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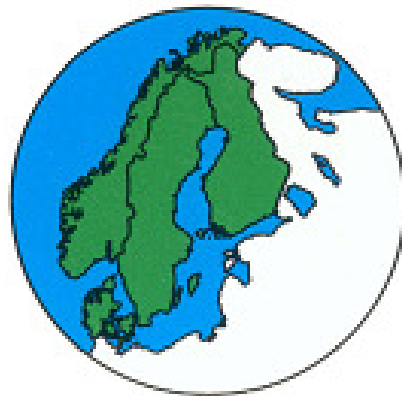
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Multiple motives of family forest owners in their speech about forest-related decision-making

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Abstract

Family forest ownership incorporates economic as well as several other motivations. While traditional rural livelihood has lost significance in the Nordic countries, multiple motives of forest owners have risen to the forefront of guiding owners' forest management behavior. At the same time, the requirements of international forest and environmental agreements force national policies to safeguard biodiversity and pay attention to many other ecosystem services more efficiently. The recent success of voluntary biodiversity protection schemes in Finnish family forests has raised the need for investigating further the emotional factors that affect forest owners' behavior and decision-making. The present paper assesses the values and attitudes beneath forest owners' speech about their decision-making. Semi-structured research interviews with 30 family forest owners from Finland were systematically examined from the perspectives of biodiversity and multiple use attitudes. The results show a broadness of multiple motives and their confounding with small-scale proactive protection of important values in holding level. The findings encourage policy-driven forest informing and holding-specific forest planning to consider the biodiversity-related values and goal frames that are present in owners' decision-making. From a broader view, forest informing is recommended to be developed as instrumental soft governance, along with efficient economic incentives.

Keywords: family forests, forest informing, forest management planning, forest policy, goal frames, values

Introduction

Current forest policies and management planning practices are challenged by two major driving forces. First, international agreements for biodiversity protection (e.g. Convention on Biological Diversity 2004) have set the framework for national efforts. Second, value diversification among citizens in general (Kangas & Niemeläinen 1996, Karppinen & Hänninen

2000) and among family forest owners in particular (Karppinen 1998, 2000) has made the view of multiple motives of forests more relevant.

As a consequence, the relationship between forest-policy-driven information delivery and forest-owner-driven planning service has been forced to find a new balance. Recent literature on forest planning (Kurttila & Hänninen 2005, Tikkanen & Kurttila 2007) indicates that this adaptation is yet in process. There is a recognized need to continue renewing forest policies and forestry practices in order to gratify the diverse values of forest owners in the urbanizing society.

Therefore the present development task is: How to reach policy objectives in an owner-centered way in non-industrial private forests? By the research contributing to the challenge above, it would be possible to devise argued, practically applicable recommendations for soft policy tools, e.g. for informing, planning, and communicative decision support.

Orientation and research questions

Throughout the past few decades, the values and objectives of family forest owners have been approached in numerous international papers aiming at improvements in private forestry policy tools. Since neither universal (Schwartz 1992) nor postmodern value theory (Inglehart 1971) has been judged as capable of grasping the special features of forest ownership, tailored conceptual frameworks have been constructed and used in empirical studies (c.f. Karppinen 2004).

Motivation has been the key element in the framework of Kurtz and Lewis (1981) in Missouri as well as in the one of Hugosson and Ingemarson (2004) in Sweden. As an alternative theoretical base, the four basic environmental attitudes defined by Pietarinen (1987) – utilism, humanism, mysticism, and primitivism – have been applied by Kuuluvainen et al. (1996) and Karppinen (1998, 2000) in Finland, as well as by Serbruyns and Luyssaert (2006) in Belgium.

The limitation of purely value-based owner typologies is their weak or at least controversial connection with actual behavior (Ní Dhubháin et al. 2007). However, research on environmental education has provided some insights of the essential role of emotions and beliefs as determinants of real actions (Grob 1995, Pooley & O'Connor 2000). It would therefore be essential to integrate these aspects into value-based theories when developing them further.

Recent environmental psychology has already tried to combine values, motives, objectives, emotions, and behavior as a unified theory of goal frames (Lindenberg & Steg 2007). According to the theory, the currently active frame affects the actor's thinking, receiving of information, seeing the alternatives, and finally, the action. Two of the three introduced goal frames, hedonic and gain frames make the decision-maker to pursue

short-term pleasure or intermediate-term utility, respectively. The third frame, normative goal frame, in turn, leads to striving for appropriate behavior that is conformable with the norms of the society and beneficial for the environment. From the perspective of the present study, the goal frame theory is relevant, because forest informing, management planning, and decision support practices may determine which goal frame becomes activated. Through the goal frame effect, the tone and the content of the communication may thus essentially affect forest owners' real actions.

This study analyzes family forest owners' speech about their decision-making from the perspective of multiple motives. The general aim is to assess the values and attitudes beneath the relatively open retrospective talked in an interview setting. More specifically, the aim is to investigate further the emotional forces that drive forest owners towards more environmentally friendly behavior.

Bio- and anthropocentric views as well as soft and hard values on forest (Pietarinen 1987) constitute the theory base, while the findings are interpreted through cognitive, affective (emotional), and behavioral components of attitude (Rosenberg & Hovland 1960) and discussed in the light of different goal frames (Lindenberg & Steg 2007).

Data and Analysis

The data comprises semi-structured research interviews with 30 family forest owners from southern Finland, representing two demographically and economically different regions: Pirkanmaa (Tampere region) and North Carelia (Joensuu region). The interviewees were selected subjectively to cover a broad variety of owner and holding characteristics (age, gender, holding size, dwelling place, occupation). Details of the interviewed owners can be found in Hujala et al. (2007, p. 457).

The interview discussions, which lasted slightly over an hour on average, covered history of forest ownership, multiple use of forests, forestry-related decision-making, and experiences of forest planning and decision support. The interviews were conducted in August–September 2005 by one individual interviewer. From the perspective of the present study, it is noteworthy that biodiversity was not included in the themes: the related issues came up in the interview contexts through initiation of the interviewees themselves. Therefore the spoken biodiversity-related issues can be interpreted to have true relevance for the owners.

The transcripts were analyzed intensively, guided by the orientation and research questions described above. Using NVivo software designed for qualitative research (Richards 2002), a total of 341 extracts relating to multiple uses, forest experiences, biodiversity, nature protection etc. were made. These extracts were then classified into 59 categories providing a list of empirically observed phenomena. Of each interview, an owner profile

was formulated and then used in condensing the results. The in-depth analysis was done by one researcher, while the meanings of the findings were jointly elaborated by all present authors.

Results

The broadness of motives

Multiple motives shaping the forest ownership were found. The occurrence of different motive categories among the interviewees is presented in Table 1. While economic income and silviculture appears as the most widely found motive category with 93 percent of interviewees, multiple and recreational use motives follow with the share of approximately two thirds of owners. Economic safety and legacy for children are also rather common motives, evidently decelerating the strength of immediate economic income motives. Aesthetics, i.e. beauty of forest, and sentimental values were as well notably present in the interviewees' speech.

All above mentioned motive categories can be counted as anthropocentric, either utilitarian or humanistic values, the speech about them representing the cognitive component of attitude. Contrarily, biodiversity (bottom line in Table 1) belongs to the ecocentric family of values. Though biodiversity *as such* was not identified as an essential driving force (only 3 owners out of 30 showed its intrinsic value), the multiple motives may lead, according to the interviewees' explanations, to owner-initiated, small-scale protection of important values and areas in holding level. This can be seen as the behavioral component of attitude. These initiatives aim at protection of several important values, but they may simultaneously safeguard biodiversity as well.

Table 1. Multiple motives interpreted from the interviewees' speech.

Motive category	% of interviewees
Economic income and silviculture	93
Multiple use	70
Recreational use	63
Economic safety or deposit	60
Legacy/children	50
Aesthetics	43
Sentimental values	20
Biodiversity	10

Positive and negative biodiversity attitudes

Both positive and negative attitudes towards biodiversity or related institutions can be interpreted as emotional reactions towards some meaningful incidents, representing thus the affective component of attitude. Positive attitudes seem to be coupled with a soft value associated with forest. In these situations, the owner considers his forest as a source of multiple benefits beyond purely economic ones and is ready for thinking trade-offs.

According to the owners, the positive attitude is strengthened when the high environmental value and/or the low economic value of the biodiversity object is shown or illustrated. If neither, offering compensations for economic loss opens the door for a more positive attitude.

Negative attitudes towards biodiversity are, in turn, originated from strong emotions, such as bad experiences of non-voluntary nature protection programs, worry of livelihood or identity (forest income dependent owners in particular), or fear of losing control over one's own property. All these categories associate with distrust or perception of illegitimacy towards forestry professionals or environmental administration.

The analysis also indicated that sentimental values may lead to either negative or positive views on biodiversity. Such values are coupled with deep emotions that are hardly manageable. An example of the consequences of sentimental values is a decisive refusal from harvestings on experientially important sites. On the contrary, sentimentally orientated owners may conduct "doubt harvestings" when some top-down nature protection intentions are assumed, to avoid losing control over property.

From the viewpoint of biodiversity and related consulting, symbolic values behind caring about the forest play an important role. Ownership as a trans-generational project (see also Törnqvist 1995, Lönnstedt 1997), link to the childhood residence, and intrinsic value of ownership are the main factors that make forest an object of multiple soft attitudes.

Discussion

When evaluating the relevance of the present results, it should be taken into account that the interviewees do not constitute a representative sample of a population. The interviewed owners had ordered a forest management plan, which indicates that they were all more or less active owners. However, the sample was diverse in terms of background characteristics, which makes the results informative. Therefore the phenomena found can be judged as relevant in qualitative sense, but their mutual importance in quantitative sense can not be generalized based on this study.

The results relating to the multiple goals of owners as well as to the symbolic values are conformable with the earlier results by Lönnstedt (1997) and Tikkanen et al. (2006). The findings encourage the designers of

forest policy-driven informing schemes and the developers of holding-specific forest planning to genuinely consider the biodiversity-related multiple values that are present in owners' decision-making. They can offer kind of a tailwind for the consultative communication pursuing biodiversity friendly behavior. Such consultation should fuel the hedonic goal frame by explaining how the suggested actions make the owners feel good.

The findings around negative and positive emotions, including sentimental values, indicate that feeling may be more important than knowledge when it comes to forestry behavior. The result is in line with the suggestion of Pooley and O'Connor (2000) but new as such in forestry field. Positive attitudes can be supported within the normative goal frame by explaining the societal regulations and environmental benefits with respect to the suggested action. The normative goal frame should however be fed with caution, since mitigating negative feelings may rather require the use of the gain goal frame.

The results emphasize the role of voluntary means for biodiversity protection in family forests. Offering compensations for economic loss seems reasonable in order to strengthen the positive and mitigate the negative attitudes towards biodiversity. This indicates that the recently developed biodiversity-related decision support methods (Kurttila et al. 2008) and opportunity cost calculation procedures (Kurttila et al. 2006) do have potential and should thus be further developed and adopted in practice. Those methods are conformable with the gain goal frame and are at best applicable in situations when the owner shows interest towards economic benefit and utility maximizing.

Based on the results above, it is hereby suggested that forest informing with multiple values should be developed as instrumental soft governance, along with efficient and legitimate economic incentives. Fueling of different goal frames in different situations could be a sound solution. Rather than sermons – as defined by Serbruyns & Luyssaert (2006) – such information delivery should approach consultation, which carefully takes advantage of the knowledge about owners' existing emotion-driven attitudes. Similar approach could initiate biodiversity-friendly behavior and increase commitment to forest plans as well. However, both the decision support services and the resulting management that focuses on multiple motives and biodiversity protection activities should be intensively subsidized.

Conclusions and further research

In this study, family forest owners' multiple motives affecting their decisions as well as biodiversity-related attitudes were qualitatively examined. The idea of analyzing themes that were not included in the

original interview guide proved reasonable. The analysis yielded both confirmation for earlier results and some new relevant perspectives.

However, the present data needs augmenting. In order to draw a more complete picture of family forest owners' multiple motives, two additional groups of owners should be investigated. First, those who have willfully ordered an ecology-based forest plan, and second, those owners who do not want to buy any of the present services.

To conclude, the development of forest planning calls for sophisticated and practically adoptable methods for comparing the consequences of alternative biodiversity protection contracts. These should be designed, experimented, reflected, and reported scientifically, and the communicative services should be delivered to the owners in a sound way.

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