level. The federal government should set an abstract regulative frame.
4. Priority accorded various policy instruments		
A legal implementation of ecological standards is essential as 1. it ensures a ecological minimum benefit, 2. a pre-requisite for the use of non-regulative instruments, 3. silviculture close to nature is (in the long run) economic favorable, 4. the effect of legal standards is rather "moral" than factual (trend-setting).	Reasonable Instrument Application Policy core policy preferences: "*Gute fachliche Praxis*"	A legal implementation of ecological standards is counterproductive as 1.voluntary activities are foiled, 2. the use of economic instruments is constricted, 3. enforcement is extensive and costly, 4. potentials for further development will be restricted, 5. standardization of management endangeres diversity of forests.

Source: Memmler (2003) referring to Sabatier (1999), here modified.

Therefore, its behavior in future will be of high interest. These two examples show the need for further research on the general relationship between interests and beliefs.

All in all the evidence of the ACF as a useful analytical tool in the struggle for the amendment of the Federal Forest Act is convincing: Not only are ideational aspects integrated (resulting in a more "realistic" rationality model of actors), but also the institutional differentiation between bureaucrats, politicians, interest groups, scientists and journalists has been overcome. Various actors from all these social spheres (and even within one institution like in our case within the Federal Ministry of Agriculture (BMVEL), see above) form advocacy coalitions to assert their forest policy beliefs.

2. Policy Deliberation caught up in a struggle for beliefs

As mentioned above, our institute was involved in that conflict from the beginning. In 2001, we were given a research assignment by the Federal Agency for Nature Conservation to develop criteria for a definition of ecological forest management standards and to describe possibilities of the implementation of such standards. We divided our task into two steps: First, we tried to gather all available scientific information concerning the influence of forest management on the subjects of protection and to describe the relationships between different dimensions of sustainability in forest management. Secondly, with the help of an expert workshop we tried to identify possible ecological standards by reflecting on the conflict potentials of the dimensions of sustainability. Consequently, these ecological standards were the result of a confluent analysis of ecological, economic and social demands on forest management. Finally we presented these standards in a research report and suggested a political discussion process about these proposals (Winkel and Volz 2003).

After our presentation of the research report, a heated discussion developed. At first, we received criticism and support from both, nature conservation activists as well as forest associations. Later on, it was remarkable to observe how the above described "coalitions" formed: While the Contra-coalition formulated a strictly renunciative position, the Pro-coalition became increasingly uncritical and supported our proposals.

In a next phase of our research activities, we organized workshops inviting the political actors involved to offer a platform for the discussion process. Although these workshops were strongly demanded especially by the Contra-coalition, most of them had to be cancelled due to the latter's short-term withdrawal. Finally just one workshop took place. It was characterized by hard and procedure-oriented discussions without leading to a substantial compromise.

During that process, our idea of policy deliberation was the derivation of proposals based on scientific research while at the same time we pointed out that a political negotiating process was inescapable, as we considered the formulation of ecological standards not only an analytic-scientific, but also a normative-political task integrating norms and values. We actually tried to act as a broker between the advocacy coalitions and different belief systems. Such brokers are independent actors, who cannot be clearly placed in one of the coalitions; they mediate between opposite belief systems and translate the different system codes. They are committed to finding common solutions to the problems. As we saw an obvious demand for such a brokering institution, we interpreted our research assignment as a challenge to act as a policy broker.

Obviously this understanding of policy deliberation didn't sufficiently fit into the policy arena. The ACF-perspective provide for an explanation for that observation. Firstly, by describing conflicts between the economic and ecological dimension of forest management we attach importance to the ecological problems of forest sustainability as "serious"

problems. By doing this, we automatically share an important element of the belief system of the Pro-coalition, as we did not concentrate our research on economic problems of forest enterprises, for example. Secondly, by suggesting elements for a (legal) definition of proper and sustainable forest management we followed the problem-solution path of the Pro-coalition, too. By doing this, we implicitly challenge the forestry's self-regulation ability – obviously the main goal of many forest policy actors (Krott 1996). Therefore, it was not important for the political discussion, that our proposals very much tried to find a balance between economic, ecological and social aspects of forest management. It was not important either, whether even in case of a verbal legal codification there would be a strong impact on forest practice, either economically or ecologically, which was questioned by protagonists of the Pro-coalition at the beginning of the discourse. In other words: Referring to the rationality of the belief systems involved it is not so important whether a definition of ecological standards has got any negative or positive economic or ecological consequences. But it is of crucial importance whether such a definition exists or not.

By developing a solution for a problem, which is perceived as an important problem by only one of the advocacy coalitions, our role in the discussion process shifted towards the position of an advocate of the Pro-coalition, although our own perception of our role was the position of a policy broker. Interestingly then our actions and proposals were seen as the actions of an advocate of the Pro-coalition. Moreover, the polarization became even stronger as the Contra-coalition persuaded the Federal Ministry of Agriculture (BMVEL) to carry out a second survey stressing the economic consequences of a legal definition of ecological standards. This expertise emphasized the potential economic risks of such a problem-solution path (Thoroe et al. 2003) and therefore supported the position of the Contra-coalition. Thus for us the necessity of predominantly having to argue against one coalition increased the shift towards the position of an advocate of the other coalition.

"When knowledge can be brought into connection with (political) 'interests', it is sometimes seen as helpful, sometimes as contradictory, and sometimes even as dangerous. Knowledge – in a political context – inevitably becomes the object of this type of value judgements as soon as it enters the political arena. This inescapable binding of scientific knowledge to its context is the essence of the politicization of science" (Weingart 2003). In addition, the demand of the political actors to support their positions with scientific expertise – the scientization of politics – bind the two spheres more strongly together (Weingart 2003).

How can scientists avoid this entanglement? Sabatier and Zafonte (2001) make out two possibilities for a university scientist's role in the struggle between the belief systems: Either scientists concentrate on research without (direct) political relevance and consequently drop out of the political process, or while deliberating actively they accept to be regarded as "members of specific coalitions in terms of sharing a set of policy core beliefs." In other words, the more scientists try to assist politics with their knowledge, the more they risk losing their neutrality and the more they become (actively and passively) part of the political game and part of the advocacy coalition system, too. By offering solutions to the problems, even by analyzing problems they automatically share elements of one belief system and ignore elements of other beliefs. The embedding of policy deliberation in a struggle for beliefs disillusions the policy deliberator, as he insists on the non-existence of a "rational choice" between conflicting belief systems and furthermore, starts to see political rationality as an "oxymoron" (Dryzek 1990). And if so the basic assumptions of the technocratic as well as of the decisonistic model of policy deliberation are no longer maintainable: "that of 1) the linear sequence of political problem definition, scientific advice and political decision-making; that of 2) the value-freedom of scientific knowledge; and 3) that of the scientific experts' political neutrality." (Weingart 2003)

The failure of the "rationality project" (deLeon 1993) in policy deliberation led to new approaches, which can be described as a "democratization" of scientific policy deliberation

(Wewer 2003). DeLeon (1993) pleads for the active implementation of Habermas' "critical theory" by establishing democratic panels of citizens and experts to initiate decision processes by integrating expertise and different rationalities or beliefs. Mai (1999) stresses the necessity of unconventional discourses between scientists and politicians especially in dynamic policy arenas, whereas the protagonists of "Post-Normal-Science" plead for a participatory creation of knowledge and decisions especially with regard to political problems, where the decision stakes are high and/or the system uncertainties are significant (Funtowicz and Ravetz 1992). Fischer (1993) deals with „wicked" political problems, which are characterized by the involvement of different rationalities and the failure of "technical" or "objective" solutions. According to him a way out is the participation of all the political actors concerned in policy analysis and deliberation (Participatory Policy Analysis).

Paradoxically our research-approach based on the idea of participatory policy deliberation (Saretzki 2003). Referring to a scientific proposal we tried to establish a platform for a discursive, participatory and procedure-oriented process which dealt with the "problem" of ecological sustainability in forestry and with possible policy instruments. As mentioned above, this participatory approach, although it was strongly demanded especially by some actors of the Contra-coalition, failed due to the fact that these actors called off their participation at short notice. Somehow the discursive and participatory approach didn't work out. With regard to this Sabatier and Zafonte (2001) mention an interesting precondition for scientific policy mediation: "A forum will be successful only in a context of policy stalemate, i.e. when each of the coalitions views a continuation of the status quo as unacceptable. […] If any should view the status quo as acceptable, then it will be much less willing to compromise and may even not participate." Obviously, this precondition is not given in the arena researched by us, as even the problem definitions of the coalitions differ significantly (comp. Figure 1). Moreover, it is maybe not given in many fields of environmental policy.

More abstractly speaking, the participatory policy deliberation is absurd, if it imports blockades and stagnancy from the policy arena instead of getting over them. It seems that the democratization of policy deliberation is in this case somehow losing its potential for being innovative.

3. Conclusion: Walking the tightrope

We would clearly like to point out one aspect: With our skeptical assessment of participatory policy deliberation we do not want to withdraw into the illusory ivory tower of a somehow aristocratic policy deliberation. But we state that in our case, and maybe in many cases of controversial policy subsystems with core-belief positions involved, a participatory deliberation approach does not eventually help to overcome the dilemmas and blockades of a policy subsystem.

Maybe under these circumstances it is more fruitful for policy deliberation to dare the development and proposal of independent, but nevertheless balanced "solutions" for certain problems. These proposals are scientific as their genesis should be transparent, arguments clearly expressed, norms should be reflected and exposed. Other perspectives and alternative proposals as long as they are perceived should be described. Of course, the proposals will never be rational and free from beliefs and pre-assumptions, regardless of how we reflect on them. By doing so we accept the insufficiency or relativity of every scientific policy deliberation. But we don't give up the opportunity to propose innovative ideas, as scientific experts can gradually influence the political process if they produce alternative problem-defining "story lines" (Hajer 1993, 1997, 2003). Provided that they are considered as the

most adequate by some political actors, they may shape the following policy process and subsequently help to solve complex political problems (Saretzki 2003, comp.).

Nevertheless the democratization of policy deliberation takes place, as the deliberator faces particularly two challenges: First, his "story line" has to go through a political and scientific controversial discourse about the problems and possible solutions to the problems. Whatever his role in this discourse is, a policy broker, an advocate of a coalition or an independent advocate of his own idea, the struggle for facts, beliefs and proposals should generate the most transparent and sophisticated deliberation process for all involved stakeholders. Secondly, scientific deliberation will never develop complete policies, as these policies always need decisions concerning norms and beliefs, which should not be replaced by scientific paradigms. Therefore, the relativities and boundaries of scientific policy deliberation must be clearly expressed and the responsibilities of a political decision process must be stressed by scientists. This final decision, needless to say, will be unavoidably determined not only by the dominant "story line", but also by factors like the distribution of resources, power and the overall political atmosphere. Due to these factors, even if a "story line" is convincing in the discourse, its political institutionalization could fail (Saretzki 2003). But apparently this political failure cannot be anticipated by the scientific deliberator.

Of course, this understanding of policy deliberation is not easy to handle and will always stay a tightrope walk between normativity, advocacy, mediation and scientific rules. Moreover, one's own self-conception as well as one's own role perceived by others should be carefully considered during the deliberation process because of the impact of the politicization of science: "The distance between science and politics is narrowing rapidly, the coupling is becoming closer, but without it being possible to efface the differences between the two. Here, as in the relationship to the economy and the media, the loss of distance becomes a problem of the science's credibility, or rather, from society´s point of view, a problem for the preservation of a source of reliable knowledge." (Weingart 2003)

Nevertheless, we agree with Weingart's conclusion, that there is no alternative to the described narrowing the gap between science and politics, as both sides depend on each other. This holds especially true for environmental policy, as almost all challenging environmental problems were firstly discovered by scientists (Markl 1997). With regard to this we conclude that the tightrope walk is worth to be done.

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Evaluation of Regional Forest Programmes in Spain – Introducing Forest Resources Management Programmes

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Summary

Through the experience of the 17 Regional Forest Programmes (RFPs) in Spain, the article presents the diverse strategies adopted in each region for their evaluation. It is noted that the only thing evaluated is the degree of accomplishment of the investments. The main shortages in the implementation of the RFPs in the Spanish results: the lack of real participation, because it has only been treated as a simple consultancy process. Its repercussions have driven two principal problems for the implementation: (i) the impossibility of direct action on the private owned forests, (ii) the lack of private financing mobilization of other sectors.

The article therefore explains two new instruments of forest policy: (i) "land stewardship", which has as object the contractuality between the private parties. (ii) Forest Resources Management Programmes (PORF) created by the Spanish NFP, as instrument of land management at the local level.

Main conclusions of the article are: (i) the political action carried on at the local level in the PORF has one of its main problems and challenges in the ability to motivate private forest owners; (ii) the evaluation of a PORF also depends on how it is accounted in the integration of the forest planning with the land management planning, and in the promotion of the relationship with other sectors; (iii) another aspect to be evaluated is the consensus reached through the contracts in order to get investments in the private forest ownership, mobilising money from public funds and/or private funds.

Keywords: Regional Forest Programmes, strategic forest planning.

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1. Introduction

After the task of forest policy science in the process of the Forest Programmes (Glück et al. 1999a and 1999b; Niskanen and Väyrynen 1999; COST E19 1999), a new stage of contribution for the evaluation of the implementation of the Forest Programmes has now emerged in its double finality – technical and political. The technical-operative goal is that the criteria of the sustainable forest management (SFM) are accomplished and therefore the forest would have their management plan. The political-strategic goal is that there will be a mobilization of the local stakeholders and at the same time, financing is also mobilized.

Statement of the problem

RFPs in Spain are not being implemented because of multiple factors: the lack of funds, disagreement among forest owners and Forest Service, no-integration with land use management plans, gap between strategic forest planning and operative forest management, etc. This leads us to questions such as:

- What do we evaluate after a Regional Forest Programme (RFP)?
- How to meet the SFM indicators?
- How to increase the public and private investments?
- How to increase the awareness on the forests of the stakeholders and the society?
- How to increase the importance of the forestry sector on the rest of the political priorities?
- Who has the right to evaluate?
- How often do they have to be done and with which consequences?

2. Follow-up and evaluation of the RFPs in Spain

In 1999 when the COST Action E19 programme on "National Forest Programmes in European Context" was started, Spain had already had its first Regional Forest Programme for ten years. This has been followed by seven others, by 2003 when the Government approved the Spanish National Forest Programme, 17 regions were completed

These documents appeared as a strategic political planning, because of the transference process of federal domains in forestry from the central government to the regions, and the subsequent need of definition and internal organization in each region.

The experience of the 17 Regional Forest Programmes, elaborated along the last 15 years offers a wide variety of methodologies and therefore different results (Alcanda 2003).

Evaluation systems in Spain

The experiences in Spain (Figure 1) concerning the RFPs and their evaluation are also very heterogeneous. The diverse strategies adopted are as follows:

- Cantabria, La Rioja, etc. have defined a list of physical indicators in relative or absolute terms which can be verified annually.
- Valencia, Andalucía, País Vasco, etc. have created a specific committee responsible for the analysing and checking of the implementation with the duty of an annual inform.

Figure 1. Regions of Spain.

- Catalunya, Castilla y León, Castilla la Mancha, etc. do not specify any mechanism for evaluation.
- Finally other regions have a mixed system which combines two or more of the above mentioned methods.
- Only in Navarra is it determined that the stakeholders are responsible for executing each measure, and therefore only in this case can we discover who has failed in the implementation.

But in most of the cases, the only thing to evaluate is the degree of accomplishment of the investments, duty that the measures proposed are often difficult to quantify because the goals are not quantitative.

These measures remain in a total strategic stage, which is not translated to the silviculture that a private forest owner applies on his or her property. For example, some silvicultural measures taken in the RFP of Valencia are:

- Fostering of the planning and silviculture in the private forests through subsidies.
- Reforestation in the degrading areas with high and very high erosion and without soil limitations with autochthon species adapted to the ecological conditions for each location.

The actions proposed by a RFP do not appear quantified, with a forecasted budget, time or space. And even if we take into consideration an ideal compromise between the Forest Service and the representatives of the stakeholders, this does not mean that the implementation of the RFP is assured except in the public owned lands. Then the problem becomes that 65% of the territory is privately owned, where only their owners choose what to do with their property.

3. Main shortages in the implementation of the RFPs in Spain

In reality, RFPs in Spain have lacked real participation, because it has only been treated as a simple consultancy process, which was supposed to build a negotiation scenery among all related stakeholders: owners, managers and users, and the translation of these negotiations in land stewardships as contracts among them. There are two principal problems in the implementation of the RFPs in not achieving the implication of either the forest owners, nor the most powerful economic sectors: (i) the impossibility of direct action on the private owned forests, and (ii) the lack of private financing mobilization of other sectors.

Intervention problems in private owned forests

The structure of forest ownership in Spain is 65% private and 35% public. Only 5 % of the public forests belong to the central or regional government, while 30% belongs to local municipalities. The average is that a parcel is only of 1 ha (Ministry of Environment 2002). It is currently unknown who the private owners are and how many of them there are. But we can presume there to be around 60 000 to 120 000, with an average extension of 1 ha, it could possibly reach the total of one million parcels.

Another problem in the elaboration of RFPs in most of the cases is that it has been conceived by the Forest Service as a management tool for the public owned forests. None of the regions have been able to apply any innovative models for the private forest land, apart from subsidies, and direct investment in case of emergency (forest fires, diseases…) (Fabra and Alcanda 2003).

Therefore, the consequence is that the proposed RFPs actions are only implemented in the lands that the Forest Service manages directly. The privately owned forests representatives, even in the regions where the participation and the consensus have been higher, have not been able to translate the sustainable management among the private forest owners individually for the properties where there has not been elaborated Technical Forest Management Plans (Figure 2). In the privately owned land, individual owners will be the ones who decide the silvicultural management to apply. The main success for the forest planning in the private owned forests have been produced in Catalunya, thanks to the creation of the Private Forest Ownership Centre (Rojas 2002).

Lack of mobilization of private financial resources

The forest sector is marginal and weak in Spain, even in the frame of the agricultural sector, (and will remains like that until the intangible products, services or externalities will be taken into account). This is mainly because the forest has no economic profit for the forest owner, and thus the result is the practical inexistence of forest stakeholders in most of the Spanish regions. Only conservationists are associated (ENGOs etc.) and derive their influence in these political lines with results favouring their criteria, acting as a lobby.

The concept of “land stewardship”, has been introduced very recently in Catalunya (Xarxa Custodia Territori 2002), and has the object the contractuality between the private aspects, one of them is the ownership (Figure 3). The challenge is the management of the natural resources preservation. The outcome of these agreements is usually to get involved any organization with high economic power. This is easy because an important aspect of the Spanish law is that the Saving Banks have to provide funds from their annual earnings for social and environmental activities.

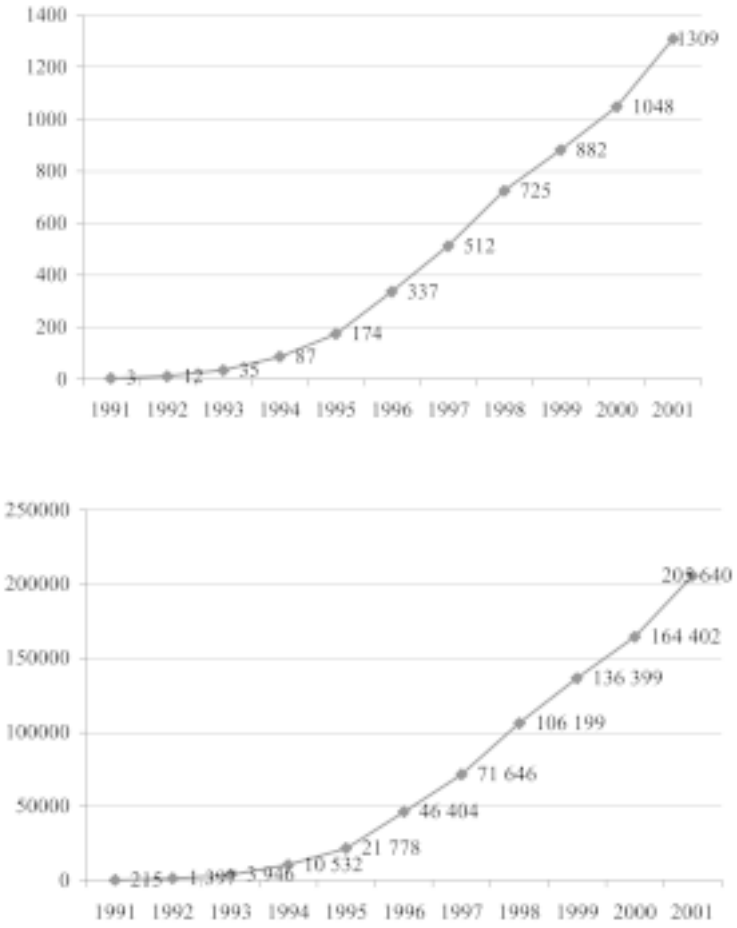

Figure 2. The number of technical forest management plans (top) and the number of hectares managed by them (bottom) (Source: Private Forest Ownership Centre).

As an important example, by 1997 the "Foundation Territory and Landscape (FTP)" which belongs to Caixa Catalunya Bank was created, with the main goal to invest in Social Fund in Nature related matters. Nowadays the FTP runs an annual budget around 3.6 mill. •. Its main activity is the acquisition of unprotected territories, through purchase, lease or transfer, for the conservation and their subsequent management. The FTP works in collaboration with local conservation bodies, non-government organizations and public authorities.

4. Forest Resources Management Programmes for the implementation of the RFPs

In the Spanish National Forest Programme (Action 6.A.2.1) (Ministry of Environment… 2003a) as in the Spanish Forest Law 43/2003 (art. 31) (Ministry of Environment… 2003b) promote the elaboration of the Forest Resources Management Programmes (PORF), as instruments of land

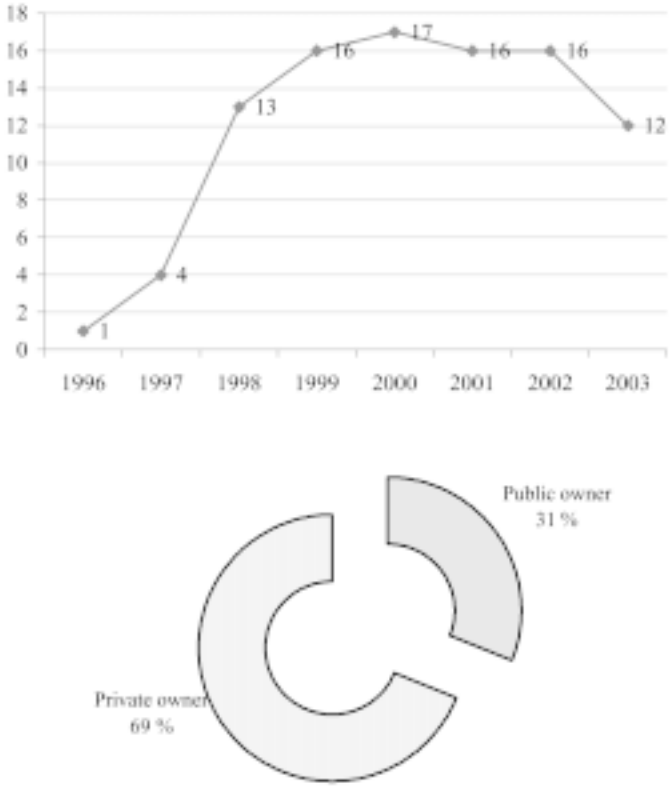

Figure 3. The number of contractual agreements from 1996–2003 (top) and the share of forest ownership with the contractual agreements (bottom) (Source: Caixa Catalunya Bank).

management with sector character in forestry, with an extension wider than a forest but smaller than a county. Thus, the working scale of a PORF is at the local level.

Thus its objective results double with the integration with the rest of land management planning (protected spaces, urbanization etc.) and on the other hand fulfilling the current gap in the vertical logic of the forest planning, between the strategic RFPs, and the operative Technical Forest Management Plans.

In Spain, no PORF has still been elaborated, and nowadays the methodology for its elaboration is under debate, as it could be approached from two perspectives:

- As an instrument for planning the uses of the territory by the Administration at smaller scale than the RFP, following its same scheme (and therefore its same mistakes in the implementation). This is how it seems that the Forest Law 43/2003 determines the consultancy participative method and the non-collaboration during the process of decision-making.
- As a document of policy implementation that requires the RFP to get passed at this scale. The main obstacles that the RFP faced were (i) mobilization of private economic resources and (ii) the mobilisation of the private forest owners. This has to be fixed through contracts where the owners act as a lobby and get to interest the private financial sector to invest in them voluntarily or legislatively.

5. PORF: territorial, participative and contractual

Among the main currently ongoing debates among the technicians is how to integrate the triple idea of the PORF: (i) integration of the land management planning (zoning and regulations at the local level); (ii) activation of the private interest through animation and negotiation; and (iii) contracting for its implementation.

The "mixed model" explains this triple idea which necessarily implies solutions balancing the social needs, and automatically promotes the management schemes as multi-beneficiaries and takes measures to be implemented through multiparty contracts fixing consensus (Buttoud 2002).

The article 12 of the French forest law (Ministry of Agriculture… 2001) creates the forestry territorial contract ("Charte Forestière de Territoire"), that can be established with the goal to carry on a programme of integral actions once every several years.

Participative process in the CFT-France

The local level of planning is where it makes the most sense to utilise the "bottom-up approach" with an interactive face-to-face negotiation, among the local stakeholders and the technicians who manage this territory.

To achieve this, the representatives do not have to be in the active procedure of negotiation, but the represented stakeholders have to participate in the share of responsibilities. So will be in first person to sign the compromises through to the contractual formulas and take individually the responsibilities.

Therefore, the main differences between PORF in respect to the RFPs are:

- People who have to deal and negotiate are the ones with their own interests affected and not their representatives through institutions.
- The Town Councils (local Administration), with own juridical entity, constitute by themselves territories to be planned, which often have already land management plans and even local criteria for natural resources management which have to be dealt to adjust and complement each other.
- There could be conflicts with other planning instruments at the same scale, defended by other stakeholders, as for example the Protected Land Programmes.
- The technical team in the affected territory is reduced from hundreds to tens.

The main known problems in the participative processes at this level are:

- Difficulty to develop mechanisms of integration between the different territorial scales of planning and the correspondent political environments of decision.
- Lack of speakers because the lack of representatives of some of the forest stakeholders
- Partiality of the responsible in the decision-making, because of the personal relationships.
- External users of the territory, who are not owners, with their interests far from the forest environment. Often even the owners do not live in the region.

The main objective is to reach the compromise among all the stakeholders to increase agreements at the long term to ensue that the negotiation and the conflict resolution shall be intensive. This will also be reinforcing the role of the main actors.

To overcome these problems two figures of facilitation have to be generated as it has been done in France. By using the figures of "animateur" in the political role, and the "pilote" in the administrative and technical role, in order to decentralise both roles.

The contractual formulas and the mobilization of the private financial resources

The contractual formulas have to involve the forest owners, managers and users in the translation of strategic to operative planning in the same proportion. The goal has to be to increase the commitment among the different parties, even if they are between the public and private parties. Also the private sector needs administrative quality control, but in any case not to lose the goal to motivate the forest owner to manage their forests.

The draft of the law for the landscape protection in Catalunya, for the establishment of a tariff on any infrastructure that the public administrators or the private agents build on land classified as non-urban, is a first step very favourable in this sense. This 1% tax of the infrastructure global budget will be destined to finance landscape preservation programmes in the affected areas.

Besides, another line recently opened for financing, is derived from the National Programme of Emission Rights Assignments, as transposition of the Kyoto protocol. The absorption of CO_2 by the forests is a scientifically contrasted fact that has to be taken advantage of. The way to establish the mechanisms for the companies that don't meet the reductions has to be studied, to give the possibility to invest in forests, and therefore to promote the forest as CO_2 sinks with a future vision.

6. HOW to evaluate the PORF

Two levels of evaluation could be differentiated, the strategic-political and the operative-technical. The first seeks to evaluate two elementary goals, human resources and financial resources mobilisation. The second seeks to evaluate the accomplishment of the sustainable forest management principles and therefore, the forest management planning.

In general, the success can be evaluated in a project helped by the following indicators:

- Indicator of result progress, independently of the initial situation.
- Indicator of efficiency, to check until which social and economical level it has been raised

The evaluation of the achievement of the PORF goal consists fundamentally of finding out which actors are attached to which objectives and which financing has been found for them. Some of the measurements for evaluation at this level could be as follows:

- Measurement of the validity of the diagnostic (e.g. number of persons audited)
- Measurement of the mobilisation of the local actor (e.g. number of meetings and level of participation in them)
- Measurement of the mobilization of the private forest ownership (e.g. part of the territory and part of the owners involved in the actions for the implementation)
- Measurement of the involvement of the stakeholders and society in projects (e.g. financing compromises among the stakeholders)

Concerning the evaluation of the specific actions, at the field level:

- First, to check if there are specific measures,
- second, whether they answer to the local actors demands or not, and
- third, to evaluate if the process has allowed to treat the "hot points" in the territory.

If the action at this level results satisfactory, then it shall be the best evaluation of the RFP. It should have positive effects and therefore the strategic goals would be transferred to the operative level. And then, this means that it has had its effects for a more sustainable forest

management. This can be measured at the political level, evaluating the number of Technical Forest Management Programmes and in the mobilisation of financial resources (public funds are limited).

In the evaluation at the forest level, from a more technical approach, the indicators that come into action are the ones used in the forest management certification, (following any scheme UNE 162002, PEFC, FSC, or other).

About the rest of the questions asked at the introduction about who, when, when, and with which finality to evaluate, it seems logical that an independent professional institution should be used to evaluate. With annual frequency, and with the finality that the results arrive to all stakeholders, with the goal that has to be the public opinion that analyses widely and judges the results.

7. Conclusions

The evaluation of Regional Forest Programmes has to be effective and efficient in its implementation, and at the same time to have their effects on the forests.

The political action carried on at the local level in the PORF has one of its main problems and challenges in the ability to motivate private forest owners. They need to organise themselves to constitute a strong actor and become a marketable sector.

The evaluation of a PORF also depends on how it is accounted in the integration of the forest planning with the land management planning, and in the promotion of the relationship with other sectors, it means, the cross-sectoral coordination.

Another aspect to be evaluated is the consensus reached through contracts in order to get investments in the private forest ownership, mobilising money from public funds and/or private funds.

The next steps in the research for the forest policies and programmes evaluation assessment, would be how to quantify the efficiency of each instrument, not only in its working scale (RFP at regional scale, PORF at the local scale, Technical Forest Programmes at the forest scale), but also in the link between each planning scale above and below, until the effects are noticed at the forest level.

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Bridging the Gap between Managerial and Participatory Evaluations of Forestry Progammes: The Case of the Vosges after the 1999 Storm[1]

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Nancy, France

Abstract

On 26 December 1999, the storm Lothar caused unprecedented damages to Vosgian forests. In response, public authorities set up the so-called Relief Plan for Forests (RPF), the most comprehensive programme ever intended for the sector. Because of both issues and money at stake, the RPF has been subject to several evaluations, which was not systematically done in the case of previous programmes. In France, public policies can be assessed by two different procedures: evaluations can be made in a managerial way, with an objective to fit to an administrative rationale or they can carried out in a more participatory way, giving larger room to the appreciation of stakeholders. In the Vosges, parallel assessments of the RPF have been carried out recently, and resulted in contrasted conclusions. From the point of view of local decision-maker, neither approach is entirely satisfactory. As a major contributor to the plan, the Government of the Vosges entrusted the French Institute of Forestry, Agricultural and Environmental Engineering (ENGREF) with the task of carrying out a local evaluation which combines both scientific expertise and public participation. Based on the emerging paradigm of ecosystem management and using the methodology of the mixed-model, the conceptual framework proposed combines a logical-deductive chain of evaluation with negotiation procedures. This paper describes the experimental process developed and its expected results.

Keywords: *forest policy, evaluation, ecosystem management, mixed-model, Vosges, France*

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The Relief Plan for Forests after the 1999 storms

On 26 December 1999, the winter storm Lothar caused unprecedented damages to Vosgian forests. In four hours, 30,000 hectares of productive forests was wiped off the map, and 11 million m^3 of wood thrown on the ground, equalling in approximately eight years of annual crops. Financial losses for forest owners have been estimated at three hundred million euros, without taking into account the social and environmental losses suffered by the whole society.

While historic records and statistical data show that frequency and violence of storms has remained the same at the century level, in the past fifteen years, there have been several "high winds" in the Vosges, causing various levels of damage. However, their effect cannot be compared to Lothar, which damaged all forests north of parallel 48. It is therefore hazardous to link the latest phenomenon to climatic change.

The undeniable increase in windfall volume observed in 1999 is likely to be caused by forestry change: increase in forest area (exposes a greater forest area to the wind and automatically increases wind damages) and transformation of coppice and coppice with standard toward high forest (resulting in increased vulnerability, due to a decrease in top height).

In response to such a disaster, the government decided to support the forest sector with the Relief Plan for Forests(RPF), publicly announced on 12 January 2000. Developed further at the regional and local level, this plan is the most comprehensive program ever intended for forests in the Vosges, and represents a hundred million euros of public incentives. Over the ten-year period [2000–2009], the sector is benefiting from twice as much funding than during the previous ten-year period [1990–1999].

The RPF can be divided into three stages, with different objectives, beneficiaries and time scales. The first stage dealt with the immediate consequences of the storm: preventing undamaged forests from the increased risks of pests and pathogens; limiting the fall in wood prices (with incentives granted for stocking or exporting woods); and reducing the taxes for victims. The related measures, based on the experiences of the previous storms of 1982 and 1984, lasted two years [2000–2001].

The second stage, which started in 2001 and is to be finished in 2009, is aimed at rebuilding and even improving all components of forest ecosystems (ecological, economic and social). Basically, the RPF provides incentives to clear and restore damaged stands (through natural or human-made regeneration); to restructure economic background (infrastructure and land tenure); and to reinforce forest organizations. Many of the measures have been decided on the basis of a common expertise associating scientists and practitioners, under the supervision of the Ministry in charge of forests.

After the formal termination of the RPF in 2009, follow-up measures, taking into consideration the stability of the entire region (including undamaged forests), may be implemented. They would address the following problems: unbalance in ungulate population; irreversible break in the traditional economic system; growing social expectancies on what should be the role and place of forests. At the present time, no measures have been formulated in this regard.

Previous evaluations of the Relief Plan for Forests

Because of its importance for French forests, the RPF has been subject to several evaluations, which was not systematically done for previous plans. In France, forestry programmes can be assessed by two different bodies with different actors, methodologies and also different underlying concepts.

Table 1. Managerial versus participatory evaluations in France.

	Managerial evaluation	Participatory evaluation
evaluators	heads from senior branches of civil service or court auditors.	academics from universities or private experts
tools	based on management sciences (e.g. administrative control)	based on social sciences (e.g. enquiries, survey)
rationale	mainly instrumental, using experts' judgements	mainly communicative, using actors' judgements
ultimate standard	internal efficiency	external effectiveness

In the first case, the assessment of programmes is the privilege of heads from senior branches of civil service or auditors from national (or supra national) courts. The evaluation is basically a procedural control focusing on managerial and accounting aspects, with an objective to fit to an administrative rationale. In the second case, the assessments of programmes are led by academics or private experts who can give a larger room to the appreciation of local stakeholders. Evaluation is then a communicative process committing actors. Table 1 summarizes the basic features of each of these competing approaches to evaluation.

For many reasons, 'managerial' evaluations are widespread, especially at the central level, whereas 'participatory' evaluations are rare and only occur at the local level. An immediate explication for this is given by the nature of the public body that mandates the evaluation. As the major policy-maker in France, the State is in charge of the evaluation of many programmes, and usually assigns its own services to carry them out. However, due to lack of resources, local and regional governments cannot rely on internal agencies to evaluate the few policies and programmes they implement, therefore they usually call on private and independent evaluators.

The RPF has been evaluated both at the national and local level; four times at the national level, twice for the region of Lorraine and twice for the administrative department of the Vosges. Only one evaluation made by a private cabinet for the General Secretary of Regional Affairs of Lorraine (SGAR) falls into the category of 'participatory' evaluations.

Applied to the regional adaptation of the RPF, these assessments resulted in contrasted conclusions. For example, the managerial assessment from the European Court of Auditors (ECA) didn't approve the strategy chosen for the clearance of damaged plots (not relying on precisely defined damage thresholds) and the three different funding levels implemented to this purpose (inefficient screening of beneficiaries). As a consequence, the ECA stated that there is loose rationale supporting public action in Lorraine, and called for dramatic changes in procedures.

In contrast, the participatory assessment from the private cabinet Evalua estimated that the regional adaptation of the plan, still problematic on some points, was needed in regard to the emotional shock endured by forest owners after the storm. Finally, Evalua stated that the RPF provided an effective incentive to the clearing of forests, and just proposed a series of marginal changes to perfect it.

From the point of view of local decision-makers, neither of the two approaches is completely satisfactory. On one hand, managerial evaluation, even if technically sound,

neglect political considerations (e.g. they never question the relevance of a measure). That's why they are usually disregarded by local actors as disconnected with their actual problems and possibly hiding them. On the other hand, participatory evaluations, even if they include political considerations (since they take into consideration the opinion of local beneficiaries) are generally unable to provide accurate solutions to the identified problems, simply because external evaluators are not sufficiently aware of the specificity of the field.

In the Vosges, where there is an urgent need to recover the prevailing prosperity of forests and to know exactly how the situation is actually unfolding, the Local Government of the Vosges, as a major contributor to the RPF, entrusted the French Institute of Forestry, Agricultural and Environmental Engineering (ENGREF) with the task of achieving an evaluation combining both scientific expertise and public participation.

A mixed framework for the evaluation of the RPF in the Vosges

In France, the definition of the general interest has long been defined under the sole responsibility of the State (according to Tocqueville, this French pattern dates from the Ancient Regime). However, in our modern and technologic societies, decision-makers require more and more the help of scientists and technicians to ground their decisions. But this increasing trend during the twentieth century toward an instrumental rationality is now criticised by many intellectuals, who point out its danger for democracy. For a philosopher like Habermas, the only way to regenerate democracy is to open a public space where communicational rationality would be promoted (1984; 1987). For him, only communication is able to reveal human rationality, especially when it comes to discuss and evaluate our actions.

However, it seems difficult to get rid of a certain form of expertise, defined prior to any discussion through scientific norms. That's the point of view of another member of the Frankfurt school, Karl Otto Apel, who restated the Kant's categorical imperative ("Act only according to a maxim which you can promote as a universal law for all rational beings") in the following way: "Act only according to a maxim, of which you can suppose that the consequences and side effects could be accepted without coercion by all the affected". In this tentative foundation of ethics, Apel admits than in our complex societies, only experts can indicate what can be the consequences and side effects of our action. (Apel 1992;1996).

This ethic for discussion, which is also influenced by the work of Jonas (responsibility toward future generation, which are included in the "all the affected" of Apel), is in line with the present discourse on Sustainable Forest Management and with the modern paradigm of ecosystem management, which advocate to ground forest policy on "sound" science and "good" judgement (Schlaepfer 1997). The need for scientific knowledge in forest policy has never been contested, but now more and more understanding is required on how the different components of ecosystems function and how they can support and tolerate human use. Only technical expertise can answer these questions, but technical expertise is not sufficient to achieve sustainability, which is also a social choice. Finding a balance between the ecological, economic and social components of ecosystems needs the involvement of all concerned actors through adapted form of public participation (see Yankelovitch 1991).

Such a way to consider policy-making can be linked to the precursor work of Etzioni, who has elaborated a 'mixed-scanning' for decision making, based on a both instrumental and communicative procedure (Etzioni 1967). Since then, this conceptual framework has been developed with a special attention in the USA and Norway (e.g. Amdam 1997). In forestry, an example of such attempts is the mixed model which has been established for the formulation of the Kyrgyz forest policy (Buttoud and Yunusova 2002).

The related procedure tries to conciliate a normative and logical sequence for identifying and classifying principles, objectives and means with a negotiation approach. Applied to the evaluation step of the policy cycle theory, it includes the following steps: (i) evaluation of the diagnosis of the situation before any intervention; (ii) evaluation of the formulation and structuring of objectives aimed at the problem solution; (iii) evaluation of the means and (iv) evaluation of the effects (in both the short and long term). All the steps must be introduced and conducted in a participatory way.

The dialogue between technical experts and local actors is introduced at each step of the process, through a technique based on the following elements: preliminary individual enquiries (expression of technical constraints and initial actors' positions); workshops (common discussion of actors' positions); public seminar for summarising; and open discussion of the results (presentation and discussion at a broader level).

Selected techniques of negotiation can be used to get a compromise or a consensus from such a participatory way. Depending on the step to evaluate, and with an increasing interest in case of competing and opposite views, the 'environmental mediation' process, the 'constructive confrontation' scheme, the acceptance of a 'community of interests', the search for more 'mutual gains', the 'collaborative learning' and the 'open decision' can be mentioned. In the context of the 1999 storm, the constructive confrontation scheme seems to be well adapted, because there is a basic consciousness of the need for solving the existing problems. On the other hand, it may exclude more ethical or abstract viewpoints (Buttoud and Yunusova 2003).

Theoretically, the mixed-model necessarily brings compromise between competitive interests and automatically promotes sustainable decisions (see Figure 1 for a tentative schematisation of this framework).

Moderators

In the framework developed, moderators play the role of intermediary between experts and actors, rigorously separated. Moderators are not experts, but help them to collect the 'usable' science, facilitating the expression of ecosystem possibilities and constraints. Moderators are not actors, but help them to reach consensus or compromise on forestry issues. The basic task of the research team is to stimulate and master the evaluation process and to further analyse the process itself, its strong and weak points.

The research team consists in two persons: one moderator, in charge of organising the debates, and one assistant, in charge of preparing the workshops (preliminary enquiries, editing of documents) and taking their minutes.

Experts

In the process, experts play the role of technical advisers. They do not necessarily belong to forest administration, which shares expertise with scientists and private experts. Experts are supposed to have an impartial and objective viewpoint on forestry, which allows them to considering long-term issues. They bring technical and scientific knowledge into the evaluation process. According the conceptual framework we presented earlier, only experts can express the constraints and possibilities of ecological, economic and social components of forest ecosystems.

At the very beginning of the experimentation phase, three recognised experts from the local background were selected with three others experts from distant regions in order to avoid too

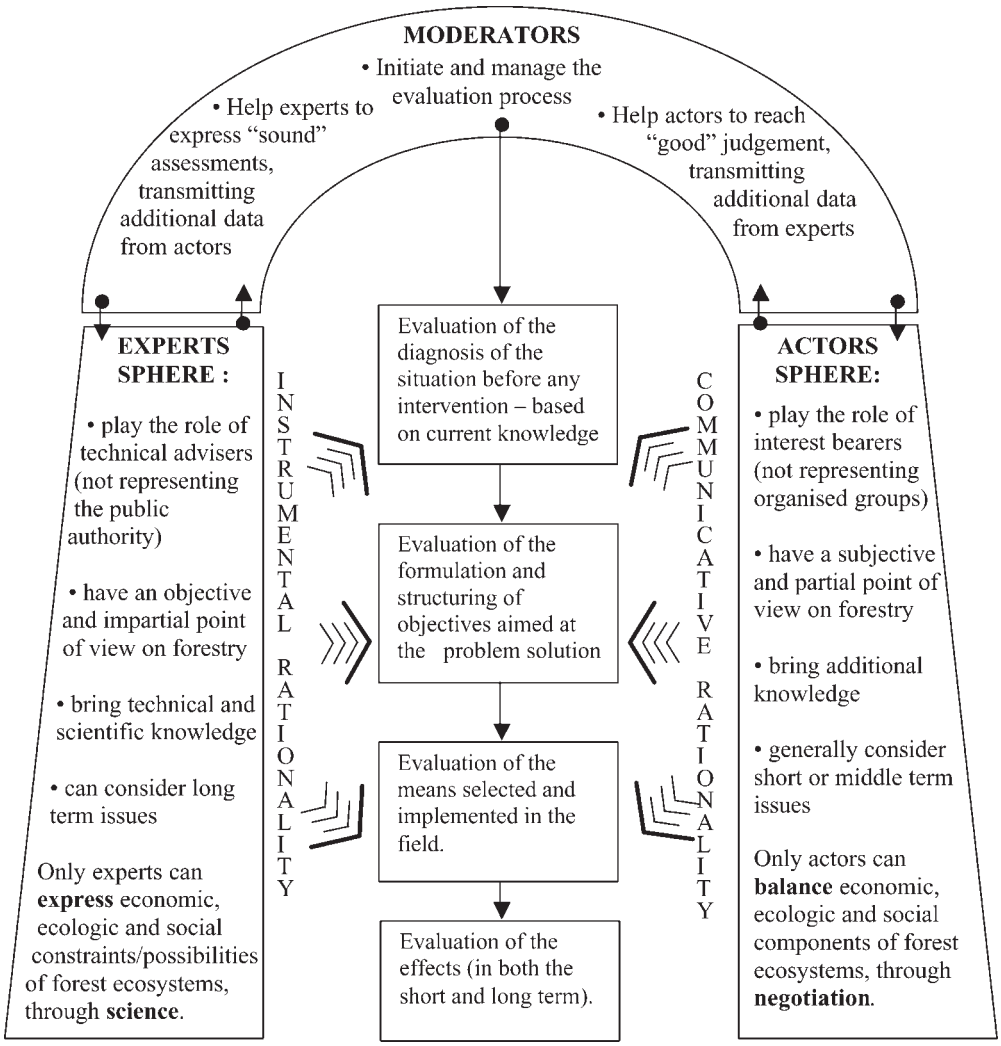

Figure 1. The mixed framework developed.

much collusion with local actors, and to stimulate the scientific debate. This group consists of one specialist of administrative matters, one scientist (ecology), two managers (for public and private forestry) and one economist (wood chain).

Actors

In the process, actors play the role of interests' bearers. They do not necessarily represent organised pressure groups or citizens. Actors are supposed to have a more partial and subjective viewpoint on forestry than experts do. As a consequence, they are more likely to consider short-term or mid-term issues. They bring additional knowledge and values into the evaluation process. According the conceptual framework we developed earlier, only actors can balance the importance of ecological, economic and social components of forest ecosystems.

Depending on the step and stage of the RPF to be evaluated, twenty actors living in the Vosges were selected in a list we established after a review of the existing forestry or rural commission working at national, regional or local level. Additional actors were also contacted upon suggestion of experts. The group of actors more consists of: mayors, foresters, industrialists, farmers, hunters, skiers, sawyers, hikers, hotel and restaurant keepers, journalists, private and public forest owners, forest historians, naturalists, forestry developers. Without claiming to be exhaustive or statistically representative, the list nevertheless contains actors from both highlands and flatlands, where forests are very different (but it is assumed that forest issues related to the storm are quite similar).

What is the difference between an expert and an actor? First, it is a question of vocabulary, like Philippe Roqueplo stated it (Roqueplo 1997). Indeed a person could be both "expert" (adjective) or "an expert" (noun). In the developed framework, an expert (noun) is a person which produce the expertise. This does not mean that the actors cannot be experts (adj.). Actually, one of the aim of this study is to make all actors experts (adj.). Furthermore, it is important noticing that experts and actors usually don't address the evaluation of public intervention in the same way: while experts focus on the rationality of the public discourse and compare means and objectives (instrumental rationality), actors consider public action in the light of individuals' rationality, through direct communication (communicative rationality). These two approaches can lead to very different judgements and that is why evaluation frequently reveals conflicts of rationality (Conan 1998). The role of moderators is to bridge the gap between actors and experts, through an adequate information and negotiation flow. This means the finding of a common language and the access to information for all participants.

The steps in the evaluation process and their expected results

In order to test such a promising framework, the Laboratory of Forest Policy from the ENGREF started on March 2004 a three-year evaluation process, using the following steps:

- At the beginning of the process, informal enquiries of potential experts for the evaluation process are made, in order to refine the methodology and pre-select various actors. The identified actors are then officially invited to attend the launching meeting of the research project at the headquarters of the Local Government of the Vosges.
- Afterward, the core group of experts, together with the research team, is asked to prepare and provide drafts to be further discussed by actors. Several workshops are organised to help to collect the opinions and positions of different actors. At the end of each step of the evaluation process, results are to be mediated through meetings and a research project webpage, hosted by the official website of the Local Government of the Vosges. This procedure, repeated for the two stages of the RPF (see first paragraph) with different expertise and different actors, should bring us the following results:
  - The first stage of the RPF can be seen as a *resistance* phase (limit the deviations from ecosystems' equilibrium), focusing on short-time and individual issues: one piece of windfall for one forest owner. The evaluation of this phase, which ended in December 2002, allows us to keep a track of what have been done in the past, for better or for worse. The conclusions of the research will be of great benefice in case of a new storm.
  - The second stage of the RPF can be seen as a *resilience* phase (regain ecosystems' equilibrium as quick as possible), focusing on mid-term and sectorial issues: one damaged forests for multiple users. The evaluation of this phase, to be ended in December 2009, makes it possible to inform local decision-maker of how the situation is

actually unfolding. If needed, the conclusions of the research will permit to reorient the immediate action, encouraging or discouraging patterns revealed during the evaluation.
- The overall objective of the RPF can be understood as a *stabilization* issue (insure future resistance and resilience of ecosystems), focusing on long-term and societal aspects: all forests for all citizens. The evaluation of this implicit goal, not formulated explicitly, would render the elaboration of a future forest local strategy easier.

Obviously, the degree of enforcement of these expected research results by the Local Government of the Vosges can't be foreseen and the risks of 'broken hopes' that are generally attained to such experimentations are real. It seems likely that results from the first phase can be more easily used by the Local Government of the Vosges than the last ones, which may not be given concrete expression (elected representatives may have alternative priorities). At least, the scenarios identified during this part of the evaluation will undoubtedly make local decision-makers sensitive to forestry issues. Conversely, reflections from this last stage, very exciting for participants, will be probably easier to obtain than negotiated judgements of the resistance phase, whose issues are still vivid.

- At the end of the process, a final meeting gathering all the participants involved in any of the step of the process will be organised to discuss the final draft of the evaluation. At this time of the process, it will be possible to measure the relative importance of all three stages of the plan, and identify potential over or under-development of certain ones. This document will then be delivered to the Local Government of the Vosges, and publicized through different media.

Open questions for a possible conclusion

The first aim of this research is to participate to the recovering of the forest sector in the Vosges. From a scientific point of view, the challenging objective of this research is to gain knowledge on evaluation issues, which have not been extensively studied in the forestry field. To achieve this goal and generalise the findings to other contexts, results will have to be carefully discussed. At this point of our work, the following aspects can be emphasized:

The attitudes of experts will be very important: even if the situation is previously discussed, experts might be biased because of their commitment to the actors and thus unable or unwilling to provide sound expert advice.

The attitudes of actors will be important to analyse as well, especially if actors with more personality or resources try to confiscate the debates in favour of one well organised group (e.g. wood producers versus environmentalists).

Ultimately, the work of the moderator itself can be influenced by prejudged ideas, leading to truncated discussion. Indeed, different negotiation techniques finally give results derived from the mediator's behaviour, possibly hiding some components of the problem. The current research will address these issue as well.

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The Quest for Inter-Sectoral Coordination in the Light of Evolving Policy Structures

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Abstract

During the last years, the forestry profession has become more and more aware of the fact that many problems in forestry originate from 'outside' the sector. As a result, nowadays 'inter-sectoral coordination' is one of the key-issues in discussions on forest policy. This emphasis on inter-sectoral coordination calls for a thorough understanding of sectors and coordination mechanisms between sectors. However, it is exactly this understanding that is missing in theory and in practice. Confusion starts already with the meaning of 'sector'. Ongoing fading of sector boundaries during the last half century makes it almost impossible to have an unambiguous, externally perceptible conception of a sector. Furthermore, in times of governance and blurring boundaries between state, market and civil society, boundaries are even harder to drawn. This paper therefore proposes another line of argumentation for understanding inter-sectoral coordination and takes departure from the concept 'policy structures'. Policy structures refer to the 'form' in which interaction between state and interest (both market and civil society) representation is arranged in policy making. Based on an overview of the evolution of sectors and policy structures, and an empirical analysis of the developments in the Dutch forest policy sector, it is argued that inter-sectoral co-ordination needs to be based on a modern notion of policy structures as self-determination in action as it is within these actions that actor still encounter 'boundaries'.

Keywords: inter-sectoral coordination, sector, boundaries, policy structure, self-determination in action

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1. Introduction

Inter-sectoral coordination seems to have become one of the central issues in forest policy since new approaches to sustainable development place greater emphasis on the integration of the forestry sector in rural development (FAO 1994). The issues' actuality for Europe was again confirmed during the Ministerial Conference on Protection of Forest in Europe of 2003 in Vienna where it was stressed how crucial cross-sectoral coordination is for sustainable development of forests (MCPFE 2003).

However, neither in theory nor in practice a conceptual framework of inter-sectoral coordination has evolved (Verbij and Schanz 2002). Andrian et al. (2002) demonstrated that a preliminary problem in analyzing inter-sectoral coordination is the definition of sectors, and more precisely sector's boundaries. Analogous, system theory argues that "it seems impossible to talk about the environment of a system when it is not absolutely clear where the boundary of the system is positioned" (Kramer and De Smit 1987). Nevertheless, this boundary issue seems not to be made problematic as main focus of studies carried out on inter-sectoral coordination in forest policy, concentrate on stressing out which other sectors are linked with forests and forestry (e.g. Schmithuesen et al. (2001); Andrian et al. (2002), and Broadhead and Dubé (2003)). Yet, these studies hardly address questions of theoretical considerations or analysis of sector definition, and actual mechanism for coordination.

This paper therefore proposes another line of argumentation for understanding inter-sectoral coordination taking its departure from the evolution of 'policy structures'. Policy structures refer to the 'form' in which interaction between state and interest representation (both market and civil society) is arranged in policy formation and implementation. Based on an empirical analysis of the developments in the Dutch forest policy sector, it is argued that inter-sectoral co-ordination needs to be based on a modern notion of policy structures as self-determination in action.

2. Evolution of sectors and policy structures

The etymological origin of the term 'sector' refers to active and purposeful delineation of subsystems within a larger whole. As a logical consequence, sectors are focused towards their boundaries, as precisely these boundaries separate different sectors. Use of 'sector' in policy science builds on the economist's concept of industry: all sellers of one type of product or service – or, more abstractly, all those firms characterised by a close substitutability of product usage who, as a consequence, exhibit demand interdependence (Scott and Meyer 1991). 'Industry' and 'sector' seem synonyms during the era of industrialisation in 18th and 19th century because of the scarce governmental involvement in industry.

However, industrialisation, growing populations, and clear signs of market-failure (e.g. poverty) towards the end of the 19th century demanded increasing government involvement. Involvement not only at the individual level, but also on safeguarding flows of natural resources for society. Importance of this last point became painfully clear during both World Wars showing enormous domestic shortage and independence on natural resources. As a result, government involvement became substantial and policy structures developed into 'iron triangles': involving few powerful personalities of politics, governmental agencies, and private organisations related to a specific resource. As a consequence, sectors were seen as closed cultures striving for autonomy within the political and administrative system.

During the 1950s and 1960s these closed personal relationships often became institutionalised in (neo-) corporatist models. This empirical relationship between interest

groups and the government was based on exchange (influence for support), and on cooperation rather than competition: organized interests are incorporated into the policy making process and defend the outcomes to their members (Andeweg and Irwin 2002). However, one of the consequences of this corporatist model is that it strengthens fragmentation of policy making and the more organisations are incorporated in the policy making, the more policy making is sectorized (Andeweg and Irwin 2002). Furthermore, boundaries between government and interest groups are getting more blurred as formerly strictly separated responsibilities are now 'exchanged': influence for support.

However, actual corporatist practices must be distinguished from contributions of democratic corporatist theory to political theory. Mansbridge (1992:54) attributes this contribution to the 'deliberative functions of interest groups and the agreements now made in conjunction with formal lawmaking processes' (Hunold 2001). Corporatism therefore leans mainly on persuading others through dialogue in a consensus culture. This in contrast to pluralism that is based on competitive, self-seeking interest groups in a conflict culture (Hunold 2001:160). This sharp distinction is however challenged towards the end of the 20th century.

The 1980s and onwards are in broad outlines characterised by economic growth, withdrawing government and by increasing awareness of the negative effect this growth has on our environment. For forests this meant not only that they were threatened in their existence by i.e. expanding cities and increasing need for agriculture land but also forestry traditions had to open up to societal demands of sustainability. The Tropical Forest Action Programme (TFAP) of 1985 and the UNCED Agenda 21 of 1992 both recognise these roles of related policy fields in conservation and development of (tropical) forests. Stress is therefore put on questions of interdependence and relations between involved actors shifting focus of sectors from 'inwards' to 'outwards'. Furthermore, generally, economic and political trends are towards reducing public involvement in sectors. In forestry this is most obvious in decentralisation of forest issues to regional and local government, and privatisation of public forest enterprises and of research (Montalembert 1995). As a consequence, traditional forest sectors not only have to broaden their scope towards other involved sectors, but also have to find new ways to deal with this changing position within government.

During the 1980 and 1990s 'policy networks' were introduced to conceptualize these more inclusive relations between public and private actors. Policy networks are characterized by predominantly informal interaction between public and private actors with distinctive, but interdependent interests, who strive to solve problems of collective action on a central, non-hierarchical level (Börzel 1997; Peters 1998). Van Waarden (1992) sees 'policy networks' as a more general and neutral concept and corporatism can be considered as being one specific type of policy network. According to Van Waarden (1992:31) policy networks are thus an overarching characterization of public-private relations in which the type of network mainly depends upon the number and type of societal actors involved, major function of the networks and the balance of power. According to this classification, inter-sectoral coordination can then be understood as the policy network type of 'macro-corporatism' as it involves at least two major interest associations, functions towards coordination and power is likely to be balanced between state and society. But how does this work out for the specific field of forest policy?

Lehmbruch (1984) characterises 'macro-corporatism' to involve a plurality of organisations usually representing antagonistic interests that manage their conflicts and coordinate their actions with that of the government expressly in regard to the systemic requirements of the national economy. This network thus serves to regulate conflicts and searches for consensus and compromise based on compulsory membership to guarantee long run compliance. As a consequence, relations tend to have a high multiplexity and continuity and are likely to be well-institutionalised (Van Waarden 1992:48). However, such requirement might hold true for negotiations between state and interest groups representing business interest but in case of

inter-sectoral coordination concerning forest issues the story runs quite different. Most interest groups will have voluntarily membership (e.g. organisations representing nature conservation, recreation, or environmental interests), wood business has low profits, many forest products are non-marketable, and also forests are affected by several governmental departments (e.g. economic affairs, spatial planning, infrastructure) altogether complicating focus on consensus and on coordination.

Above developments thus seem to require more open systems of interest representation to overcome problems of limited, authoritative policy making of corporatism. Jacobs and Korhonen (1995) argue that most liberal countries therefore abandoned strict corporatist policy structures in favour of more inclusive public consultation often referred to as democratic corporatism or pluralist corporatism (in Hunold 2001:161). For example in The Netherlands 'traditional' corporatism is replaced by a much more informal way of corporatism ('the polder model') having a lower institutional integration but a much higher societal support (Andeweg and Irvin 2002:145). Difficulty in these evolving, open policy structures is that boundaries are no longer visible for (neutral) observers while actors need boundaries to structure, to distinguish, to define and to identity (Schanz 1999:4).

This becomes clear when looking at policy networks: focus on boundaries is highly underexposed in policy networks as they are formed around a nucleolus, comprising an event, an actor, an issue or an institution (Gillespie and Murty 1991). Some references is made to permeability of boundaries in range of different policy network types: from 'open' issue networks to 'closed' policy communities. Nevertheless, policy network boundaries remain vague for (neutral) observers unlike with policy structures of 'iron triangles' and 'neo-corporatism': iron triangles include actors concerning a certain resources, while (neo-) corporatism include actors having a certain interest.

Furthermore, sectors, and therewith sector boundaries, only 'exist' if sectors are discernable and involved actors attach some sort of sector identity to the sector. With sector identity is meant 'who or what the sector is, the various meanings people within the sector can attach to the sector, or the meaning attributed by others to the sector' (after Beijaard (2000)). Sectors are therefore social constructs making them not only incomprehensible but also dependent on context and the respective actors. Hints can be observed that new 'policy structures' evolve, beyond the possibility to be recognized by an external observer while policy becomes increasingly integrated *(inter-sectoral coordination)* and sector boundaries seem to blur *(governance)*. However, at the same time the effects of "boundaries" continue to be experienced in daily practice. It can therefore be hypothesized that post-network policy structures have evolved. The case of the Netherlands will be used to illustrate these developments in policy structures concerning forest policy.

3. The evolution of policy structures in Dutch forest policy

First involvement of the Dutch government in forests was towards the end of 19th century resulting in establishing the State Forest Service (SBB) in 1899. For that forestry was a private business of private forest owners. Furthermore, as there was only some 36 000 hectares (circa 1% of the Netherlands) of forest left at the start of SBB, the wood industry developed separately from the forest sector with most wood being imported. Interest of Dutch government in forests was not solely for its wood production function; forests are interesting because of their role in fighting erosion, in making economic worthless land productive again, and planting trees as unemployment relief. As a consequence, SBB' focus during the first half of the 20th century was not solely on wood production and this made them susceptible for

ideas on nature-oriented forestry systems that were also attractive for recreation. However, scarcity during World War I and II evidently showed the negative effects of being depended on import of resources. As a result, after WWII the dominant political discourse focussed on safeguarding own supply: forests had to produce wood. Close cooperation between a few like-minded persons within powerful positions in government and in business adhered to this discourse, resulted in a closed circuit of representatives with an inward focus on forestry.

With the establishment of the Industrial Board of Forestry (in Dutch: Bosschap) in 1954 these personal relations were formalised and institutionalised. Bosschap´s aim was to improve management of enterprises occupied with forestry and/or wood production and to attend to their common interests in negotiations with policy and politics (Buis and Verkaik 1999). However, lack of compliance among different forest owners, and large size of nature conservation organisation has made it difficult to establish corporatist relations and discussion on forest policies (Schanz and Ottitsch 2004). Establishing the Forest Act in 1962 was another product of this 'sector'. This Act, in its essence, states that forest land has to remain forest land for ever. Discussion on integrating the Forest Act with the Act on Nature Conservation comes up now and then but so far this has not resulted in integrating both Acts.

Besides this dissension in interest representation it was towards the end of the 1960s and during the 1970s that society became interested in forests for its nature and recreational value due to increasing leisure time and prosperity, changing nature images, and dangers of environmental disasters. The great storms of 1972 and 1973 accelerated this process showing that forests regenerate perfectly well by themselves. This resulted, among other things, in 1982 in joining the Department of Nature Conservation and Recreation of the Ministry of Culture, Recreation and Social Work with the State Forest Service accommodating this new department with the Ministry of Agriculture. The boundary between forest and nature conservation further faded as non-foresters now had to collaborate with foresters of SBB on forest issues.

In 1986 this new department presented the second forest policy plan of the Netherlands entitled 'Meerjarenplan Bosbouw'. Central aim within this plan was 'creating such conditions for the forest area in the Netherlands so that they fulfil the societal wishes towards forests, for now and for the future' (MLNV 1986). The term 'multifunctional forests' was introduced in Dutch forest policy and this can be interpreted as the embodiment of involving other interests in forest policy. Obviously, the plan was a compromise between forestry and nature conservation and was a reflection of internal power struggles between the corporatist forest tradition and the public nature- and environmental interest organisations. It was only because of a strong lobby of Stichting Bos en Hout (Association for Forest and Wood) for the paper and board industry that this policy document for forestry contained an objective on wood production, namely a wood self-sufficiency rate for the Netherlands of 17%, effectively meaning an increase of 12%. However, this aim was never reached and moreover the self-sufficiency rate dropped to about 6% now and the policy aim abandoned in the last policy document in 2000. In this national policy document entitled 'Nature for People – People for Nature', policies on nature conservation, forestry and landscape are integrated (MLNV 2000). Only after intensive lobbying of 'wood interest organisations' the document contains one sentence referring to the production function stating that 'a certain percentage of the forest is in principle suitable for wood production'. Several events that are listed here mark how nature conservation became the dominant discourse in forest policy towards the end of the 20th century:

- Dutch Forest Law was decentralised in 1995 within the Decentralisation Act making the provinces responsible for executive tasks in the field of forests.
- State Forest Service became a 'state corporation' in 1998 while the tasks of forest policy (Ministry of Agriculture, Nature Management and Fisheries at that time) and forest management (SBB) were already split in 1986.

- Subsidies for forestry and nature conservation are integrated in 2000 in one output oriented contractual scheme based on function endowment (Hoogstra and Van Blitterswijk 2002).
- Due to departmental reorganisations, forestry is no longer visibly as a separate organisational unit within the Ministry of Agriculture, Nature and Food Quality. They also officially state that 'forest is just one of the many ecosystems' and they also don't see themselves as part of a (forest) sector.
- Forest research was privatised and merged to become a research institute for the green environment in which the specific field of forestry has disappeared.
- Name of the Forestry Department of Wageningen University was changed to Forest and Nature Conservation Policy meaning that there is no longer a Master degree in forestry.

These developments do not only occur in research, science and government but also within 'traditional' forest organisations. Recently the forest specialist journal of the Royal National Forest Association merged and became the specialist journal for forest, nature and landscape. And last but not least, the last corporatist bastion, the Industrial Board of Forestry, has decided to broaden its scope and now is transforming towards an Industrial Board for Nature Conservation.

The overall conclusion therefore is that in forest policy the typical policy structure of the former closed circuits have so much blurred and broadened that actors in the Netherlands no longer make a clear distinction between forest policy and nature-conservation policy. Schanz and Ottitsch (2004, in press) support this finding by stating that forestry in the Netherlands is 'actually a sub-sector of nature conservation, and that this is reflected in the governmental administrative structure'. This process of broadening is not only reflected in governmental administrative structures but also in a broader scope of policy instrument, research topics, and typical 'forest' organisations. Furthermore, strategic positions within advisory boards, large nature and forest organisations, and the Ministry are no longer occupied by trained foresters but are filled in by 'generalists' like jurists, public administrators, and communication experts. Altogether this thus requires evolving policy structures in which policies are formulated and implemented as corporatist-like policy structures based on personal relationships between government and interest organisations between persons with similar backgrounds no longer seem the appropriate policy structure for raising forest issues in policy making.

4. Discussion: The rise of policy structures based on self-determination in action

Above description of developments in the Dutch forest sector show how government retreats from the issue of forest policy and how during the last decades the dominant discourse in forest policy switched from wood production to nature conservation, and now moving to recreation. Both developments require a new approach to forest policy structures because the 'form' in which interaction between state, market and civil society on forest issues takes place changed enormously.

Point of departure for each policy structure should be *boundaries* as boundaries represent differences among or transitions between the patterns we create in the world that we perceive. Logical focus would be on forest *sector* boundaries but sector boundaries are no longer observable in times of multi-level, multi-actor and multi-sector governance and in a broad, inter-sectoral focus on forests. It is only within the *actions* of involved actors in practice that the effects of 'boundaries' can still be encountered.

As a consequence, policy structures for policy making have to rely much more on so-called 'self-determination in action': in actions boundaries are set and reset over and over again.

This then makes decision making unobservable for an outsider and the role of government changes from steering to facilitating interactions between actors. In this respect, policy networks can be seen as an 'outcome' of policy structures based on self-determination in action as it is within their daily actions that actors are setting their 'boundaries'. From this perspective mechanisms for inter-sectoral coordination in forestry mainly have to build on 'boundaries in actions' and thus need to be semi-structured and flexible as these boundaries change continuously.

Consequently, evaluation of forest policy has to change from being based on an instrumental rational to being based on a communicative rational; from goal-oriented evaluation to process-evaluation. In such a setting of unclear decision making, accountability will be the central question: who can be held accountable, to whom and for what.

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National Forest Programmes as Policy Vehicles for Sustainable Forest Management: Findings from a Major European Research Project

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Abstract

With the negotiation of the proposals for action of the Intergovernmental Panel on Forests in 1997 governments agreed a new body of soft law on forests at the heart of which is the concept of the National Forest Programme (NFP). This paper produces in summary form the results of four years of pan-European research on NFPs that took place under the auspices of COST Action E19. This COST Action focused on, first, those factors that support or impede the emergence of a substantive NFP and, second, on four variables that can be seen as core to the formulation and implementation of NFPs to effectively promote sustainable forest management. Five supporting and impeding factors were analysed, namely land tenure, legal regulations, financial incentives, political culture and institutions. The four core variables examined were participatory mechanisms, negotiation and conflict resolution, intersectoral coordination and long-term iterative planning. The paper concludes that a NFP can be seen as an original assemblage of policy tools that may generate new synergies and policy innovations geared to the attainment of long-term sustainable forest management.

Keywords: intersectoral coordination, iterative planning, negotiation, participation

Introducing COST Action E19

During the 1960s and 1970s some countries, such as Finland, formulated national wood production programmes, which contained similar elements to what are now known as national forest programmes. However it was not until the 1980s that the concept of national programmes for forests was first popularised in the 1980s when the Food and Agriculture Organisation, along with the World Bank, United Nations Development Programme and World Resources Institute, launched the Tropical Forests Action Programme (TFAP). In 1992 the United Nations

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Conference on Environment and Development (UNCED) endorsed, albeit with little enthusiasm, the concept of "national action forestry programmes". However it was the Intergovernmental Panel on Forests (IPF) that significantly advanced the concept of national forest programmes (NFPs). The IPF's proposals for action helped firmly to establish the idea of NFPs in the international forest policy dialogue and provided some indication of the principles that a NFP should promote. However, the proposals do not provide a clear and unambiguous definition of "NFP", nor do they provide policy makers with any clear advice or propositions on how to formulate a NFP. It was with the aim of repairing these omissions that in 1999 COST Action E19 on "National Forest Programmes in a European Context" was established.

From its inception the work of COST Action E19 faced a conceptual challenge. With no firm and commonly accepted definition of a NFP, and with some countries in the Action having neither a formal NFP nor any immediate likelihood of launching such a process, the challenge was to agree a theoretically-sound framework that could apply to all countries. The solution agreed was to proceed on the assumption that a NFP shared, and was based upon, the main characteristics of modern policy planning (Glück, Mendes and Neven 2003).

Subsequent discussions in COST Action E19 led to agreement to concentrate on four core variables of a NFP: participation; collaboration; intersectoral cooperation; and long-term iterative planning. Defining a NFP in this way has the advantage of escaping the tautology of accepting that a country has a NFP if its national forest policy makers say it has. It also enables analysis of the national forest policy of countries with no declared formal NFP process.

In addition to examining these four core variables that are internal to a NFP, the research also explored those factors in the external policy environment that affect NFP formation. A *supporting factor* is one that contributes to the substantive development of the core variables of a NFP, while an *impeding factor* is one that inhibits or constrains the substantive development of these core variables. It is, of course, possible that a particular factor may serve as a supporting factor in some countries, yet be an impeding factor in others. Amongst the supporting and impeding factors examined on COST Action E19 were land tenure, legal regulations, financial incentives, political culture and institutions. Below some conclusions are presented from COST Action E19 on, first, the supporting and impeding factors and, second, the four core variables. Quotations are from the individual country reports (to be published in Humphreys 2004).

Supporting and impeding factors

Land tenure

One conclusion that emerges from COST Action E19 is that where private forest ownership is highly fragmented, and where private forest owners are poorly organised, this will impede the participation of forest owners in a NFP. Under conditions of fragmented forest ownership, participation can only be achieved where there is a mechanism that can harness and synthesise the various viewpoints of forest owners, such as a national level umbrella organisation. Such mechanisms are absent in some European countries. Fragmented ownership is reported in several countries, including Austria, Italy, Lithuania and Finland. In Norway 88 per cent of the forest is under private ownership and there are over 120,000 non-industrial forest owners with different motives and objectives.

Public sector ownership is not necessarily a supporting factor. As the Greek report makes clear, "[s]tate ownership has empowered the well-intentioned forest authorities to make decisions for the greatest collective good of society, but provided limited opportunities for

building an efficient collaborative dialogue between the state authority and various users". In this respect the land tenure arrangements in Greece serve as an impeding factor, as they block the meaningful participation of other stakeholders.

The roll back of the state in many European countries has led to a reduced role for the public sector in national forest ownership. For example, in the Netherlands the state traditionally had a leading role in forest ownership for most of the twentieth century. Until the 1970s the Dutch Forest Service (SBB) would usually take over private forests being sold by their owners. Since then the SBB plays a less prominent role in this area. Forests are increasingly bought by nature conservation groups, although this is often with financial support from the government, while the SBB has been semi-privatised.

Legal regulations

The constitution of a country often establishes the legal parameters within which a national programme such as a NFP can be set. For example, in Germany the federal constitution restricts many of the legislative and most of the executive competencies to the Laender rather than the federal level. This vertical distribution of political power shaped the potential scope and limits of the federal NFP. In Switzerland the federal constitution is seen as a supporting factor; the principle of *Vernehmlassungsverfahren*, or consultation, applies at all administrative levels of the Swiss political-administrative system. This principle has supported the development of participatory practices in Switzerland, which have taken root in fertile soil compared to countries that have only recently emerged from more authoritative political traditions.

Because there are many different dimensions to a NFP, the national legal framework may be supportive in some areas, yet impeding in others. This is the Greek experience, where the national legal framework serves as a supporting factor with respect to proposed land use changes that might affect the integrity of the forest resource, yet as an impeding factor with respect to intersectoral coordination and participation, with limited provisions for public involvement.

In Portugal the Forest Policy Law of 1996 is seen as a "major precondition" for a substantive NFP, with the law laying out many of the core principles of a NFP as established by the IPF and other international organisations. These principles include SFM, participation, intersectoral coordination and conflict resolution. In contrast, in Poland the formulation of the NFP commenced on the assumption that the existing legislation already enabled a balanced forest economy and did not require further elaboration or revision. The situation in the United Kingdom is similar to that of Poland, where no Forest Act has been passed since 1967. Successive British governments have preferred instead to rely on forms of regulation other than the law, such as consensus and voluntary principles.

The effective of legislation depends in large measure on how thoroughly it was drafted, although even well drafted forest legislation can be ineffective when it conflicts with other bodies of national law. For example, in Hungary three separate acts were passed by parliament in 1996 on forestry, nature conservation, and hunting and game management. However there is a "lack of basic harmonisation" between these acts and other forest-related legislation, such as that on land and water management. The result is that different ministries have tended to pursue different objectives, with cooperation being "the exception rather than the rule".

Financial incentives

Few issues illustrate the importance of an intersectoral approach to NFPs as much as financial incentives. Decisions outside the traditional domain of forestry can have profound impacts

upon forests and forest policy. Financial incentives, including subsidies, grants, taxation and tax breaks, are ultimately the responsibility of the national finance ministry or treasury.

Financial instruments can play a powerful role in affecting actor behaviour. How they are designed and deployed can significantly support or impede SFM. For example, in Flanders high inheritance taxes have acted as a disincentive for forest conservation, impeding SFM and causing forest owners to lose interest in forest management issues. But financial incentives can act as a supporting factor. For example, in the United Kingdom grant aid is available for almost all woodland creation. The Lithuanian report illustrates how financial incentives may be a "double-edged sword": on the one hand income received from Lithuanian state forest enterprises is allocated towards reforestation and forest maintenance; but on the other hand no subsidies and grants are available for ecological functions.

The Greek report draws out an important point on the role of external finance in setting national policy objectives. In Greece funds from the EU have promoted local forest actions "which do not necessarily represent priority areas in the national forest policy". The authors of the Greece case study conclude that "EU funds are selective and of limited objectives and applicability and thus unable to promote a comprehensive forest policy in the long run". This recalls a criticism that was levelled at the TFAP, namely that national forestry action programmes in tropical countries tended to be "donor-driven"; they reflected the priorities of external actors rather than those at the national and local levels.

The social and environmental benefits of forests – the positive externalities – do not have a market value, with the result that forests are undervalued in the market economy. Many reports, particularly that on Spain, consider that NFPs should have a central role in compensating forest owners for the positive externalities of their forests. This is something that national policy makers are increasingly realising. To give just one example, in Switzerland the Forest Law of 1991 allows for compensatory payments to be made to forest owners who carry out tasks that are in the public interest.

Political culture

Like a supertanker at sea, the "direction" of a political culture shifts only very slowly. A dominant political culture will become embedded in many different organisations and institutions in a country, and will change only gradually. So, for example, in Lithuania the introduction of private ownership and market forces has taken place while old political leftovers linger, such as the prevalence of state ownership of forestry. In this respect countries in the former Soviet bloc can be seen as "political cultures in transition". The Portuguese report suggests that such transitions can take decades. In Portugal the centralised and authoritarian political culture of half a century of authoritarian rule that preceded the restoration of democracy in 1974 continues to make itself felt in the national consciousness, and this has tended to impede the emergence both of effective intersectoral coordination and of political space where conflicting claims can be resolved.

The French report stresses the dominant role of experts in policy making. The French political tradition emphasises representative rather than participatory democracy. Policy tends to be made on a rationalist-deductive basis, with an important factor being the expertise of civil servants. Senior public officials and experts play a leading role in national policy processes, with forestry being no exception. A not dissimilar situation exists in Greece where the "political culture is characterised by an instrumental rationalist decision making process where the public authority is the sole entity in charge of making choices in the interest of the 'common good'." The political cultures of France and Greece can be seen as contrary to the

NFP principles of participation and transparency. Other political cultures, however, are more supportive of direct public participation, such as that of Switzerland.

The Finland case study reports a factor that doubtless applies to other countries, namely the political ideology of neoliberalism. Neoliberalism emphasises the declining role of the state in public policy, income tax cuts and pressures to reduce public spending, including grants and financial subsidies for forestry. In this respect neoliberalism can be seen as a global political culture that serves to impede substantive NFP formation: the role of central government is weakened, which can thwart intersectoral coordination; and a lower level of public finance is available for public goods in general and the positive externalities of forests in particular. However a contrary view should be noted: neoliberalism also stresses an enhanced role in politics for other actors, such as business, NGOs and local community groups, and this can contribute to enhanced participation.

Institutions

A Swedish policy principle on institutions is worth highlighting. Translated into English it reads “The forest owner shall not need to communicate with more than one government authority concerning the management of his/her forests”. A key advantage of such a principle is that it can minimise bureaucratic overlap and duplication, and avoid double or multiple policy signals being sent to the forest owner. The Swedish report stresses that “full application of the principle is probably not realistic, as no single forest administration can provide all the different kinds of expertise that are needed”. Even so, it appears to be a desirable goal to reach for.

Non-state institutions have a clear role to play in NFPs. It was noted above that fragmented forest ownership can impede NFP formation, but that successful institution building at the national level, for example though the creation of an umbrella organisation, can help overcome this constraint. Collective organisation of the private sector has proceeded slowly in many European countries, including Lithuania, Portugal and Netherlands. However, in Finland the Finnish Forest Association (SMY) has acted as a mediator between forestry and other actors. It has succeeded in “establishing and managing a top-level discussion forum for decision-makers, which can be seen as a supporting factor for the NFP.”

The Finnish case study also illustrates the advantages of regional forest centres, with thirteen such centres established in the country. Created before the initiation of the Finnish NFP, the regional centres have played a useful role in the formulation of the NFP, by hosting public forums, in the implementation of the NFP, and through conflict resolution at the district level.

Participatory mechanisms

Where no opportunity exists for participating actors to influence decisions and outcomes then participation is merely formulaic rather than substantive. Participation requires engagement and commitment from those communities that have a stake in forest use. The UK report makes a useful distinction here. Communities may be defined territorially, that is according to where they live, or they can be defined in terms of shared interests or identity. In the UK experience the former type of community is better represented in forest policy than the latter type.

Actors who are less than fully committed can derail a participatory process. For example, in Germany some NGOs failed to visibly participate in the activities of a working group for

more than a year. When they did turn up it was at the end of the process when they rejected the draft of the working group. The result was the temporary paralysis of the NFP process.

Heavy reliance on experts tends to restrict genuine public involvement. But if one risk of policy making is that it can be dominated entirely by specialists at the expense of the public, an equal and opposite risk exists. If all decisions are taken in bottom up participatory processes, taken to its extreme this would dispense completely with the role of the trained specialist. This highlights an important question: what is the optimal balance between expertise and public participation. There is no ready formula for the "right mix" between expertise and participation, which will depend on the issue under consideration, the level at which policy is being made and the length of time before a decision is needed.

In Hungary both experts and public discussion contributed to the formulation of the NFP. The process began with an expert level meeting that generated proposals that were recorded in what became known as the White Book. Altogether there were seven phases to the NFP. The objective of the first six phases (four expert level phases and two public phases) was to amend and update the White Book in the light of the latest discussions. The seventh phase of the Hungarian NFP is implementation.

Where a participatory process attracts a large number of participants, the sheer weight of numbers can render the process unwieldy. For example, handling a large number of written comments in a transparent manner may prove impossible. At public meetings not everyone may be able to speak, or say everything they want. A participatory process must therefore be managed. However the very notion of "managing participation" can be seen as interventionist, elitist and contrary to the spirit of genuine participation. This can engender problems if the management of a participation process (e.g. who speaks and for how long; who initiates the first drafts of working documents; and who is invited to working group meetings) is seen to favour some actors rather than others. The management of participation therefore needs take place according to the principles of procedural fairness, openness and transparency if negative perceptions are to be avoided.

Indeed one clear conclusion that emerges from the case studies is the need for fair and impartial procedures for participation. Inarticulate or minority interest groups can be overlooked or dominated by articulate minorities. As the UK report argues, this implies "greater use of process and more formality in forestry dialogue". A further important factor that affects influence is the power capabilities available to actors. As the report on Norway emphasises, the "resources available to stakeholders may not reflect the legitimacy of their claims". The Norwegian experience has found that participation works best for conflict resolution rather than for technical issues.

We can distinguish between two models of participation: participation as a means; and participation as an end (Shannon 2003). When participation is used as a means, decision-making authority continues to reside with experts and civil servants, who set the questions that the participatory process should address. The main advantage of participation according to this model is that it can improve the quality and nature of the information that is considered by policy makers. Participation according to this model can also legitimise outcomes. Participation as a means is thus an elitist form of policy making.

However the second model – participation as a goal – rejects elitist and technocratic decision making. Instead "the core assumption is that dialogue is essential to understanding since knowledge is socially produced" (Shannon 2003, p.4). According to this model the participatory process does not solely address pre-set questions: it can also generate and construct public questions through discussion. The assumption is that actors are partaking in an iterative policy dialogue aimed at defining the problem, identifying possible solutions and evaluating the merits of different strategies. The NFP notion of participation is very much in line with this second model of participation.

Negotiation and conflict resolution

Effective conflict resolution mechanisms need to encompass the full range of affected stakeholders. Where such mechanisms exclude some actors, it is inevitable that many conflicts will remain latent and unresolved. For example, in Austria and Finland conflict resolution has traditionally been restricted to influential organised groups within the corporatist political system. The result in Austria has been that conflicts that involve actors outside the dominant policy network tend either to be sidelined or ignored. A similar situation existed in Finland until the mid-1990s, although the creation in 1995 of the Forest Forum for Decision-Makers has promoted the identification and resolution of a range of forest conflicts.

The Netherlands case study indicates that when an organisation representing a broad range of actors enters a conflict resolution process, the agreement of its membership to comply with any outcome is usually necessary if the process is to succeed. However in the Netherlands the binding force of membership compliance is often absent due to the large number of forest owners and the heterogeneity of their interests. Consequently agreements reached might not be accepted by all members and may subsequently need revision.

Conflicts are less likely to appear where property rights are unambiguous and clearly defined. However in Greece an incomplete forest cadastre has inevitably complicated forest ownership questions. The authors of the Greece case study conclude that "most attempts at conflict resolution have been highly inefficient so far". In Italy there are no specific strategies for conflict resolution; instead compromises have tended to be negotiated only after lengthy arbitration. In Germany the current texts on the NFP are "rather vague" on negotiation and conflict resolution schemes. The German experience suggests that compromise need not necessarily be an effective conflict resolution tactic. Attempts to reach consensus can fail where actors believe that compromises have gone too far and violated core values or principles.

The Aarhus Convention of 1998 furthers the aims of forest conflict resolution. As well as promoting public participation in environmental decision-making, the convention also upholds the rights of the public to environmental information and to access to the courts to resolve conflicts. Since the convention was agreed Denmark has broadened the range of actors who may appeal against environmental decisions to encompass any individual or local association with a significant personal interest in the case, as well as national nature and environmental organisations that aim to represent affected recreational interests.

Intersectoral coordination

Intersectoral coordination can be seen as the problem of how to manage multiple channels and interconnections between different sectors, of which the forest sector is one. But what precisely constitutes the forest sector? This varies from country to country, and is something that has ramifications for how intersectoral coordination is addressed. In the Netherlands, for example, the conventional usage of the term "forest sector" does not incorporate forest industries. Indeed it can be argued that forestry does not constitute a separate sector at all in the Netherlands, and that it is more a sub-sector of nature conservation. This inevitably affects how intersectoral coordination is approached in Dutch forest policy. The approach chosen has been "linkages without coordination": the forest sector supplies other sectors with information, but does not seek to involve them in decision making.

It is clear that intersectoral coordination is a two-way process that requires permanent consultation and dialogue between stakeholders, so that non-forest sectors integrate sustainable forestry concerns into their policies, and that national forest policy includes the

concerns of other sectors. However with respect to this last point there is an important caveat: forestry should only aim to integrate into its policy domain those policies that support, or at least do not run counter to, the objectives of NFPs and SFM. In many countries forestry is a "poor cousin" compared to other sectors, and the objectives of a NFP can be negated by the policies of more economically powerful sectors. Hungary provides a case in point, where "the major factor jeopardising the Hungarian NFP is its marginalisation among other national level development programmes with stronger political support".

The authors of the Norwegian report neatly summarise the challenges of achieving intersectoral coordination in NFPs: Forestry involves numerous interwoven social, environmental and economic issues, yet it is an issue that attracts limited political attention. As a result the potential for large-scale intersectoral initiatives is limited. The Norwegian experience suggests that achieving intersectoral coordination requires a "hierarchy" of processes.

Several case studies report the formation of institutions geared to addressing intersectoral problems. In the UK an International Forestry Group has been created. This is primarily a government body that aims to secure interministerial coordination on the UK's national and international forest policies. A similar approach has been adopted in Spain, where several ministries partake in the National Forest Council, which was held its first meeting in 2002. The verdict in Spain is that there is a need for "better integration of land use policy and forestry". In Portugal the verdict is harsher: the 1996 Forest Policy Law provided for the establishment of an Interministerial Commission for Forest Affairs. However this has met rarely and has been "ineffective" in fulfilling its mandate.

The separation of functions and competencies into different ministries, organisations and sectors is not a problem per se. An intersectoral problem arises only when there are unresolved coordination problems. Coordination problems can arise within ministries and institutions, and not solely between them. The crucial factor, therefore, is how effectively the organisational culture handles and resolves coordination problems.

Long-term iterative planning

A NFP should not simply be viewed as an end to be attained, but rather as a long-term, open-ended iterative process. As the authors of the Finnish report emphasise, the Finnish NFP is not "a programme hewn in stone" but "a process that will be implemented and revised according to changing demands and feedback." As the Spanish report makes clear, long-term iterative planning "implies the implementation of a continuous policy cycle that involves the planning, monitoring and evaluation of achieved goals, and the revision of objectives and instruments." The National Forest Council is intended to play a role in long-term iterative planning in Spain through, for example, quantitative evaluation and centre-regional bilateral coordination agreements.

Of the four core variables of a NFP examined in COST Action E19, long-term iterative planning is arguably the area where there has been the least progress in Europe. This is explicitly acknowledged in some of the case studies, including Switzerland where the authors state that the NFP is linear and non-iterative: "In Swiss forest policy long-term iterative planning does not yet exist. Forest policy planning is rather characterised by selective or step-by-step modifications of the existing policy framework, thus it represents more an incremental than an iterative policy process".

Long-term iterative planning requires target setting if progress is to be assessed, although sufficient flexibility should be built into a NFP so that the targets themselves can change in response to changing circumstances. Such circumstances may include, for example, new

political priorities, a shift in the economic climate, new demands from stakeholders or catastrophic damage from storms (as in France in 1999) or severe fires (as in Portugal, 2003). As well as the monitoring of implementation and the evaluation of targets, a truly iterative process also requires broad representation and inclusiveness plus a broad array of formal and informal feedback loops between institutions, between sectors and between different layers of multilevel governance.

A NFP should aim to strike a balance between policy certainties and flexibility. If a NFP is to be iterative and adaptive, some degree of institutional fluidity is necessary over the long-term if the NFP is to be capable of reacting flexibility in response to new situations. A dynamic and fluid political bureaucracy that is able to adapt its *modus operandi* in response to unforeseen events will serve as a supporting factor. But while NFPs require some degree of institutional adaptability, frequent institutional changes will prevent policy continuity by introducing uncertainties. Institutions involved in a NFP thus need to strike a balance between, on the one hand, the necessary responsiveness to changing circumstances that long-term iterative planning demands and, on the other hand, introducing unnecessary policy discontinuities.

Concluding thoughts

Had states by now agreed a global forests convention then the NFP concept would certainly have continued to evolve, although the whole nature of the concept and the direction of its evolution would have been very different. The NFP concept would by now have a firm legal grounding in hard international law. NFPs would be tasked with implementing internationally agreed commitments and targets, either those agreed during the negotiations for the forest convention, or those subsequently agreed by the conferences of parties to the convention. States would, in principle at least, be accountable to other states for the implementation of their NFPs.

As it is the concept has evolved very differently. It is grounded upon soft international law, namely the outputs from the IPF and IFF. NFPs are not tasked with implementing internationally agreed commitments and targets, but with nationally-agreed measures. No state has any obligation at all to take action that is consistent with the IPF and IFF outputs, which as their name indicates are merely proposals. While states may submit voluntary reports to the United Nations Forum on Forests, no state is formally accountable to other states for what their NFP achieves or fails to achieve.

That said, the NFP concept has been considerably refined and developed over the last decade. If states do agree a forest convention, existing NFPs will be able to adapt to take on the new demands and legal obligations that a forest convention would impose. The NFPs that have so far been created are policy vehicles that can be used to implement any new international forest-related commitments that states may agree. With respect to the means of implementing any global forest convention states would not be starting with a blank sheet in the way that they would have had the elements of the NFP concept not been elaborated in the way that they have.

NFPs are here to stay whether a forest convention is agreed or not. One conclusion that emerges clearly from COST Action E19 is that NFPs represent a paradigm shift in forestry. The dominant perception of forestry as a production sector in which welfare goods are provided free as positive externalities is yielding slowly to the perception of forestry as a multiple-use sector that embraces sustainability and where the welfare role of forests is central. NFPs are based upon this new shared understanding. The emphases on “multiple use forestry” and “multi-value” forests inevitably leads to the recognition of multiple stakeholders. Hence the emphasis in the new paradigm of participation, conflict resolution

and intersectoral coordination, elements that were not emphasised in the old production-oriented forestry. The holistic and iterative nature of a NFP, and its stated aim of integrating all the relevant dimensions of forest policy, should lead to the generations of synergies that would not previously have been possible. For example, a particular policy may lead to some adverse consequences. If the NFP represents a genuinely iterative process, these consequences should be noticed and policy connections made, whereas this need not necessarily have happened in the pre-NFP period. Furthermore, the *combination* of particular tools may generate policy innovations. A NFP can therefore be seen as an *original assemblage* of policy tools that may result in new synergies and innovations geared to the attainment of long-term sustainable forest management.

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