

Private Forest Owners in the Western Balkans – Ready for the Formation of Interest Associations



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List of Abbreviations

AFET	Association of Forestry Engineers and Technicians
B-H	Bosnia and Herzegovina
BL	Faculty of Forestry University of Banja Luka
CC	Chamber of Commerce
CCoC	Croatian Chamber of Commerce
CEPF	The Confederation of European Forest Owners
CF	Cantonal Forest Office – Federation of B-H
CFRI	Croatian Forest Research Institute
CFS	NGO Croatian Forest Society
CFT	Chamber of Foreign Trade
CoFWI	Croatian Chamber of Forestry and Wood Processing Industry Engineers
EFI	European Forest Institute
FAO	Food and Agriculture Organization of the United Nations
FES	Forestry Extension Service
FF	Faculty of Forestry
FoFSA	Faculty of Forestry, University of Sarajevo
FOPER	Forest Policy and Economics Education, Training and Research in the Western Balkan Region
FS	Forest science and research organisations
FSRO	Forest science and research organisation
HA	Hunting association
IGF	Interest groups – Forestry
IGFWI	Interest groups – Forestry and Wood-processing Industry
IIED	International Institute for Environment and Development
MAFW-DF	Ministry of Agriculture, Forestry and Water Management Directorate for forests
MAFW-RD	Ministry of Agriculture, Forestry and Water Management – Department of Rural development
MAWW	Ministries of Agriculture, Water Management and Forestry at all levels
ME	Ministries of Environment at entity levels
MEBH	Ministry of Environment and Tourism – Federation of B-H
MERS	Ministry of Environment and Spatial Planning – RS
MESP	Ministry of Environment and Spatial Planning in Serbia
MFBH	Ministry of Agriculture, Water Management and Forestry – Federation of B-H
MFRS	Ministry of Agriculture, Forestry and Water Management – RS
MoC	Ministry of Culture, Department for Nature Protection in Croatia
MRDFWM-HD	Ministry of Regional Development, Forestry and Water Management – Directorate for Hunting in Croatia

MRDFWM-PFD	Ministry of Regional Development, Forestry and Water Management – Dep. for Private Forest. In Croatia
MZSPP	Ministry of Environment and Physical Planning in Macedonia
MZSW	Ministry of Agriculture, Forestry and Water management in Macedonia
NAPFO	The National Association of Private Forest Owners in Macedonia
NEAP	National Environmental Action Plan
NFI	National Forest Inventory
NGO	Non-governmental organization
NWFF	Non-wood forest functions
NWFP	Non-wood forest product
OG	Official Gazette
PA	Public administration
PbE	Public enterprises
PE-HS	Public enterprise Hrvatske šume d.o.o
PE-NP	Public enterprises National Park
PE-SS	Public enterprises Srbijasume
PFA	Public Forest Administration
PFO	Private forest owners
PFOA-LA	Private forest owners (local) association
PFOAs	Private Forest owners association
PP	Political parties
PRIFORT	The project “Research into the Organization of Private Forest Owners”
RM	Republic of Macedonia
RS	Public forest enterprise Šume of the Republic of Srpska
SFE	State Forest Enterprise
SS	Public forest enterprise Sarajevo Šume
SSDF	Strategy for Sustainable Development of Forestry in the Republic of Macedonia
WC	Wood Cluster

Preface

The project “Research into the Organization of Private Forest Owners’ Interest Associations in the Western Balkan Region (PRIFORT)” is a seed product of the Finnish project “Forest Policy and Economics Education, Training and Research in the Western Balkan Region (FOPER)”. During my interviews (May and June 2005) with key persons in forest policy to determine the training needs for the FOPER project, it became obvious that there are millions of private forest owners in the region who are mostly not organised in independent interest associations. From the Austrian point of view this was astonishing because in Austria there are even two levels of interest associations: one level of compulsory membership of all employed persons, entrepreneurs and farmers, and a second level of voluntary membership in interest associations with specific tasks. It is possible that Austria’s familiarity with interest associations was a favourable precondition for supporting research on this topic in the Western Balkan region.

The PRIFORT project focuses on the following four countries of the Western Balkan region: Bosnia and Herzegovina, Croatia, Macedonia and Serbia. As all four countries are candidates for accession to the European Union they must adapt their institutions and legal matters to European standards, also in forestry. Thus, in concurrence with the European Forest Institute and the Finnish FOPER project, the Austrian Ministry of Agriculture and Forestry, Environment and Water Management provided the financial means for a two-year research project (from May 2007 until April 2009). The main objective of this project was to reveal the preconditions for the formation of independent interest associations of private forest owners in the region by theory-oriented empirical social research. For this purpose, quantitative door-to-door surveys of randomly selected private forest owners and qualitative in-depth interviews of consciously selected forest policy decision makers were carried out.

During the several last years, an abundance of data was collected and collated that are laid down in this report comprising two volumes. Volume 1, the current volume, comprises the main results divided into six chapters. In Chapter 1 the main hypotheses of the interest group theories are scrutinized by empirical evidence of surveys of private forest owners and in-depth interviews of forest policy decision makers. Chapters 2 to 5 present a synopsis of the preconditions for the formation of private forest owners’ associations in Bosnia and Herzegovina, Croatia, Macedonia and Serbia, based on the results of quantitative and qualitative research. Finally, Chapter 6 deals with a comparison of the four countries with regard to all relevant aspects obtained by the surveys of private forest owners. Volume 2 contains detailed data (frequencies and cross-tabulations) for the four countries based on the questionnaire and is only available at: www.prifort.com by the end of 2011.

This project could not have been carried out without the support of a large number of institutions and their representatives in public forest and environmental administration, state forest enterprises, non-governmental organizations, and forest education and research in Bosnia and Herzegovina, Croatia, Macedonia and Serbia. They are all acknowledged for their trust in independent social research. In

particular, I would like to thank Gerhard Mannsberger from the Austrian Ministry of Agriculture and Forestry, Environment and Water Management for having enabled funding and Ilpo Tikkanen and Tomi Tuomasjukka from the European Forest Institute (EFI) for their sympathy during the project's life. Thanks also go to Andreas Ottitsch for reviewing Chapter 1 and to Olli Saastamoinen for reviewing the whole report. Last but not least, very special thanks to Minna Korhonen from EFI for making this publication possible.

Peter Glück, Project Coordinator
Vienna, December 2010

Executive Summary

The Western Balkan countries: Bosnia and Herzegovina, Croatia, Macedonia and Serbia have in common that their private forests are significant resources for the development of market economy and private ownership. Although the share of private forests varies between 10% (Macedonia) and 47% (Serbia), and probably will increase when the restitution and privatization process will have been finished, the private forest owners are almost not represented in national forest policy due to the lack of independent interest associations. Private forest owners' interests are mainly in the hands of public forest administration.

In all four countries there are very large numbers of private owners of predominantly small-scaled forests varying between 240,000 in Macedonia and 800,000 in Serbia. They are mainly males of an average age of 53 years and most of them live in rural areas in settlements with less than 5,000 inhabitants. More than one half of them are farmers, lower-level employees or unemployed. Regarding education, more than one half of them have high school or vocational college qualifications and one quarter elementary school qualification. The majority of private forest owners have inherited the forests and want to leave them to their children.

Most private forest owners hold forest properties smaller than 1 ha. In addition, these properties are often fragmented into 2 to 7 parcels on average, most often in Serbia and Bosnia and Herzegovina. Mixed and coppice forests dominate and volume and annual increment per hectare are modest compared to state forests. The private forests are mainly used for domestic fuel wood and saw log consumption; tourism, nature conservation and hunting are of minor importance. Consequently, for about one half of the private forest owners the forest is a gain, as reflected in its contribution to the household income. In order to increase the efficiency of forest management, all forest owners are prepared to cooperate with other private forest owners, first and foremost in road construction and maintenance. Of second priority is cooperation in forest training for the respondents from Bosnia and Herzegovina, Macedonia and Croatia, and cooperation in sharing harvesting equipment for Serbian respondents.

Almost all private forest owners are unsatisfied with the existing situation. They miss extension services of the public forest administrations and state forest enterprises for improving their forest management. Most forest owners miss advice in harvesting, support of road construction and maintenance and advice in silviculture, however, with different priorities in the four countries according to their special needs.

Private forest owners are also much concerned that their interests are not appropriately represented in national forest policy by an independent interest association. In particular they expect such an association to fight for provision of financial incentives, tax breaks and reformulation of the existing forest laws in the interest of private forest owners. The respondents suffer from restrictive legal regulations concerning private forest owners. Prescription to pay levies for timber harvests and permissions for harvesting and tree marking by the forest authority before felling are indicated as the most restrictive ones. Although private forest

owners' organizations are very rare for the time being, the respondents are well aware about their tasks.

The preconditions for the formation of private forest owners' associations for both extension service at the local and regional levels and interest representation at the national level are favourable. Between one and two quarters of the respondents are prepared to engage themselves in the formation of an interest group. They declare to join such an organization voluntarily if they may expect either economic advantages or positive performance of the organization or very low membership fee. In each of the four countries there is a critical mass of entrepreneurial forest owners who strongly support an association of private forest owners; in Bosnia and Herzegovina the "drivers" amount to 55% of the respondents.

A majority of two thirds of Bosnian private forest owners also support compulsory membership in accordance with the forest policy decision makers in this country, while the positions of both private forest owners and representatives of institutions in Serbia and Croatia are reserved in this respect. An explanation could be that in Serbia private forest owners' associations at the local level have been developing slowly during the last two years, and Croatia supports their formation by the Forest Extension Service, a department of the public forest administration. In Macedonia compulsory membership is most refused by the representatives of existing private forest owners' associations.

1. Scrutiny of Interest Group Theories for the Formation of Private Forest Owners' Interest Associations in Bosnia and Herzegovina, Croatia, Macedonia and Serbia¹

1.1 Introduction and objectives

The Western Balkan countries – Bosnia and Herzegovina (B-H), Croatia, Macedonia and Serbia – have in common that their forests are significant resources for the development of the market economy and private ownership. Although the share of private forests varies between 10% (Macedonia) and 47% (Serbia), and will probably increase when the restitution and privatization process is finished, private forest owners are nearly unrepresented in national forest policy due to the lack of an independent interest association (Table 1.1). Private forest owners' interests are mainly in the hands of public forest administration.

The assumed causes of the existing situation are manifold (Ranković and Nonić 2002) and rooted partly in forest history (Nonić 2004:26; Nonić and Miličić 2008:60). First, the private forest owners are used to the existing situation that there is a powerful public forest administration which implements the forest regulations on private forest owners in concurrence with the state forest company (e.g. levies for timber harvests, permission for harvesting, tree marking by forest authority before felling, and license for timber transport) (Nonić 2004:64). Second, the great number of private forest owners in combination with the small average size of their forest land, often fragmented into a number of dislocated cadastral plots, makes the owners believe that their property is not worth much. Third, forest ownership often cannot be allocated to individual persons but rather to the family (common property). Fourth, such small parcels of fragmented forest land are difficult to manage efficiently for the production of valuable timber assortments (Nonić et al. 2006:96). Thus, it is not surprising that the share of fuel wood in the annual removals dominates in private forests, while state forests mainly produce industrial wood (saw logs and pulp wood). The preference for fuel wood production corresponds with the dominance of coppice forests in private forests with relatively modest growing stock and annual increment per hectare compared to state forests where high forests prevail. Finally, demographic characteristics of the private forest owners as well as political culture, interests and values of forest policy decision makers are further potential reasons for the existing situation of private forest owners in the Western Balkan region.

The basis of this chapter is the fact that the voluntary interest associations of private forest owners in B-H, Croatia, Macedonia and Serbia are just in the development stage. This is not surprising as interest associations are key players in democratic political systems, and not enough time has passed since the transition of these countries from the Yugoslavian Socialism period to democracy. The situation

¹ The chapter has been modified from the article published in "Forest Policy and Economics" 12(4): 250–263.

Table 1.1. Private forest ownership in Western Balkan countries.

Country	Forest area (1,000 ha)	of which private (1,000 ha)	of which private (%)	Number private forest owners (1,000)	Average size private forest (ha)	Average size cadastre parcel (ha)	Number cadastre parcels
Bosnia and Herzegovina ¹	2,710	523	19	500	0.50		a few
Croatia ²	2,688	581	22	600	0.97	0.48	2
Macedonia ³	997	96	10	240	0.40		
Serbia ⁴	2,313	1,170	52	500-800	2.34	0.34	7

1 Source: Avdibegović 2006.

2 Source: Croatian Forests Ltd. 2006.

3 Source: Ministry for Agriculture Forestry and Water Management. 2004.

4 Source: Medarević and Banković 2008.

in other former socialistic European countries is similar (Hirsch et al. 2007; CEPF 2008). The project aims at overcoming this deficiency and at enabling policy makers to apply appropriate policy tools. Thus, the main objective of the chapter is to define the preconditions for the formation of independent interest associations of private forest owners in the Western Balkan region. In this context, the following questions are addressed:

- Why are private forest owners' interest associations (PFOAs) in the four countries almost not existent?
- What is the procedure of forming PFOAs?
- What kinds of services and lobbying are expected by potential members of PFOAs?
- What are the possible choices, constraints and possibilities to form PFOAs in the Western Balkan region?

In order to answer these questions the main characteristics of private forest owners are described and the prevailing hypotheses on associations are tested by empirical research².

1.2 The role of interest groups in democratic political systems

The large number of private forest owners shares several common, albeit strong, interests which can be summarised in two groups. The first group refers to the representation of interests in the political process and the second refers to support in forest management.

2 In concurrence with the European Forest Institute and the Finnish FOPER ("Forest Policy and Economics Education, Training and Research") project for the Western Balkan region, the Austrian Ministry of Agriculture and Forestry, Environment and Water Management financed a two-year research project (from May 2007 until April 2009) on the Formation of Private Forest Owners in the Western Balkan region ("PRIFORT"). Further information is available at www.prifort.com.

The first group of services refers to the representation of their members' interests in the political system. "An interest group is an organised association which engages in activity relative to governmental decisions (Salisbury 1975:175)". Contrary to political parties, interest groups do not strive for governmental responsibility. The livelihood of private forest owners is not only affected by forest policy and the national forest regulations concerning private forest owners, but also by a number of other policy areas such as environmental policy, tourism, energy and many other policy areas referring to forests. The representatives of PFOAs permanently observe the political process of the formulation and reformulation of policies that affect the interests of their members. For this purpose, they maintain close contacts to other interest groups, political parties and officials in public administration, for example, in order to avoid detrimental developments and support the favourable for their members.

With regard to the second group, efficient forest management cannot be done without appropriate skills in silviculture, harvesting, the marketing of forest products and services and social aspects, as well as the cost-efficient utilization of resources such as forest roads, harvesting machines, hauling devices, transport facilities and information systems on product prices. Many of these are only cost efficient if applied to large adjacent forest areas in order to benefit from economies of scale. The same also holds for acquiring the necessary skills and competences in forest management by training. What is needed is an organisation that ensures that the most urgent needs of private forest owners to sustainably manage their forests are satisfied. This organisation supplies training courses in silvicultural techniques, performance-oriented harvesting methods, the realisation of better timber prices, the avoidance of accidents in forest work, etc. It also provides its members with the possibility to use highly efficient machinery and even manpower for carrying out their own harvesting operations in cooperation with other private forest owners.

Interest associations are irreplaceable in a developed democratic political system (Glück 1976). They put policy issues in the interest of their members high on the political agenda. For this purpose, they apply public relations and other means of raising public awareness to ensure the responsiveness of governmental units to formulate appropriate programs. The associations evaluate whether the programs and their implementation meet their expectations. Furthermore, they control accountability by ensuring that government and bureaucracy have exercised their powers and discharged their duties properly. If this is the case, the government – more specifically the public forest administration – is seen as legitimate and supported by the private forest owners.

1.3 Theories about the formation of interest associations

1.3.1 Pluralism

From a pluralistic point of view, interest groups are the organised reflection of the underlying society with the various interests of its members (Truman 1951). Interests refer to facts – the effects of which are advantageous to somebody. They comprise goals and the general set-up impacting goal achievement. Interests aim at

the maintenance or enhancement of a material or, in a wider sense, an immaterial or value position. In democratic political systems, interests are normal, ubiquitous and permanent; they follow from the freedom of behaviour of individual citizens. The pursuit of interests within a democratic political system is the basis of rational, utility-oriented behaviour. Interests are the source of social change if a government is able to regulate conflicts of interests manifesting themselves in political issues.

In principle, interests can be organised on the basis of shared attitudes and demands drawn from them. The challenge for the formation of interest groups is to create collective awareness for shared attitudes. Due to conflicting interests, the relationship between individual interest groups on the one hand and between interest groups and the state on the other hand is characterised by pluralistic competition: Individual groups wrestle with each other by ‘lobbying’ and with the state by ‘bargaining’ to implement their interests (Seebaldt and Straßner 2006:17).

1.3.2 Theory of collective action

The pluralistic group theory fails to explain why the private forest owners are almost not organised in the Western Balkan region. For Olson (1965), as representative of Public Choice, the pluralists erroneously assumed that because a small group with a reason or incentive to organise itself to promote its members, the rationally behaving individuals also have reasons and incentives to support an organisation that works in their interests. This assumption is logically unsound, at least for large groups (Olson 1965:126). He argues that rational, self-interested individuals of small groups behave differently from those of large groups regarding the membership of an interest association. The core piece of his *Logic of Collective Action* (1965) is the consideration that the result of successful interest representation in the political process is a collective good; it can be the reformulation of the forest law in the interest of the private forest owners or subsidies for the transformation of coppice into high forests. Thus, if the number of private forest owners is very large as is the case in the Western Balkan countries, the individual owner behaves quite rationally if he/she does not join the interest association because he/she enjoys the benefits anyway; he/she behaves as a ‘free rider’.

From these considerations, Olson draws the conclusion that large ‘latent’ groups (Olson 1965:50) can only be organised in interest associations if they can mobilise their potential members with ‘selective incentives’ either positive or negative. Positive selective incentives just for members are ‘separate services’ from the collective good, such as favourable prices for the preparation of forest management plans or forest fire insurance. A negative incentive aims at punishing free riders who are not prepared to share the costs for the provision of the collective good; it can be in the form of coercion by ‘compulsory membership’. As a third option there is still ‘moral suasion’ of the potential members in the sense of pluralistic thinking. As moral suasion can only bring about results in the long-term, the main instruments for the formation of private forest owners’ associations in the medium-term are compulsory membership and positive selective incentives.

In addition to the size of a group, Olson also considers in his analysis the ‘relative size’ of individual members. A large forest owner will save more from a given reduction in income tax than an owner of a small forest holding. He concludes that

'heterogeneous groups' characterised by different gains made by their members from the collective good are, *ceteris paribus*, better able to provide collective goods than homogeneous groups. In heterogeneous groups, individual members have a higher-than-average interest in an increased provision of the collective good (Olson 1965:29).

1.3.3 Exchange theory

Olson's logic of collective action was a breakthrough in the theories of interest associations. However, he did not examine the formation and development of interest associations but assumed a working system. Furthermore, he did not explain why and to which purpose lobbying is carried out (Stern 2006:113). Salisbury (1969) filled both gaps by the following two explanation patterns in the spirit of rational choice: the political entrepreneur and the exchange theory. In principle, he argues that the political entrepreneur who organises an interest group does not differ from an entrepreneur who produces sawn wood: "Entrepreneurs/organisers invest capital to create a set of benefits which they offer to a market of potential customers at a price (Salisbury 1969:11)". According to Olson, the individual does not engage himself for the provision of the collective good. Such behaviour would be irrational in his understanding. Nevertheless, it is not so rare. The need for interest representation can vary. Individuals with a high need for interest representation grow into the role of a political entrepreneur. The founder can expect a special position of power and his interests will find special consideration (Seebaldt 1997:49–50).

Salisbury distinguishes three possible kinds of incentives or benefits of an interest association for joining it (Salisbury 1969:15–16): material, solidary and expressive incentives. Material incentives mean the tangible rewards of goods and services. Solidary benefits are experienced directly and within the self such as acknowledgement in a group. Expressive benefits and incentives refer to benefits from expressing certain kinds of values such as maintaining the biodiversity in forests. A fourth incentive for joining an interest association is the information lead of its members compared to non-members. If the goals or services no longer meet the needs of customers or, by analogy, if the membership is too expensive or the profit of the entrepreneur is too low, the organisations break down. The exchange of services for money is at the core of the exchange theory.

The chances of survival of interest associations are not the same; interest groups with clear economic goals are the most stable ones. This proposition is also supported by Olson in later publications (Leuffen 2006:106). The political entrepreneur is dependent on profit – as is also the case for his clients – and comprises immaterial (e.g. satisfaction and happiness) and material components (e.g. money); the latter being decisive for the long-term survival of the association.

1.3.4 Voice, exit and loyalty

Another explanation for the formation of interest groups has been proposed by Albert O. Hirschman (1974). In accordance with Olson, the decision to become a member

and, thereby, to form a group stems from rational choice. Then the individual takes on the attitude of a consumer and the association, correspondingly, becomes a supplier of services. Hirschman regards the member as ‘homo oeconomicus’ who has two options in case of dissatisfaction with the services of the interest association: voice or exit.

‘Voice’ is any attempt to change an unfavourable situation instead of avoiding it by individual or collective petitions to the responsible persons (Hirschman 1974:25). Voice is nothing else than an integral part of any political system that is also called ‘articulation of interests’. For various reasons the member is not willing or not able to leave or change the organisation. In short, voice aims at forcing the interest association to provide more satisfactory services; thus by externalising its voice, the pressure on the organisation increases (Nerb 2006:137).

‘Exit’ or the decision of the member to leave the association is characteristic of organisations in a competitive situation (Hirschman 1974:17). As any exit of a member brings about a loss of membership fees for the organisation, interest associations which are exclusively financed by membership fees are thus vulnerable.

Finally, ‘loyalty’ decides upon exit or voice within the tension field between an association and its members (Hirschman 1974:65). If a member is loyal to its organisation, he/she will try to strengthen its influence on the organisation in case of negative developments of the organisation in order to correct or diminish these developments. The higher the loyalty the lower is the option of exit, and voice prevails. Loyalty is not unchangeable; it can voluntarily be created by identification with the association. But it can also be enforced by high cost for entry and exit (e.g. high membership fees) or loss of benefits or even legally binding regulations (cf. Olson 1965).

1.3.5 Theory of critical mass

The rational choice approach brought about another explanation for the provision of the collective good is: the theory of critical mass. Similar to Olson, Marwell and Ames (1978/79: 1336–1338) argue that individuals with limited time and money resources make their decision to join an interest group by comparing costs and benefits. However, contrary to Olson they found by empirical investigations that the internal situation of interest groups is not homogeneous. Furthermore, they criticised that Olson’s individuals act strictly rationally and independently of each other, while the theory of critical mass considers the interdependencies between the individuals and the resulting perceptions. The main difference to Olson is that the individuals’ decisions and engagement do not only depend on their isolated personal rational choices; they also consider the actions of other engaged individuals in the group. Contrary to Olson, interest groups are characterised by interdependence, heterogeneity and the mobilisation impacts of individual actors (Marwell and Oliver 1993). The theory of critical mass focuses on the complexity of social interactions within the group and does not regard it as a homogeneous block. The decisive factor for the formation of the interest group is not the real group size but rather the existence of ‘large contributors’ – those who are highly interested and highly resourceful (Marwell and Oliver 1993:10). If the critical mass of human and financial capital is big enough, the provision of collective action will take effect.

The preceding literature review established that interest groups with economic goals have a 'take-off advantage' in formation compared to others. This result has also been confirmed by scholars of conflict theory (e.g. Offe 1981) and neo-corporatism (e.g. Lehmbruch 1977). Once an interest association of a large number of members is established, its sustainable development and prosperity highly depend on the organisation and the lessons learnt from the sociology of organisations (e.g. Weber 1956). This, however, is beyond the scope of this chapter.

1.4 Empirical research

1.4.1 Main hypotheses to be checked

To summarise the main hypotheses drawn from the literature review of interest group theories, almost all scholars agree that interest groups with purely economic interests have a take-off advantage in formation and are the most stable. For this reason, it needs to be ascertained whether private forest owners hold primarily economic or other interests. As the number of private forest owners in each of the four countries is large, one cannot easily expect the formation of interest associations without external aid. However, the preconditions for forming them do not only depend on the number of private forest owners but also on the 'relative size' in terms of heterogeneous or homogeneous group members. Furthermore, it is particularly important to discover the readiness of respondents to engage themselves in the formation of the interest association as political entrepreneurs. Is there a 'critical mass' of members who are highly engaged and well endowed with resources for the formation of a PFOA? In order to be successful, a PFOA has to meet the clients' needs by supplying appropriate services according to Salisbury's exchange theory. Finally, much depends on the forest policy decision makers and whether or not they are prepared to promote the formation of PFOAs. In this context, their attitude towards voluntary or compulsory membership is crucial. In the following sections the aforementioned hypotheses are examined with empirical evidence from both the survey and field research results.

1.4.2 Methods applied

In order to investigate the preconditions for the formation of PFOAs in Bosnia and Herzegovina, Croatia, Macedonia and Serbia, two methods of social research were applied: quantitative door-to-door surveys of randomly selected private forest owners (Neuman 2006; Malhotra 2007) and qualitative in-depth interviews with consciously selected forest policy decision makers (Miles and Huberman 1994; Glück and Mayer 1996; Silverman 1997, Denzin and Lincoln 2000).

The random samples for quantitative door-to-door surveys of private forest owners in each of the four countries were drawn from overlapping areas with the highest percentage of forest area and the highest share of private forests. This ensures that the main bulk of private forest owners are covered. Within these municipalities,

35 settlements and 10 respondents within each settlement were randomly selected, yielding a total of 350 respondents for each of the four countries. Close cooperation with local forest authority officials and forest guards in the field helped to contact private forest owners once they were randomly selected in each settlement. The surveys were conducted by junior researchers in May and June 2008 – in Croatia mainly by employees of the Advisory Service – who used a common questionnaire comprising 42 questions (Q1-Q42, Appendix). The questionnaire aims partly at the description of the status quo and partly at scrutinising the hypotheses above. The sample size of 350 respondents is based on a level of precision of 5% and a level of confidence of 95%. The data from the survey results were imported into Microsoft Excel sheets in a format suitable for further analysis by SPSS, version 16.0.

The data analysis contains frequency distributions, cross-tabulation, correlation analysis, cluster analysis, factor analysis and non-parametric tests. An analysis of testing the equality of variances has been used to test the hypotheses about differences of continuous variables (e.g. acreage and timber volume sold) in the four countries. Non-parametrical Kruskal-Wallis H tests are used to test hypotheses on some attitudes of private forest owners regarding the significance of organisational and institutional aspects that are expressed as ordinal variables (e.g. very much, much, maybe, not at all). Mann-Whitney U tests are conducted in order to check whether the differences of the private forest owners' evaluations of organisational and institutional aspects between the four countries are significant. Hypotheses of similar characteristics related to socio-demographic features of private forest owners are tested by means of chi-square tests.

Based on the main results of the surveys of private forest owners, focused qualitative interviews (in-depth interviews) were conducted from November 2008 to January 2009 in order to acquire more information on the attitudes of forest policy decision makers towards the formation of PFOAs. The qualitative interviews were unstructured and nondirective. The questions were not standardised and open questions prevailed. The interviewees were visited at their working places by senior researchers who attempted to create a trusting and friendly atmosphere.

The selection of respondents is an important part of qualitative interviews. It aims at an appropriate set of relevant patterns of behaviour (theoretical sampling), while quantitative research aims at a frequency of certain patterns of behaviour by random sampling. The selection of respondents focused on representatives from institutions which influence the formation of PFOAs. In each of the four countries, these were representatives of the Ministries responsible for forestry, the timber trade and commerce, and for nature conservation; the state forest company; private forest owners' associations; the Chamber of trade and commerce; environmental NGOs; the main political parties; the association of forest professionals; hunting associations; research institutions, etc. The total number of respondents for each country did not exceed 20–25 persons due to a limited budget.

The data analysis was based on the interview protocol and consisted of the following phases. In phase one, (individual analysis) the most important statements of the respondents were emphasised and representative statements for quotes were specified. In the second phase (generalising analysis), the data were reduced to reveal any commonalities and differences. For this purpose, a data display (matrix of topics) proved useful as it enabled the researchers to group types of respondents

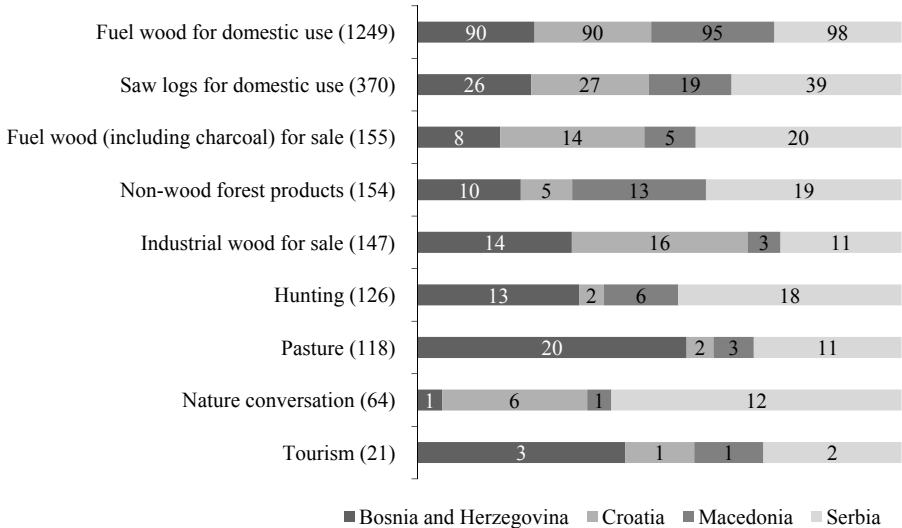


Figure 1.1. Main use of forest (multiple answers) (Q22).

(e.g. advocates, indifferent, and opponents) for explanation. In the last phase, the research results were revisited (control phase).

1.4.3 Main results

The following sub-sections refer to the scrutiny of the main hypotheses above. Only the main results of the quantitative and qualitative research are depicted. Detailed information about country results can be found in Chapter 6 of the current report and Volume 2 of the final report (available at www.prifort.com).

Main interests of private forest owners

In all four countries, economic interests in forest dominate; the forests are mainly used for domestic fuel wood and domestic saw log production (Fig. 1.1). However, due to the small average size of forests the contributions to the yearly household income in terms of returns from timber sales and domestic use (Q24) are modest (see Chapter 6). The private forest owners in all four countries show relatively high interest in cooperation with other private forest owners in order to increase the efficiency of forest management (Q26). According to the different preconditions of the four countries, there are significant differences between the countries (see Chapter 6). All forest owners declare their readiness to cooperate first and foremost in forest road construction and maintenance (Q26e). The second priority is cooperation in forest training (Q26d) for the respondents from Bosnia and Croatia, and cooperation in sharing harvesting equipment (Q26a) for Macedonian and Serbian respondents.

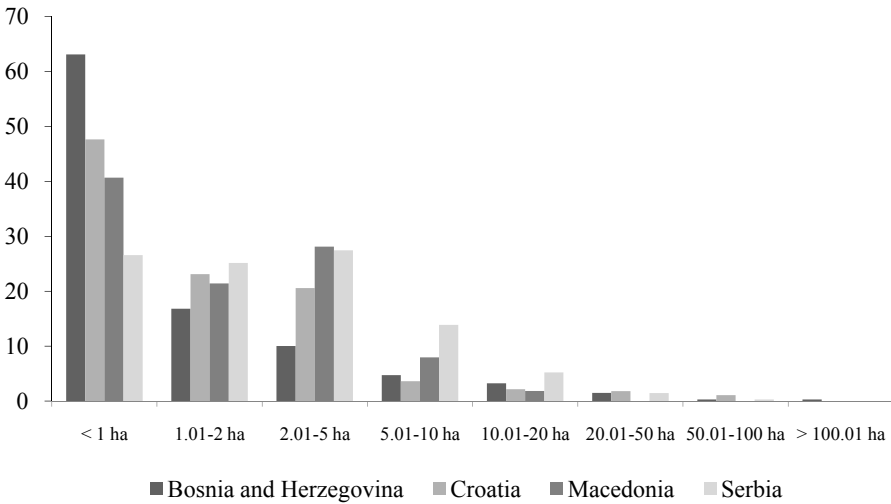


Figure 1.2. Number of private forest owners according to size classes (%) (Q 19a).

Relative size of private forest owners

In general, it can be said that small-scale forests certainly dominate (Q 19a); however, in addition to the one half of owners with forests smaller than 1.5 ha, there is also a remarkable percentage of owners who hold more than 5 ha, particularly in Serbia (48%) (Fig. 1.2). The average forest size differs significantly among countries (see Chapter 6), ranging from the smallest in Macedonia (2.1 ha), followed by Croatia (2.9 ha) and B-H (3.1 ha) to Serbia (4.1 ha). Other answers refer to questions whether the private forest owners are a homogeneous or heterogeneous group. With regard to the question whether the forest in general is a gain or a burden for the family (Q 20), almost one half of the respondents see the forest positively, one quarter negatively and the remaining quarter is indifferent. The highest positive evaluation is measured in Macedonia, followed by Serbia, Croatia and B-H. Not surprisingly, there is a major differences in the awareness of private forest owners of forest regulations concerning private forest ownership (Q 29). Only 25% are aware of them while the dominating majority does not care. Further differences exist with regard to ownership and fragmentation. Some 56% of the respondents share their property with other family members (Q 36), and 71% of the private forests are fragmented (Q 23), two thirds of which have 2–4 parcels. There are significant differences regarding the percentage of fragmented forests among the four countries (see Chapter 6); forest fragmentation dominates in Serbia (86%) and is the lowest in Macedonia (57%). The private forest owners also differ with regard to their education (Q 40) and occupation (Q 39).

The results of the in-depth interviews of forest policy decision makers in the four countries also confirm that the private forest owners are a very heterogeneous group in terms of silvicultural, economic and socio-demographic aspects (Table 1.2).

Table 1.2. Attitudes of the forest policy decision makers.

Theme	B-H	Croatia	Macedonia	Serbia
Private forest owners are a homogeneous group	-	-	+/-	-
Need for public support in forest management	+	+	+	+
Need for extension service	+	+	+	+
Need for lobbying	+	-	+	+
Discrimination by forest legislation	+	+/-	+	+
Need for formation of independent interest associations	+	+	+	+

Legend:

+ Advocates prevailing

- Opponents prevailing

+/- Advocates and opponents balanced

Engagement for private forest owners' associations

In B-H, about one half of the respondents are much or very much prepared to engage themselves in the formation of a private forest owners' interest association (PFOA) in their region (Q 16); in Croatia and Macedonia the readiness is one third, and in Serbia one quarter (Fig. 1.3).

An interest association to both provide forest management (Q4) and lobbying (Q5) services is regarded more necessary where the current representation of private forest owners' interests is considered inadequate (Q3); where the readiness of private forest owners for engagement in a PFOA is higher (Q16); where the support of compulsory membership is higher (Q17); where the affiliation of private forest owners with their forest is higher (Q1), where the gain from forest is lower (Q20); where the forest for domestic use is more important (Q22); where the readiness for cooperation with other private forest owners is higher (Q26); and where the private forest owners are more aware of pressing legal regulations (Q29).

The readiness of respondents to engage themselves in a PFOA (Q16) and to support compulsory membership (Q17) significantly (for the 1% level) depends on the dissatisfaction with the services of the state forest company and forest authority (Q4). It also depends on the lack of an interest association in the region which would represent the interests of all private forest owners by lobbying political parties, civil servants in ministries and government so that the social and economic situation of private forest owners would improved (Q5).

The decided readiness of a fair number of private forest owners in each of the four countries to engage themselves in the formation of a PFOA (Q16) finds a favourable climate in the political system of their countries: almost all forest policy makers in the four countries support the idea of strengthening the position of private forest

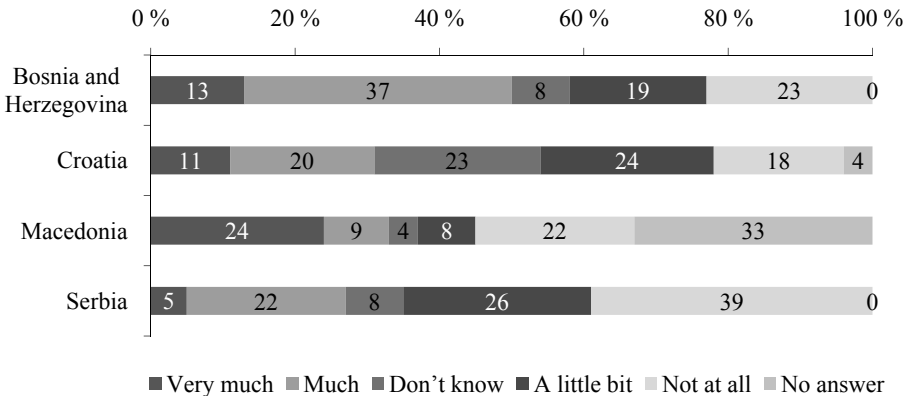


Figure 1.3. Engagement in the formation of a PFOA (Q 16).

owners by establishing an interest association (Table 1.2) – some even consider it as a key topic. Many decision makers share the opinion that this is a challenging task due to the lack of tradition and negative experiences with cooperatives in the former socialism period. However, it is the only way to improve the position of private forest owners in the political process in general and the forest legislation in particular.

Critical mass of drivers

In order to gather more information on the attitudes of private forest owners regarding the formation of PFOAs in their countries, a two-step cluster analysis for each of the four countries was carried out. Compared with traditional clustering techniques it can deal with categorical (Q4, Q5, Q7, Q8, Q9, Q16, Q17, Q20, Q24, Q25, Q26, Q32 and Q40) and continuous variables (Q19 and Q25), assuming that the variables are independent. A cluster analysis was carried out for each country separately.

The results reveal three homogeneous sub-groups of private forest owners regarding the formation of PFOAs – the differences are only in details and have been named drivers, supporters and free riders, whose shares vary from country to country (Fig. 1.4).

The ‘drivers’ strongly support an association of private forest owners; they are the biggest group in B-H (55%). The most expected services regarding forest management (Q8) depend on the national needs, which vary from country to country (see Chapter 6). Regarding lobbying activities (Q9), the drivers mainly expect tax breaks and the provision of subsidies. The private forest owners within this cluster express high readiness to be engaged in the establishment of an interest association (Q16), in B-H and Croatia they even support obligatory membership (Q17). The drivers are the owners of relatively large forest estates (Q19a) and regard their forest as a gain (Q20). Correspondingly, they are prepared to cooperate with other private forest owners in all kinds of forest management activities (Q26a-f) with the

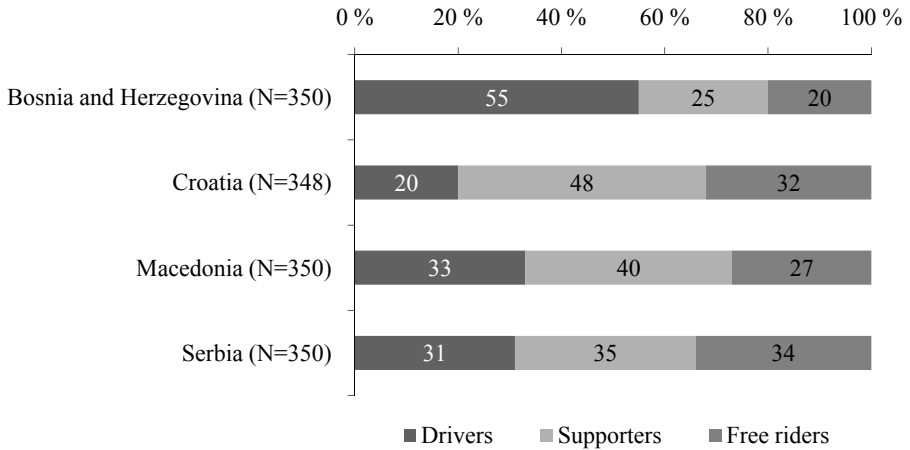


Figure 1.4. Critical mass of drivers.

exception of Serbian private forest owners who are ready to cooperate only in forest road construction and maintenance (Q26e).

The ‘supporters’ also express a need for an interest association providing services in forest management and lobbying, but not as strongly as the drivers. They are only moderately prepared to engage themselves in the formation of associations. One part supports obligatory membership while another is undecided in this respect or reluctant. They own relatively small properties and consider their forests neither as a gain nor as a burden. Only in Serbia is the size of forest property about the same as that of drivers. Thus, most Serbian forest owners from this cluster consider the forest as a significant source for the household’s income.

The ‘free riders’ do not see a significant need for an association of private forest owners. In B-H, Croatia and Serbia, their readiness to play an active role in the establishment of private forest owners’ interest associations is low. They disagree with obligatory membership in such associations. They own small forest properties on average and usually do not use them at all. Thus, they regard their forests rather as a burden than a gain. Overall, the level of interest for cooperation with other forest owners is small. However, in Macedonia the free riders are very much prepared to be engaged in a PFOA. They strongly agree with obligatory membership in such an association. Finally, they are very interested in all kinds of cooperation.

Corresponding to their characteristics, the drivers represent the critical mass of private forest owners striving for the formation of a PFOA in their countries. Together with the supporters in all four countries there is a large majority of private forest owners who wish for better services in forest management and an independent organisation to represent their interests in the political system.

Expected services of a private forest owners’ association

The respondents have very clear expectations in the services of PFOAs regarding forest management (Q 8). For all four countries, advice in harvesting (17%), support

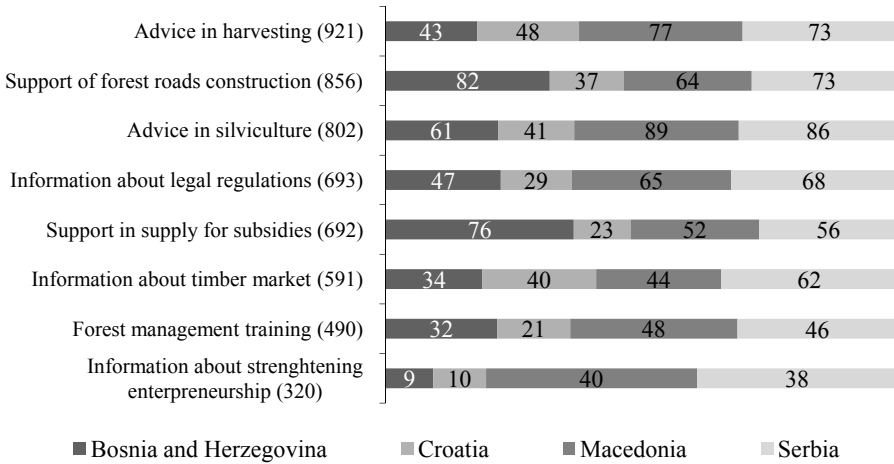


Figure 1.5. Expected services of a PFOA for improving forest management (multiple answers) (Q 8).

of forest road construction and maintenance (16%), and advice in silviculture (15%) are on the top of the agenda. However, the preferences vary between the four countries according to their peculiar needs (Fig. 1.5). Similarly, they share a few priority areas regarding interest representation (Q 9): provision of subsidies (21%), tax breaks and exceptions (18%), and the reformulation of the forest law (15%) received the highest confirmation (Fig. 1.6). The focus on economic performances is also confirmed by the question concerning the conditions under which the respondents would be prepared to join a PFOA voluntarily (Q 15). Some 68% are prepared to become a member for economic advantages; 63% if the association's performance is positive; and 59% if the fee is small or zero.

The need for public support of forest management and an extension service is endorsed by the forest policy decision makers in all four countries; however, with regard to lobbying, the situation is different. While B-H, Macedonia and Serbia regard lobbying as important, Croatia does not. Similar attitudes in the four countries are found regarding the discrimination of private forest owners by forest legislation (Table 1.2).

Voluntary or compulsory membership

Compulsory membership of all private forest owners in a PFOA (Q 17) is contested among the four countries. This idea is supported by Bosnian (63%) and Macedonian private forest owners (47%), while Croatian and Serbian respondents are reluctant (Fig. 1.7). The following reasons for the support are indicated (Q18): no restriction of personal freedom (44%); increased performance of a PFOA (52%); provision of better services for the members (51%); compliance with the national political system (35%); and increased strength of private forest owners in forest policy (40%).

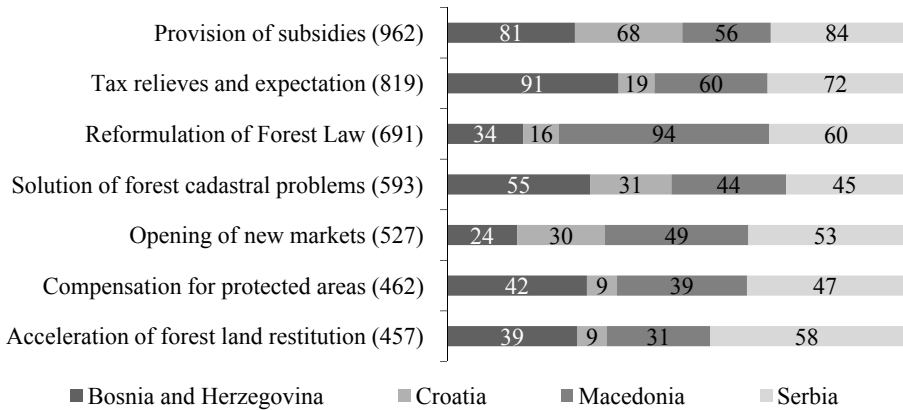


Figure 1.6. Expected lobbying activities of a PFOA (multiple answers) (Q 9).

Not surprisingly, the divided position towards voluntary or compulsory membership of private forest owners is also reflected by the attitudes of most forest policy decision makers. The formation of independent and voluntary interest associations is not contested among the forest policy decision makers in the four countries. Compulsory interest groups find the strongest support in B-H, while they are almost unanimously rejected by the other three countries (Table 1.2).

1.5 Discussion

The results of the interviews of private forest owners in each of the four countries are not representative for each country itself; rather, they are for the area in which forests and private forest owners dominate. This approach was chosen in order to cover the main actors and to keep the travel costs for the interviews low. However, compared with the official data in Table 1.1, the results of the survey could be deemed to be biased because the average size of forest properties in each country is higher. Alternatively, the reason for the differences could lie in the fact that the official data are not based on sound statistical surveys but just on estimates. Another surprise is the high share of PFOA members among the Macedonian respondents. The explanation is that the PFOA of Macedonia focused its acquisition of members also in the area with the highest percentage of forest cover and private forest land. Furthermore, it cannot be excluded that the high critical mass of drivers for the formation of an interest association is also the outcome of the chosen sampling design that might have preferred the owners of larger properties.

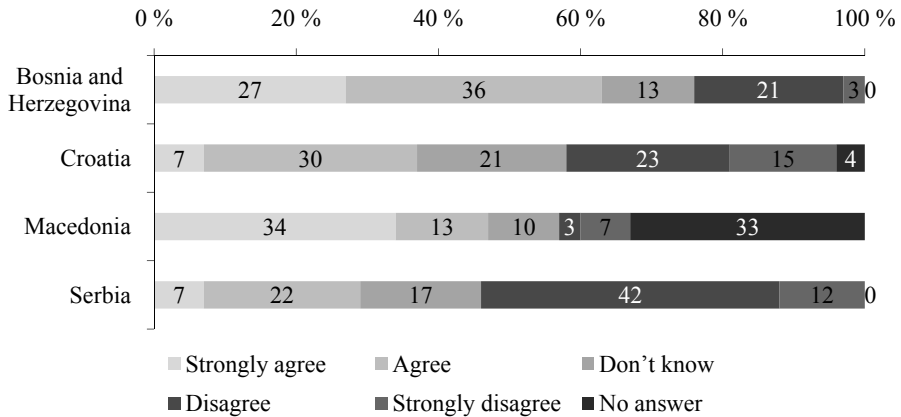


Figure 1.7. Support of obligatory membership in a PFOA (Q 17).

The high proportion of members of the Macedonian PFOA might also be the reason why Macedonia deviates from the other three countries in some respects. Private forest owners share the highest expectations in the lobbying activities of their interest association, in particular regarding the reformulation of the forest law (Fig. 1.6). They might also have good experiences with extension services regarding advice in silviculture and harvesting as well as in forest management training.

In the Croatian survey, it was not possible to refuse the support by employees of the Forestry Advisory Service, an independent agency established by the Government of the Republic of Croatia. Thus it cannot be excluded that the answers to delicate questions about the performance of public forest administration (Q10-Q13) are biased. Due to the existence of the Forestry Extension Service since 2006, Croatia is the only country where the majority of forest policy decision makers do not see a priority need for lobbying. Furthermore, they do not see the discrimination of private forest owners by the existing forest law contrary to their colleagues in the other three countries (Table 1.2).

In spite of the above potential limitations, the quantitative and qualitative research on the situation of private forest owners in B-H, Croatia, Macedonia and Serbia build a sound basis on which to define the economic and social position of private forest owners. The results allow comparisons with the existing literature on private forest owners in their countries (Trendafilov et al. 2008; Posavec et al. 2006; Sabadi 1994; Nonić and Milijić 2008); neighbour countries (Lako 2008; Schmithüsen and Hirsch 2009); and other European countries (Lönstedt 1997; Karppinen 1998; Harrison et al. 2000 Schraml and Volz 2003; Ziegenspeck et al. 2004; Hognl et al. 2005). It is therefore possible to recognise commonalities and differences as well as prejudices. Finally, forest policy decision makers should better be enabled to take appropriate actions to ensure sustainable forest management in private forests in their new democratic political systems.

1.6 Conclusions

Although the large number of private forest owners in each of the four countries is certainly an explanation for the lack of PFOAs in accordance with Olson's logic of collective action, it is not sufficient. Many years have passed since the transition from the Yugoslavian Socialism period to a democratic political system yet the power of the main actors in forest policy is almost unchanged and situated in the public forest administration and state forest companies. This is reflected by forest laws that do not recognise private forest owners as self-supporting entrepreneurs who are responsible for the sustainable management of their forests. Thus far, no serious actions have taken place from the governments' side to organise the private forest owners in a powerful interest organisation and to give them a voice in forest policy. Given such an initiative, the chances for success are favourable in light of this paper's survey results and in-depth interviews with policy makers.

It was found that in all four countries, the economic interests of private forest owners prevail, focusing on the domestic provision of fuel wood and saw logs. Corresponding to the prevailing economic interests, private forest owners expect forest management services such as advice in support of forest road construction and maintenance, silviculture and harvesting from a PFOA. In addition, they also expect the representation of their interests in the political system. There is an almost unanimous demand for tax breaks and exceptions in cases of catastrophe timber harvesting; subsidies for sustainable forest management; a solution to cadastral problems; and the reformulation of the forest laws in the interest of private forest owners. The economic basis of private forest owners facilitates the formation and administration of an interest association and makes it more stable once it has come into being. Furthermore, it was found that the individual private forest owners are far from being a homogeneous group. They differ in the size of their forest property and its fragmentation into a number of parcels, contribution of their forest to their households' income, awareness of political constraints such as legal regulations on forest management as well as with regard to their education and occupation. Heterogeneity is another favourable condition for the formation of an interest association since it provides the possibility that highly engaged 'large contributors' occur who provide resources to the interest association. Such a (hypothetically) high engagement for a PFOA was found in all four countries, in particular in B-H. This is supported by the results of the cluster analysis, which reveals a strong critical mass of drivers of a PFOA in all four countries.

In light of the research results, the answers to the questions at the outset of the chapter can be summarised as follows:

- The private forest owners in each of the four countries build large 'latent' groups in the sense of Olson's logic of collective action. The high number of potential members can only be organised if positive (individual economic advantages) or negative (compulsory membership) selective incentives are offered to the potential members. These incentives have not been provided thus far. Yet, there is empirical evidence that the attitudes of forest policy makers have changed in favour of PFOAs.
- In addition to selective incentives, the formation of a PFOA much depends on the availability of a critical mass of engaged and entrepreneurial private forest

owners. Such a critical mass undoubtedly exists in all four countries. Thus, there is the chance of spontaneous formations of small local associations of private forest owners, particularly if they are supported by the public forest administration. During the last few years, for example, local PFOAs have been established in all four countries; in Serbia a national umbrella organisation for lobbying was created in 2009.

- The private forest owners in all four countries have very clear expectations of the services to be supplied by a PFOA. They consist of services regarding sustainable forest management as well as representation of private forest owners' interests in the national political system. These services vary in the four countries depending on the national needs.
- Although the preconditions to form PFOAs in the four countries seem to be favourable in light of the surveys and field research, much still depends on the ruling policy makers to devolve responsibility to PFOAs. The formation of PFOAs certainly brings about a new distribution of power in the forest political arena and might increase the accountability, responsiveness and legitimacy of forest governmental units in all four countries.

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2. The Preconditions for Private Forest Owners' Interest Associations in Bosnia and Herzegovina

2.1 Private forests in general

The total surface covered by forests and forest lands in Bosnia and Herzegovina (B-H) amounts to 2,709,769 hectares or 53.4% of the state's territory. Of the state's territory, some 24% is considered as pasture land (much of it close to forest areas) and only 10% arable land. B-H is ranked fourth in Europe regarding the percentage of forest cover and sixth with respect to forest and forest land per capita (0.74 ha) (FAO 1999). According to the data from the National Forest Inventory 1964–1968, productive forest land makes up 96% (2,601,991 ha) of the total forest land in B-H. The basic official data on forests in B-H are presented in Table 2.1 (NEAP 2003).

2.1.1 History of forest ownership development

Forest ownership in B-H is determined by the political and historical developments that the country has gone through. To fully understand the current forest ownership situation, it is necessary to be familiar with the social and political backgrounds of past forest land tenure developments. Forest land tenure and related issues in the medieval Bosnian State were similar to those in other European countries. The Royal dynasty (the 'Kotromanićs') was the master and the sole owner of the Bosnian kingdom. As a reward for loyalty, large land areas were awarded to several Bosnian noble families (such as the Vukčićs, Kosačas and Pavlovićs). As the King became weaker, the nobles became stronger. In order to keep social peace, the nobles conceded some rights of use (without ownership rights) to their serfs (vassals), e.g. for fuel wood, collecting fruits and pasture.

When B-H was conquered by the Ottoman Empire (1463, 1482), a new forest ownership pattern was established. The legal base for forest land tenure was the Islamic canonical law based on the teachings of the Koran and the traditions of the Prophet (the Shariat). Accordingly, forests were considered as public good and could not become the subject of private ownership (Begović 1960). Some forests, called 'Baltalici', were designated for the satisfaction of the local population's needs. This type of ownership is close to community forests. In addition, some remote forests, called 'Džiboli-mubah', also existed and everybody was allowed to use these forests free of charge either for their own needs or for commercial purposes (Čomić 1999). The commercial demand for forest products simply did not exist due to undeveloped business and trade. Under such circumstances there was no real need for the development of private forests as a specific type of ownership. This kind of forest ownership structure remained for centuries. However, once wood became an important raw material and gained increasing market value in the first half of the 19th century, the Bosnian feudalists started usurping forest areas and selling their rights of use to foreign forest exploitation companies, mainly from Croatia, Austria

Table 2.1. Forests in B-H (ha).

	Republic of Srpska	Federation of B-H	B-H total
State forests	979,716	1,206,616	2,186,332
Private forests	229,874	293,563	523,437
Total forests and forest land	1,209,590	1,500,179	2,709,769

and Hungary. In 1858, private forest land was recognised in B-H as a legal form of forest ownership by ‘Ramadan’s Law on land tenure’ when new forests were planted and cultivated by the owners themselves. ‘Ševal’s Law on forest’ from 1869 proclaimed all free forests (‘Džiboli-mubah’) as property of the state. By the same law, all other types of forest ownership (‘Baltalici’, endowment forests – ‘Vakufi’ and private forests) were temporarily put at the disposal of the state until their ownership status had been reconsidered (Forestry Encyclopaedia 1980).

Immediately after the annexation of B-H by the Austro-Hungarian monarchy in 1878, the first landscape cadastre was conducted (1880–1885) and forest ownership issues were regulated in accordance with ‘Ševal’s Law on forest’ from 1869. Although ‘Baltalici’ remained the property of the state, some restricted users’ rights of the local population were recognised (‘Meremat’ right of the village population). In this context, communal forests as a special type of forest ownership were abolished. For the purpose of achieving Austro-Hungarian political aims, some forest areas were given to private owners, mainly to powerful local feudalists. Consequently, at the end of the 19th century private forests in B-H amounted to about 550,000 ha (Forestry encyclopaedia 1980).

The Yugoslavian monarchy’s Forest Law from 1929 significantly affected private forestry as the state could now intervene in estates greater than 300 ha (Sabadi 1994). At the time, however, the average size of private forests was significantly less than 300 ha due to permanent logging and inheritance. The absence of state intervention resulted in the exaggerated cutting of private forests – the consequences of which can still be seen today such as the unsatisfactory stock volume.

The agrarian reform in the former Yugoslavia in 1945 limited the ownership of private forests to 8–30 ha, depending on the terrain (Sabadi 1994). Like many other countries with economies in transition, B-H is now facing a process of ownership restitution, which is yet to be completed. The comparison of forest inventory results conducted by the Austro-Hungarian monarchy (1880–1885) with the current area of private forests in B-H indicates that the share of private forests will not significantly increase anymore as a result of the process. Although it is generally considered that the agrarian reform had a very strong impact on private land ownership in the former Yugoslavia, the land nationalisation process influenced mainly private agricultural properties (plough-field, pastures, hay-field, etc.), while the greater part of private forest estates, due to constant inheritance, was already below the prescribed maximum of 8–30 ha.

The specific social and political circumstances in B-H as well as the long period of planned economy (1945–1991) entailed modest attention and scientific research

on private forests. Unlike the intensive management of state forests, private forests have been somewhat neglected by both forest policy decision makers and private forest owners. The processes in the context of the new political situation in B-H, such as privatisation, denationalisation and restitution, have qualified the issue of private forest ownership at the top of public policy debates.

The official number of private forest owners in B-H is not available and there are several reasons for that. Land books and cadastre data are not completely accurate. Forest land is mainly a subject of family heritage but in many cases the process of formal ownership transfer is not officially completed. As the procedure of land partition among all successors is relatively expensive and time-consuming, in many cases the land is not designated to single physical persons. The benefits the single owner could gain from obtaining his portion of the land are often lower than the costs. Thus, in many cases a group of people (usually members of the same family) own the forest property collectively. They possess equal (so-called "ideal") portions of the land, know the borders in the field and use the land in one way or another. However, they cannot sell their portions as the formal ownership transfer procedure has never been completed. There is no doubt that the number of private forest owners in B-H is large. The experts estimate the number of private forest owners in B-H to be about 500,000. The majority of them own about 0.5 ha of forests, usually fragmented into a few parcels (Avdibegović 2006). Although quite rare, there are also relatively large private forest estates, particularly in the lowlands and northern parts of B-H.

2.1.2 State versus private forests

In many aspects there is a significant difference between state and private forests in B-H. While high forests are mainly owned by the state, private forest owners own roughly one third of coppice forests. Compared to state forests, stock volume and annual increment in private forests are significantly lower. According to the pre-war information (Forestry Program B-H 1986) Tables 2.2, 2.3, 2.4 and 2.5 depict data related to the silviculture and production capacities of private and state forests.

The official data for the current annual cuttings in private forests in the Federation of B-H are not available as they are dispersed among the forest offices in different cantons. The gross annual harvesting in state forests in the Federation of B-H for 2006 amounts to 2,593,736 m³ (Pašalić 2007). At the same time, the gross annual harvesting in state forests in the Republic of Srpska was almost the same (2,556,277 m³), while in private forests it was just 392,508 m³ (Institute of Statistics RS 2007). Considering the pre-war harvesting data as well as increased cuttings due to the poor economic situation within the post-war period, the current amount of removals in private forests in B-H is estimated to be 800,000 m³ per year.

2.1.3 Legal regulations concerning private forests

In terms of its political structure, B-H is probably among the most complicated countries in the world. The General Framework Agreement for Peace 1994 (known as the 'Dayton Agreement') has established B-H as a state comprising two entities:

Table 2.2. Ownership types by forest categories.

Forest category	State forests (ha)	%	Private forests (ha)	%
High forest	1,184,848	92	107,076	8
Beech	353,353	91	36,916	9
Fir, spruce and beech	566,480	97	19,336	3
Scots and Austrian pine	90,118	96	4,009	4
Sessile oak	79,738	75	26,675	25
Other high forests	95,159	83	20,140	17
Coppice	621,647	68	296,161	32
Beech	145,435	62	90,153	38
Sessile oak	84,835	52	78,312	48
Mixture coppice	263,872	73	95,385	27
Other coppice	127,505	80	32,311	20

Table 2.3. Stock volume in state and private forests.

Forest category	State forests		Private forests	
	Vol. (1,000 m ³)	m ³ per ha	Vol. (1,000 m ³)	m ³ per ha
High forest	256,475.8	216.5	10,972.1	102.5
Coppice	16,174.2	26.0	7,044.6	23.8

Table 2.4. Annual increment in state and private forests.

Forest category	State forests		Private forests	
	Vol. (1,000 m ³)	m ³ per ha	Vol. (1,000 m ³)	m ³ per ha
High forest	6,490.2	5.48	436.1	4.07
Coppice	569.1	0.91	446.8	1.51

Table 2.5. Planned annual harvesting in state and private forests.

Forest category	State forests		Private forests	
	Vol. (1,000 m ³)	m ³ per ha	Vol. (1,000 m ³)	m ³ per ha
Conifers	2,504	1.39	85.2	0.21
Broadleaves	3,848.6	2.13	797.7	1.98

the Federation of B-H and the Republic of Srpska, each with a high degree of autonomy. The organisation of the forestry sector is heavily influenced by this constitutional framework. The role of the state in forestry issues is almost symbolic, while all forestry responsibilities/activities are concentrated at entity levels. There is no common legal framework for forest management and forest legislation at the federal state level; forest legislation in the two Entities is not harmonised (Avdibegović 2006). This explains the substantial differences in legal regulations concerning private forests in both the Federation of B-H and the Republic of Srpska.

2.1.3.1 Federation of B-H

According to the Law on Forests of the Federation of B-H (2002), forest owners are those legal or natural persons who have a legally registered right of ownership to a forest or forest land. The Law prescribes two main types of ownership: forest and forest land in state property (state forests) and private forests. The ownership right for private forests must be proved by valid documents from the land registry and the cadastre of real estate.

Private forests are managed by their owners in accordance with the legal regulations and provisions laid down in mandatory forest management plans. The Cantonal forest offices are obliged to prepare forest management plans for private forests. In some Cantons, this regulation is not yet observed. The mandatory forest management plans are jointly financed by the forest owners themselves (in proportion to the forest area of the owner) and the Cantonal Ministries (from the Cantonal funds for the enhancement of forests). The common forest management plan is prepared for all private forests within a municipality.

According to the law, the Cantonal forest offices carry out the following tasks in private forests ensure sustainable forest management: marking trees before felling, measuring and labelling timber, issuing a waybill, planning silvicultural activities, etc. They can also transfer certain tasks to the Cantonal Forestry Management Companies. The Law prescribes that Cantonal forest offices provide financial and professional support for the establishment and functioning of forest owners' associations, where the reduced size, fragmentation or dispersal of forest parcels are detrimental to sustainable forest management. However, not one Canton has implemented this provision.

Private forest owners in the Federation of B-H are obliged to allot funds for the simple biological reproduction of forests. Prior to selling wood, private forest owners must pay 15% of the gross income from the approved quantity of wood calculated on the basis of market prices. This money is paid to the Cantonal funds for the enhancement of forests.

Private forest owners are obliged to carry out afforestation, forest tending and other silvicultural activities specified in the forest management plans. The Law prescribes that silvicultural measures in private forests can be co-financed by the Federation and Cantonal funds for the enhancement of forests, if the income from timber is not sufficient to carry out the necessary silvicultural activities.

The most important legal regulations concerning private forest owners in the Federation of B-H are presented in Table 2.6.

It is obvious from the table that private forests in the Federation of B-H are overregulated. This is not a case in the new European forest legislation, however,

Table 2.6. Legal regulations on private forests in the Law on Forests of the Federation of B-H.

Regulations	Articles
Mandatory management plans and other documents	18, 20, 21, 22, 28, 29, 47, 69, 72, 75
Tree marking before felling	23, 24, 71
Permission for felling	4, 71
Allocation of funds for simple biological reproduction of forests	25, 26, 72
Issuing of waybill and other documentation for wood transport	37
Different restrictions related to using of NWFPs	8, 10, 72

which is moving towards reduced regulation of many aspects of private forest management by the public forest administration. It focuses on setting frame conditions by defining minimum requirements and performance standards, while guidelines for best management practices are increasingly used (Cirelli and Schmithüsen 2000).

2.1.3.2 Republic of Srpska

The Law on Forests of RS (2003) requires forests and forest lands to be administered by their owners in accordance with the provisions of this Law. Similar to the Federation of B-H, the Law prescribes forest management plans for all private forests within a municipality. Unlike the situation in the Federation of B-H, these plans must be adopted by the Municipality Assembly before its implementation. The municipality and the forest owners co-finance forest management plans.

Based on a contract between the Municipality Assemblies and responsible forest districts, the public forestry enterprise ‘Šume Republike Srpske’ carries out all forestry activities in private forests. The felling of trees in private forests is carried out by the owner in accordance with the provisions of the forest management plan and a decision appointed by the public forest enterprise. Labelling felled trees in private forests and issuing a waybill is also done by the enterprise.

According to the Law, private forest owners are obliged to allot funds for basic biological reproduction of forests. Private forest owners shall be obliged to pay 10% of the net income from the approved quantity of wood to a separate account for the forest biological reproduction of the Municipality; the amount is calculated on the basis of market prices.

Private forest owners are obliged to reforest forest stands after fires and forest areas affected by devastation or damaged by storms within one year at the latest.

As mentioned above, national forest legislation prescribes a number of legal regulations to private forest owners in B-H, many of which include elements of very strict regulations. Considering the legally-based dominance of public forest

administration and state forest enterprises, it can be seen that the private forest sector in B-H is discriminated by forest legislation.

2.2 Selection of the random sample for the door-to-door survey

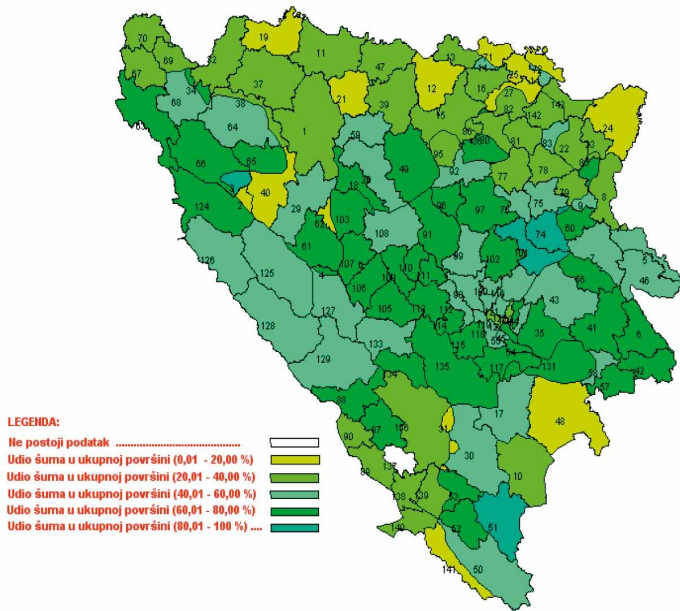
The agreed common questionnaire for the door-to-door survey of private forest owners (Annex 1) and the guideline for the interviews of selected forest policy decision makers (Annex 2a) were applied in each of the four participating countries. The main aim was to cover the hypotheses drawn from the review of the theoretical literature (explanatory research), but also to be open to new ideas and hypotheses (exploratory research). Furthermore, the questionnaires were designed to correspond with the methodological requirements of empirical methods of social research as well as with the needs of data analysis by SPSS.

The survey of private forest owners was conducted on the basis of the common principles for the sample design as follows:

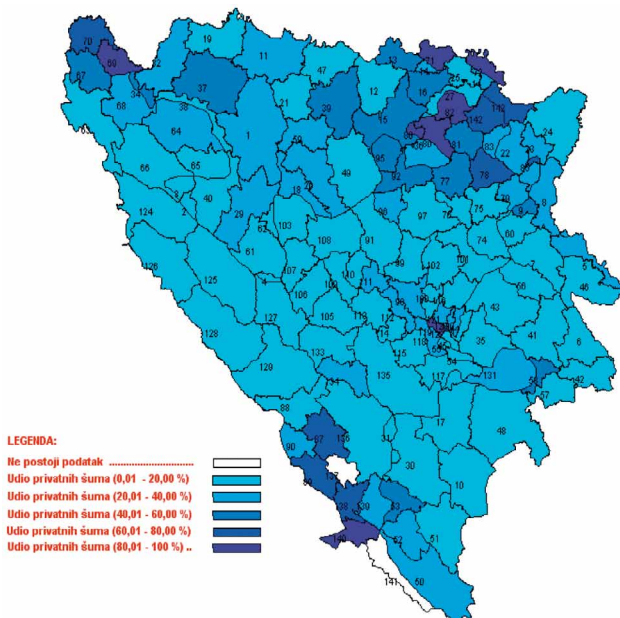
- The target population consisted of all private forest owners – not just ‘active’ owners.
- The level of precision amounted to $\pm 5\%$.
- As the data about the citizens and private forest owners (names, addresses etc.) were available only at the municipalities (cadastral offices) or local forest authorities, close cooperation with these institutions in the field was established in order to identify private forest owners in the field.
- The sample size was randomly selected 350 private forest owners.

Based on available data, all municipalities in B-H were ranked by the following two criteria: the highest percentage of forest coverage (Map 2.1) and the highest percentage of private forest land (Map 2.2). By overlapping these two criteria, the most representative municipalities (five in the Republic of Srpska: Berkovići, Ljubinj, Knežev, Milići and Krupa na Uni and four in the Federation of B-H: Sapna, Široki Brijeg, Stari Grad and Goražde) were identified. The ownership pattern in B-H is such that the percentage of private forests is highest in the lowland areas where the forest coverage is the smallest and vice versa

In order to identify the necessary number of private forest owners to be interviewed, a list of all local communities (settlements), called ‘Mjesna zajednica’, within nine selected municipalities was established. These local communities were the most appropriate ‘units’ for the purpose of this project as they existed in all former Yugoslavian countries and had survived the administrative changes the countries had gone through. These are also the basic election units with the most reliable lists of inhabitants. The data from local Cadastre offices (‘Cadastral municipalities’) could not be used for private forest owners’ identification due to the inaccurate updating of land ownership changes or low level of data digitalisation. In total, 35 settlements were chosen randomly from the list of all local communities (settlements) within nine municipalities. Close cooperation with the public forest administration and forest guards in the field was established in order to identify private forest owners in each settlement. Based on the local knowledge of forest guards, lists of private forest owners in each settlement were created, of which ten were selected randomly.



Map 2.1. Forest cover in B-H



Map 2.2. Private forestland in B-H

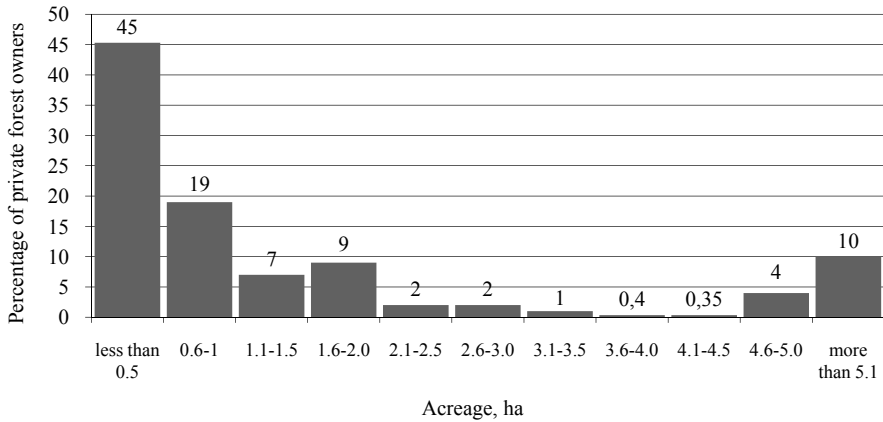


Figure 2.1. Size of private forests (in ha).

2.3 Results of the quantitative analysis¹

2.3.1 Silvicultural aspects

Taking into account the complicated situation with the land register as well as the socio-economic circumstances B-H has seen during the last few decades, it is surprising that 97% of the respondents know the size (acreage) of their forest estates. Roughly two thirds of the respondents own less than one hectare of private forests (14% own more than four hectares), which characterise the private forest ownership pattern in B-H (Figure 2.1.). Forests in private properties are mainly mixed or coppice forests; only 15% of private forests are high forests. Furthermore, more than 85% of forests are either broadleaved or mixed while only 13% are coniferous forests.

2.3.2 Sociological aspects

Private forest owners in B-H are mainly male (97%), a result of the socio-cultural characteristics of B-H society where women rarely share formal ownership rights (particularly land) with their husbands. The majority of private forest owners are older than 41 (the average age is 53) while one quarter is older than 61.

Only 3% of private forest owners live in settlements with more than 5,000 inhabitants. This clearly refers to the important role of private forests for the economic development of rural areas. The majority of the respondents belong to low income population. Half are either retired or unemployed while more than one third are lower-level employees, manual workers and farmers. Only 3% of private forest

¹ The complete results are available at prifort.com/Download/Volume_2_final.pdf

owners have college or university education – the majority have either vocational or high school qualifications while one third has only elementary school qualifications or even no formal education at all.

2.3.3 Economic aspects

The majority of private forest owners like their forests, which points to very strong emotions towards them as they are passed from one generation to another. Only 5% of private forest owners purchased or sold their forests during the last decade.

Almost one half of private forest owners included in this survey regard their forests as a gain for their families, while one quarter considers them a burden. The forest's contribution to the yearly household income depends on whether timber is designed for sale or domestic use. The contribution from timber sales is negligible while the contribution from domestic use in household income is higher (23% of the interviewed forest owners reported some) – probably those who cut trees for fuel wood each year. The dynamics of cuttings depends on the purpose of timber use. Some two thirds of private forest owners fell trees for fuel wood periodically; one quarter every year; and 13% do not fell trees at all. More than two thirds do not cut trees for technical wood at all.

The predominant use of private forests is for fuel wood for domestic purposes. Only one fifth of private forest owners are market-oriented by selling either fuel wood or saw logs. Other types of use such as nature conservation, tourism and production of NWFPs are of minor importance. Some 4% of private forest owners do not use their forests at all.

Almost 60% of respondents do not own their forests individually; they usually share them with their closest relatives. Private forest ownership in B-H is highly fragmented – only one quarter own consolidated forests (total forest area within one parcel) while two thirds of private forests are fragmented into 2–4 parcels (Figure 2.2).

The average distance between the home and forest is less than 4 kilometres; the majority of private forest estates are within a distance of 10 kilometres.

The readiness for cooperation with other private forest owners depends very much on the type of activities. The highest readiness for cooperation relates to forest road construction and maintenance while other potential types of cooperation (joint selling forest products, sharing forest management planning costs, sharing harvesting equipment etc.) are not so pronounced. Those who are ready to cooperate in road construction and maintenance expressed a strong lack of support from interest associations in terms of forest management (Figure 2.3) and lobbying activities (Figure 2.4).

2.3.4 Institutional aspects

The percentage of respondents who know the boundaries of their private forests is rather high (more than 90%). Furthermore, the boundaries of the majority of private forest estates are visible in the field and registered in the land register. Only a small percentage of private forest owners (11%) had ownership disputes with other

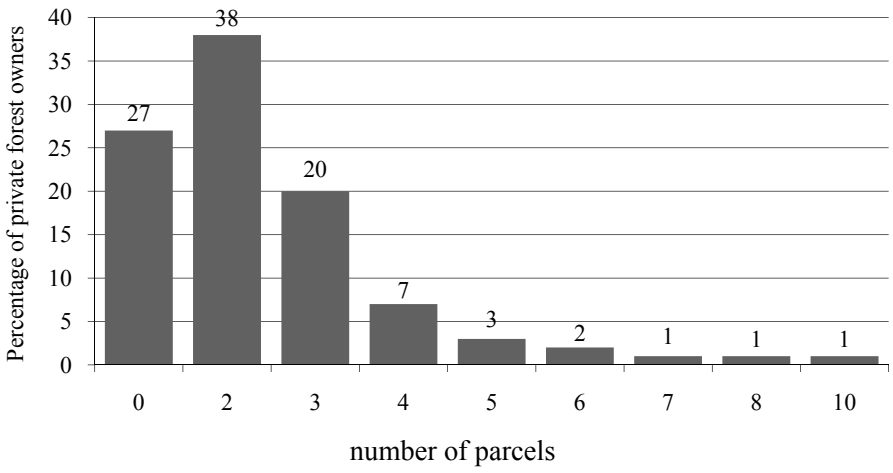


Figure 2.2. Fragmentation of private forest ownership.

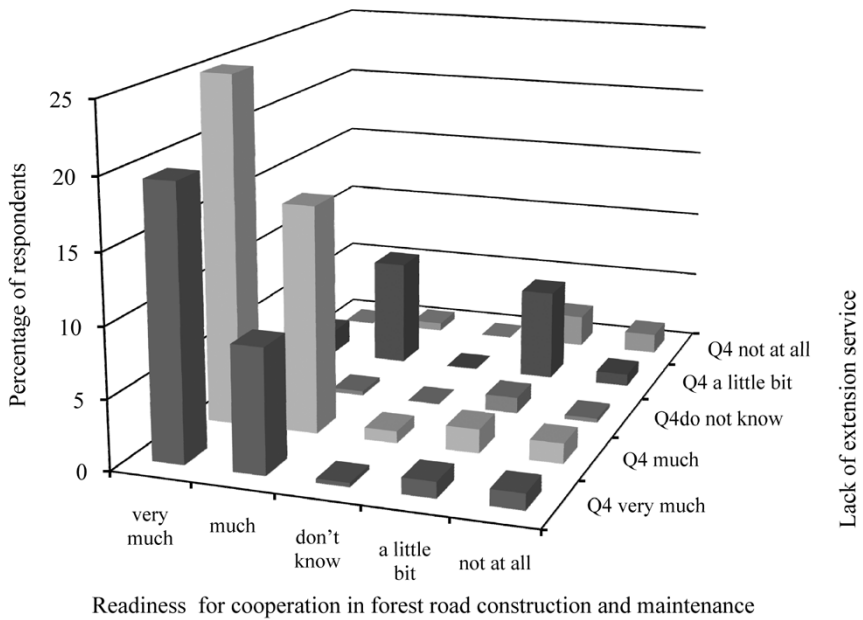


Figure 2.3. Correlation between the readiness to cooperate in forest road construction and maintenance and lack of support from interest associations for forest management.

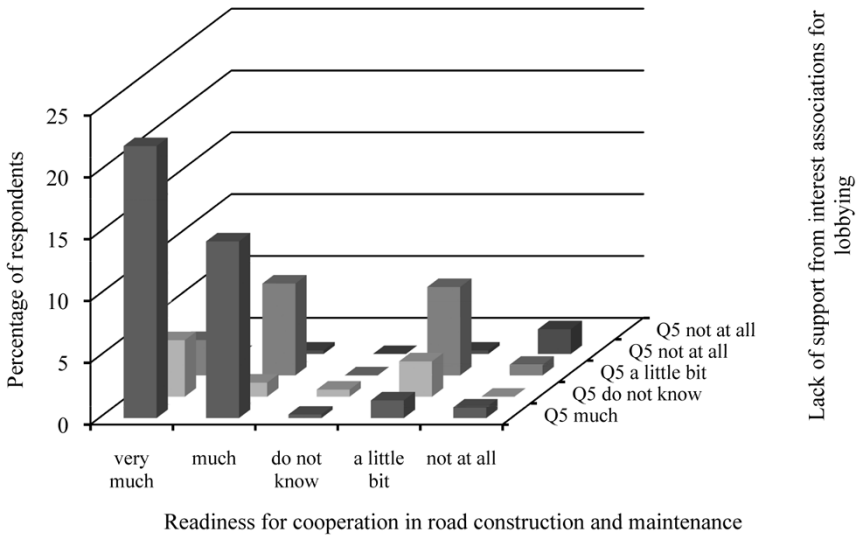


Figure 2.4. Correlation between the readiness to cooperate in forest road construction and maintenance and lack of support from interest associations for lobbying.

claimants during the last decade, mainly related to illegal cutting and disputes with state forest enterprises regarding ownership rights.

The level of awareness of forest regulations on private forests is very low. Only 9% of private forest owners included in this survey are familiar with forest legislation (Figure 2.5). The most stringent legal regulations according to private forest owners are the prescription to pay levies for timber harvests, obligatory management plans, requested permission for harvesting and tree marking by public forest authorities before felling (Figure 2.6).

None of the interviewees received any subsidies from public forest administration. Those private forest owners who are under strong pressure from legal regulations (particularly levies for harvesting) expressed a stronger need for interest associations' support in terms of forest management and representation of their interests by lobbying.

The quality of information about private forest management obtained from all types of institutions (public forest administration, state forest enterprises, associations of private forest owners and NGOs) is rated as very low.

2.3.5 Attitudes towards private forest owners' interest associations

In search of additional information about managing their forests, roughly one half of private forest owners turn either towards state forest enterprises or public forest administration; one third to either relatives or neighbouring owners; and one quarter do not consult anybody. It is not clear whether the latter group manage their forests

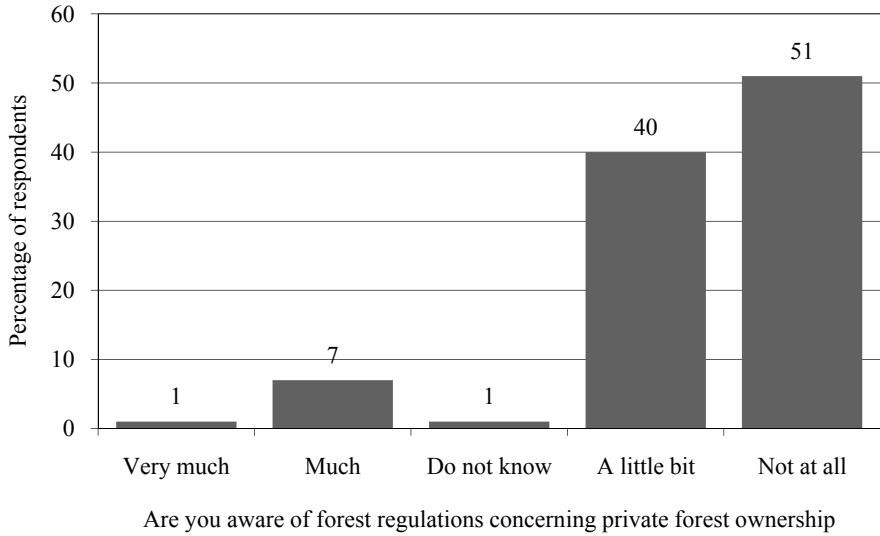


Figure 2.5. Awareness of forest regulations concerning private forest owners.

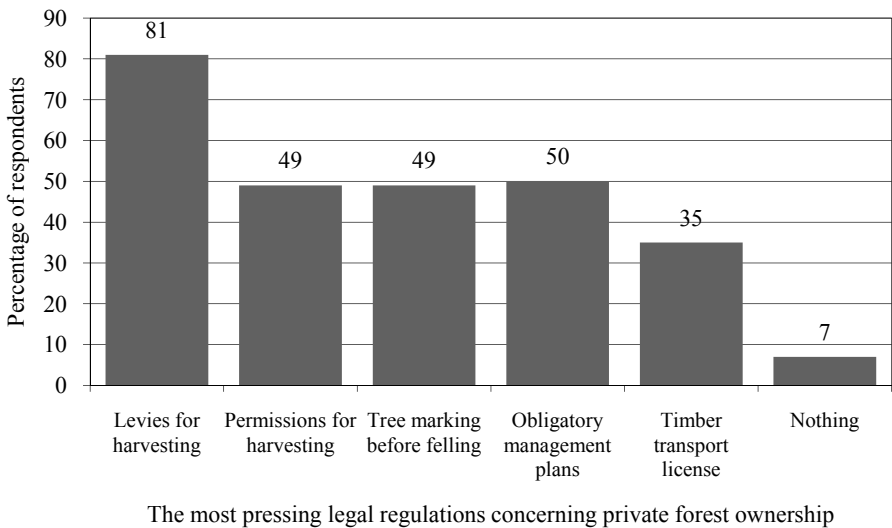


Figure 2.6. The most stringent legal regulations according to private forest owners.

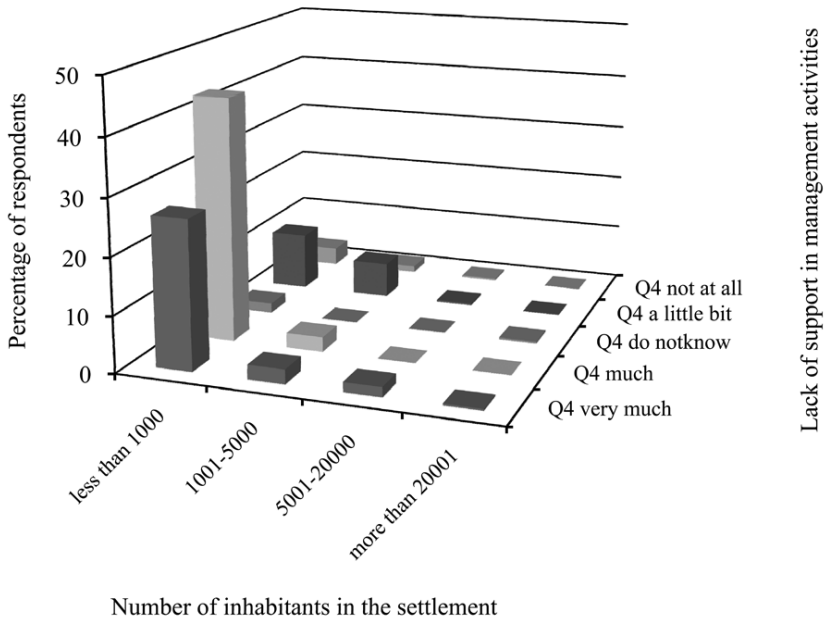


Figure 2.7. Correlation between the lack of support from interest associations for forest management and size of settlement of private forest owners' homes.

at all (they do not need any kind of support) or they do not know to whom to turn (lack of information). In search of information on how to manage the forest, private forest owners do not consult private forest owners' associations or professional journals. Public forest administration and private forest owners' associations are, however, preferred for different forest services (e.g. advice in silviculture, harvesting, timber market, lobbying etc.).

More than 80% of private forest owners believe that their interests are not appropriately represented. The majority of private forest owners noted in this survey the lack of an interest association to support them in managing their forests (e.g. silviculture, harvesting operations, timber market access etc.) and to represent their interests by lobbying political parties, civil servants in ministries/governments in order to improve their social and economic situation.

The correlation analysis indicates that the population in smaller settlements and poorer private forest owners express a stronger lack of support from interest associations in both management (Figures 2.7 and 2.9) and lobbying (Figures 2.8 and 2.10) activities.

The most desired services expected from private forest owners' associations are the construction and maintenance of forest roads, the preparation of necessary documentation for getting subsidies, advice in silviculture/harvesting and information on legal regulations. Other services, such as information on the timber market, forest management training and strengthening entrepreneurship are not

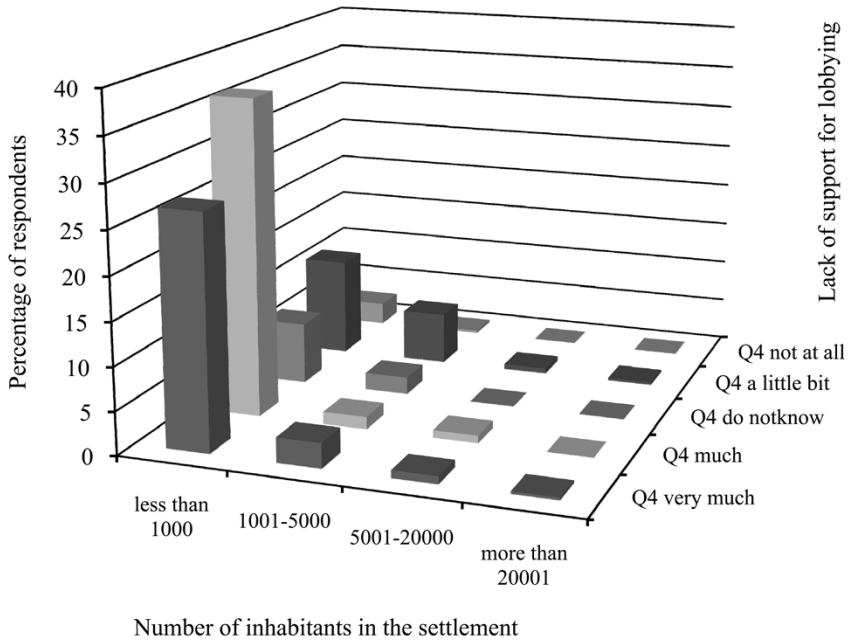


Figure 2.8. Correlation between the lack of support from interest associations for lobbying and size of settlement of private forest owners' homes.

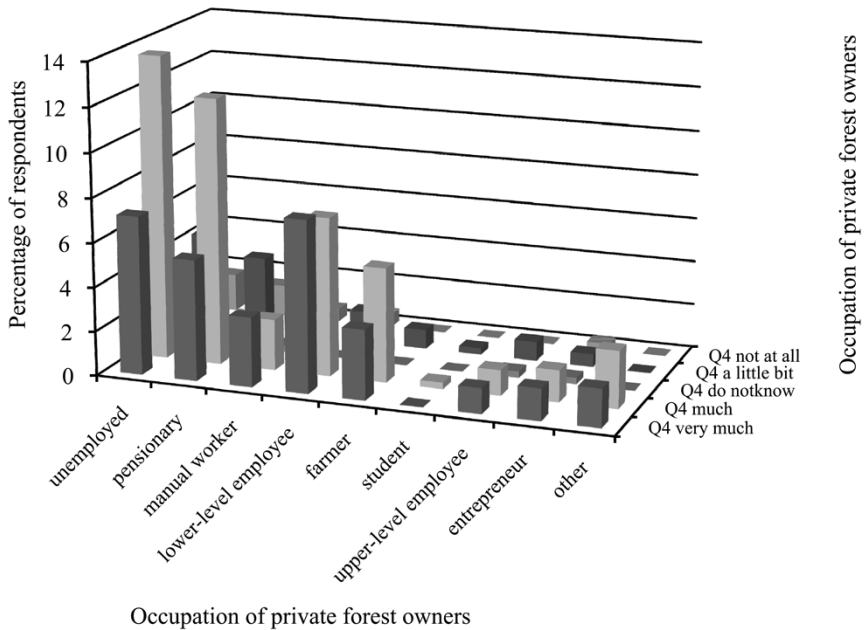


Figure 2.9. Correlation between the lack of support from interest associations for forest management and occupation.

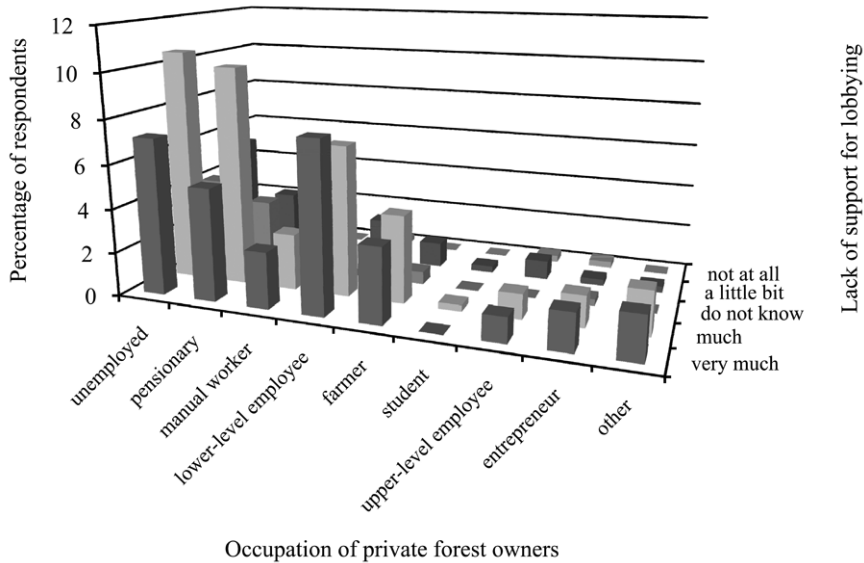


Figure 2.10. Correlation between the lack of support from interest associations for lobbying and occupation.

expected so strongly (Figure 2.11). Only 1% of private forest owners do not expect any services from interest associations to improve forest management.

The most desired lobbying activities expected from private forest owners' associations are pure forest policy issues such as tax breaks/exemptions, the provision of subsidies and solutions to forest land register problems (Figure 2.12)

The level of private forest owners' understanding of the interest associations' mission, objectives and perspectives is encouraging. The majority of respondents find the support of the members as the main objective of an association. They also understand that associations should supply all kinds of services for efficient forest management and represent the members' interests by lobbying different state institutions. On the other hand, more than one third of the respondents somehow associate private forest owners' associations with shared properties. Nevertheless, most agree that associations can contribute to common solutions acceptable to the majority of their members. Slightly more than one half believe that associations are easy to establish in the long-run.

The survey results show that none of the interviewees is a member of private forest owners' interest associations. If such associations existed, the majority of respondents would be prepared to become a member if some economic advantages might be obtained. Two thirds accept voluntary membership without any (or low) fees. For one half of the respondents, the positive performance of associations in previous periods is an important factor to become a member. The low level of trust in the public forest service is underlined by the fact that one third of private forest owners would join the association if they were independent from public administration.

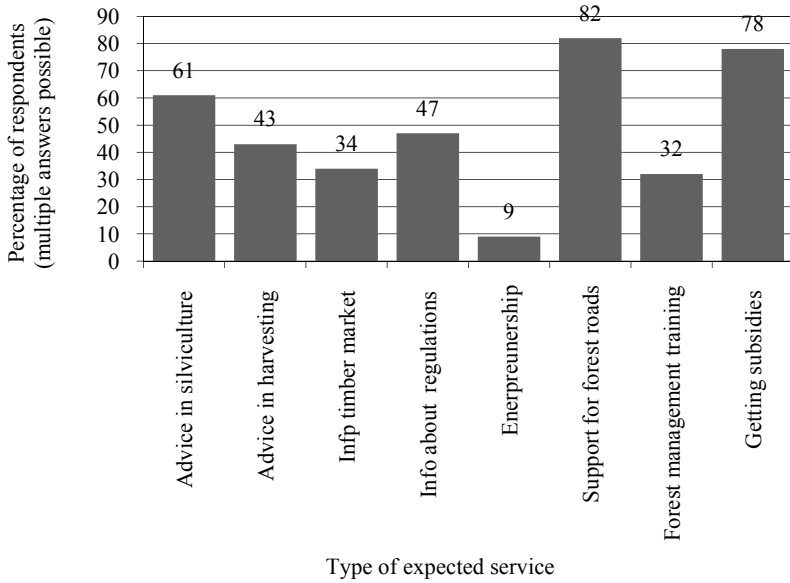


Figure 2.11. Expected services from a private forest owners' interest association to improve forest management.

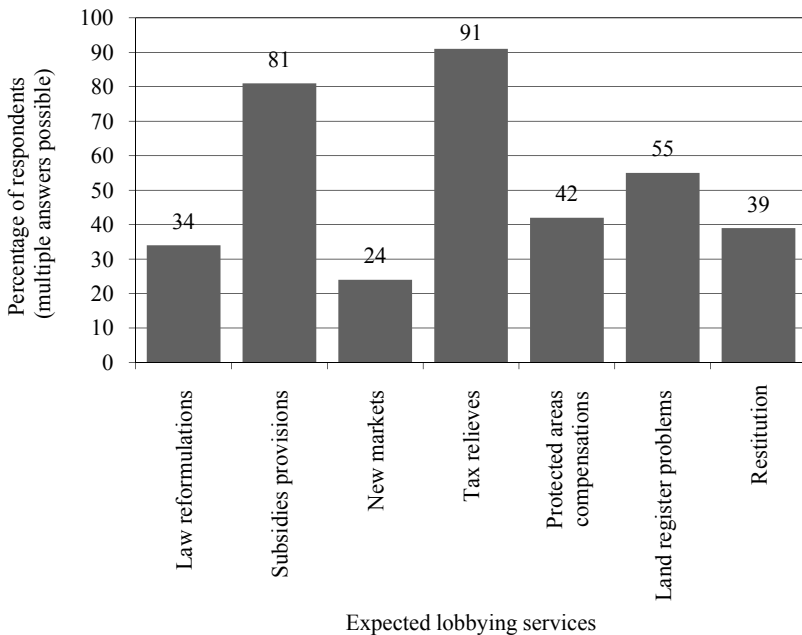


Figure 2.12. Expected lobbying services from a private forest owners' interest association.

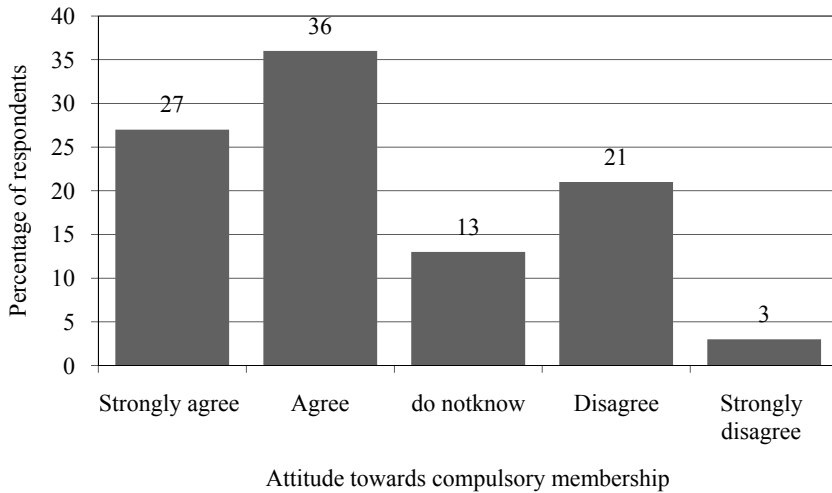


Figure 2.13. Attitude towards compulsory membership in a private forest owners' interest association.

The lack of interest associations to support private forest owners is emphasised by the fact that one half of the interviewees are ready to engage themselves in the establishment of such associations. Those who lack associations for support in forest management and lobbying activities are more ready to play an active role in their establishment.

Almost two thirds of the interviewees agree with the idea that obligatory membership in private forest owners' interest associations should be forced by legislation for all private forest owners (Figure 2.13). The supporters of obligatory membership in private forest owners' interest associations are also very much prepared to engage themselves in their establishment.

Those private forest owners who lack private forest owners' associations in terms of forest management (Figure 2.14) and representation of their interests (Figure 2.15) strongly support obligatory membership.

Obligatory membership of a private forest owners' interest association by legislation is strongly supported by the interviewees with the smallest and the largest sizes of individual parcels (Figure 2.16), and those living in small settlements (Figure 2.17).

2.3.6 Groups of private forest owners

The cluster analysis revealed three homogeneous subgroups of private forest owners. The biggest cluster (55% of the interviewees) are called 'drivers' and strongly plead for an association of private forest owners. The most expected services in terms of

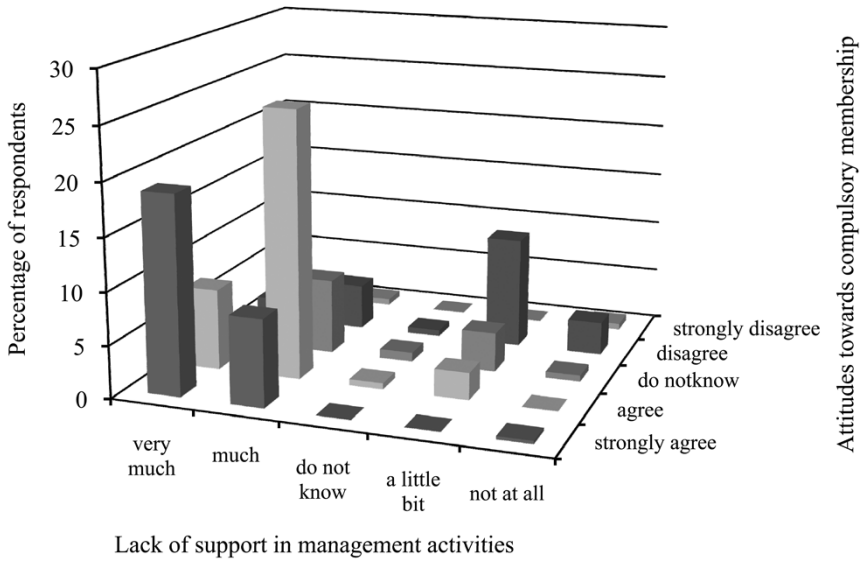


Figure 2.14. Correlation between compulsory membership and lack of support from interest associations for forest management.

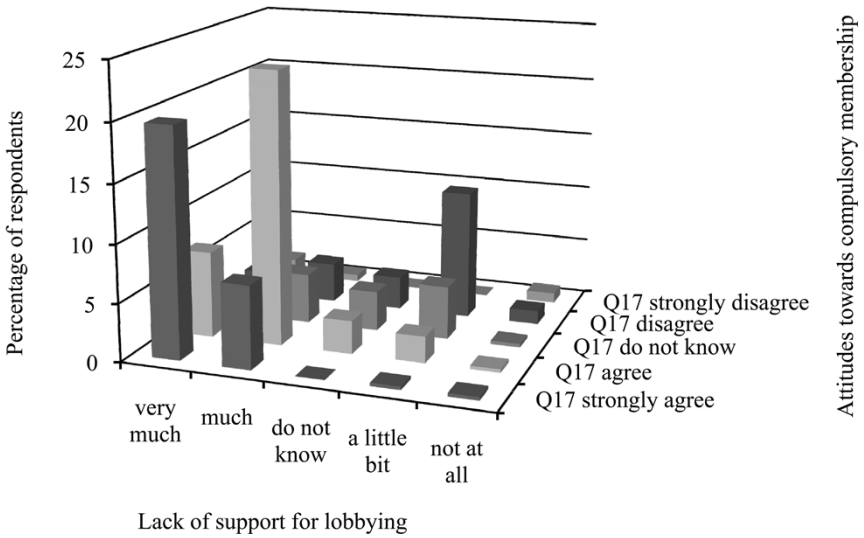


Figure 2.15. Correlation between compulsory membership and lack of support from interest associations for lobbying.

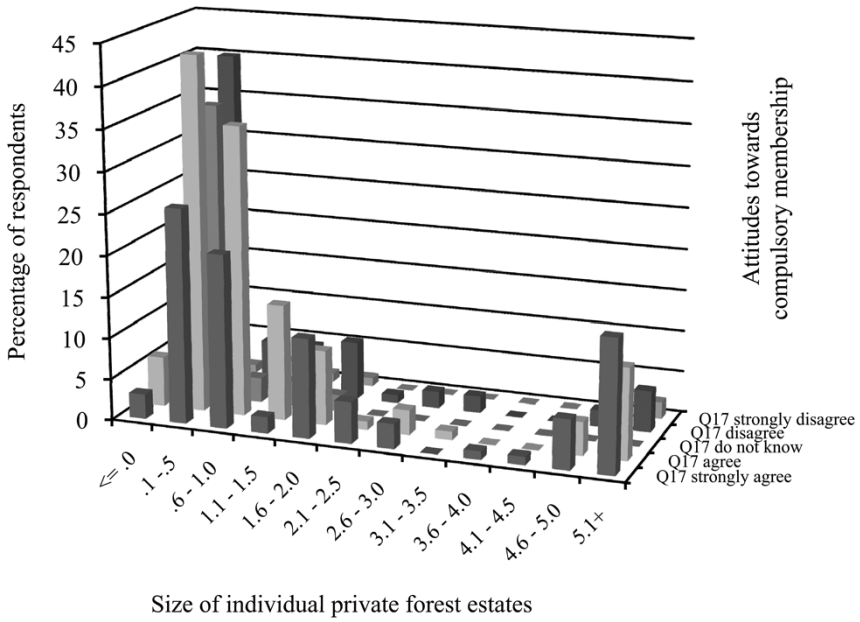


Figure 2.16. Correlation between compulsory membership and size of private forest property.

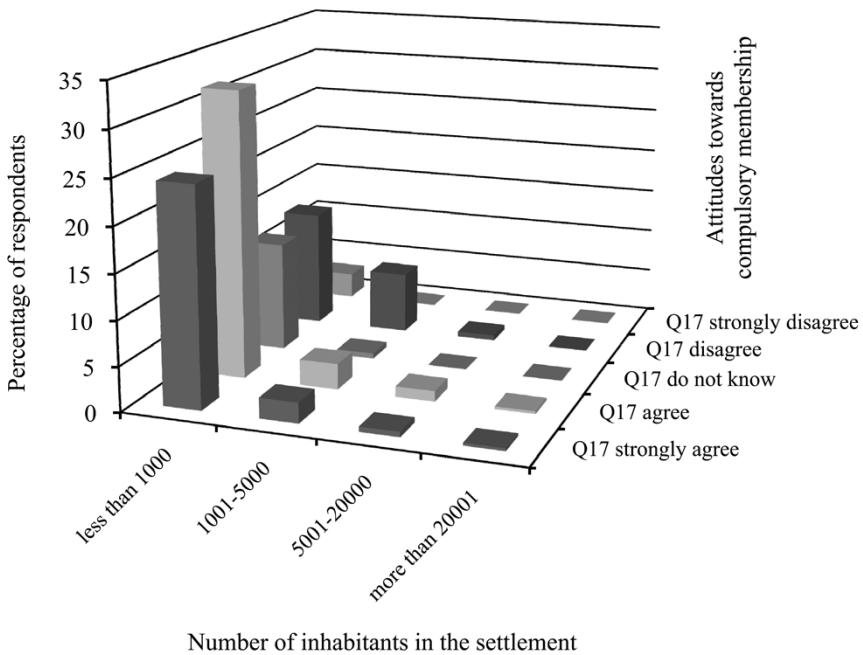


Figure 2.17. Correlation between compulsory membership and size of settlement of private forest owners' home.

forest management from such an association refer to support in road construction and maintenance, preparation of documents for getting subsidies and advice in silviculture. With regard to lobbying activities, the owners expect mainly tax breaks and the revision of subsidies. The private forest owners within this cluster expressed high readiness to be engaged in the establishment of associations and they support obligatory membership. These are the owners with the largest forest estates in B-H and regard their forests more as a gain than a burden. They use their forests mainly for domestic purposes, in particular for fuel wood consumption (3.5 m³ per year on average). Readiness for cooperation with other forest owners is expressed in all aspects (sharing harvesting equipment, sharing management plan costs, selling forest products, forest training, and road construction). There is a certain diversity regarding the respondents' education level.

The second cluster (25%) – 'supporters' – express a moderate need for an interest association of private forest owners. Most often they expect support in road construction and maintenance, more information on timber markets, tax breaks, the provision of subsidies and a solution to land register problems. They are moderately prepared to engage themselves in the formation of associations. Still, they support obligatory membership in private forest owners' interest associations. Compared to the 'drivers', they differ in terms of property size, the evaluation of economic benefits from their forests, the main use of the forest as well as the type of activities of potential cooperation. They own relatively small properties (0.67 ha on average) and find their forests neither a gain nor a burden. Wood for domestic purposes is used in small quantities in both fuel and industrial wood (about 1 m³ yearly). The cooperation with other forest owners is quite desired in road construction/maintenance and to a certain extent in some training activities, while the interest in other types of cooperation is minor. As concerns the level of education, the owners within this cluster have mainly graduated from high school or vocational college.

The smallest cluster (20%) – 'free riders' – do not see a significant need to establish private forest owners' associations and disagree with obligatory membership in such associations. If they expect any services from associations, they are mainly related to preparing documents to obtain subsidies, tax breaks and road construction. The readiness to play an active role in the establishment of private forest owners' interest associations is low. They own small forest properties (0.5 ha on average) and usually do not use them at all. Thus, they find their forests rather a burden than a gain. On the whole, the level of interest for cooperation with other forest owners is small. The interviewees belonging to this cluster have a relatively low level of education (either elementary or vocational school).

2.3.7 Results of the factor analysis

Some underlying factors that explain the pattern of variability within a set of observed variables are identified by using a factor analysis. The following five factors explain about 70% of variability: (1) the readiness of private forest owners for mutual cooperation; (2) the need for an interest association to support private forest owners in forest management and lobbying for their interests; (3) the economic importance of private forests in terms of contributions to the total household income; (4) the amount of domestic fuel wood consumption; and (5) the

level of private forest owners' education. These results strengthen the results of the cluster analysis.

2.4 Results of the qualitative analysis

The main aim of the focused in-depth interviews was to identify the attitudes of forest policy decision makers towards the formation of private forest owners' interest associations in B-H. The qualitative research included 21 key representatives of all institutions and authorities who might influence the formation of private forest owners' associations in B-H. Thus, the concept of theoretical sampling (to obtain an appropriate set of relevant patterns of behaviour) instead of random sampling was used in the selection of the respondents. The following institutions were included (Annex 2a): Ministries responsible for forestry issues at the entities' level (4 persons), ministries responsible for environment protection at the entities' level (2), public forest companies (2), public forest authorities at the cantonal level (1), private forest owners' associations (1), chamber of trade and commerce (1), associations of forest/wood processing professionals (2) and academy – forestry faculties (2). Furthermore, the representatives of six political parties were also interviewed (3 left-wing parties and 3 right-wing parties). After analysing the answers, the respondents were grouped (advocates, indifferent, opponents) according to their attitudes towards the formation of private forest owners' interest associations. Table 2.7 gives the matrix of basic topics and the relevant institutions/organisations.

2.4.1 Sustainable forest management of private forests

The opinions held by interviewed forest policy actors about the readiness of private forest owners to manage their forests sustainably are given in Table 2.8.

The majority of the respondents believe that private forest owners cannot manage their forests in a sustainable manner without external support. The representatives of MFBH explain this common opinion with the fact that “private forest owners have no economic interests due to their small parcels and relatively bad forest conditions; at the same time, they are not trained in forest management to improve the current situation.” Most policy actors claim that private forest owners cannot achieve sustainable forest management solely; they propose different types of support to private forest owners (advice, education, financial incentives, legislation improvements) offered by the public forest administration.

2.4.2 Are private forest owners a homogeneous group?

The majority of respondents are of the opinion that private forest owners are a very heterogeneous group (Table 2.9).

According to the representatives of different institutions (MFBH, RS, P5, PFOA, CFT), private forest owners differ in many respects, such as silviculture (different

size of individual parcels, different forest conditions), social characteristics (place of residence, age, education, economic attitudes towards forests) and economic interests (entrepreneurs versus passive owners).

2.4.3 Discrimination by forest legislation

The respondents' opinions about discriminatory treatment of private forest owners in forest legislation are presented in Table 2.10.

The majority of the respondents agree that private forest owners are discriminated by the current forest legislation as compared with state forest companies. The arguments are as follows:

- “Legislation entrusts the public forest administration with too many responsibilities regarding private forests. Private forest owners have many obligations and only very few rights.” (MFBH)
- “Wood harvesting taxes for private forest owners are higher than those of public forest enterprises.” (MFRS, PFOA)
- “Private forest owners are not recognised as potential beneficiaries of subsidies from budget funds aiming at improving forest services (external economies).” (CF, CFT)
- “Active participation of private forest owners in forest policy processes is not provided by legislation.” (MERS)
- “Forest legislation does not provide an appropriate organisational framework for sustainable management in private forests (BL); there is no institution to support private forest owners.”

2.4.4 Public support of forest management

All respondents unanimously agree on the need of public support for private forest owners in order to achieve sustainable forest management of private forests (Table 2.11).

The respondents mainly argue that private forest owners need financial and professional (advisory) support, as they have neither the money nor the necessary knowledge for sustainable forest management. The representatives of public administration, public forest enterprises and political parties claim that “Private forest owners should be supported to apply for budget funds aiming at improving forest conditions.” As modality of such support they propose co/financing of different projects in private forests (silviculture, forest protection measures, reforestation etc.) with important support of public forest administration and state forest enterprises in the implementation of these projects.

2.4.5 Need for lobbying and extension service

The respondents' opinions about the need for lobbying in forest policy processes and advice in forest management in order to strengthen the role of private forest owners are presented in Table 2.12.

Table 2.7. Matrix of topics for the qualitative analysis.

TOPIC	PA						PbE		PP				FS		IGFWI			
	MAWF			ME			SS	RS	RP		LP		SA	BL	AF ET	PF OA	CFT	WC
	MF BH	MF RS	CF	ME BH	ME RS	P1			P2	P3	P4	P5						
III-2a	-	-	+	-	-	-	-	-	+	-	-	-	-	+/-	-	+	-	-
III-3	-	-	+	-	-	-	-	-	-	-	-	-	+	+	-	-	-	-
III-7b	+	+	+	-	+	-	-	-	-	+	+	+	+	+	+	+	+	+/-
IV-9	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
V-12	+	+	-	+/-	+	+/-	+/-	+/-	-	+/-	-	+/-	+	-	+	+	+/-	+/-
V-14	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
V-15a	-	-	-	+	-	-	-	+	+	-	+	+	-	-	+	+	-	-
V-16a	+	-	+	+/-	+	+/-	+/-	+	+	+	+/-	+	+	+	-	+	+	+

+ Advocates
 - Opponents
 +/- Indifferent

- Abbreviations of topics in Column 1 (Table 2.7):
- III-2a: Do you believe that private forest owners can manage their forests in a sustainable way?
 - III-3: Are private forest owners a homogenous group?
 - III-7b: Are private forest owners discriminated by the current forest legislation?
 - IV-9: Do private forest owners need public support for sustainable management of their forests?
 - V-12: Do you support strengthening the role of private forest owners through lobbying in forest policy processes?
 - V-14: Do you support the formation of independent private forest owners' associations?
 - V-15a: Do you think that voluntary private forest owners' associations are the appropriate approach?
 - V-16a: Do you believe that compulsory membership in private forest owners' associations is possible in B-H?

Abbreviations of the organisations in Columns 2–6 (Table 2.7):

- PA: Public administration
- MAWF: Ministries of Agriculture, Water Management and Forestry at all levels
- MFBH: Ministry of Agriculture, Water Management and Forestry – Federation of B-H
- MFRS: Ministry of Agriculture, Forestry and Water Management – RS
- CF: Cantonal Forest Office – Federation of B-H
- ME: Ministries of Environment at entity levels
- MEBH: Ministry of Environment and Tourism – Federation of B-H
- MERS: Ministry of Environment and Spatial Planning – RS
- PbE: Public enterprises
- SS: Public forest enterprise Sarajevo Šume
- RS: Public forest enterprise Šume of the Republic of Srpska
- PP: Political parties
- RP: Right-wing parties (P1: SDA, P2: HDZ, P3: SBiH)
- LP: Left-wing parties (P4: SS, P5: NSRZB, P6: SDP)
- FS: Forest science and research organisations
- SA: Faculty of Forestry University of Sarajevo
- BL: Faculty of Forestry University of Banja Luka
- IGFWI: Interest groups – Forestry and Wood-processing Industry
- AFET: Association of Forestry Engineers and Technicians
- PFOA: Private Forest Owners Associations “Naša Šuma”
- CFT: Chamber of Foreign Trade
- WC: Wood Cluster

Table 2.8. Do you believe that PFOs can manage their forests sustainably?

Institution	Advocates	Indifferent	Opponents
Public administration			MFBH
			MFBH
			MFRS
			MFRS
		CF	MEBH
			MERS
Public enterprises			SS
			RS
Political parties	P1		P2
			P3
			P4
			P5
			P6
Forest science and research organisations		BL	
Interest groups – Forestry and Wood-processing industry	PFOA		AFET
			CFT
			WC

Those respondents who give priority to lobbying underlined the necessity of creating a political, legislative and institutional framework as the ultimate precondition for a successful extension service. The representative of the PFOA emphasises why lobbying activities should have priority: “In the context of EU integration and adaptation of the forest sector to internationally recognised principles of forest policy, lobbying is most necessary – now or never.” The respondents who give priority to advice in forest management claim that tailor-made training programs for private forest owners would be the most suitable modality of support. Their opinions can be summarised in the following statement: “If private forest owners do not know how to manage their forests, lobbying activities would not result in an improvement of the current situation.” All respondents regard PFOAs as the logical institutions for supporting private forest owners in both lobbying and an extension service. Only the representatives of public forest administration find that forest administration should play a key role here. The respondents who cannot decide to prioritise one of the two options find these activities inseparable; they treat

Table 2.9. Are private forest owners a homogenous group?

Institution	Advocates	Indifferent	Opponents
Public administration			MFBH
			MFBH
			MFRS
			MFRS
			MEBH
	CF		MERS
Public enterprises			SS
			RS
Political parties			P1
			P2
			P3
			P4
			P5
			P6
Forest science and research organisations			SA
	BL		
Interest groups – Forestry and Wood-processing industry			AFET
			PFOA
			CFT
			WC

lobbying and extension service as two equally important components of the integral support system for private forest owners.

2.4.6 Formation of independent interest associations

The respondents' opinions about the formation of independent associations of private forest owners are presented in Table 2.13. All respondents unanimously support the formation of independent interest associations of private forest owners in order to articulate their interests and represent them in forest policy processes.

Some obstacles for establishing independent associations of private forest owners in B-H are identified:

- The number of private forest owners is too big.
- Individual private forest owners have quite different interests that prevent them from getting organised.

Table 2.10. Are private forest owners discriminated by the current forest legislation?

Institution	Advocates	Indifferent	Opponents
Public administration	MFBH		
	MFBH		
	MFRS		
			MFRS
	CF		
	MEBH		
Public enterprises			SS
			RS
Political parties	P1		
			P2
	P3		
	P4		
	P5		
	P6		
Forest science and research organisations	SA		
	BL		
Interest groups – Forestry and Wood-processing industry	AFET		
	PFOA		
	CFT		
		WC	

- Private forest owners have too little knowledge about the functioning of associations.
- Private forest owners' interest associations have no tradition in the forestry sector of B-H.
- There are negative experiences with similar associations (cooperatives in agriculture) during the previous Socialism period.

2.4.7 Voluntary membership

The respondents' opinions about voluntary membership in PFOAs are presented in Table 2.14. Their opinions are quite diverse. The representatives of public administration and forest science do not believe that this is the most appropriate approach. However, the majority of representatives of political parties (both right

Table 2.11. Do private forest owners need public support for forest management?

Institution	Advocates	Indifferent	Opponents
Public administration	MFBH		
	MFBH		
	MFRS		
	MFRS		
	CF		
	MEBH		
Public enterprises	SS		
	RS		
Political parties	P1		
	P2		
	P3		
	P4		
	P5		
	P6		
Forest science and research organisations	SA		
	BL		
Interest groups – Forestry and Wood-processing industry	AFET		
	PFOA		
	CFT		
	WC		

and left) and the representatives of PFOAs represent the opposite opinion. Among the arguments against voluntary membership, the following are the most pronounced:

- “Private forest owners are too big and diverse a group of individuals with different interests to be voluntarily organised.” (MFBH)
- “Why is it that we don’t have these associations if voluntary membership were realistic?” (SA)
- “Voluntary approach is not popular in B-H society.” (MFRS)

The following arguments for voluntary membership in PFOAs are identified:

- “It would be possible if there were a favourable institutional/legislative framework.”
- “If private forest owners were informed about the positive effects of memberships.” (P5, P6)
- “If it were supported by the public forest administration and state forest enterprises.” (AFET)

Table 2.12. Which support do private forest owners need more: lobbying or advice in forest management?

Institution	Lobbying	Both	Forest management
Public administration	MFBH		
	MFBH		
	MFRS		MFRS
			CF
		MEBH	
	MERS		
Public enterprises		SS	
		RS	
Political parties		P1	
			P2
		P3	
		P4	
			P5
		P6	
Forest science and research organisations	SA		
			BL
Interest groups – Forestry and Wood-processing industry			AFET
	PFOA		
		CFT	
		WC	

2.4.8 Compulsory membership

The respondents' opinions on obligatory membership in private forest owners' associations are presented in Table 2.15. Most of the respondents who support compulsory membership argued as follows:

- “This is the modality to establish a strong public-private-partnership.” (MFBH, CF, P1, P2, P4, AFET, CFT)
- “By doing so, all private forest owners in B-H would have equal possibilities for sustainable forest management.” (MFRS, P3, P6)
- “Forest policy implementation will be easier for the public forest administration.” (SA)

Table 2.13. Strengthening the position of private forest owners by establishing independent private forest owners' associations

Institution	Advocates	Indifferent	Opponents
Public administration	MFBH		
	MFBH		
	MFRS		
	MFRS		
	CF		
	MEBH		
	MERS		
Public enterprises	SS		
	RS		
Political parties	P1		
	P2		
	P3		
	P4		
	P5		
	P6		
Forest science and research organisations	SA		
	BL		
Interest groups - Forestry and Wood-processing industry	AFET		
	PFOA		
	CFT		
	WC		

- “Obligatory membership would strengthen the position of private forest owners in forest policy (the bigger the degree of representation, the stronger the influence).”
- “A certain percentage (5–10%) of them would become proactive actors of forest policy in B-H.” (WC)

Although the majority of the respondents support obligatory membership as the most appropriate approach, the following obstacles were identified:

- “Mentality/psychological barriers.” (MFBH, MFRS, RS, P2, P5, SA)
- “Lack of understanding of the concept among private forest owners.” (MFBH, MFRS, BL, WC)

Table 2.14. Voluntary membership as an appropriate approach to establish private forest owners' associations

Institution	Advocates	Indifferent	Opponents
Public administration			MFBH
			MFBH
			MFRS
			MFRS
			CF
	MEBH		MERS
Public enterprises			SS
		RS	
Political parties	P1		
	P2		
			P3
			P4
		P5	
		P6	
Forest science and research organisations			SA
			BL
Interest groups – Forestry and Wood-processing industry	AFET		
	PFOA		
			CFT
			WC

- “Restriction of free disposal over private property.” (CF, P5, SA)
- “Lack of political willingness among those parliamentary parties that count on rural population votes.” (MFBH)
- “Negative experiences from the period of socialism.” (MERS)

Probably the most illustrative statement of all obstacles mentioned is the following: “People would ask why you prescribed it by Law nowadays when we are living in a democracy. Even during the Monarchy and Tito’s period, nobody pressed us with obligatory membership”. There are many preconditions for obligatory membership in PFOAs that are identified as necessary:

- “Symbolic or no membership fees.” (CF, RS, BL, CFT)
- “The necessity of a serious feasibility study or pilot projects in order to evaluate impacts of such an approach.” (MEBH, P2, P5, WC)
- “Launching of strong education programs for PFOs.” (MFRS, P6, AFET)

Table 2.15. Obligatory membership as an appropriate approach to establish private forest owners' associations

Institution	Advocates	Indifferent	Opponents
Public administration	MFBH		
	MFBH		
			MFRS
	MFRS		
	CF		
		MEBH	
	MERS		
Public enterprises		SS	
	RS		
Political parties	P1		
	P2		
	P3		
	P4		
			P5
	P6		
Forest science and research organisations	SA		
	BL		
Interest groups – Forestry and Wood-processing industry	AFET		
			PFOA
	CFT		
	WC		

2.5 Summary and conclusions

The data on silvicultural aspects, particularly the fact that the majority of private forest owners own less than one hectare of private forests, clearly point to the extremely small-scale character of private forest ownership in B-H. The small percentage of high coniferous forests compared to the prevailing broadleaved (mainly coppice) forests reveals that private forests are relatively poor in terms of economic potentials. The high percentage of ‘collectively owned forests’ (forests with more than one owner) and the high fragmentation of forest estates imply ‘forest management communities’ as the only reasonable approach for sustainable forest management. Otherwise economies of scale can hardly be achieved. A continuous process of partition (caused by inheritance) will bring about further fragmentation and the downsizing of private forests. All these aspects entail a diminishing economic interest of private forest owners. Although they own the forest property, it is too

small and fragmented to be managed efficiently for valuable timber assortments. The chance to create voluntary interest organisations is small if the private forest property is either too small or fragmented into dislocated areas or it is in such a poor condition that individual owners have no economic incentive to manage it.

Regarding sociological aspects, the common pattern of private forest management in B-H is strongly shaped by the traditional key role of men and older persons within individual families. Private forest owners are mainly rural or semi-rural people. According to some estimates, almost 60% of the B-H population live in rural areas, of which a significant percentage is regarded as poor. The widespread poverty in B-H is largely an outcome of the war and the difficulties of the transition process. There are also other factors contributing to rural poverty such as prevailing mountainous areas, shallow soils and the scarcity of fertile agricultural lands - all leading to low productivity of the smallholder farming sector. Under these circumstances, private forests can play an important role in individual households' portfolios in rural areas. The high percentage of respondents who know the boundaries of their private forests refers to the important role of local knowledge, based on ownership transfer from one generation to the other. Taking into account the complicated situation with the land register as well as the socio-political circumstances in B-H during the last few decades, the results of this survey in terms of accuracy of boundaries and land registers are somewhat surprising. The low level of ownership disputes with other claimants during the last decade is also a surprise. With this in mind, problems in organising independent private forest owners' organisations cannot be explained just by inaccurate cadastral/land register data or ownership disputes.

Due to the large number of private forest owners in B-H with different characteristics and interests, the formation of an interest association needs specific preconditions. However, the existence of different sub-groups may be assumed, among which there is one with pronounced entrepreneurial characteristics. Although the majority of private forests have no distinctive economic position in the timber market - they mainly produce fuel wood for domestic use - the economic interests of private forest owners still prevail. In addition, there are private forest owners who perform harvesting on a regular basis and rely on their forests as an important source of household income. The entrepreneurial spirit of these private forest owners might be a favourable precondition for their active involvement in the formation of interest associations. The cluster analysis revealed three homogeneous subgroups of private forest owners, among which the 'drivers' account for 55% of the interviewees. They strongly support the formation of an interest association and express a high readiness to be engaged in their establishment.

Public forest administration and state forest enterprises traditionally have a strong position in the eyes of private forest owners and the rural population in general. Furthermore, private forest owners' associations or any other institutions offering advisory/extension services do not exist, are non-active or have been formed just recently in B-H. The variety of answers, together with the relatively high percentage of private forest owners who do not consult anybody, refers to the strong need for an institution endowed with a clear mandate and sufficient capacities to advise private forest owners in managing their forests. This is underlined by the fact that more than 80% of private forest owners believe that their interests are not appropriately

represented. The interests of private forest owners are fully controlled by public forest administration. Thus, a high level of mistrust of private forest owners towards both public forest administration and state forest enterprises is evident.

Forest legislation regulates all aspects of private forest management with the effect that private forest owners heavily depend on public forest administration. Although the Law on Forests prescribes support of private forest owners, in practice the relationship between the public forest administration and private forest owners is characterised by coercion rather than partnership. The Law is quite restrictive as permissions for all kinds of forest operations in private forests are required from the public forest administration. In this way, the government hinders local self-governance of private forest owners by defending its interest to control all aspects of forest management. The forest policy actors agree that forest legislation discriminates against private forest owners by prescribing too many obligations and giving only few rights. The entities' Forest Laws in B-H comprise regulations for private forest owners on financing, planning, management and the timber trade to an extent that is not consistent with European standards.

Although the level of awareness related to forest regulations on private forests is quite low, the respondents recognise the most pressing legal regulations as follows: paying levies for timber harvests, obligatory management plans, and required permissions for harvesting and tree marking by public forest authorities before felling.

The initiatives for developing private collective actions are weak if the owners' awareness of heavily regulated management of private forests does not exist or is little. It is not just the owners' lack of awareness of heavily regulated management but rather the lack of awareness of forest legislation in general. The necessary institutional development cannot rely on legislation enforcement alone; rather, it has to be accompanied by capacity building amongst the private forest owners through training, information exchange, awareness raising, etc. The key question is how to find an appropriate balance between governmental control and the encouragement of private initiatives. This is a lesson that can be learned from analysing the development of recent forest legislation throughout Europe. The results of empirical research show positive attitudes of policy decision makers towards shifting from state control to collective initiatives. They understand that the new forms of partnership management involving forest owners and public forest administration would promote sharing rights/responsibilities but also help private forest owners to get around problems of exclusion. As an alternative to over-regulation of private forest management, local owners' monitoring and enforcement of rules accepted by interest group members can be used to improve forest conditions. Keeping in mind all difficulties the private forest owners face in using of their ownership rights, the process of removing regulation of private forest management from government control seems to be unavoidable. However, the draft version of the new forest legislation in both Entities prescribes a significantly improved position of private forest owners by putting them on an equal position with public forest companies.

The majority of private forest owners lack interest associations and expect different services from them. The existence of forest roads and financial incentives (subsidies) to conduct silvicultural measures are crucial preconditions for a more active role of private forest owners. In post-socialist countries such as B-H, where

people have had bad experiences with planning the economy, particularly with ‘agricultural cooperatives’, this collective ‘social heritage’ from the period of Socialism might cause serious psychological obstacles for any initiative to create voluntary associations or interest groups that would act collectively. However, the respondents agree that associations can contribute to common solutions acceptable to the majority of members.

The high readiness for cooperation among the private forest owners related to forest road construction and maintenance has its roots in pure economic interests. It can be explained either by the low density or bad condition of forest roads in private forests. Due to high timber demand, wood-processing companies are oriented to private forests in the search for raw materials. Private forest owners sell timber directly on a ‘per stump’ basis; however, the prices they can obtain would be much higher if the access to forests were easier (the lower the hauling/skidding costs, the higher the stumpage price of wood). The basic preconditions such as forest infrastructure are necessary to enable private forest owners to take a more entrepreneurial, market-oriented role.

The empirical results concerning the characteristics of private forest owners (small-scale estates, low level of education, lack of professional skills, etc.) refer to their high dependency on expert and technical support of public forest administration. Limited financial, human and educational resources of private forest owners seriously undermine the successful establishment of interest organisations, unless they get support from the public forest administration. All forest policy actors unanimously support the formation of independent interest associations of private forest owners in order to articulate their interests in forest policy processes. In the current situation, the public forest administration has a dominant position and does not have to negotiate with private forest owners about any issues in the B-H forestry sector. Still, the absence of interest associations of private forest owners is recognised by the representatives of public administration as an obstacle for the implementation of a consistent forest policy in private forests. One can conclude that all policy actors are aware of the private forest owners’ importance as well as of the fact that their interests are seriously neglected. By establishing interest associations, they believe that a necessary dialogue based on partnership between private forest owners and public forest administration can be established. Many obstacles have been identified to establishing interest associations of private forest owners in B-H, such as different and heterogeneous interests among private forest owners, the lack of information on the advantages of associations and negative experiences with cooperatives in agriculture during the previous socialism period (that must not be put in the same category as interest associations). It should be taken into consideration that those associations where external forces drive their formation often collapse once the external support is withdrawn (IIED 2006). According to the Law on Forests in the Federation of B-H, the public forest administration should provide financial and professional support for the establishment and functioning of forest owners associations, where the reduced size of forest parcels, the fragmentation or dispersal of parcels of different owners are detrimental to sustainable and efficient forest management. This provision, however, is not implemented in practice. As policy actors support the establishment of independent interest associations of private forest owners, it can be concluded

that at least there is a declared political will to support the formation of interest associations. Nevertheless, no associations have been established so far. The existence of a formal political will is not sufficient for the voluntary formation of independent private forest owners' interest organisations.

The common opinion of forest policy actors is that private forest owners in B-H can manage their forests in a sustainable way only if they are strongly supported in financial and professional terms. The arguments are that private forests are heavily fragmented and poor, and small-scale private forest ownership prevails - both negatively affecting economic interests in forest management. The role of public forest administration and state forest enterprises in supporting private forest owners is assumed to be crucial. The results of the quantitative research, however, point to the fact that forest policy makers do not provide any kind of support to private forest owners. Thus, the argumentation of policy makers is not endorsed by empirical evidence. As concerns the type of support that would strengthen the role of private forest owners, the policy makers are divided into two groups: those who give priority to lobbying underline the necessity of creating a political, legislative and institutional framework as the ultimate precondition for achieving any further effects in extension service; the others believe that advice in forest management should have priority for strengthening the position of private forest owners. The majority of forest policy actors find interest associations the most suitable institutions for supporting private forest owners in both lobbying and extension service.

There is a critical mass of private forest owners who are ready to engage themselves in the establishment of such associations and support the idea of compulsory membership. They believe that obligatory membership will increase political influence of private forest owners and promote their interests. The majority of the interviewees do not find obligatory membership as a restriction of personal freedom that is incompatible with the national political system. The idea of obligatory membership is strongly supported by the respondents who represent the common profile of private forest owners in B-H (small individual parcels, rural and poor population). This leads to the conclusion that obligatory membership in private forest owners' associations might be established as interest organisations for all private forest owners at the national level. The research results show that the concept of mandatory membership is recognised by the majority of forest policy actors as very interesting in order to improve the situation in B-H's private forestry.

The representatives of public forest administration and forest science do not believe that voluntary membership of private forest owners' associations is the most appropriate form. The majority of the respondents support compulsory membership, although they are aware of the different obstacles and necessary preconditions for such a concept. These attitudes correspond with the results of quantitative research where almost two thirds of the interviewed private forest owners agreed with the idea of obligatory membership. Obviously, the concept of mandatory membership in private forest owners' associations is recognised as very promising in order to improve the situation in B-H's private forestry. However, the concept of obligatory membership could somehow irritate private forest owners if it is understood as a top-down measure of the public administration. It is interesting that many respondents, particularly the representatives of political parties, support both types of membership – voluntary and mandatory. This opens room for the simultaneous

creation of both types of associations in B-H, depending on different interests of private forest owners (big and small owners, market-oriented and domestic use-oriented owners, rural and urban owners, etc.). The potential geographical scale of an interest organisation is an important factor as to whether the stimulus to meet individual interests will result in group-oriented behaviour. A large number of potential members increase the difficulties of organising the group. Small (local) groups are probably easier to organise on smaller territorial units (municipalities, entities, cantons). Empirical research in B-H shows that local people who highly depend on forest resources for a major portion of their livelihood are quite sensitive concerning the quality of forest management. They also put greater value to the long-term sustainability of forest resources than others (Avdibegović 2006a).

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3. The Preconditions for Private Forest Owners' Interest Associations in Croatia

3.1 Private forests in general

The inadequate economic status of private forests in the Republic of Croatia has given rise to concern for many years and has provided an incentive for professional discussions. This resulted exclusively in passing a new forest law but lacked practical application in the field. Nevertheless, the size of private forests and their share in the forest fund of Croatia are a commitment and a challenge to the forestry profession.

Past attempts to merge small-scale owners in larger units as well as costly programmes of private forest management that remain unimplemented have led to a very serious question: What should be done and how should small-scale private forests be managed successfully? The long-standing dissatisfactory social status of the peasant, combined with permanent insecurity regarding private ownership, has left an indelible mark on private forests. In order to make a positive turnaround, the forest owner should be relieved from various bureaucratic procedures and encouraged to cooperate actively with the forestry profession. The job of a forester is to advise and plan with the final goal of achieving positive returns from management.

Forests in Croatia cover an area of 2,688,687 ha, of which 581,770 ha (22%) are privately owned, while the main share of forests (75%) is owned by Croatian Forest Ltd (General Forest Management Plan 2006–2015). With regard to the growing stock, private forests (80 m³/ha, annual increment 4.4 m³/ha) are in a very different condition from the state-owned forests (190 m³/ha, annual increment 7.5 m³/ha). The most important tree species in private forests are common beech (18,916,000 m³ or 24%), and hornbeam (13,022,000 m³ or 17%). Almost all (99% or 581,770 ha) private forests are production forests (Meštrović and Kovačić 1991; Matić 1987).

The lowland region covers 302,520 ha (52%) of private forests. The main management classes in private forests are seed forests of species like ash and common elm, followed by low-value coppice forests of hornbeam. In private forests, the growing stock and increment per hectare are only half as that in state forests (Anonymous 2006).

The mountainous region covers 69,812 (12%) of private forests. They consist of beech forest, coppice of other hard broadleaved tree species with low growing stock and increment.

The Mediterranean region covers 209,437 (36%) of private forests. Private owners do not have high forests but a lot of different coppice wood.

Private forests consist of about 1.5 million parcels, managed by almost 600,000 owners. The average size of privately owned forests in Croatia is estimated to be smaller than 0.42 ha per owner. Furthermore, private estates are usually fragmented into several smaller plots. On average, each owner has two disconnected plots. The boundaries are not marked and in reality there is no certainty of ownership. In some cases, what is stated in writing differs greatly from reality (Meštrović and Starčević 1994).

As mentioned, there is a significant difference between state and private forests in terms of quality. Compared to state forests, private forests are characterised by relatively modest growing stock and annual increment per hectare (Čavlović 1994). All these aspects cause a lack of interest among private forest owners – they possess the property but it is too small or of too little value to be managed efficiently for valuable timber assortments. However, if the value of the property is relatively high the owners undertake great efforts to achieve economic goals. There are several large estates in the lowland area of Croatia (Križanec 1987). Some 52% of all private forests and most private forest owners are located in the lowlands. Most of these forests are deciduous. Roughly 11% of all private forests are located in the mountainous region. The high potential of these mixed forests is not used efficiently. In total, 37% of all private forests, consisting mainly of coppice management classes, belong to the owners in the Mediterranean region.

3.1.1 Historical development

The ‘Royal Patent’, issued in Croatia in 1877, regulated that a squire or a landowner should hand over part of the forests in his estate to the peasants, his former serfs. This marks the beginning of the present private forest ownership. In every village, forests obtained by the peasants through segregation were managed by the Land Community (Zemljišna zajednica), which had its own forest ranger, while surveillance was carried out by the municipal and regional forester. From 1900 to 1930, land communities distributed their forests to the peasants (pursuant to the regulations of the ‘Urbarium’), thus putting an end to their activity. Surveillance over private forests was under the jurisdiction of a district officer until 1954. This duty was passed to the Forest Office, which lasted for only eight years, and in 1962 all the affairs related to private forests were delegated to individual Municipalities. According to the Forest Law of 1983, the issue was again placed under the jurisdiction of Forest Offices – a status that has remained unchanged until today.

The devastation of private forests in Croatia began with their segregation into privately owned forests in accordance with the Royal Patent of 17 May 1877, and is still an ongoing process. According to Starčević (1984, 1992), the main causes of degradation are private property fragmentation, the owner's social status, disintegration of villages, a lengthy production cycle, insecurity of private ownership, inadequate treatments, poor control and sanctioning, and the non-observance of legal regulations. For all these reasons, forests were left out of the control of forestry experts, forestry institutions and inspections - consciously or not. The early 19th century saw no interest in an integral forest development that would also incorporate forest regeneration. The forest estate was treated restrictively and prohibitively, while any interest of the forest owner was disregarded. After the Second World War, only public and small-scale private forest estates remained (Potočić and Piškorić 1976). Private forests were subjected to degradation because elements of forestry policy did not provide for any incentives aimed at improving the forest estate status (Sabadi 1993, 1994).

Table 3.1. Distribution of property.

Property structure	Area [ha]	%	Growing stock [m ³]	%	m ³ /ha	Annual increment [m ³]	m ³ /ha	Planned annual cut [m ³]	m ³ /ha
State-owned	2,018,987	75	302,417,000	79	150	7,960,286	3.9	5,793,500	2.9
Public	87,930	3	17,245,000	1	196	421,510	4.8	66,100	0.7
Private forests	581,770	22	78,301,000	20	135	2,144,442	3.7	704,700	1.2
Total	2,688,687	100	397,963,000	100	148	10,526,238	3.9	6,564,300	2.4

Table 3.2. Purpose of forests and forest land.

Purpose of forest and forest land	Private forests and forests land area (ha)				Total
	Stocked	Unstocked		Unfertile	
		Productive	Unproductive		
Productive	570,618	5,701	450	64	576,832
Protective	4,022				4,022
Specific assignment	832	85			917
Total	575,471	5,786	450	64	581,770

3.1.2 State and private forests

According to the latest statistical data (Statistical Yearbook 2007), forestry reserves for 2006 were 2.221 million hectares, of which 1.645 million hectares are state owned and 575,466 privately owned. The production of forest products in private forests was 152,971 m³ for 2006. The forestry sector is reported in the Statistical Yearbook together with agriculture and hunting data, i.e. the number of registered legal entities for agriculture, hunting and forestry was 4,178, of which 2,118 were active. Tables 3.1 and 3.2 present the property structure and purpose of forests and forest land (Report Croatian forests Ltd. for the year 2007).

3.1.3 Legal regulations concerning private forests

According to the Constitution, forests are protected by the state (§ 52). Several Croatian laws are related to forest and forestry, for example: the new Law on Forests (Official Gazette No.140/05, amended in 2006 and 2008), which brought some ‘improvements’ in the form of directions for private forest owners in order to improve forest management (paragraphs 20, 30, 31, 69); and the National Forestry Policy and Strategy, (OG 120/2003) which sets up priorities (immediate, mid-term and long-term) regarding the forestry sector, which helped start certain processes such as the establishment of the Forestry Extension Service (FES) (OG 64/2006). Some of the immediate priorities are categorisation, financial management, support and promotion of measures in order to stimulate private entrepreneurship in the forestry sector. In the long-term, the state will support and promote measures for the sustainable management of private forests (Vukelić and Harapin 1994).

The ministry responsible for private forests is the Ministry of Regional Development, Forestry and Water Management. Within the Ministry there is a Department for Private Forests. Forestry Extension Service offices are established in Counties employing about 70 people, mostly forestry engineers.

The new Law on Forests limited the jurisdiction of Croatian Forests Ltd. Co. over private forests. Private forest owners are financially supported through the following resources: (i) Green Tax (all commercial and industrial companies in Croatia must pay 0.07% tax on their turnover, which is transferred to Croatian Forests Ltd. Co.); some 20% of this amount are spent on private forests, e.g. for restoration, forest roads, etc; (ii) National budget for financing FES (Management Programs for private forests, allocation etc.); and (iii) Pre-accession EU funds for projects like the afforestation of abandoned agricultural land, the establishment of agroforestry management systems, etc.

In order to obtain forest revitalisation funds for private forest owners in Croatia, they must be registered in the Forest Owner Register, perform prescribed activities and submit a request to the Forestry Extension Service. As past experience shows, problems occur with obtaining statements in the event of co-ownership due to incomplete inheritance proceedings. In some cases, forested land is officially registered as meadows, pastures or agricultural land (Posavec 2006).

Forestry and other activities related to forests and forest land are regulated by the following laws:

- Law on Nature Protection (OG 70/2005, amended in 139/2008)
- Forest Law (OG 140/2005, amended in 82/2006 and 129/2008)
- Law on Forest Planting Material (OG 140/2005.)
- Law on Environmental Protection (OG 110/ 2007)
- Law on Water (OG 107/1995)
- Law on Hunting (OG 140/ 2005.)
- Law on Fire Protection (58/1993, amended in OG 33/2005 and 107/2007)
- Law on Physical Planning and Building (OG 76/ 2007)

The Government of the Republic of Croatia has accepted the proposal of the Ministry of Agriculture, Forestry and Water Management for the establishment of a separate Department of Private Forests. The basic aim of the Department is to offer professional and financial support to private forest owners for the purpose of managing private forest areas on the principles of sustainability (sustainable development) and the maintenance of their natural property. Additional tasks of the Department include monitoring the private forest status, proposing measures for the improvement of the present status, initiating the establishment of support to private owners' associations, and intermediate collaboration with the bodies of the regional and local self-management units. Immediately before and at the time of the Department's foundation within the Ministry, the private forest sector began to 'wake up'. It was the regional self-management units (which have a major share of private forests in the forest area) that first recognised the problem of non-management of private forests while they were working on development programs. The work on preparing strategic planning guidelines for sustainable development, particularly in rural areas, was impaired by the lack of reliable data on the area, growing stock and private forest owners.

With the establishment of the Forest Extension Service (June 2006, OG 64/2006), intended as a measure of forest policy with the goal of improving the status and management with private forests and a tool for allocating the funds collected from the use of non-wood forest functions (NWFF), the procedure of organising forest owners into associations gained momentum (as a 'triggering factor', Waddock 1991). According to the data from the beginning of the year 2009, there are 30 registered forest owners' associations. The most common reasons for the establishment of forest owners' associations are:

- exchanging information on new measures of forest policy concerning private forests;
- associating for the purpose of the joint planning and construction of forest infrastructure (for which the means are also allocated from NWFF); and
- an increasing common interest in the prevention of illegal activities in forests (forest protection, unlawful use, lack of maintenance of existing forest roads, etc.).

The size of a forest property is not important in the context of the listed reasons. In most cases, owners team up in order to improve the condition of and preserve their own forests, which the majority view as a special good that needs protection regardless of size.

The joint appearance of forest owners on the market has not yet been recognised as the most important goal of pooling forces. It is expected, however, that with an

increasing share of larger private forest holdings in the structure as a consequence of restitution, the establishment of interest associations as a means of a more successful market approach will gain prime importance.

3.2 Selection of the random sample for the door-to-door survey

In January and February 2008, the random sample for the survey of private forest owners was defined. According to the commonly agreed methodology - overlapping areas with highest percentage of forest area and highest percentage of private forests - nine municipalities were determined. Within these municipalities, 35 settlements were randomly selected, from which 350 respondents were randomly selected in the next phase. In the same period, in cooperation with the PRIFORT team from Bosnia and Herzegovina, Macedonia and Serbia, a final version of the questionnaire in Croatian language was developed. In February 2008, the questionnaire was piloted in the field and some modifications made in cooperation with the other PRIFORT teams. The questionnaire comprised 42 questions on: sociological, silvicultural, economic and institutional as well as attitudes of private forest owners towards interest associations (Annex 1). In March 2008, selected members of the Croatian Forest Extension Service began the survey. In each of the selected settlements, a list of 30 potential respondents was determined, based on the random sample in municipalities and settlements. From this list, ten respondents in each settlement participated in the survey. Data collection started at the beginning of April 2008 and was carried out jointly by 20 Forest Advisory Service employees. In total, 350 forest owners from 35 settlements in nine counties participated in the survey. In May 2008, junior researchers entered the data onto Microsoft Excel sheets to facilitate further processing by SPSS.

3.3 Results of quantitative analysis

3.3.1 Silvicultural aspects

Bearing in mind the complicated situation with land register as well as the socio-economic circumstances Croatia had gone through during the last few decades, it is surprising that 75% of the respondents know the size (acreage) of their forest estate.

As 38% of the respondents own less than one hectare of private forests (2.9 ha on average), extremely small-scale estates characterise the private forest ownership pattern in Croatia (Figure 3.1); economies of scale in terms of forest management can thus be applied. Nevertheless, 10% of the respondents own more than 10 hectares when 'no answer' was excluded.

Forests in private property are mainly mixed and coppice forests; only 17% of private forests are high forests. Furthermore, more than 58% of forests are either broadleaved or mixed (broadleaved and coniferous) while only 5% are pure coniferous forests (Q19).

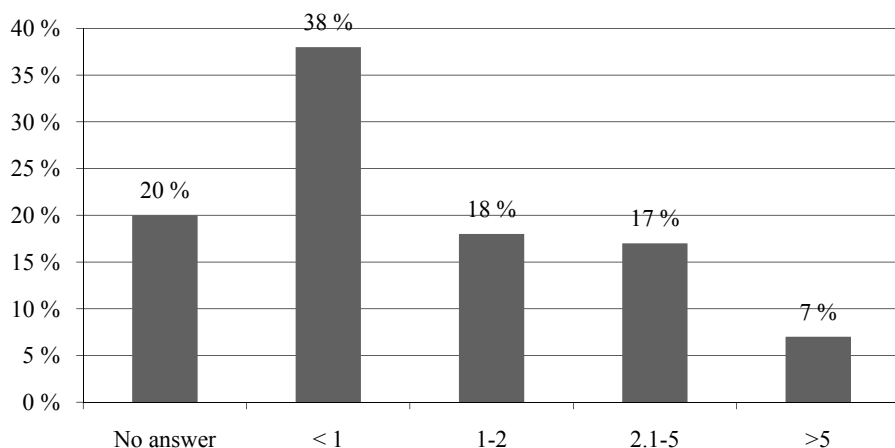


Figure 3.1. Size of private forest owners' properties (in ha) in Croatia.

3.3.2 Sociological aspects

Private forest owners in Croatia are mainly male (75%), a result of certain socio-cultural characteristics typical to the region.

The majority of private forest owners are older than 46 (from 46 to 60), while almost 30% are older than 60 (Q34–35). It is evident that the transfer of forest ownership between the family members occurs in the parents' old age or even after they have passed away. Some 46% of respondents do not own their forests individually; they usually share them with their spouse or relatives (Q36).

Private forest owners are mainly rural or semi-rural people. Only 4% of them live in settlements with more than 5,000 inhabitants. This clearly refers to the important role of private forests for the economic development of rural areas. In addition to the war and human migration to the major cities, other factors contribute to rural poverty such as prevailing mountainous areas, shallow soils and the scarcity of good agricultural lands, which all lead to the low productivity of the smallholder farming sector. Better infrastructure in Croatia and adequate links to processing industries and markets support the further development of agriculture. Under these circumstances, private forests can play an important role in individual economic development in rural areas. The majority of the respondents belong to people with low income; half are either retired or unemployed, while more than one third are lower-level employees, manual workers and farmers (Q38–40). Only 11% of private forest owners have college or university education. The majority of the respondents have either a vocational or high school background while almost one third has only elementary education (Figure 3.2).

There is a positive correlation between a lack of lobbying and a formal level of education.

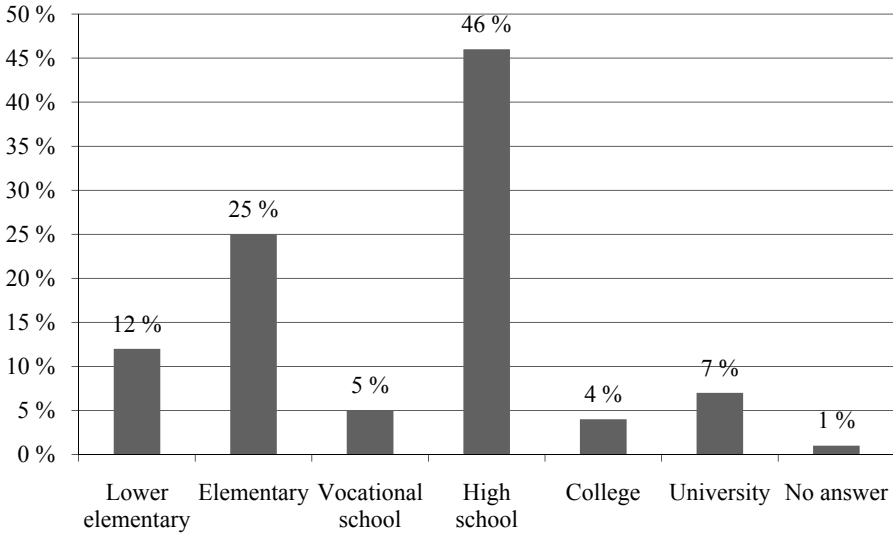


Figure 3.2. Private forest owners' level of formal education in Croatia.

3.3.3 Economic aspects

The majority of private forest owners included in this survey like their forests very much, which points to very strong emotional links between themselves and their forests. This is probably due to the fact that private forests are treated as family heritage – they are passed down from generation to generation (Q1).

Only 9% of private forest owners purchased and only 3% sold their forests during the last decade. The lack of a market for forest land as well as further partitioning of private forests by inheritance will bring about further fragmentation and the downsizing of private forests (Q41–42).

Private forest ownership in Croatia is fragmented – only 33% of private forest owners covered by this survey own consolidated forests (total forest area within one parcel) while 60% of private forests are fragmented into 2–4 parcels (Figures 3.3 and 3.4) (Q23).

The fact that the average distance between home and the forest is 7.5 km and that the majority of private forest estates are within a distance of 10 kilometres (62%) clearly shows that agro-forestry is the most favoured concept of land management in rural areas (Q37).

Almost one half of private forest owners included in this survey regard their forests as a gain for their families, while one quarter finds them as a burden. It clearly refers to two opposite groups of private forest owners in terms of the economic valuation of their forests. The predominant type of forest use is the production of fuel wood for domestic use. Only 2% of private forest owners are strictly market-oriented by selling either fuel wood or saw logs. Other types of use such as nature conservation, tourism and the production of non-wood forest

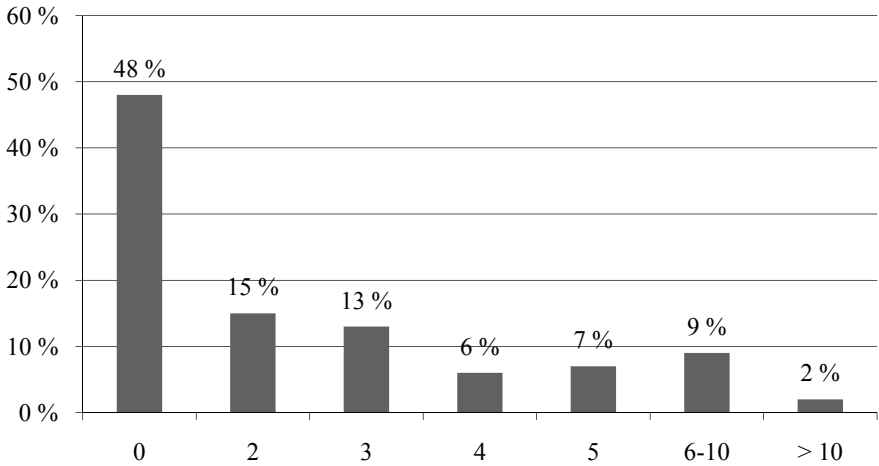


Figure 3.3. Number of parcels in Croatia.

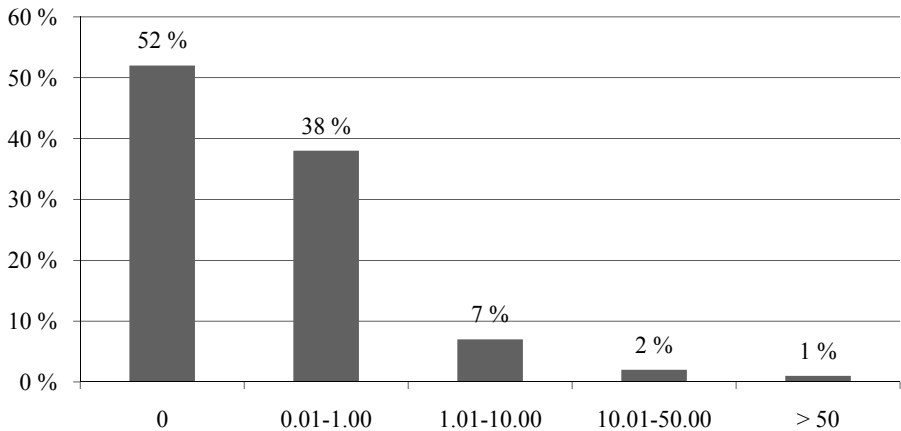


Figure 3.4. Average size of parcels (in ha) in Croatia

products and services are of minor importance; 8% of private forest owners do not use their forests for any purpose (Q22).

The forest contribution to the yearly household income depends on whether timber is meant for sale or domestic use. The contribution from timber sales is negligible while the contribution from domestic use to household income is slightly higher (26% of the respondents reported some). These are probably individuals who cut trees for fuel wood every year. The dynamics of loggings depend on the

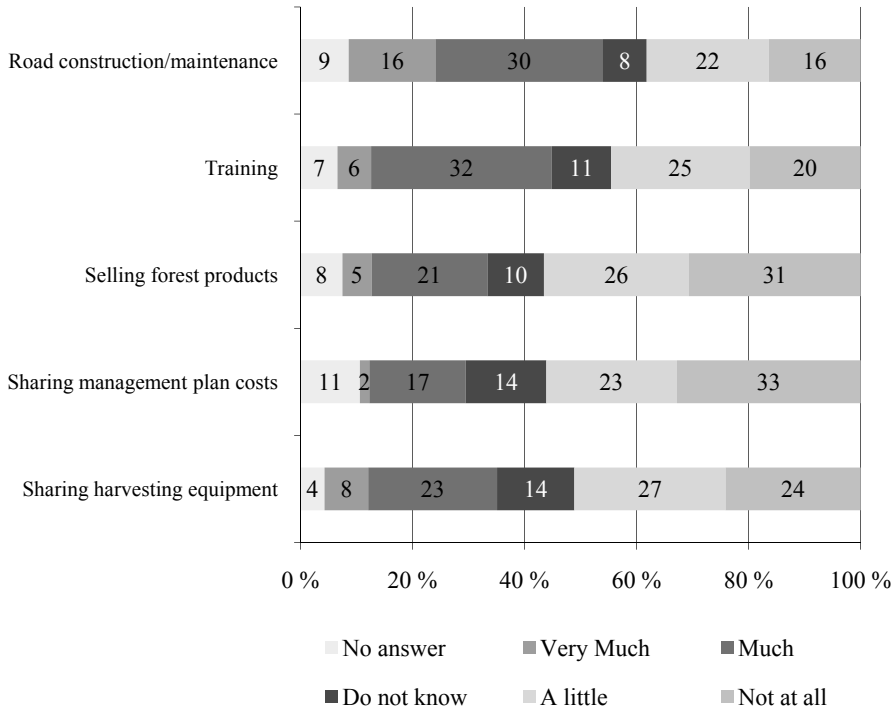


Figure 3.5. Readiness to cooperate in Croatia

purpose of timber use. Almost one third of private forest owners cut trees for fuel wood regularly; 50% harvest every year, while 7% do not cut at all. It could be concluded that private forests have no distinctive economic importance for private forest owners in Croatia at the time of writing (Q24 and 25).

The readiness to cooperate with other private forest owners depends very much on the type of activities. The highest readiness for cooperation relates to forest road construction and maintenance, training and sharing harvesting equipment, while other potential types of cooperation (sharing cost for elaborating forest management plans, selling forest products) are not so pronounced (Figure 3.5). Again, the basic preconditions such as forest infrastructure are necessary to enable private forest owners to take a more active role in national forest policy (Q26).

3.3.4 Institutional aspects

The percentage of respondents who know the boundaries of their private forests is quite high at over 80% (Figure 3.6). The role of local knowledge based on

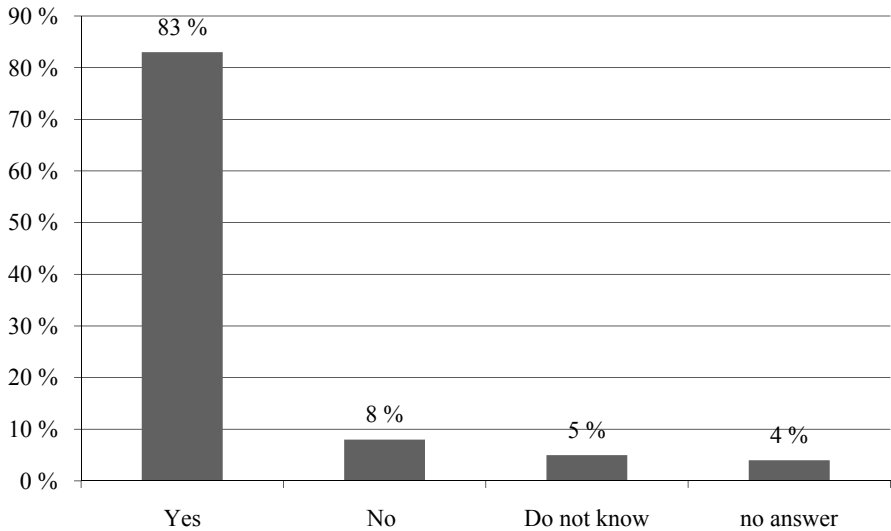


Figure 3.6. Knowing about boundaries of private forest property by private forest owners in Croatia

ownership transfer from one generation to the other thus works. Furthermore, the boundaries of the majority of private forest estates are visible on the ground and registered in the land register. Bearing in mind the complicated situation with the land register as well as the socio-political circumstances and transition in Croatia during the last decades, the results of this survey in terms of accuracy of borders and land registers are surprising (Q27). Only a small percentage of private forest owners (13%) had some problems regarding ownership, mainly related to illegal logging and disputes with state forest enterprises regarding ownership rights (Q28)

The level of awareness of forest regulations on private forests is very low. One quarter of private forest owners included in this survey are familiar with forest legislation (Q29) (Figure 3.7).

The Croatian Forest Law from 2005 comprises regulations for private forest owners on financing, planning, management and the timber trade to an extent that is consistent with European standards. To overcome the low awareness of forest legislation, strong training programs, planned and implemented by competent institutions, are needed. The most strict legal regulations mentioned was the prescription to pay levies for timber harvests (Forest Law, §65), obligatory management plans (Forest Law, §20), required permission for harvesting, and tree marking by public forest authorities before felling (Forest Law, §30) (Q30, Figure 3.8).

However, only 2.6% of the interviewees received subsidies from the public forest administration (Q33). Those private forest owners who are under strong pressure by legal regulations (particularly by levies for harvesting) more strongly expressed the lack of interest associations' support in terms of forest management and representing

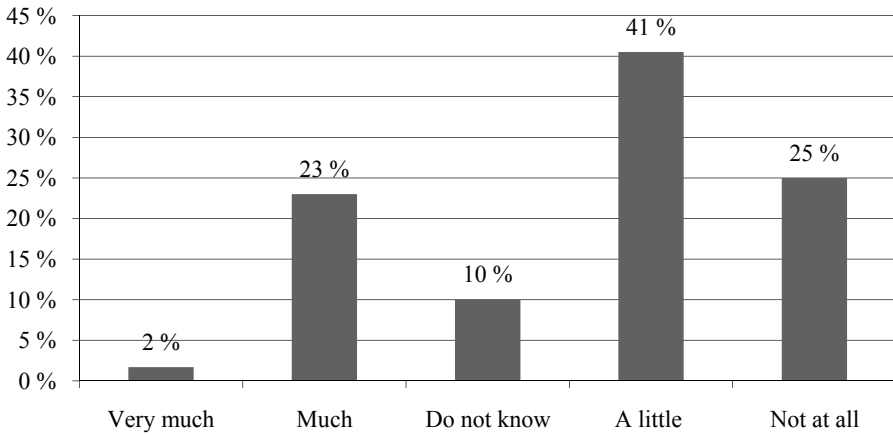


Figure 3.7. How much are private forest owners familiar with forestry legislation in Croatia?

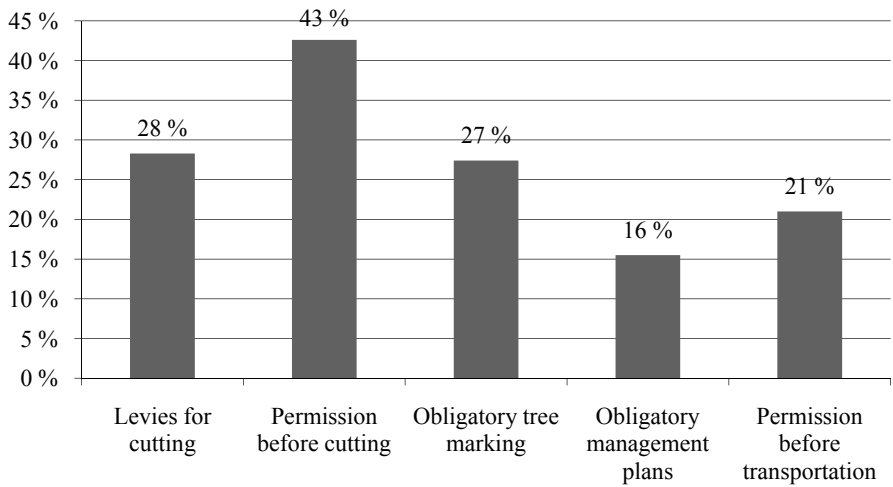


Figure 3.8. The hardest legal regulations for private forest owners in Croatia.

their interests by lobbying (Q32). The quality of information on private forest management obtained from all types of institutions (public forest administration, state forest enterprises, associations of private forest owners and NGOs) is rated as very low (Q31).

3.3.5 Attitudes towards private forest owners' associations

In searching for additional information on managing their forests, roughly one half of the private forest owners included in this survey are oriented either to state forest enterprises or public forest administration. About one third is oriented either to the relatives or neighbouring owners, while 10% do not consult anybody regarding managing the forest properly. Concerning the last group, it is not clear whether they manage their forests by themselves (then they do not need such kind of support) or whether they lack information (then they do not know whom to address) (Q2).

In search for information on how to manage the forest, 41% consult the Forest Extension Service and 26% ask neighbours. This is probably due to the newly established extension service for private forest owners in Croatia. Furthermore, while private forest owners' associations or other institutions offering advisory/extension services exist, they are not very active or have been formed only recently. This is underlined by the fact that more than 80% of private forest owners believe that their interests are not appropriately represented. One third of the respondents indicate that their interests are poorly represented, and 15% state that they are not represented at all (Q3). This also points at a high level of mistrust of private forest owners towards both public forest administration and state forest enterprises.

According to the respondents, the Forest Extension Service and state forest enterprises are preferred for different forest services (e.g. advice in silviculture, harvesting, timber market, etc.) and representing private forest owners' interests by lobbying political institutions. Private forest associations are less desirable for the provision of these services. This is somewhat controversial – private forest owners' associations in Croatia have existed for some time but their capacity to solve problems is still modest (Q6, Q10 and Q11).

The majority of private forest owners included in this survey lack an interest association to support them in managing their forests (e.g. silviculture, harvesting operations, timber market access, etc.) and representing their interests by lobbying political parties, civil servants in ministries/governments to improve their social and economic situations (Q4 and Q5) (Figure 3.9). The correlation analysis indicates that the population in smaller settlements (where rural population dominates) express a stronger lack of interest associations' support in terms of both private forest management (e.g. harvesting, timber trade, etc.) and lobbying activities so that their social and economic situations will improve.

The most desired services from private forest owners' associations regarding interest representation are subsidies, the opening of new markets, cadastral issues or tax reduction (Q9). The services expected from interest associations regarding extension services are advice in harvesting, silviculture, the timber market, road construction and information on legal regulations. Services such as training and strengthening entrepreneurship are not expected so strongly (Figure 3.10). Forest

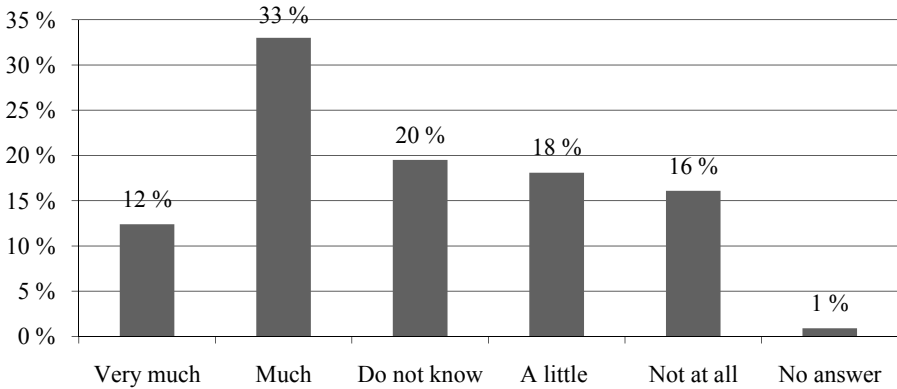


Figure 3.9. Respondents who miss a private forest owners' association in Croatia.

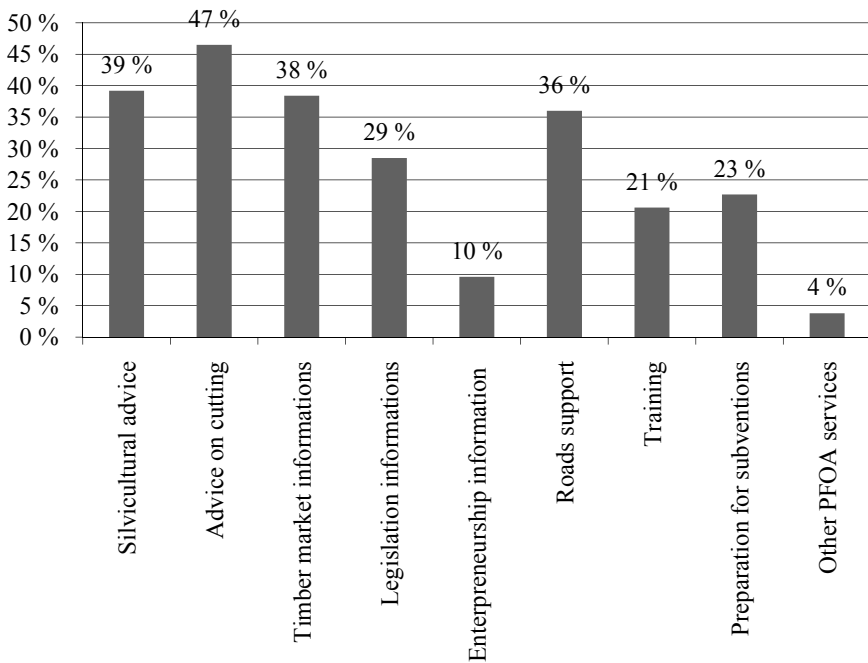


Figure 3.10. Required services from private forest owners' interest associations in Croatia.

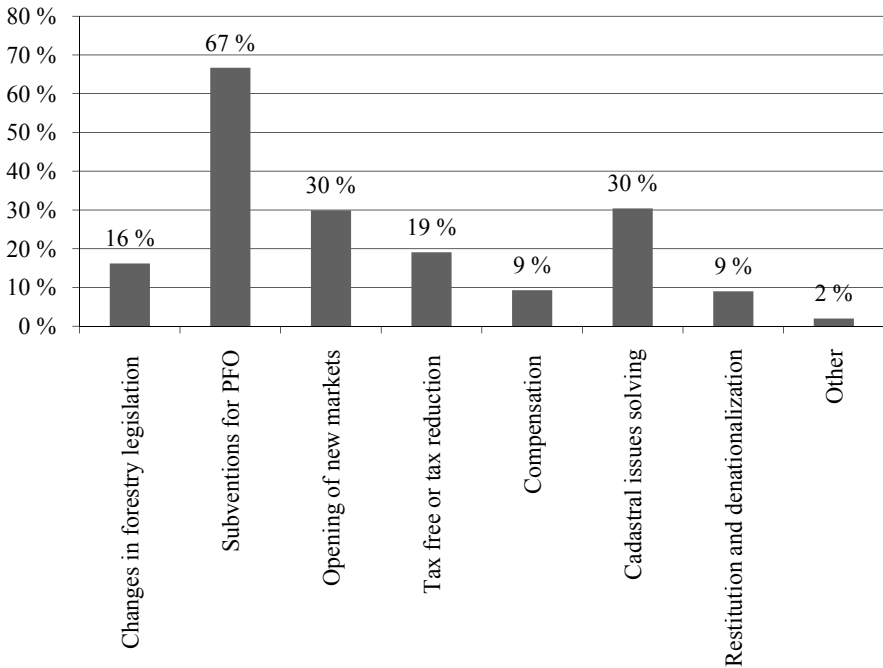


Figure 3.11. Expected economic advantages from a private forest owners' association in Croatia.

roads and financial incentives (subsidies) to conduct silvicultural measures are crucial preconditions for a more active role of private forest owners in the forest products market. Only 1% of private forest owners do not expect any services from interest associations in order to improve forest management (Q8).

The survey results show that 6% of the interviewees are members of private forest owners' interest associations. It can be concluded that these associations are still very locally oriented (Q14). If such associations existed, the majority of respondents would be prepared to become a member provided that some economic advantages might be expected (Figure 3.11)

Some 40% of the respondents would accept voluntary membership if the membership fee is low or without charge. For one half of the respondents, the positive performance of associations in previous periods is an important factor to become a member. The lack of interest associations to support private forest owners is emphasised by the fact that one half of the interviewees are ready to engage themselves in the establishment of such associations. Those who lack associations regarding support in forest management and lobbying activities are more ready to play an active role in the establishment of private forest owners' associations (Q16). One third of the respondents are prepared to engage themselves in a private forest interest association (Figure 3.12)

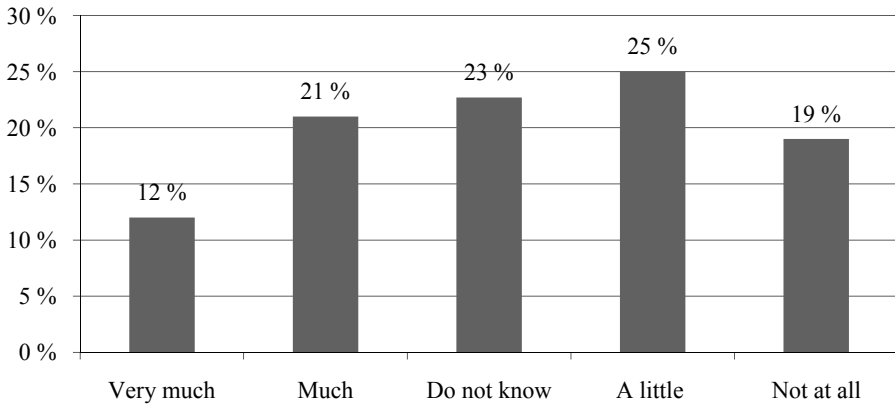


Figure 3.12. Private forest owners' readiness to engage themselves in interest associations in Croatia.

There is a positive correlation between those who are willing to engage themselves in an interest association and their sex, occupation, type of forests and stand structure.

More than one third of the interviewees agree with the idea that compulsory membership in private forest owners' interest associations should be required by legislation for all private forest owners in a way as it is regulated, for example, for hunters (Figure 3.13). Those who lack private forest owners' associations in terms of forest management and representation of their interests strongly support obligatory membership. The supporters of compulsory membership are also very much prepared to engage themselves in their establishment. They believe that compulsory membership will help increase political influence of private forest owners as well as better promotion of their interests. The majority of the interviewees do not find compulsory membership as a restriction of personal freedom and incompatible with the national political system (Q17 and Q18).

Compulsory membership is strongly supported by those respondents with a small size of individual parcels, living in small settlements and being part of the poor population. Furthermore, those private forest owners with more accurate boundaries of their estates strongly support compulsory membership. Private forest owners who express a lack of associations are also willing to engage themselves in them and have a positive attitude towards compulsory membership. They show great affection towards their forest property and do not oppose cooperation with other private forest owners regarding forest utilisation, sharing costs for management plans, selling forest products, training and road construction. These respondents do not expect training and silvicultural advice from private forest associations.

3.3.6 Groups of private forest owners

The cluster analysis for Croatia resulted in the following three groups of private forest owners: 'drivers', 'supporters' and 'free riders'.

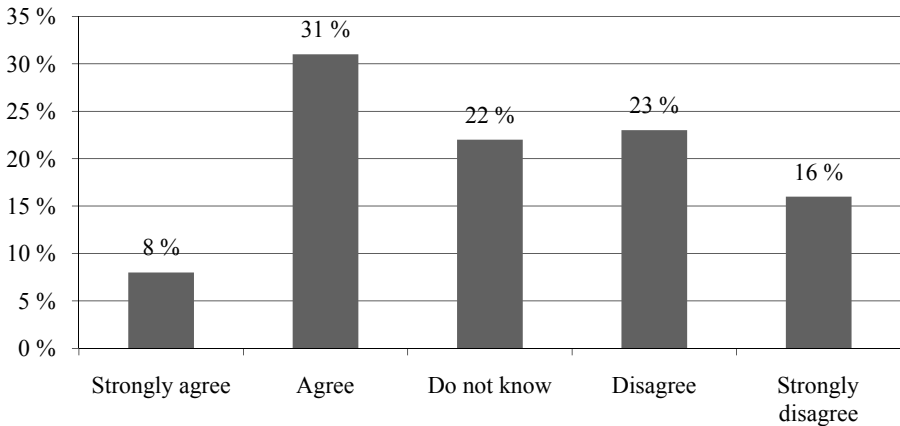


Figure 3.13. Compulsory membership in private forest owners' associations in Croatia.

The 'drivers' comprise 33% of the respondents covered by this survey – they express the strongest need for an interest association and lobbying activities. Among the three clusters, drivers show the highest willingness to engage themselves in the establishment of an interest association. They support compulsory membership more strongly than others – they strongly accept it and see only advantages. This group supports cooperation more than the others and are mostly interested in silvicultural and logging advice as well as in support regarding road construction. Getting subsidies is their priority when it comes to expected activities of a private forest association regarding interest representation. They also state cadastral issues and the opening of new markets, similar to the other two clusters.

The majority know the boundaries of their forest properties, which is between 1 and 2 ha. Most of them draw some gain from their forests – the forest for domestic consumption rather than for commercial purposes. They do not think that restrictions from forestry legislation could significantly influence their gain from the forest. Regarding the level of education, the owners within this cluster have graduated from high school.

The biggest cluster of private forest owners – 'supporters' – comprises 48% of the interviewees. The private forest owners within this cluster express a moderate need to be engaged in the establishment of associations and they support compulsory membership. Supporters strongly claim subsidies, but also the opening of new markets and the resolution of cadastral issues.

These are the owners with forest estates of mostly less than 1 ha and regard their forests more a burden than a gain. They use their forests mainly for domestic purposes, in particular for fuel wood consumption. The readiness for cooperation with other forest owners is not very strongly expressed; however, the majority support obligatory membership.

Logging and silvicultural advice are most needed in this group as well as information on timber markets.

Members of this group have a significantly lower level of education - the majority only completing elementary school (four or eight years of education).

The smallest cluster – ‘free riders’ – includes 20% of the interviewees.

They do not see a significant need to establish private forest owners’ associations. Any expected services are mainly related to advice on timber market, logging, support on road construction and information regarding legislation. The readiness to play an active role in the establishment of private forest owners’ interest associations is very low. They mainly expect subsidies from an interest association, stronger than other cluster members. Expectations regarding the solution of cadastre and the opening of new markets are twice as weak than the need for subsidies. They are strongly against obligatory membership because they think it will limit their independence has no advantages. Almost half of the respondents state that they need lobbying activities very much.

More than other groups, they find their forests a burden rather than a gain or they have little income from them. They are not afraid that forestry legislation could significantly influence their gain. The size of their forest property is less than 1 ha. The level of cooperation with other private forest owners is small.

The interviewees belonging to this cluster have a relatively high level of education (college or university).

3.3.7 Factor analysis

Some underlying factors that explain the pattern of variability within a set of observed variables are identified by using a factor analysis. The following four factors explain about 55% of the variability: (1) lacking an interest association of private forest owners regarding forest management (Q4); (2) the need for an interest association to support private forest owners in lobbying their interests (Q5); (3) the readiness to engage in the establishment of a private forest owners’ interest association in the region (Q16); (4) obligatory membership of a private forest owners’ interest association by legislation (Q17). These results strengthen the results of the cluster analysis.

3.4 Results of qualitative analysis

The main goal of the focused in-depth interviews was to identify the attitudes of forest policy makers towards the formation of private forest owners’ interest associations in Croatia. The qualitative research includes 16 key representatives of all institutions and authorities, which might influence the formation of private forest owners’ associations in Croatia (Annex 2b). Thus, the concept of theoretical sampling (to get an appropriate set of relevant patterns of behaviour) instead of random sampling is used in the selection of respondents (Jones, 1985). The following institutions have been included: Ministries responsible for forestry issues (2 persons); Ministries responsible for environment protection (1 person); Public forest companies (1); Public forest authorities Forest Extension Service (2); Private forest owners’ associations (1); Chamber of Commerce (1); Chamber of

Forestry (1); Associations of forest/wood processing professionals (1); NGO (1) and Academia; consisting of the Forest Research Institute Jastrebarsko (1) and Faculty of Forestry (1). Furthermore, the representatives of three political parties were also interviewed (2 left-wing parties; 1 right-wing party). After analysing the answers, the respondents were grouped according to their attitudes towards the formation of private forest owners' interest associations (advocates, indifferent, opponents). Table 3.3 presents the matrix of basic topics and the relevant institutions/organisations.

3.4.1 Sustainable forest management of private forests

The opinions of interviewed forest policy actors about the readiness of private forest owners to manage their forests sustainably are given in Table 3.4.

Almost all interviewed decision makers consider that it is not possible to introduce sustainable management in private forests at present. Only CFS, CCoC and HSS are of the opinion that sustainable management is possible only in larger forest areas. For this purpose, many private forest parcels have to be combined as it is inefficient to manage very small parcels; further, PFOs are not capable of managing their forests properly. They need forests as an occasional income.

Almost all interviewees believe that PFOs are not capable of managing their forests without support from forestry-related institutions, due to lack of training and education.

Most respondents emphasised associating, state support, financial incentives and training as preconditions for the sustainable management of private forests in Croatia:

- “It is not possible to introduce sustainable management at this stage because private forest owners are not motivated enough, they have too small parcels” (SDP, FF, IF, CFS)
- “SFM is possible after combining and enlarging parcels of a group of private forest owners” (CFS, CCoC and HSS)
- “It is possible only with appropriate training and education for private forest owners” (HS, MRDFWM-PFD, FES)

3.4.2 Are private forest owners a homogeneous group?

Table 3.5 gives the opinions of the representatives of relevant institutions and organisations as to whether private forest owners are a homogeneous or heterogeneous group. All respondents agree that private forest owners are a very heterogeneous group, only one respondent from PFOA-A stated that PFOs are homogenous. This statement shows that representatives of the institutions are well informed about the status quo in the private forestry sector.

The representatives of public administration emphasize the difference between ‘active’ and ‘passive’ private forest owners. ‘Active’ owners are those who cut their forests almost every year, while ‘passive’ do not use their forests primarily as a source of income and are not very interested in forest management. In the following there are some typical statements:

Table 3.3. Matrix of topics for qualitative analysis.

TOPIC	PA				PbE	PP		FSRO		IGF				
	MRDFWM		MoC	FES		RP	LP		FF	CFRI	CFS	GA	NGO	
	PFD	HD					HSS	SDP					CCoC	CoFWI
(II-1a)	-	-	-	-	-	+	-	-	-	-	+	+	-	
(II-2a)	-	-	-	-	-	-	-	-	-	-	-	-	+	
(II-6a)	+/-	+/-	+/-	+/-	+	-	+	+/-	+	+/-	0	+/-	-	
(III-8)	+	+	+	+	+	+	+	+	+	+	+	+	+	
(IV-12)	+	+	-	+	-	+	-	-	-	-	-	+/-	+	
(IV-14)	+	+	+	+	+	+	+	+	+	+	+	+	+	
(V-15)	+	+	+	+	+	+	+	+	+	+	+	+	+	
(V-16)	-	-	+	-	-	+/-	+/-	-	-	-	-	-	-	

+ Advocates
 - Opponents
 +/- Indifferent

Abbreviations in Column 1 (Table 3.3) explained.

- II-1. Do you believe that private forest owners can manage their forests in a sustainable way?
 II-2a. Are private forest owners a homogenous group?
 II-6a. Are private forest owners discriminated by the current forest legislation?
 III-8. Do private forest owners need public support for sustainable management of their forests?
 IV-12. Do you support strengthening the role of private forest owners through lobbying in forest policy processes?
 IV-14. Do you support the formation of independent private forest owners' associations?
 V-15a. Do you think that voluntary private forest owners' associations are the appropriate approach?
 V-16a. Do you believe that compulsory membership in private forest owners' associations is possible in Croatia?

Abbreviations of the organisations in Columns 2–6 explained.

PA. Public administration

MRDFWM-PFD.

Ministry of Regional Development, Forestry and Water Management – Dep. for Private Forest.

MRDFWM-HD.

Ministry of Regional Development, Forestry and Water Management – Directorate for Hunting.

MoC.

Ministry of Culture, Department for Nature Protection

FES.

Forest Extension Service

PbE. Public enterprises

PE-HS.

Public enterprise Hrvatske šume d.o.o.

PP . Political parties

RP-HDZ.

Right-wing party

LP-SDP.

Left-wing party

LP-HSS.

Left-wing party

FSRO. Forest science and research organisation

FF.

Faculty of Forestry

CFRI.

Croatian Forest Research Institute

IGF. Interest groups – Forestry

NGO-GA. Green Action

CCoC. Croatian Chamber of Commerce

CoFWI. Croatian Chamber of Forestry and Wood Processing Industry Engineers

PFOA-A. Private forest owners' association – alliance of PFOA

CFS. NGO Croatian Forest Society

Table 3.4. Do you think that sustainable forest management is possible in private forests? (II-1a)

Institution	Advocates	Indifferent	Opponents
Public administration			FES
			MRDFWM-PFD
			MRDFWM-HD
			FES
			MoC
Public enterprises			PE-HS
Political parties	HSS		SDP
			HDZ
Forest science and research organisations			CFRI
			FF
Interest groups Forestry	CFS		CoFWI
	CCoC		PFOA-A
			GA

Table 3.5. Are forest owners A homogenous group? (II-2)

Institution	Advocates	Indifferent	Opponents
Public administration			MoC
			FES
			MRDFWM-PFD
			MRDFWM-HD
			FES
Public enterprises			PE-HS
Political parties			SDP
			HSS
			HDZ
Forest science and research organisations			CFRI
			FF
Interest groups Forestry	PFOA-A		CoFWI
			CFS
			CcoC
			GA

(Abbreviations see Table 4.3)

- “Owners are a heterogeneous group because of their different social status and knowledge” (CF)
- “Owners are heterogeneous because they have different management goals” (HSS)
- “Owners are from rural and urban areas and have different education qualifications” (MRDFWM-PFD)

3.4.3 Discrimination by forest legislation

The majority of respondents believe that private forest owners are as equally treated by the Law on Forests as the state forest company (Table 3.6) and refer to some improvements regarding forest management rules by the new forest law. Some respondents (HS, SDP, and CFRI) state that PFOs are privileged under the new Law on Forests since they have fewer obligations in comparison to the state forest company due to the establishment of the Forest Extension Service.

The representatives of PFOA-A and the political party HSS believe that they are discriminated due to heterogeneity.

There are the following opinions:

- “According to paragraph 8 of the Forest Law (2005), private and state forest owners are treated equally in forest management rules” (CCoC)
- “The Law of Agriculture Land and Law of Touristic Services support the development of PFOs (MRDFWM-PFD); they support the owners’ employment in rural areas”
- “Private forest owners are privileged because they have fewer obligations in forest management than the state company (PE-HS, SDP), local municipalities build their infrastructure (forest roads)- SDP”
- “PFOs have more subsidies (state fund) aimed at improving public forest functions (externalities), they are treated well” (CoFWI)
- “PFO are discriminated because there is no proper surveillance of private forests, which causes illegal logging” (PFOA-A)
- “An active participation of private forest owners in forest policy processes is recognised in the legislation and establishment of Forest Extension Service” (FES, MRDFWM-PFD, MRDFWM-HD)

3.4.4 Public support of forest management

All interviewees agree that private forest owners need public support for the sustainable management of their forests (Table 3.7).

Most respondents propose state support for the establishment of private forest owners’ associations and their activities, the provision of subsidies and training as well as advisory support in forest management. Some state that financial support is not always the best option for PFOs, while training and advisory services are more important.

Since the establishment of FES the public awareness of necessary support for private forest owners has increased. All interviewees agree that development in private forest management is not possible without public support.

Table 3.6. Are forest owners discriminated by the current forest legislation? (II-6b)

Institution	Advocates (discrimin.)	Indifferent (equal)	Opponents (privil.)
Public administration		FES FES MRDFWM-PFD MRDFWM-HD MoC	
Public enterprises			PE-HS
Political parties	HSS	HDZ	SDP
Forest science and research organisations		FF	CFRI
Interest groups Forestry	PFOA-A	CCoC CoFWI CFS	

(Abbreviations see Table 4.3)

Table 3.7. Do forest owners need public support for forest management? (II-8)

Institution	Advocates	Indifferent	Opponents
Public administration	MoC FES FES MRDFWM-PFD MRDFWM-HD		
Public enterprises	PE-HS		
Political parties	HSS SDP HDZ		
Forest science and research organisations	CFRI FF		
Interest groups Forestry	CoFWI CFS PFOA-A CCoC GA		

(Abbreviations see Table 4.3)

The interviewees argue as follows:

- “PFOs need subsidies but with the same obligations as the state company” (PE-HS)
- “Some PFO associations are established only for subsidies (FES), there is a need for better control in the field” (FES, HSS)
- “PFOs need subsidies only for the enlargement of forest management areas” (FoF, CFRI)
- “PFOs need subsidies but education and training is more important” (SDP, PFO-A)
- “Subsidies are the only motivation for some forest owners” (PFO-A)

3.4.5 Need for lobbying and extension service

The respondents' opinions about the need for lobbying and advising in forest management are presented in Table 3.8. The majority of the respondents consider that advisory services are more needed now in forest management than lobbying. In their opinion PFOs should be properly trained for forest activities in order to practise sustainable management of their forests. Only respondents from the related Ministries and HSS state that lobbying is more important.

The representatives argue as follows:

- “Forest Extension Service is an adequate institution for supplying services such as advising, professional training, seminars and workshops” (FES, FoF, CFRI, SFS)
- “PFO land improvement should be monitored through forest condition observation and proper field reaction” (CFRI)
- “Simplify the procedure and decrease the costs of PFO forest management plans; prohibit dividing forest property into very small parts” (HSS, FoF)
- “If PFOs do not manage their forests properly, they should be fined/forced with high taxes; if they do not apply forest management on their private property, then they should sell it or pass management rights on to someone else” (PE, HSS, FoF)

3.4.6 Formation of independent interest associations

The respondents' opinions on establishing an independent organisation of forest owners are presented in Table 3.9. They unanimously consider an independent interest association of private forest owners as the best solution to represent their interests. All respondents support the idea of strengthening the position of private forest owners by establishing their interest associations.

There are some interesting pros and cons regarding an independent interest association. The following advantages are put forward: easier forest management; common forest management; increase of number of jobs; efficient wood selling; easier articulation of forest owners' interests; stronger voice of forest owners in the forest sector; and rural development. The disadvantages include distributional problems, short-term interests for subsidies and management.

Table 3.8. Is Lobbying more necessary for forest owners than advice on forest management? (IV-12)

Institution	Advocates	Indifferent (both)	Opponents
Public administration	MoC		FES
	MRDFWM-PFD		FES
	MRDFWM-HD		
Public enterprises			PE-HS
Political parties	HSS		SDP
	HDZ		
Forest science and research organisations			CFRI
			FF
Interest groups Forestry		CCoC	
			CoFWI
			CFS
			PFOA-A
			GA

(Abbreviations see Table 4.3)

Table 3.9. Strengthening the position of PFOs by establishing independent PFOAs (IV-14)

Institution	Advocates	Indifferent	Opponents
Public administration	FES		
	FES		
	MRDFWM-PFD		
	MRDFWM-HD		
	MoC		
Public enterprises	PE HS		
Political parties	HSS		
	SDP		
	HDZ		
Forest science and research organisations	CFRI		
	FF		
Interest groups Forestry	CoFWI		
	CFS		
	PFOA-A		
	CCoC		
	GA		

(Abbreviations see Table 4.3)

There are currently 30 registered PFOAs in Croatia, which shows the trend of associating. Here are some typical statements:

- “Only associating could increase PFOs’ employment” (MRDFWM-PFD)
- “What is mostly lacking is short-term interest and a voluntary approach” (FES)
- “The main advantage is articulating forest owners’ interests” (PFOA-A, CoFWI)
- “The main obstacle regarding the common management of private forests is the fair division of income between the owners in the association” (MoC, FES)

3.4.7 Voluntary membership

Table 3.10 gives an overview of the respondents’ opinions about voluntary membership in forest owners’ organisations. The representatives of all institutions agree unanimously that voluntary membership in forest owners’ associations at all levels is the best approach for strengthening the private forest owners’ interests.

The Croatian Forest Extension Service has developed a model of financial (through subsidies) and professional support (advisory services and training through workshops). The following are some opinions on the issue:

- “The established model in Croatia is on a good track; a PFO register has been created” (MRDFWM-PFD, FES)
- “There is a need for better marketing and ways to better inform potential members of the possibilities of joining a local PFO association” (MRDFWM-PFD, FES)

3.4.8 Compulsory membership

Compulsory membership in a national association of private forest owners is rejected by most respondents (Table 3.11). However, representatives of the public forest administration, public enterprises, political parties and private companies argue that while there is the possibility to establish such a model, it should be adapted to specific national circumstances. For the time being, obligatory membership is not foreseen in Croatia; however, the possibility remains.

The major obstacles for compulsory membership are the existing mentality and the rejection of imposed obligations. Due to cadastral problems, there are no data about forest owners at the national level. Obligatory membership could stimulate passive forest owners to manage their forests.

The obligatory membership fee should be at least EUR 1–2 per year and guarantee some benefit for the owner. Public administration and interest groups are not familiar with the model of obligatory membership; this option should be disseminated to a broad audience. The following statements are articulated:

- “Obligatory membership is not possible according to the present Law on Property – Official Gazette” NN 91/96 articles 30 and 64 (MRDFWM-PFD)
- “Obligatory membership is not possible because of the lack of a common forest owners database” (FES)

Table 3.10. Voluntary membership in Private Forest Owners’ interest organisations (IV-15)

Institution	Advocates	Indifferent	Opponents
Public administration	FES		
	FES		
	MRDFWM-PFD		
	MRDFWM-HD		
	MoC		
Public enterprises	PE HS		
Political parties	SDP		
	HSS		
	HDZ		
Forest science and research organisations	FF		
	CFRI		
Interest groups Forestry	GA		
	CoFWI		
	CFS		
	PFOA-A		
	CCoC		

(Abbreviations see Table 4.3)

- “Obligatory membership could cause negative reactions among the owners (FES); to join an association is the individual owner’s decision” (CCoC, MoC, CFS)
- “Obligatory membership could increase the owners’ awareness about their property; if they are obliged to pay a membership fee, a higher interest in management of their forest property might be expected” (FoF)

3.5 Summary and Conclusions

Although there are no exact statistical data on the average size of private forest property, the size of the forest parcels and the number of forest owners, the results of this research regarding the average size of forest property (2.9 ha) and the number of forest parcels per owner (2.6 ha) are significantly higher than the figures in all other sources presented to date. However, in comparison to many European countries, private forest properties in Croatia are still very small (Niskanen et al. 2007). The main results on species composition in private forests show the dominance of broadleaved mixed forests. The characteristics of private forests such as low

Table 3.11. Obligatory membership in Private Forest Owners' interest organisations (IV-16)

Institution	Advocates	Indifferent	Opponents
Public administration		FES	FES MRDFWM-PFD MRDFWM-HD MoC
Public enterprises		HS	
Political parties		SDP HSS	HDZ
Forest science and research organisations			CFRI FF
Interest groups Forestry			CcoC CoFWI CFS PFOA-A GA

(Abbreviations see Table 4.3)

wood production mainly for fuel wood, and small, highly fragmented parcels with a tendency for further downscaling, are a bad precondition for achieving economies of scale.

In the present situation, the majority of private forest owners in Croatia are not in a position to manage their forests in an economically sustainable manner. They mainly produce fuel wood for their own needs. Taking into account all the characteristics of private forest property in Croatia, it is obvious that voluntary private forest owners' interest organisation cannot be established without subsidies by the state.

In terms of social and demographic characteristics, the research shows that the majority of forests owners are older than 46 (from 46 to 60), while almost 30% are older than 60. Obviously, the transfer of forest ownership among the family members happens in parents' older age or even after they die. Some 46% of the respondents do not own their forests individually; they usually share them with their spouses or relatives. Private forest owners are mainly rural or semi-rural people. Only 4% of them live in settlements with more than 5,000 inhabitants. This clearly refers to the important role of private forests for the economic development of rural areas. The majority of the respondents belong to the low income category – half are either retired or unemployed, while more than one third are lower-level employees, manual workers or farmers.

The majority of forest owners are aware of the boundaries of their forest properties and did not have any ownership disputes over the last few years. Such a high percentage of forest owners who know the exact boundaries and did not have any ownership disputes do not comply with the status of cadastre. Only a small percentage of private forest owners (13%) had some problems regarding ownership, mainly related to illegal logging and disputes with state forest enterprises regarding ownership rights.

Regarding the economic aspects of the survey, most respondents like their forests very much, which points to very strong emotional links between the owners and their forests. This is probably due to the fact that private forests are treated as family heritage; they are mainly inherited from ancestors and will be left to children. Only 9% of private forest owners purchased and only 3% sold their forests during the last decade. The inexistence of a market for forest land as well as the further partitioning of private forests by inheritance will bring about the further fragmentation and downsizing of private forests.

More than 80% of private forest owners believe that their interests are not appropriately represented. One third of the respondents indicate that their interests are poorly represented and 15% state that they are not represented at all. This also points at a high level of mistrust of private forest owners towards public forest administration and state forest enterprises. When they need support they contact neighbours, the state company or the forest extension service. One third of forest owners are not prepared to engage themselves in the establishment of a private forest owners' association.

The qualitative research on the attitudes of forest policy decision makers shows many commonalities among different institutions. Only respondents from the related Ministries stated that lobbying was more important than an extension service. The differences in opinions between different institutions as well as within the same institution are small.

In summary, almost all interviewed forest policy decision makers support the formation of a voluntary interest association of private forest owners, based on selective financial incentives for potential members. Public administration and interest groups are not familiar with the model of obligatory membership; this option should be disseminated to a broader audience.

Most respondents agree that the present public support through the Forest Extension Service improves the management of private forests. This support is supplied in the form of subsidies and training for private forest owners. Almost all respondents consider private forest owners as a very heterogeneous group.

Most respondents believe that private forest owners are equally treated by the forest law as the state forest company. Consequently, the majority of the respondents state that private forest owners need advice in forest management at the national level much more than lobbying; some respondents argue that both lobbying and advising are needed. However, for the time being an extension service is more needed.

The majority of respondents agree that an independent interest association of private forest owners is by far the best solution for strengthening the position of private of forest owners. Almost all respondents support voluntary membership in such an association. Some respondents agree that also compulsory membership in a private forest owners' association is an option under certain circumstances. The

strongest opponents of the obligatory approach are representatives of the public forestry administration who are against all compulsory solutions and additional expenses.

The work of Forest Extension Service concerns the elaboration of forest management plans (at the beginning of 2008, only 6% of private forests had management plans), forest health care, forest road construction (so far 73 km of forest roads have been built), presentations and workshops for private forest owners, marking trees and generating new sources of income (e.g. utilization of forest biomass, public bidding of forest logs).

The new Croatian Law on Forest (2005) includes financial instruments for small scale forest owners, comprising assistance in drawing up management plans, securing means of biological reproduction and constructing forest roads. Most of the owners (65%) are only a little or not at all familiar with forestry legislation.

As a main result of the research it should be underlined that the majority of private forest owners included in this survey lack an interest association to support them in managing their forests and to represent their interests by lobbying in ministries/governments so that the social and economic situation of private forest owners will be improved. According to the conducted research within the PRIFORT project, it is recommended that the main goals for the further social and economic development of rural areas policy take into account the presented private forest owners' opinions in Croatia.

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4. The Preconditions for Private Forest Owners' Interest Associations in Macedonia

4.1 Private forests in general

The forestry sector of the Republic of Macedonia (RM) faces significant problems related to data on forest resources and forest land. The three main sources (Statistical Yearbooks; Spatial Plan; and Ministry of Agriculture, Forestry and Water Economy) differ on the bases of data and collection methodologies and thus each has different data. As the Government of the Republic of Macedonia approved the "Strategy for Sustainable Development of Forestry in the Republic of Macedonia (SSDF)" (2006), this document will be used as data basis in this report.

According to the SSDF, the total forest land area in RM totals 1,159,600 ha, of which 947,653 ha are forests. The total wood mass is 74,343,000 m³ and the total annual increment is 1,830,000 m³ with an average annual increment of 2.02 m³ per ha. With the help of the Forestation Fund (which was active between 1971 and 1990) more than 140,000 ha of bare land were afforested. This is an increase of the total afforested area by 60%.

For the time being, about 90% of the total forest area is state owned, while their part of the total wood mass is 92%. Private forests amount to 10% (or 94,146 ha) of the total forest area, and their portion of the total wood mass is 8%. Out of the total forest and forest land area, 8% is not included in the current forest management plans. At present, a process of denationalisation is in progress in RM, so it is possible to have some small but no radical changes in these figures.

As all the data for private forests and their owners are not precise, a new forest inventory and cadastre are needed.

4.1.1 History of forest ownership

The first data on the forest area and the ownership situation in RM are from 1938 (Table 4.1)

According to the data from 1938, municipalities held the greatest share (with 59%) of the forest area, with private forests accounting for 14%. After the Second World War (1947 to 1949), a 'fast inventory' of forests was carried out in the territory of Yugoslavia. The results were published in 1953 and showed some changes in the ratio between state and private ownership. All forests owned by municipalities became state owned as did some of the private forests due to the process of nationalisation. As a result, some 93% of the forest area in RM became state owned, a situation that remained mostly unchanged for more than 50 years.

After the 'fast inventory' there were two official inventories in 1961 and 1979. The share of private forests was 8% in 1961; in 1979 it was 10%, and in 2006 9%. According to the data from the Statistical Yearbook 2006, the share of private forests amounts to 11%.

Table 4.1. History of forest ownership.

	1938		1953		1961		1979		2006	
	ha	%	ha	%	ha	%	ha	%	ha	%
State	162 054	26.3	800 423	93.2	816 516	92.0	816 899	90.2	853 507	90.1
Municipality	360 737	58.6	55 823	6.5						
Private	84 914	13.8	2 576	0.3	71 001	8.0	88 754	9.8	94 146	9.9
Church	7 496	1.2								
Total	615 261	100	858 823	100	887 517	100	905 653	100	947 653	100

4.1.2 State versus private forests

The data in Table 4.2 show changes of the forest area in the mixed and pure stands during 1979 to 1999. It is evident that there is an increase in forest area in all categories. What is most evident, however, is that the pure conifer area from 1999 enlarged about three times compared to 1979. During the 1980s and the 1990s, it was the strategy in all forest areas to afforest or reforest with monocultures of conifers because of the high proportion of industrial wood. This is why these kinds of monocultures have experienced the greatest increase, although later it was concluded that that had been a huge mistake because of the emergence of diseases.

There are no exact data on tree species composition, age classes, silvicultural types and percentage in vegetation zones.

As shown in Table 4.2, there was no enlargement of mixed conifer areas in private forests during those 20 years. The main forest type of private forests is broadleaved forest, which cover about 73% of the total private forest area.

In general, state owned forests are in a better condition than private forests although they are also of low quality (Table 4.3); the main reason for this is that private forests are located in the lower zone (oak zone and sub-mountain and mountain beech zone) near rural areas. State forests are managed in a way very close to sustainable forestry.

Although the private forests cover almost 10% of the total forest area, they contribute only 8% of the total wood mass due to the lower quality of standing timber. Most of the timber harvests in RM are still for fuel wood. The forest management plans focus on timber and do not include environmental, social and cultural aspects in the sense of sustainable forest management.

Fuel wood from private forests reaches up to 16% of the total quantity on average. During the last several years, this percent varied between 5% in 2001 and 21% in 2000 (Table 4.4). The share of industrial wood from private forests in the total industrial wood is very low with 9% on average with variations from 8% in 2002 up to 11% in 2005.

At present, private forests are in a very bad condition in terms of their area and quality. In the socialism period after the Second World War, private forest owners were not interested in their ownership; since the transition, however, they have started to become more aware of their forests and of the fact that one can earn good money if the forest is managed well. There is now optimism that the quality of private forests will improve in the future.

4.1.3 Legal regulations concerning private forests

The Constitution ensures the right of private forest ownership and all types of forest ownership are equal under the law – forests as part of the natural wealth are considered a public good in the Republic of Macedonia.

The management of private forests is under the jurisdiction of the Law on Forests, which makes only few distinctions between state and private forests. According to the Law, owners of an area less than 100 ha are not obliged to make a forest management plan. The forest parcels are usually small and fragmented; the largest

Table 4.2. Distribution of forest by type and property.¹

1	ALL			STATE			PRIVATE		
	1979	1999	Index	1979	1999	Index	1979	1999	Index
	ha	ha	%	ha	ha	%	ha	ha	%
2	3	4	5	6	7	8	9	10	
PURE	581 279	622 593	107.1	510 505	532 505	104.3	70 774	90 088	127.3
- Broad.	546 959	545 087	99.7	479 071	463 482	96.7	67 888	81 605	120.2
- Conifers	34 320	77 506	225.8	31 434	69 023	219.6	2 886	8 483	293.9
MIXED	324 374	328 001	101.1	306 128	306 094	100.0	18 246	21 907	120.1
- Broad.	277 395	263 087	94.8	261 047	243 902	93.4	16 348	19 185	117.4
- Conifers	6 024	6 367	105.7	4 724	5 062	107.2	1 300	1 305	100.4
- Br.&Con.	40 955	58 547	143.0	40 357	57 130	141.6	598	1 417	237.0
ALL	905 653	950 594	105.0	816 633	838 599	102.7	89 020	111 995	125.8

¹ Statistical Yearbooks, RM

Table 4.3. Wood mass and annual yield by ownership.²

1	Wood mass		Yield	
	m ³	m ³ /ha	m ³	m ³ /ha
	4	5	6	7
State	68 592 167	84.0	1 675 491	2.05
Private	5 750 955	64.6	153 539	1.72
All	74 343 122	82.1	1 829 030	2.02

being 73 ha. As a consequence, there are no management plans for private forests; however, if some private owners expand to more than 100 ha, they have to pay for the elaboration of the plan. Private forest owners expect the Public Enterprise to implement all necessary forest activities in their forests.

The forest management plans contain activities that are obligatory for both public institutions and private owners. According to the forestry legislation, the Ministry of Agriculture, Forestry and Water Management will provide nurseries offering seedlings free of charge for every land owner. Funding comes from the budget (programme for extended reproduction of forest). After forestation, private owners are obliged to carry out different silvicultural activities such as thinning. Forestry inspectors are responsible for controlling these activities and for reporting and penalising those who do not fulfil their obligations.

4.2 Selection of the random sample for the door-to-door survey

The agreed common questionnaire for the door-to-door survey of private forest owners (Annex 1) and the guidelines for the interviews of selected forest policy decision makers (Annex 2) were also used in Macedonia. The questionnaire has been designed in a way to correspond with the methodological requirements of empirical methods of social research as well as with the needs of data analysis by SPSS.

The survey of private forest owners has been conducted using the common principles of sample design:

- The target population consists of all private forest owners, both active and passive.
- The margin of error is $\pm 5\%$.
- The data on citizens and private forest owners (names, addresses etc.) are available only at the municipalities (cadastral offices) and local forest authorities. Close collaboration with these institutions has been established in order to identify private forest owners.
- The sample size is 350 randomly selected private forest owners.

Table 4.4. Cut wood mass distribution by years.³

	2000		2001		2002		2003		2004		2005	
	fuel	technical	fuel	technical	fuel	technical	fuel	technical	fuel	technical	fuel	technical
state	638 305	159 298	373 829	90 010	359 290	104 567	533 433	120 863	492 555	134 329	456 525	131 419
private	172 209	14 223	18 504	9 381	84 215	9 493	97 727	11 431	117 384	14 574	103 624	16 938
All	810 514	173 521	392 333	99 391	443 505	114 060	631 160	132 294	609 939	148 903	560 149	148 357
% private	21.2	8.2	4.7	9.4	19.0	8.3	15.5	8.6	19.2	9.8	18.5	11.4

3 Strategy for sustainable development in RM

Based on the available data, all municipalities in RM were ranked by the following two criteria: the highest percentage of forests coverage, and the highest percentage of private forest land in former municipalities (Annex). By overlapping these two criteria, the most representative municipalities were identified. As mentioned above, the percentage of private forests is the highest in the lowland areas where forest coverage is the lowest and vice versa.

There was a need to identify the right number of private forest owners who would be interviewed; a list of all local communities (settlements) – ‘Mjesna zajednica’ – was drawn up within ten selected municipalities. These local communities were the most appropriate for this project because they already existed in all former Yugoslavian countries and survived the administrative changes the countries were subject to. These are also the basic election units with the most reliable lists of inhabitants. The data from local cadastre offices (‘Cadastral municipalities’) could not be used for private forest owners’ identification due to the inaccurate updating of land ownership changes or low level of data digitalisation. In total, 35 settlements were randomly selected from the list of all local communities (settlements) within ten municipalities. Close cooperation with public forest administration and forest guards in the field was established in order to identify private forest owners in each settlement. Based on the local knowledge of forest guards, the lists of private forest owners in each settlement were created, of which ten were randomly selected and identified as municipalities for the PRIFORT project research (Skopje; Berovo; Kriva Palanka; Kumanovo; Kratovo; Probitip; Delcevo; Struga; Tetovo; and Debar).

4.3 Results of quantitative analysis

4.3.1 Silvicultural aspects

The private forest owners in RM are constantly pointing out the problems with cadastre and land registration; however, the results of the survey show that 94% of them know the exact size of their forests. As the average size of private forest estates is 2.1 ha, extremely small-scale estates characterise the private forest ownership pattern; the largest number of forest owners have parcels ranging from 0.5 ha and 1 ha, while the largest private forest parcels are greater than 5.1 ha (Fig. 4.1).

Furthermore, the survey results show that the species composition is almost the same as in the state owned forests. More than one half of the forests are mainly broadleaved, less than one half are mixed forests and less than 1% is mainly coniferous. Only 7% are high forests and approximately one third is coppice forests. This means that nearly two thirds of the private forests are mixed: high and coppice forests – another reason why private forests do not play a big role in the timber market.

4.3.2 Sociological aspects

From the respondents’ answers it can be seen that private forest owners fully appreciate their forest estates because they are a part of their family heritage.

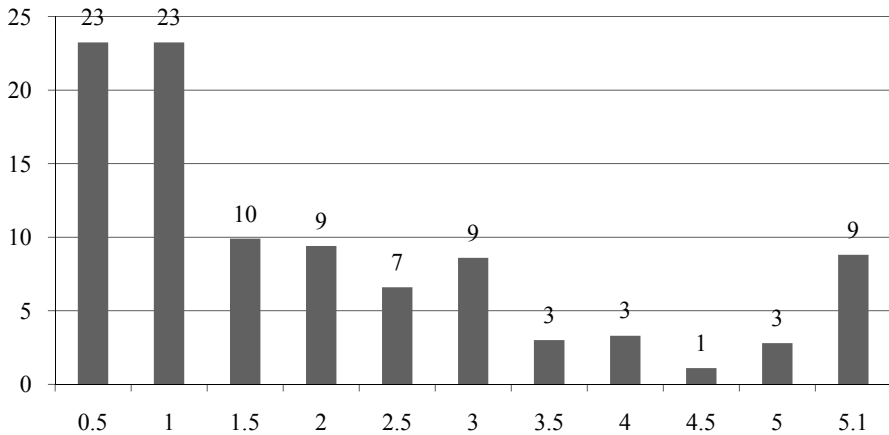


Figure 4.1. Size of private forest estates (ha).

The majority of private forest owners in RM are male (97%) – it is an old Macedonian tradition that only male children inherit forest estates. The minimum age of an owner is 19 years and the oldest owner is 81 years old; the average age is 53 years.

The results of this survey show that two thirds of the respondents own 100% of the forest property. Respondents who own less than 100% share the forest with their spouses (3%), parents (8%), relatives (22%) and children (2%). Almost all respondents inherited the forest and less than 1% either bought the forest or sold it. There is no place in the timber market for the private forest owners in Macedonia because of the monopoly held by the public forest enterprise. Another reason could be that it is very difficult for joint private owners to reach an agreement on selling.

More than two thirds of the respondents in this survey live in settlements with 1,001–5,000 inhabitants; 5% of private forest owners live in settlements with less than 1,000 inhabitants; 20% in settlements with 5,001–20,000; and 6% in those with more than 20,000. Correspondingly, the average distance from the owners' home to the forest is about 10 km – the minimum distance is 1 km and the maximum 81 km. The forest estates are located close to the villages where the original owners were born.

In accordance with the high unemployment rate in RM, almost one third of the private forest owners are currently unemployed. Since two thirds of the private forest owners live in rural and semi-rural areas, they depend on agriculture and forestry for their existence but with very low income. If the forest is well managed then it could provide both employment and income. About one third of the employed private forest owners are either upper- or lower-level employees in some state institutions; the rest are farmers (17%) and manual workers (15%).

4.3.3 Economic aspects

As mentioned above, the quality of the private forests in RM is very low, which is perhaps why only one half of the respondents qualify their forests as a gain and

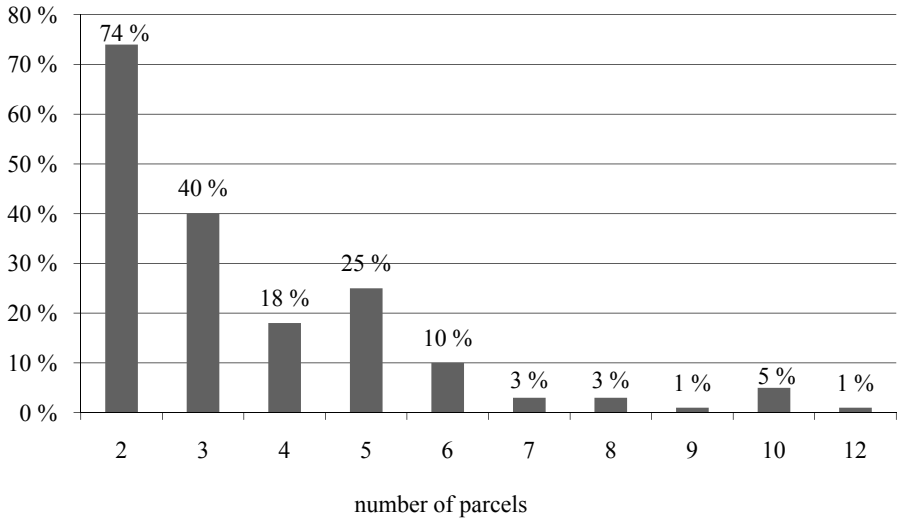


Figure 4.2. Fragmentation of private forest ownership in RM.

the other half as a burden. The majority of the respondents use their forests for fuel wood for domestic use; 19% for saw log production for domestic use; and 12% for hunting. The results indicate that forests contribute a little to the yearly household income in terms of returns for domestic use. About 42% of the private forests are consolidated and another 57% are fragmented. The average number of fragmented parcels is five and their average size is 4 ha (min 0.1 ha and max 18 ha). The most frequent size of parcels is less than 3 ha. (Fig. 4.2)

The results of the survey show that more than one half of the respondents cut their forests every year, 42% do it periodically and 4% do not cut them at all. The average interval of forest cuts is slightly more than one year.

The respondents are not prepared to cooperate with other forest owners on sharing costs for equipment; making forest management plans; selling forest products and forest training. However, they are prepared to cooperate in forest road construction and maintenance. The private forest owners who are ready to cooperate in forest road construction and maintenance are concerned about the lack of interest associations for forest management (Figure 4.3) and lobbying (Figure 4.4).

4.3.4 Institutional aspects

Contrary to our assumptions, 97% of the respondents know the boundaries of their forests because the parcels have marked boundaries on the ground. The same percentage of respondents has their parcels registered in the land register. The owners who are sharing their parcels with their spouses, parents and relatives have no ownership disputes (95%).

Only 34% of the private forest owners are familiar with the forest regulations (Fig. 4. 5). The most restrictive legal regulations concerning private forest owners

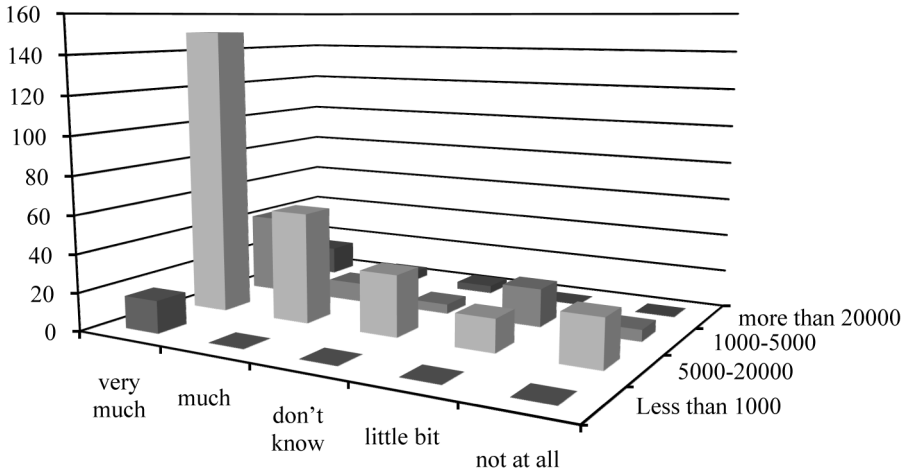


Figure 4.3. Correlation between the readiness to cooperate in forest road construction and the lack of interest associations for forest management.

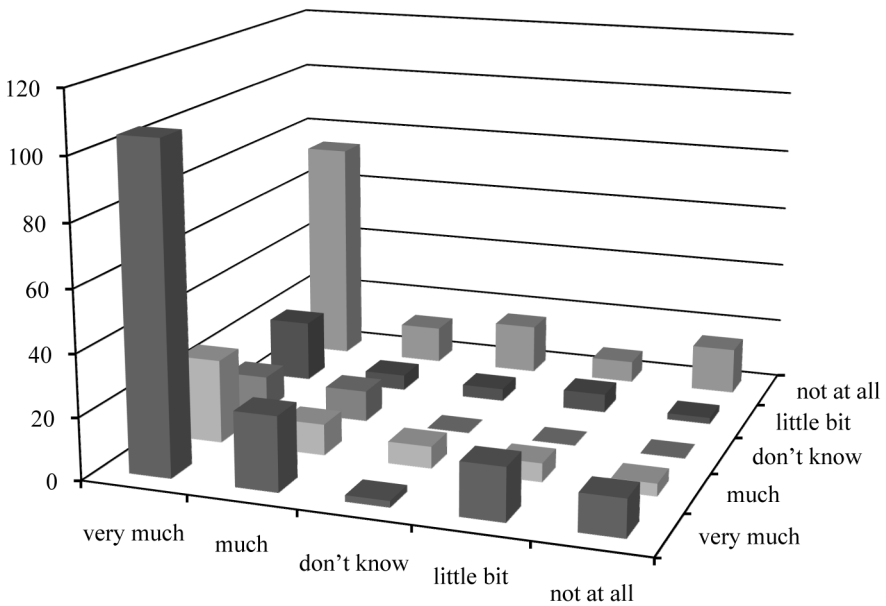


Figure 4.4. Correlation between the readiness to cooperate in forest road construction and the lack of interest associations for lobbying.

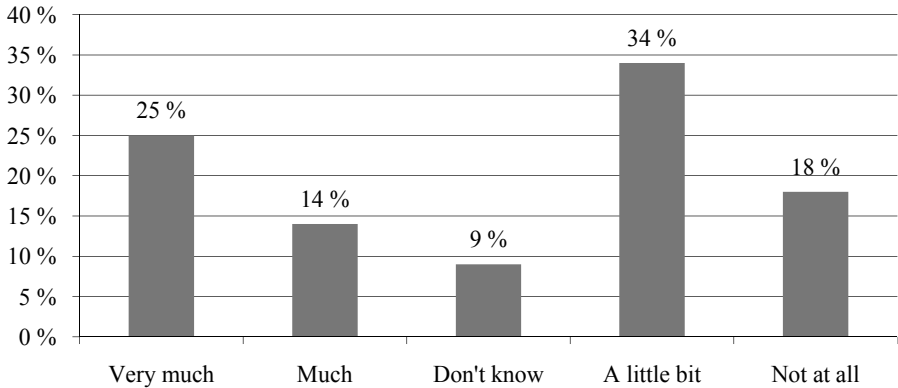


Figure 4.5. Awareness of forest regulations.

are: permission for harvesting; levies for harvesting; tree marking; and timber transport licence from the public enterprise 'Macedonian Forest' (Fig. 4.6). These regulations have many harsh effects on the benefits from the forest. The majority of the respondents (99%) have never received any kind of subsidies from the state, although their forests play a very important role for the environment.

The quality of information obtained from the public forest administration and state forest enterprise is assessed as being very bad.

4.3.5 Attitudes towards private forest owners' associations

The private forest owners in RM have no appropriate institution that provides them with information on how to improve forest management. As a result, they must address their questions to the PE (36%), to the private forest interest associations (26%) and even to relatives (12%).

With regard to forest management, the respondents expect the following services from a PFOA: advice on silviculture and harvesting, information on timber markets and information about strengthening entrepreneurship related to wood and non-wood products (Figure 4.7).

With regard to lobbying, the respondents expect the following services from a PFOA: reformulation of the forest law, tax breaks/exceptions and the provision of subsidies (Fig. 4.8).

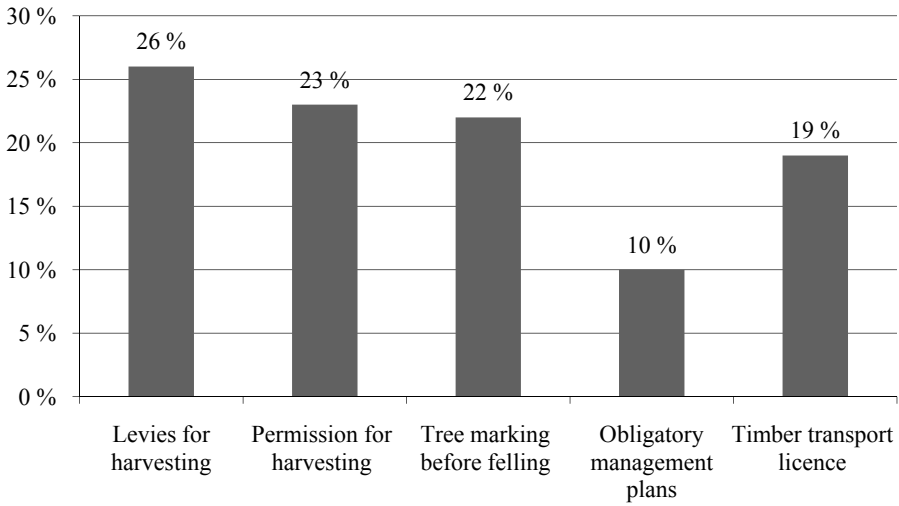


Figure 4.6. Most restrictive legal regulations concerning private forest owners.

Surprisingly, one third of the respondents are members of the existing NAPFO in RM, although the degree of representation of private forest owners in the country is very small.⁴ Thus, the respondents are well informed about the tasks of a PFOA.

One third of the private forest owners are prepared to join a PFOA voluntarily if the performance of the association is positive. Another third will join a PFOA voluntarily if the membership fee is low or very low. The interviewees are also prepared to engage themselves in the establishment of a PFOA in their region.

Two thirds of the respondents support compulsory membership in a PFOA (Fig. 4.9), as they consider that an obligatory interest association serves the interests of their members regarding an extension service and their interests are better represented.

The respondents do not regard obligatory membership as a restriction of personal freedom. They have no opinion as to whether obligatory membership would fit in the national political system.

Those private forest owners who lack private forest owners' associations for forest management and lobbying strongly support obligatory membership (Fig. 4.10 and 4.11).

4.3.6 Groups of private forest owners

The Cluster analysis identified the following three homogeneous groups of private forest owners:

⁴ The reason for this is the same approach applied for the formation of NAPFO and the selection of the random sample of private forest owners. In both cases, the overlapping area of high forest density and the high density of private forest owners has been taken.

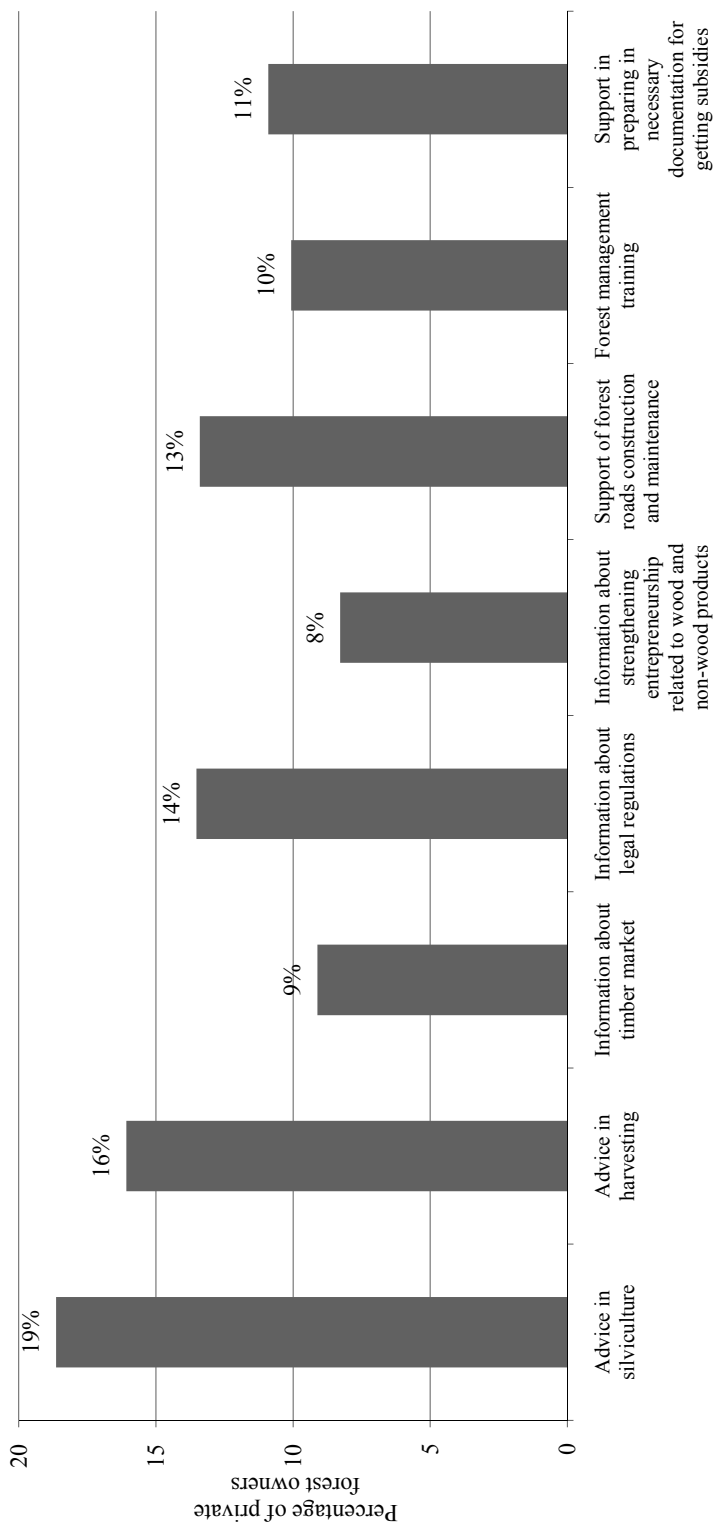


Figure 4.7. Expected services from a private forest owners' association to improve forest management.

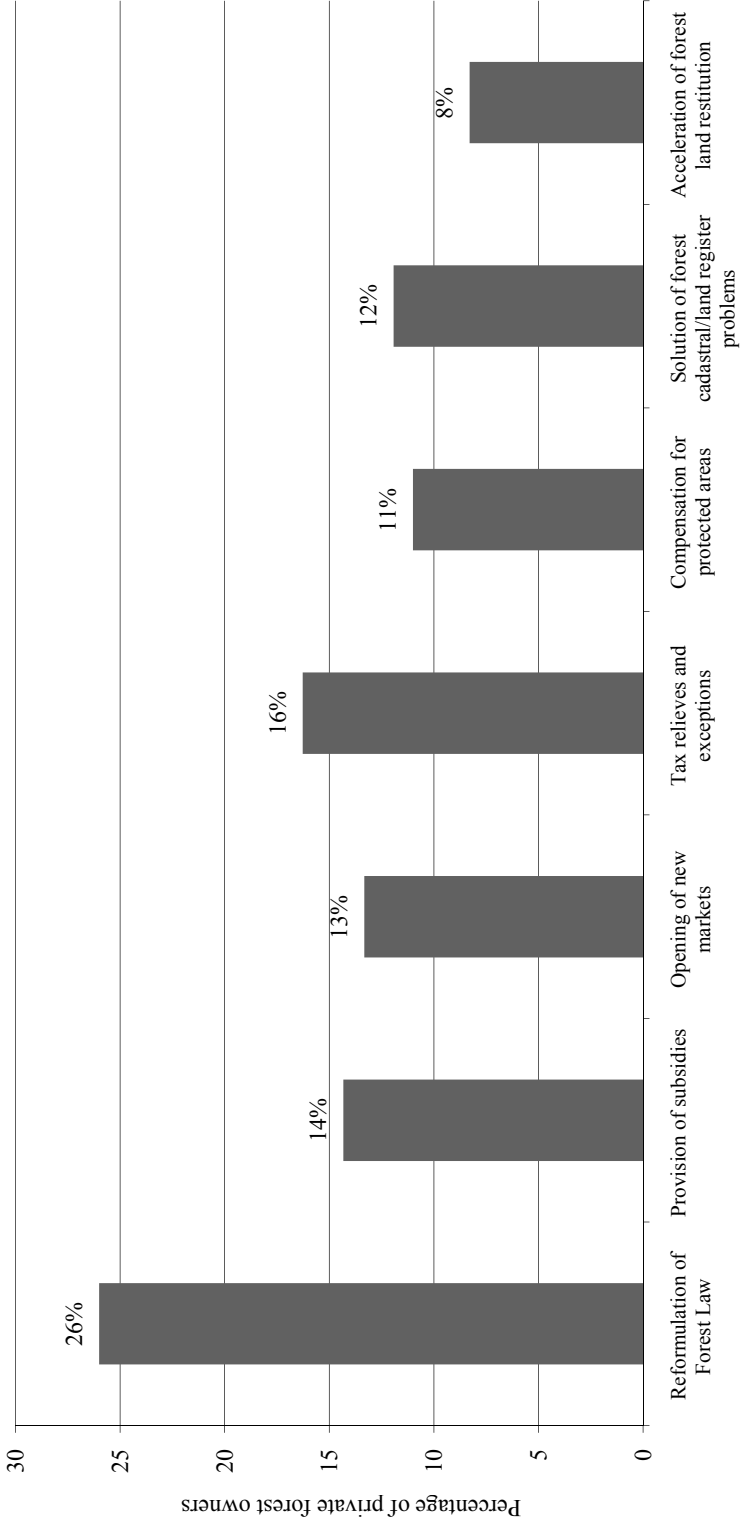


Figure 4.8. Expected lobbying services from a private forest owners' association.

What do you think about the idea that all private forest owners become automatically members of a private forest owners' interest association by law?

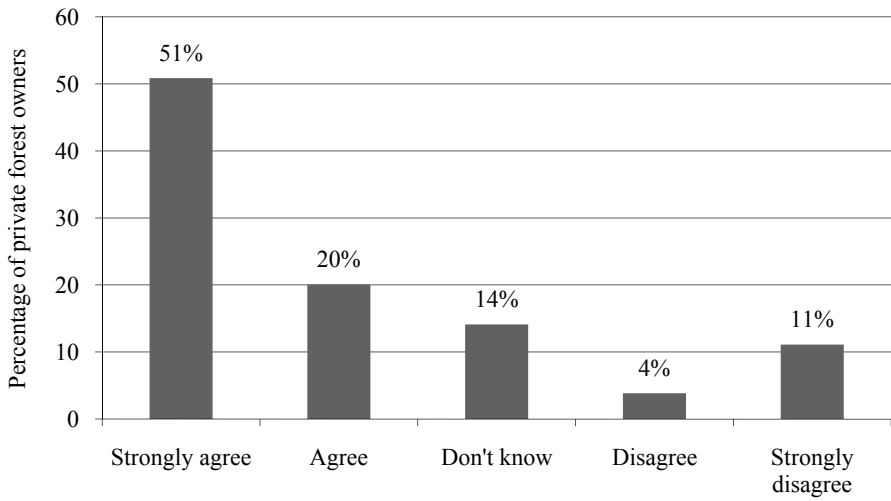


Figure 4.9. Compulsory membership in a private forest association.

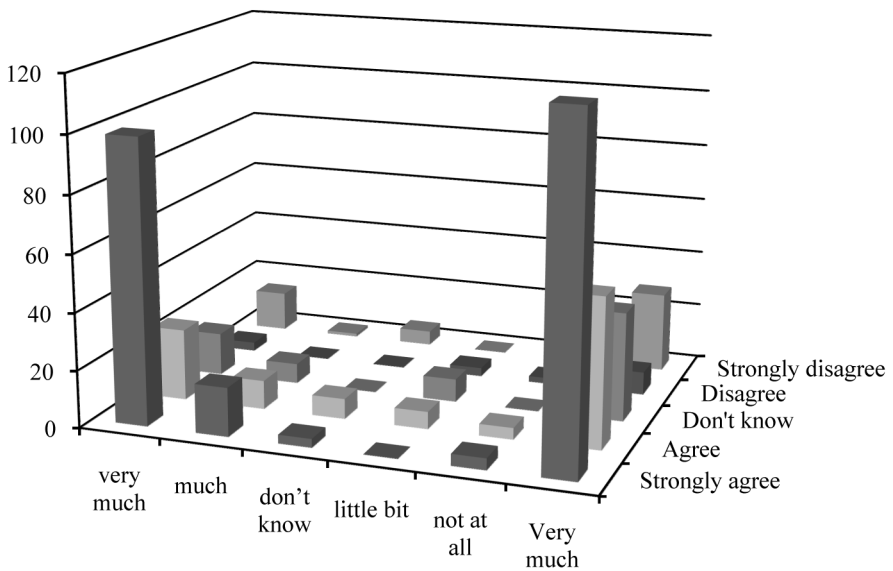


Figure 4.10. Correlation between obligatory membership and the lack of a PFOA for forest management.

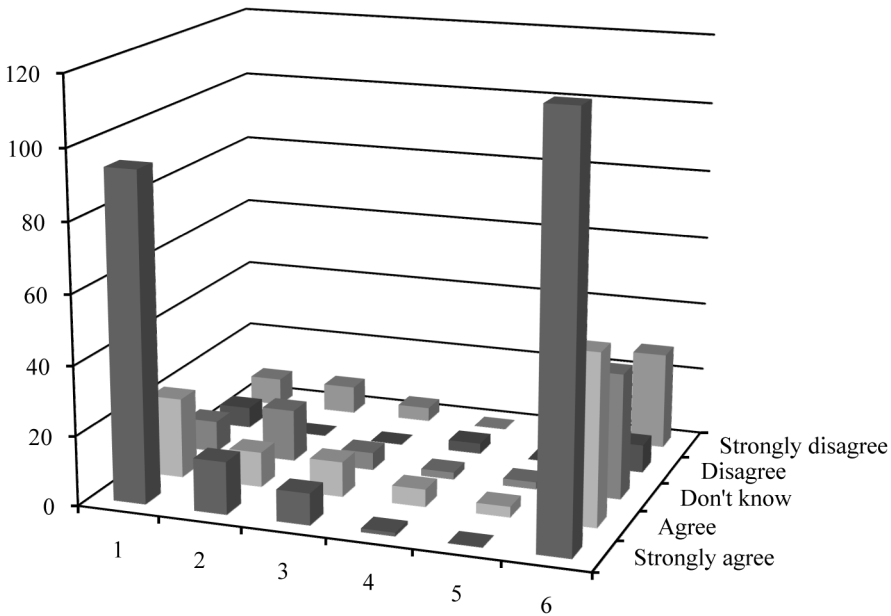


Figure 4.11. Correlation between obligatory membership and the lack of a PFOA for lobbying.

1. Cluster 1 (33%) – ‘drivers’ – highly interested in an association of private forest owners; they are already members, they own large properties, use their forest for fuel wood, have high school and higher education
2. Cluster 2 (40%) – ‘facilitators’ – interested in an association of private forest owners, own medium- to small-size forest properties, low use of wood for domestic and industrial purposes, have elementary and vocational education
3. Cluster 3 (27%) – ‘free riders’ – highly interested in an association of private forests, own small-scale properties, moderate use of wood for domestic and industrial purposes, have lower education from elementary and vocational schools.

4.3.7 Results of the factor analysis

As a result of the factor analysis, the following five factors explain 70% of the variability:

1. ‘Readiness for cooperation’ (based on sharing management plans’ costs, selling non-wood forest products and forest training).
2. ‘The need for an interest association’ (readiness to engage the association; obligatory membership by legislation; the influence of the regulative legislation) based on the lack of an association for services and lobbying and obligatory membership by legislation).

3. 'Economic evaluation of forest' (based on forest gain or burden and forest contributions to income).
4. 'Domestic fuel wood consumption' (based on acreage in hectares and fuel wood used per year).
5. 'Restrictive legal regulations' for private forest management.

4.4 Results of the qualitative analysis

The main goal of the focused in-depth interviews was to identify the attitudes of forest policy decision makers towards the formation of private forest owners' interest associations in RM. The qualitative research includes 21 key representatives of all institutions and authorities who might influence the formation of private forest owners' associations in RM. The following institutions are included (Annex 3d): Ministries responsible for forestry issues (4 persons), Ministries responsible for environment protection (2), Public forest enterprise (4), Private forest owners' associations (2), and the Forestry faculty (2). Furthermore, the representatives of 2 political parties were also interviewed (1 left-oriented party and 1 right-oriented party). The responses are grouped according to their affirmation or negation of the question (advocates, indifferent, opponents).

The matrix of basic topics and the relevant institutions are presented in Table 4.5.

4.4.1 Sustainable Forest Management of Private Forest Owners

Table 4.6 shows the opinion of the decision makers on the readiness of private forest owners to manage their forests sustainably.

The small-scaled private forest properties and their fragmentation into many parcels make sustainable forest management difficult. Nevertheless, almost all respondents answer that sustainable management of private forests is possible only if the state provides financial support, better information and training. On the other hand, some representatives of the state forest enterprise consider that there is no need for sustainable management of private forests because they are overusing their forests and they are not in good shape: "They can be sustainably managed only if we manage them with other forest functions (e.g. protection of the land cover)." The MZSW representative considers that "It is not possible to have sustainable management on such small parcels, it is just not efficient, it is only possible if they join together and make joint management plans." The political party representative also argues that "It is not possible at the moment because some serious changes are needed in the PE's structure and work; their position against the PFO also has to be changed."

4.4.2 Are private forest owners a homogeneous group?

Table 4.7 shows the opinions as to whether private forest owners are a homogeneous or heterogeneous group. More than half of the interviewees think that private forest

Table 4.5. Matrix of topics

Topic	Public Administration				Public Enterprise				National Association	NGO's		Scientific Institutions		Political Parties					
	MZSW1	MZSW2	MZSW3	MZSV4	MZSPP1	MZSPP2	PE1	PE2		PE3	PE4	NAPFO1	NAPFO2	NGO1	NGO2	FF1	FF2	PP1	PP2
For. owners homogen	-	+	+	-	+	+	-	-	-	-	+	+	-	+	+	+	-	+	+
Obligatory membersh	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+
Voluntary membersh	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	-	-	-
PFO susta Manage forests	-	+	+	+	+	+	-	-	-	-	+	+	+	+	+	+	+	+	-
PFO dealt Forest act	+	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	+
PFO need public finance support	-	+	-	+	+	+	-	-	-	-	-	+	+	+	+	+	+	+	+
Advice needed	+	+	+	+	-	+	+	+	+	+	+	+	+	+	-	+	+	+	-
Lobbying needed	+	-	-	+	+	+	-	-	-	-	+	+	+	+	+	+	+	+	+
Autonomous association	+	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-	-	-	+

+ advocates
 - opponent

Abbreviations:
 Public administration (PA)
 MZSW 1, 2, 3, 4: Ministry of Agriculture, Forestry and Water management
 MZSPP 1, 2: Ministry of Environment
 Public enterprises (PE)
 PE 1, 2, 3, 4: Public enterprises JP "Makedonski Sumi"
 Political parties (PP)
 VMRO-DPMNE: Right party
 SDSM: Left-wing party

Scientific institutions
 FF 1, 2: Faculty of Forestry
 NGO
 NGO 1, 2: DEM, DREN
 National associations
 NAPFO 1, 2: National Private Forest Owners' Association

Table 4.6. Do you think that sustainable forest management is possible in private forests?

Interest groups	Advocates	Indifferent	Opponents
Public administration	MZSW2 MZSW3 MZSW4 MZSPP1 MZSPP2		MZSW1
Public enterprise	PE1 PE2 PE4		PE3
National Association	NAPFO1 NAPFO2		
NGOs	NGO1 NGO2		
Scientific Institutions	FF1 FF2		
Political parties	PP1		PP2

(Abbreviations see Table 4.5)

owners share mainly the same interests and are thus homogenous. A smaller part of the respondents who are representatives of the state forest enterprise and the Ministry of Forestry argue that they can never act as a homogeneous group because of the lack of good organisation in the association and too many problems due to passive and active private forest owners.

Active owners are those who carry out harvesting in their forests on a regular basis every (or almost) every year. On the contrary, passive owners are those who live far away from their forest holdings and are not in the position to use them appropriately. Besides these two groups there is a third group of 'entrepreneurial forest owners', for whom the forest represents a very significant source of income, regardless of whether harvesting is their primary or additional occupation. The association of private forest owners considers that although forest owners are homogeneous in their interests, their heterogeneity can be a great threat to associating them. The representative from MZSW states: "They are not homogeneous, our mentality is like that, and no one can agree and be homogeneous although they have the same interests, you can never unite all PFOAs in RM." Another representative from MZSW says that "They have too many common issues and interests to be heterogeneous; I just cannot imagine their heterogeneity." A representative from

Table 4.7. Are forest owners a homogeneous group?

Interest groups	Advocates	Indifferent	Opponents
Public administration			MZSW1
	MZSW2		
	MZSW3		
			MZSW4
	MZSPP1 MZSPP2		
Public enterprise			PE1
			PE2
			PE3
			PE4
National Association	NAPFO1		
	NAPFO2		
NGOs			NGO1
	NGO2		
Scientific Institutions	FF1		
	FF2		
Political parties			PP1
	PP2		

(Abbreviations see Table 4.5)

PE claims that “The existing association divides them into members and non-members, so it logically follows that they are not homogeneous.” The representative of PP believes that “They act heterogeneously because they have different attitudes considering one issue; it is better for them to be coordinated in their attitudes so they can act as a “whole body” that can have political influence, so they can have more benefit from their homogeneity.” The representative from PE argues the point that “They will act homogeneously only when they will be a good example for proper management of their forests to us (PE).” Other representatives from PE think that “Many PFOs act partially homogeneously because there are some individuals who do not cut their marked trees but cut the ones from the state and present them like the marked ones. So how can you say that they are homogeneous?”

4.4.3 Discrimination by forest legislation

Table 4.8 gives the opinions on treatment of private forest owners by the Forest Law. Only few respondents (from the Ministry for Forestry and State Forest Enterprise) think that the existing law from 1997 treats private forest owners in the same way as

Table 4.8. Are forest owners discriminated according to current legislation?

Interest groups	Advocates	Indifferent	Opponents
Public administration			MZSW1
		MZSW2	
		MZSW3	
		MZSW4	
		MZSPP1	
Public enterprise		MZSPP2	
	PE1		
	PE2		PE3
	PE4		
National Association	NAPFO1		
	NAPFO2		
NGOs	NGO1		
	NGO2		
Scientific Institutions	FF1		
	FF2		
Political parties	PP1		
			PP2

(Abbreviations see Table 4.5)

the State Forest Enterprise. Some respondents agree that forest owners are neglected and even discriminated against by the existing Forest Law. Most interviewees confirm that the existing law discriminates against PFOs. Some of the interviewees who took part in the preparation of the draft new Forest law argue that the situation of private forest owners will be strongly improved in the forthcoming law. The representatives of the private forest owners' associations consider that the existing law only imposes demands and obligations but no state support (perhaps with some exceptions). Some representatives from the Ministry of Forestry and from the State forest Enterprise claim that private forest owners are going to be privileged in the new law.

It is uncontested that although forest owners have certain obligations and duties, they do not have the same rights as the state forest enterprises – especially regarding financial support.

The representative from MZSW reports that “In the preparation of the Strategy for Development they had remarks from foreign consultants that in the past PFOs were seriously neglected and discriminated, thus there is a need to redress the situation.” The representative from the PE argues that “No matter what we do they will never stop complaining.” Another representative from PE says that “Their demands and complaints are not real; they do not match with the existing law and with the

situation in the field – the real situation.” The representative from PP believes that “The mistakes do not come from the legislation; rather, they come from bad implementation and improper work done by the employees.” The representative from PE claims that the PFO have more privileges than themselves “If the private owner’s forest is not included in the management plan of PE and he broke the law by making clear cuts on his area he did not have to pay any penalty for it.” The other representative from PE makes a similar statement “No one punishes the PFO, not even the inspection or the forest police if they break the law or fail to fulfil their obligations according to the law; for example, if they do not reforest after cutting or keep the forest clean. We are always being punished for this so we are the ones being discriminated against.”

4.4.4 Public support of forest management

More than one half of the respondents have a positive attitude towards public support of PFOs for ensuring sustainable forest management (Table 4.9).

Most of the respondents consider that state support should be provided through financing the improvement of the private forest owners’ association and its activities, provision of subsidies, training, extension service for proper forest management and, of course, lobbying. The following measures are needed: promotion of sustainable forest management, support in entrepreneurship development, and establishing good market conditions. On the other hand, representatives from the State Forest Enterprise and from the Ministry of Forestry are strictly against any kind of public and financial support of the private forest owners. The representative from MZSW argues that “The state does not have enough financial means to support the forest as a whole – it should not just support private forests.” Another representative from MZSW believes that “The support should be given only locally to private forests that are worth the investment. It does not make sense to support low quality forests and owners who do not know how to run them properly; the state should finance them only if the community has some benefits from the ecosystem services.” The representative from MZSPP states: “The Forest is a natural wealth in which we invest in good times and which we use in bad times. We all know in what times we are.” The representative from the PE claims that “They have higher expenses for the supplied services so that the costs are not covered by the available funds.” Another representative from PE says that “Really important public funds are necessary for solving the cadastre and boundary problems. Unless they are provided we cannot help them with anything.” The third representative from PE believes that “At present, the organisation of PE is not ready to give the necessary support to the PFOs. If the financial situation of PE was better, it would be able to help them financially.”

4.4.5 Need for lobbying and extension service

The respondents’ attitudes on the need for lobbying and advice in forest management are presented in Table 4.10.

Most respondents believe that lobbying is more important than the extension service in forest management because it strengthens the position of private forest

Table 4.9. Do forest owners need public support for forest management?

Interest groups	Advocates	Indifferent	Opponents
Public administration			MZSW1
		MZSW2	
			MZSW3
		MZSW4	
		MZSPP1	
			MZSPP2
Public enterprise			PE1
			PE2
			PE3
			PE4
National Association	NAPFO1		
	NAPFO2		
NGOs	NGO1		
	NGO2		
Scientific Institutions	FF1		
	FF2		
Political parties	PP1		
	PP2		

(Abbreviations see Table 4.5)

owners. Others think that both are equally important. Further, most emphasise that the position of private forest owners can be improved by the Private Forest Owners' Association. A small number consider that lobbying and advising have the same importance, and that they should be conducted simultaneously – lobbying at the national and extension service at the local level. For the time being, lobbying is considered more important because it can provide subsidies and tax breaks, which help the owners at the local level. Only a small number of the respondents believe that extension service is more important, since it can be provided much faster than lobbying services. It can be concluded that lobbying is regarded as today's key instrument with which to strengthen the position of private forest owners. It seems to be necessary to improve the interests of private forest owners.

The position of NAPFO is the following: "PFOs need both advice and lobbying. They need to see what will be offered to them as advice and what as lobbying." The representative from MZSW thinks that "If PFOs can get good advice and they will start working properly, lobbying will come naturally after that." The representative from PE says that "Often, some of the PFOs tell them that they do not need advice from them, but they just want the employees of the PE to break down the barriers in

Table 4.10. Which services should be supplied by PFOA?

Interest groups	Lobbying	Both	Forest Management
Public administration	MZSW1		MZSW2
			MZSW3
	MZSW4	MZSPP1	
	MZSPP2		
Public enterprise	PE1	PE2	
		PE3	
	PE4		
National Association		NAPFO1	
		NAPFO2	
NGOs		NGO1	
		NGO2	
Scientific Institutions	FF1		
	FF2		
Political parties	PP1		
	PP2		

(Abbreviations see Table 4.5)

the lobbying process.” Another representative from PE claims that they need both lobbying and advice “They don’t need advice – they need training of the PFOs so that they can improve their situation. As far as lobbying is concerned, they already do some lobbying at NAPFO, but this is far too little in comparison with what is really needed.” A representative from a forestry NGO states that “They need both advice and lobbying – an appropriate instrument from another country should be taken and implemented.” The representative from MZSPP thinks that “The PFO are not experts in forestry and it is logically that they need advice; further, their issues need to be properly defined so that someone can lobby for their resolution.”

4.4.6 Formation of independent interest associations

The respondent’ opinions on improving the position of private forest owners are presented in Table 4.11.

Table 4.11. Strengthening the position of a PFO by establishing independent PFOAs.

Interest groups	Advocates	Indifferent	Opponents
Public administration			MZSW1
		MZSW2	
		MZSW3	
		MZSW4	
		MZSPP1	
		MZSPP2	
Public enterprise	PE1		
	PE2		
	PE3		
	PE4		
National Association	NAPFO1		
	NAPFO2		
NGOs	NGO1		
	NGO2		
Scientific Institutions	FF1		
	FF2		
Political parties	PP1		
			PP2

(Abbreviations see Table 4.5)

Almost all interviewees consider that an association of private forest owners is the best solution to represent the owners' interests. The majority of the respondents support the idea of strengthening the position of the private forest owners by improving the position of the association. They fully agree that the weakest link is the poor position of the private forest owners in the existing Forest Law. It is obvious that the position of the representatives of the PFOA in the forest policy process must be strengthened. There is also the need to avoid the possibility of cronyism and corruption in such an organisation.

According to the representatives of the PFOA, they can greatly improve their position in the ongoing forest decision-making process. The representative from MZSW is against strengthening the position of the PFOA by establishing more and new independent PFOAs "It would be more relevant if there was only one PFOA. There is a small number of private forest owners, and as individual units they cannot do much; basically, they have the same interests and problems, and they could not accomplish much by the foundation of many independent associations – they should

Table 4.12. Voluntary membership as a more convenient approach during the organising of interest representation of a PFO.

Interest groups	Advocates	Indifferent	Opponents
Public administration	MZSW1		
	MZSW2		
	MZSW3		
	MZSW4		
	MZSPP1		
	MZSPP2		
Public enterprise	PE1		
	PE2		
	PE3		
	PE4		
National Association	NAPFO1		
	NAPFO2		
NGOs	NGO1		
	NGO2		
Scientific Institutions	FF1		
	FF2		
Political parties			PP1
			PP2

(Abbreviations see Table 4.5)

group themselves in the framework of one single association.” A representative of PP thinks that “The Formation of an independent PFOA can be considered as the fulfilment of the personal interests of some influential members in the PFOA, the material background is their main concern.”

4.4.7 Voluntary membership

Table 4.12 gives an overview of the respondents’ opinions on voluntary membership in a forest owners’ interest organisation. The representatives of all institutions agree that voluntary interest associations at all levels are the best approach for strengthening the interest representation of private forest owners. The majority of respondents support such an approach, while only one Political Party (right-oriented) argues “That under the present conditions, private forest owners are not interested in an association; it could not provide better conditions.”

Table 4.13. obligatory membership as a possible approach in formation of a PFO interest organisation.

Interest groups	Advocates	Indifferent	Opponents
Public administration			MZSW1
			MZSW2
			MZSW3
			MZSW4
			MZSPP1
			MZSPP2
Public enterprise			PE1
			PE2
			PE3
			PE4
National Association			NAPFO1
			NAPFO2
NGOs			NGO1
			NGO2
Scientific Institutions			FF1
			FF2
Political parties	PP1		
	PP2		

(Abbreviations see Table 4.5)

The majority of the respondents are convinced that a PFOA provides the private forest owners with an extension service, subsidies, tax breaks, reformulation of the existing forest law, etc. Presently, there is no organised system of support; there are only specific projects in certain regions. Membership should be on a voluntary basis and private forest owners should be informed that membership in a PFOA is in their interest. Private forest owners' associations are the most adequate solution for small-scale forest owners who are the majority in Macedonia. Due to bad experiences with coercion in the past, many Macedonians are reserved towards obligatory membership.

4.4.8 Obligatory membership

The last question refers to the respondents' opinion on obligatory membership in a national association of forest owners, based on a legally-binding instrument

Almost all respondents reject obligatory membership, independently of the institution they represent. The right-oriented political party is of the opinion that “Obligatory membership is good for strengthening their political position.”

The majority believes that any kind of compulsory interest organisation will make the people feel oppressed – an opinion resulting from the country’s history. Thus, the major obstacles for compulsory membership are the existing mentality; the rejection of imposed obligations; bad experiences with existing chambers and cooperatives; the lack of suitable institutions; and the possibility of corruption. Moreover, obligatory membership fees cannot guarantee benefits for all owners.

The representatives of political parties emphasise the following advantages of obligatory membership: efficiency in formation; complete number of members; stronger influence in the political process; reliable partner for the state; budget stability; the possibility to accumulate membership fees; and the possibility to use foreign funds.

4.5 Summary and Conclusions

The fact that the majority of private forest owners own less than one hectare clearly points out the extremely small-scaled character of private forest ownership in RM. The small percent of high forests compared to the prevailing mixed broadleaved (mainly coppice) forests reveals that private forests are relatively poor in terms of economic revenues.

Private forests are family heritages and there is no market for them in RM. Most private forest owners are rural or semi-rural inhabitants and the average distance from home to forest is 10 km.

The quality of the private forests in RM is very low. Maybe this is the reason why for some owners the forest is a gain and for others a burden. The majority of the respondents use their forests for fuel wood for domestic purposes, which contributes a little to the yearly household income. Fragmentation is one of the reasons for this situation.

Private forest owners are not very familiar with the legal regulations related to the management of their property and are facing problems with PE ‘Macedonian forests’ because it has a monopoly role. All activities related to the management of their forests are under the jurisdiction of the public enterprise. It means that the state has to manage their forests; however, there are insufficient financial means to do this properly. Due to this situation a strong association of private forest owners is badly needed in the country. The private forest owners expect that the association will support them in management activities and lobbying in the forest political process. They expect a PFOA to achieve tax breaks and exemptions. In their opinion, membership in such an organisation should be obligatory. They support the idea that all private forest owners automatically become members of a private forest owners’ association by law. They believe that an obligatory interest association represents the members’ interests better, provides better services and increases the political strength of private forest owners.

The attitudes of forest policy decision makers related to the organisation of PFOAs correspond with the opinions of private forest owners in some issues and differ in others.

More than half of the respondents agree that the sustainable management of private forests is possible if there is financial support by the state, better information and training in sustainable forest management.

The respondents are divided in their opinion as to whether private forest owners are a homogeneous group. Representatives from the state forest enterprise and the Ministry of Forestry think that they can never act as a homogeneous group because of the lack of good organisation in the association and too many problems among active and passive forest owners. On the other hand, the association of private forest owners considers that forest owners are homogeneous in their interests and that heterogeneity can be a great threat to their formation.

Almost all respondents agree that private forest owners are neglected and discriminated against in the existing Forest Law. Some argue that the situation of private forest owners will be greatly improved in the draft version of the new Forest Law. The representatives of the private forest owners' associations emphasise that the existing Law contains obstacles for PFOs that are actually pushing them backwards. The state should support the improvement of private forest owners' associations and their activities, such as the provision of subsidies and training, extension service in forest management and, of course, lobbying. The measures needed for the procurement of public support include the promotion of sustainable forest management.

Many respondents think that lobbying will help strengthen the position of private forest owners. This is even more important than an extension service in forest management – some consider that both are equally important. Most emphasise that the position of private forest owners can be improved by strengthening the position of the Private Forest Owners' Association. A small number of respondents consider that lobbying and advising are of the same importance, and that they should be conducted simultaneously – lobbying at the national and extension service at the local level. Lobbying is considered more important for the time being, since it can provide subsidies along with tax breaks and other financial support, which will all benefit the local level.

The majority of the respondents support the idea to strengthen the position of private forest owners by improving the position of the association. They fully agree that the weakest link is the poor position of the private forest owners in the existing Forest Law and the inexistence of actions that consider their issues. There is a need to strengthen the position of the representatives of PFOA in the forest policy process.

There is the prevailing opinion that voluntary forest owners' associations at all levels are the best approach to strengthen the position of private forest owners. The majority of interviewees refuse compulsory membership; an obligatory interest organisation will make PFOs feel obliged and forced. The representatives of political parties endorse compulsory membership, however, because it makes their interest association larger and stronger, and consequently politically more influential.

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Annex: Area of state and private forests in former municipalities.

Nr.	Former municipalities	Total		State Owned		Private	
		ha	%	ha	%	ha	%
1	Berovo	38,225	100.0	31,625	82.7	6,600	17.3
2	Bitola	42,089	100.0	41,729	99.1	360	0.9
3	Brod	53,821	100.0	52,345	97.3	1,476	2.7
4	Valandovo	21,879	100.0	21,362	97.6	517	2.4
5	Veles	44,092	100.0	43,037	97.6	1,055	2.4
6	Vinica	20,352	100.0	19,191	94.3	1,161	5.7
7	Gevgelija	44,015	100.0	43,958	99.9	57	0.1
8	Gostivar	49,196	100.0	48,333	98.2	863	1.8
9	Debar	9,346	100.0	7,021	75.1	2,325	24.9
10	Delchevo	29,943	100.0	14,890	49.7	15,053	50.3
11	D. Hisar	23,195	100.0	22,924	98.8	271	1.2
12	Kavadarci	45,853	100.0	43,393	94.6	2,460	5.4
13	Kichevo	45,347	100.0	43,857	96.7	1,490	3.3
14	Kochani	18,160	100.0	16,386	90.2	1,774	9.8
15	Kratovo	9,625	100.0	3,817	39.7	5,808	60.3
16	Kr. Palanka	23,352	100.0	17,514	75.0	5,838	25.0
17	Krushevo	9,184	100.0	8,925	97.2	259	2.8
18	Kumanovo	23,247	100.0	16,751	72.1	6,496	27.9
19	Negotino	23,445	100.0	23,340	99.6	105	0.4
20	Ohrid	44,292	100.0	42,231	95.3	2,061	4.7
21	Prilep	20,767	100.0	18,926	91.1	1,841	8.9
22	Probishtip	6,369	100.0	4,537	71.2	1,832	28.8
23	Radovish	41,556	100.0	37,550	90.4	4,006	9.6
24	Resen	22,431	100.0	22,345	99.6	86	0.4
25	Sv. Nikole	7,321	100.0	5,404	73.8	1,917	26.2
26	Skopje	68,574	100.0	60,537	88.3	8,037	11.7
27	Struga	21,994	100.0	17,296	78.6	4,698	21.4
28	Strumica	47,471	100.0	44,458	93.6	3,013	6.4
29	Tetovo	36,198	100.0	29,963	82.8	6,235	17.2
30	Shtip	14,314	100.0	12,988	90.7	1,326	9.3
	Total	905,653	100.0	816,633	90.2	89,020	9.8

Forest fund in former municipalities.

Nr.	Former municipalities	Forest area, ha	Forest area, %
1	Berovo	38225	46.9
2	Bitola	42,089	24.5
3	Brod	53,821	57.7
4	Valandovo	21,879	65.5
5	Veles	44,092	28.4
6	Vinica	20,352	46.0
7	Gevgelija	44,015	57.5
8	Gostivar	49,196	35.9
9	Debar	9,346	35.0
10	Delchevo	29,943	50.7
11	D. Hisar	23,195	53.3
12	Kavadarci	45,853	40.0
13	Kichevo	45,347	54.4
14	Kochani	18,160	31.5
15	Kratovo	9,625	25.3
16	Kr. Palanka	23,352	32.1
17	Krushevo	9,184	45.0
18	Kumanovo	23,247	19.3
19	Negotino	23,445	31.6
20	Ohrid	44,292	42.5
21	Prilep	20,767	11.3
22	Probishtip	6,369	19.4
23	Radovish	41,556	55.9
24	Resen	22,431	30.1
25	Sv. Nikole	7,321	11.2
26	Skopje	68,574	36.9
27	Struga	21,994	40.3
28	Strumica	47,471	49.3
29	Tetovo	36,198	33.2
30	Shtip	14,314	16.5
	Total	905,653	35.2

5. The Preconditions for Private Forest Owners' Associations in Serbia

5.1 Private forests in general

Based on the results of the National Forest Inventory, private forests in Serbia cover approximately 47% and state forests 53% of the total forest area. The latter category comprises forests the ownership of which could not be accurately determined in the NFI process. Table 5.1 shows the structure of private forests in Serbia, characterised by a large number of forest owners, small average forest area per owner and many small forest parcels.

The existing forest ownership structure represents a significant problem for the efficient management of forests. The structure of private forests according to the number of owners and size classes is presented in Table 5.2. These data refer to the Serbian territory without the provinces of Kosovo and Vojvodina.

More than 72% of owners possess properties smaller than 1 ha; 26% own forests from 1 to 10 ha; and only 2% of the total number of forest owners possess forests larger than 10 ha.

In brief, the private forest sector in Serbia is characterised by the high fragmentation of properties, the large number of parcels and owners, and the insufficient organisation of forest management. According to Nonic et al. (2006:97), "This unfavourable development was fostered by the 1953 Law on Land Maximum and the Law on Inheritance, which provided for the division of forest parcels into smaller units without any limitations in minimum areas".

Table 5.1. Structure of private forest in Serbia.

Area of private forests	1,175,200 ha
Estimated number of forest owners	900,000
Forest property size per owner	1.27 ha
Number of forest parcels	3,900,000
Average size of forest parcel	0.30 ha

Source: Internal records of forest management: Public Enterprises Srbija Sume. 2008.

Table 5.2. Structure of private forest property by number of owners.

0.01–1 ha	1–10 ha	10–20 ha	20–30 ha	over 30 ha	Total
638,322	233,846	8,372	1,516	426	882,482

Source: Internal records of forest management: Public Enterprises Srbija Sume. 2008.

The existing Law on Inheritance (2003) does not prohibit the division of small forest parcels (OG 101/03) even though the estimated total number of private forest parcels is as high as 3,900,000 in Serbia today. Of these parcels, 51% are smaller than 0.30 ha (in the categories 0.1–0.2 ha and 0.2–0.3 ha, respectively); 77% are smaller than 0.5 ha; and only 0.4% of forest parcels in Serbia are larger than 1 ha (Nonic et al. 2006).

The large private forest parcels show significant values of timber volume and annual increments similar to those in state forests, which underlines the importance of private forests as a very valuable natural resource in Serbia.

5.2 Forest policy and legislative aspects related to the private forest sector

Legislative aspects related to the private forest sector are defined by the Constitution of the Republic of Serbia from 2006 (OG 83/06) and the Law on Forests from 1991 (OG 46/91, 46/91, 83/92, 53/93, 54/93, 67/93, 48/94, 54/96).

5.2.1 Constitution of the Republic of Serbia (2006)

According to §86 of the Constitution of the Republic of Serbia (OG 83/06), private and state ownership rights are equal and have equal legislative protection. However, §87 declares that all natural resources are goods of public interest and are therefore owned by the state (OG 83/06). This section does not adequately define the status of private forests, since they are not considered as ‘goods of public interest’ and thus represents a problem in passing the new forest law.

In §88, however, a difference between forest and forest land is defined whereby forest land is not considered to be of good public interest. Therefore, although private forest land can be privately owned, the law can limit its usage if it endangers the environment or the interests of other owners (OG 83/2006).

5.2.2 Forest Law of the Republic of Serbia (1991)

The existing Forest Law of the Republic of Serbia (OG 46/91, 46/91, 83/92, 53/93, 54/93, 67/93, 48/94, 54/96) prescribes that “... forests as public welfare must be maintained, regenerated and utilised in such a way that their values and multiple benefits are conserved and increased; sustainability and protection is ensured; and increment and yield are permanently increased” (§2).

According to this aim, forest regions were formed by the same Law “...to carry out rationally the measures of management in forests, woodlands and other forest potentials in a defined territory” (§5). They include both state-owned and private forests (§21). In this way, all forest management operations and tasks must be equally implemented in all forests, disregarding the category of ownership.

According to the Forests Law (1991), private forest owners manage their forests. However, the State entrusted public enterprises with forest management and public enterprises of national parks to perform professional and technical tasks in private forests within the forest area they manage (§10).

The above Law defines 27 forest management areas (§21). State forestry companies (PE Srbijasume, PE Vojvodinasume) manage all state forests within these forest areas. The state forests of the national parks are managed by the national park public enterprises. According to the Law on National Parks (1993), the State has entrusted management of five national parks: Djerdap, Tara, Fruska Gora, Kopaonik and Sar Planina to public enterprises of national parks (OG 39/93).

According to the Law, private forests within each forest area are in the custody of the responsible state forest enterprise. This company will also conduct the specified professional and technical tasks.

According to the existing Forest Law (1991), private forest owners are obliged to (OG 46/91, 46/91, 83/92, 53/93, 54/93, 67/93, 48/94, 54/96):

- apply a forest management plan (§24; §27; §32; §33; §34)
- mark trees before felling performed by private forest service (§38; §39)
- receive compensation for logging: the owner pays a levy into the state budget (§54)
- stamp timber and fuel wood to obtain a transport licence (§47)
- protect the forests from illegal activities, fire, insects and diseases (§65; §66; §69)
- reforest forest areas affected by fire and clear-cuts with or without permission (§36)

If the State declares a certain privately-owned forest area as protected in accordance with the existing Law, the owner has a legal right to compensation by the state since the area cannot be utilised (§73). However, the majority of forest owners have never received any compensation to which they would have been entitled.

The Law does not mention any indirect or direct measures of support such as subsidies for private forest owners.

5.2.3 Forestry Development Strategy of the Republic of Serbia (2006)

Until 2006 there was no overall forestry development strategy in Serbia, since strategic goals were implemented in legislation and certain documents. This changed with the development of the Forestry Development Strategy of the Republic of Serbia (OG 59/06).

This document represents a basic strategic and development document of the Serbian forest sector, under which the principles, development goals and the measures of implementation have been determined by the State. It sets the framework and demands institutional reform and the redefining of relations, roles, and responsibilities within the complete Serbian forestry sector. The basic goals of the Strategy are "Conservation and enhancement of the forests' condition and the development of forestry as an economic branch." (OG 59/06: 12); further, it

aims “To increase the contribution of the forest sector to the economic and social development of the Republic of Serbia.” (OG 59/06: 14).

Related to status and concern for private forests, it is declared in the Strategy that “The responsibility of the State in resolving almost all major issues about the growing stock, from the assessment of the state of the forest to the organisations of forest owners, requires that the State takes the initiative - especially when the owners’ initiative is lacking - and a decisive executive role, to create a uniform attitude to forests regardless of their ownership form. The objective is the enhancement of private forests and the sustainable development of private forestry within rural development.” (OG 59/06: 19).

To attain this objective, the following planned measures aim to (OG 59/06):

- assess the state of private forests and to develop a planning and control system for private forest management
- provide professional and financial support for organisations of forest owners to strengthen their capacities to achieve sustainable forest management;
- create legal preconditions for a smooth implementation of sustainable management in cases of absent forest management and owners
- create preconditions for the consolidation of private forest holdings; this will be made possible by economic policy measures and preventing the further fragmentation of forest holdings
- support private forest management to ensure the protection and improvement of the condition of private forests.

However, the Forest Development Strategy cannot be implemented without legislative changes, since it is not in accordance with the existing Law. Further, the strategic orientation is in contradiction to the existing Law.

The basis for implementing the Forestry Development Strategy is the draft of a new Forest Law, which has been in a bargaining process for the last four years. The existing Law on Forests is compared with a new draft in Table 5.3. The draft of the new Forest Law was started in 2004 and is expected to be passed in 2009.

5.2.4 Draft of the new Forest Law (2007)

Some existing regulations on private forestry are maintained in the draft forest law, such as tree marking, compensation for cuttings, timber and fuel wood marking and licences for timber transport (2007, §43; §45; §84). However, forest owners and forest owners associations or their companies can perform tasks of public interest. In this sense, the new Law will give the owners the option to decide between service providers; it also specifies measures to support private forest owners (2007, §79; §80).

A further new proposition is the establishment of the Agency for Forests, which will act as a public forest service institution (2007, §69).

The proposed activities of the agency for private forests are professional and coordinating tasks. Professional affairs consist of:

1. preparing strategic and regional forest development and hunting planning
2. analysing the efficiency of legislative articles
3. preparing legislative solutions

4. preparing other professional matters related to the forestry sector
5. forming and maintaining an information system in forestry
6. coordinating and taking custody over forest management planning
7. preparing and approving annual financial programs
8. coordinating the forest inventory and monitoring forest health
9. taking control over performed activities on forest protection (2007, §70)

According to the draft of the Forest Law, other major functions of the Agency are the setting up of an advisory service for private forest owners to support them through the procurement of subsidies; coordinating work on forest infrastructure; and indirect support for private forests owners (2007, §70).

The draft prescribes harvesting and the protection of private forests as well as advice and technical support for private forest owners by registered companies (2007, §79).

It is planned to categorise forest owners with regard to the area of their forest property – properties over 100 ha are required to have a forest management plan. In addition, they are obliged to organise a Private Forest Service (PFS) or to have

Table 5.3. Comparison of the existing Forest Law with the draft of a new Forest Law.

Articles/ law	Law on forests (1991)	Draft of a forest law (2007)
Forest owners' obligations		
Obligatory forest management plan	√	√
Obligatory tree marking before felling	√	√
Obligatory compensation for cuttings	√	√
Obligatory timber and fuel wood marking and licence for transport	√	√
Support to private forest owners		
Technical support	√	√
Advisory support	–	√
Training	–	√
Financial support	–	√
Support for organising PFO	–	√
Organisational frameworks for Private Forest Service (PFS)		
Owner can choose the service	–	√
PFS in PE	√	√
PFS in Agency for Forests	–	√
PFS in Forest owners' associations	–	√
PFS within consulting companies	–	√

a contract with a company registered for technical and advisory services in private forests (2007, §21). Owners of smaller properties must have a forest management program; further, technical services are to be performed by a registered company which the state has appointed. Technical activities on small properties will be financed by the state budget (2007, §25).

The new law will also support organisations of private forest owners which perform the following activities (2007, § 80):

- information activities in cooperation with the Agency for Forests on programs, procedures and the possibilities to support the private forest sector and rural development
- direct coordination of support for private forest owners
- technical and advisory activities in private forests
- represent the interests of private forest owners

Associations of private forest owners as well as other forms of cooperation and the implementation of forest policy measures are important for achieving the goals of the Forestry Development Strategy of the Republic of Serbia. However, realising these measures and the availability of finances demand urgent legislative changes as well as building institutional capacities.

5.3 Impediments for the development of the private forest sector

5.3.1 Services currently supplied to private forest owners

The Law on Forests from 1991 introduced the term ‘professional and technical tasks in private forests’ (OG 46/91, 46/91, 83/92, 53/93, 54/93, 67/93, 48/94, 54/96).

These tasks consist of (§10):

- 1) issuing logging licences for private forest owners
- 2) tree marking in private forests
- 3) issuing timber and fuel wood transport licences for forest owners
- 4) organising forest protection activities in private forests

As mentioned above, private forest owners manage their forests themselves. However, public enterprises are entrusted with performing professional and technical tasks in neighbouring private forests of their territories. Table 5.4 gives the area of private forests in which the public enterprises perform these tasks.

The public Enterprise ‘Srbijasume’ performs professional and technical activities in approximately 97% of the private forest area; the other enterprises are responsible for the remaining 3%. The professional and technical activities in private forests are financed by the budget of the Directorate of Forests.

Since a Program for private forest management as prescribed by the Law on Forests (OG 46/91, 46/91, 83/92, 53/93, 54/93, 67/93, 48/94, 54/96 § 24) is lacking, PE performs professional and technical tasks in private forests according to Temporary annual management plans for private forests. These plans prescribe silviculture as well as the protection and utilisation of private forests by cadastral

Table 5.4. Private forest area by Public enterprises providing technical service (2008).

Nr.	User/Manager	Forest area		Timber volume		Total annual increment	
		(ha)	(%)	(mil. m ³)	(%)	(mil. m ³)	(%)
1.	PE Srbijasume	989,000	96.7	103,800	95.23	2,100	94.89
2.	PE Vojvodinasume	5,000	0.5	300	0.28	12	0.54
3.	PE of national parks	25,000	2.4	4,500	4.13	90	4.07
4.	PCE Borjak	4,000	0.4	400	0.37	11	0.50
Total	Private forest area	1,023,000	100	109,000	100	2,213	100

Source: Internal records of forest management: Public Enterprises Srbija Sume. 2008.

municipalities. The plans are valid for the year in which they are approved. The Board of Directors of a PE first accepts the plans before being approved by the Directorate of Forests. Annual plans cover the territory of forest estates by cadastral municipalities (OG 122/2003).

If a forest owner wants to harvest trees on his private forest property, he must first submit an application to the Private Forest Service together with proof of ownership issued by the Land Register Service.

Once the applications have been filed, he then marks the trees to be cut based on silvicultural needs of the forest stand and a valid annual management plan (OG 46/91, 46/91, 83/92, 53/93, 54/93, 67/93, 48/94, 54/96, §24, §38).

After tree marking, he registers all marked trees and calculates the amount of compensation for the harvested wood according to the assortment structure and official price list for wood assortments issued by the public enterprise.

The owner is obliged to pay compensation to the state budget 15 days after the trees have been marked for cutting regardless of whether they have been felled or not; the amount is 3% of the commercial value of logs (OG 46/91, 46/91, 83/92, 53/93, 54/93, 67/93, 48/94, 54/96 §.54, OG 95/92). This compensation aims at the improvement of the forest condition and protection of forests; however, since no investments in private forests are made, all monies generated from the compensation are deposited in the state budget and to investments into state forests (OG 46/91, 46/91, 83/92, 53/93, 54/93, 67/93, 48/94, 54/96 § 24).

After harvesting, the forest owner must file a motion for stamping the harvested wood. Based on this, the Private Forest Service officers check if the harvesting has been carried out properly and according to the tree marking. If there are no objections they stamp the wood and issue the transportation documents (OG 95/92, OG 54/2000).

5.3.2 Predominance of the state forest enterprise

The existing Law established PE ‘Srbijasume’ (OG 46/91, 46/91, 83/92, 53/93, 54/93, 67/93, 48/94, 54/96, §9). The tasks of PE comprise (in addition to silviculture, forest protection, production of timber of state forests, etc.) professional and technical tasks in private forests (OG 46/91, 46/91, 83/92, 53/93, 54/93, 67/93, 48/94, 54/96, §10).

The existing model of technical support for private forest owners through the Private Forest Service within public forest enterprises proved to be inefficient as did the previous one when support was provided through municipality services¹. However, the Public Enterprises do not have enough technical and organisational capacities and are not interested in the successful performance of these duties in private forests. This is a significant obstacle to improving the management of private forests (Begus 2006).

According to Begus (2006), the biggest flaw of the current system of organising professional and technical tasks in private forests is a clear conflict of interest. Since the major task of PE is state forest management, private forest issues do not come first to their attention. Performing services for private forest owners can cause conflicts of interest since PE foresters cannot be independent in technical activities and advising (Begus 2006).

Another problem is financing services for private forests – a complex issue that has not been adequately solved. Each year, the Directorate for Forests makes a contract with Public Enterprises, which defines professional and technical tasks in private forests. While the Directorate of Forests pays a certain amount of money to PE ‘Srbijasume’ for technical activities in private forests, PE ‘Srbijasume’ uses this money without any evaluation. Some EUR 1.2 million is spent each year on making temporary yearly management plans; marking trees, stamping wood assortments and issuing transport documentation; controlling and providing evidence of work done; activities on tending and protecting private forests; preparing plans for reforestation; gathering taxation data on parcels; and training forest owners (Nonic et al. 2008).

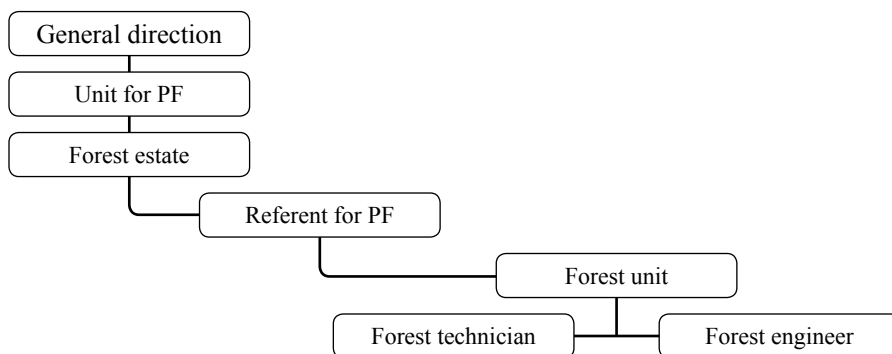
Another serious problem is the inadequate organisational structure within the Public Enterprise ‘Srbijasume’², considering the services supplied to private forests. It does not function as an independent department and, until recently, it had no personnel to coordinate the work, which has resulted in a lack of vertical coordination and communication with regional and local levels of government (Fig. 5.1).

Private Forest Service is organised on four levels:

- I. General Directorate of PE Forestry and Nature Protection. The unit for private forests is headed by a unit manager who gathers and processes data from forest estates and presents them to the general and executive managers; he also coordinates the work of forest engineers and technicians assigned for private forest services by Forest Estates.
- II. In Forest Estates there is a section for forest management planning and development, in which the private forest service is situated. The tasks in

¹ Before 1992, municipality services carried out all the activities for private forests. Then the Public Forest Enterprise took over 500 foresters from municipalities who have been paid by the state’s budget since that time.

² When PE ‘Srbijasume’ was established in 1992, it consisted of 7 sector directorates and 27 forestry units. Today there are 8 sector directorates, 17 forestry units covering the entire territory of Serbia and 66 management units.



Source: Statute of PE 'Srbijasume' (1992).

Figure 5.1. Organisation of private forest service within PE 'Srbijasume'.

private forests are coordinated by engineers and technicians for private forests. The head adviser for private forest services in Forest Estates works on annual management plans for private forests and coordinates their implementation in forest estates and forest units.

- III. Tasks by the Forest Unit in private forests are conducted by skilled workers. The Forest Unit adviser coordinates the activities of foresters and organises tree marking, reforestation and forest protection, etc.
- IV. Forest engineers and forest technicians carry out tree marking, timber and fuel wood stamping, logging control and other activities within their jurisdiction. Forest engineers carry out tree marking in high forests and forest technicians in coppice forests.

The current number of employees responsible for private forests in PE 'Srbijasume' is 320, mostly forest technicians. Their activities are mainly concentrated on tree marking, marking industrial and fuel wood and issuing documents for timber transport. Because of these duties and a lack of adequate knowledge and skills they do not have enough time for other tasks - especially an advisory role (Begus 2006).

The personnel in the field are not motivated and the material and financial conditions are poor. Even if they were trained, they would not have any career possibilities (Begus 2006).

As there are no forest management plans, foresters do not have enough information on the condition of private forests and so their management is inadequate. Communication between forest owners and foresters mainly flows in one direction – from foresters to owners – and is largely to do with legal procedures. The extension service is limited because procedures are too complicated – some extension work is done mainly in the context of tree marking, but it is not coordinated and organised.

The current organisation of extension and technical services for private forests, and the lack of an organised advisory service do not comply with the owners' needs and the state's responsibility for the sustainable stewardship and improvement of private forests.

Reorganisation of professional and technical services and the foundation of an advisory support service have priority in order to further improve private forests (Nonic et al. 2008).

5.3.3 Status of Restitution of former private forest land

In the period after World War II, the new government introduced general changes in the state's organisation and ownership structure – changes that also affected forests.

The so-called 'socially owned property' was established by the nationalisation of state, communal, private, monastery and church forests. Rural and communal forests were resolved and entirely designated as state forests (Nonic 1993).

Regarding confiscated forests, the Basic Law on Expropriated and Confiscated Forest Property was passed; parts of these properties were given to new owners, based on the Federal Law on Agricultural Reform and Colonisation. Forest properties nationalised according to articles 3, 10 and 26 of the Federal Law on Agricultural Reform and Colonisation were previously owned by persons who did not have the status of a farmer. These comprised Third Reich citizens and persons of German nationality as well as criminals and other persons from which forests were confiscated based on court decisions (OG 61/46, §3, §10, §26) and owners against whom confiscation started and had not been finished according to the previous Law on Liquidation of Agricultural Reform on Large-scale properties (1931). All these forest properties were transferred to state ownership (Nonic 1993).

No compensation was given the nationalised forests – farmers without any land property became new owners and forest cooperatives were established for forest management improvement (Nonic 1993).

Today, only some phases of the restitution process have started, such as the passing of the Law on the Restitution of Former Church Property (OG 46/06) and the Law on Evidence of Confiscated Property (OG 45/05). However, except for the restitution of property to the church, other owners are still not mentioned in the process due to a lack of political consensus.

5.4 Private forest owners' organisations in Serbia

According to Nonic (2004), forest cooperatives are the first organisations of private forest owners in Serbia. Cooperatives have been established in the period after 1930 "After dividing large properties, which peasants have bought in favour of their cooperatives for the purpose of easier and more rational mutual management." (Nonic 2004: 41)

The purposes of these cooperatives were joint forest management as well as to protect forests and pastures; they were established voluntarily, except in cases of ownership over forests with a protective function. Apart from existing laws and regulations under which cooperatives were established, "in terms of their implementation, there was no adjustment of certain declarations" that slowed or even blocked the establishment of cooperatives (Nonic 2004: 41).

After World War II, a certain form of 'cooperative approach' was established after laws and regulations were passed which made it possible to set up organisations of forest owners. However, even though the Law "made it possible for voluntarily organisations of private forest owners within agricultural cooperatives organisations of joint work which managed forests as social property," it can be concluded that

this possibility was never realised – forest cooperatives were never formed (Nonic 2004: 43).

During the course of the joint project activities of the Food and Agriculture Organisation of the United Nations and the Directorate of Forests in recent years, private forest owners became interested in associating. This could strengthen their position and assist them in achieving their goals and representing their joint interests (Milijic 2007).

Currently, there are two models of forest owners' organisations in Serbia:

- The community forest model³, which aims at joint forest management⁴.
- Private forest owners' associations, whose aim is to represent members' interests (mainly economic).

No other forms of private forest owners' organisations are present in Serbia at present (Nonic et al. 2008).

5.4 Private forest owners' organisations in Serbia

5.4.1 Community Forestry

Community Forestry ('Gemeinschaftswald') is spread worldwide and has a long tradition. Agricultural communities ('Agrargemeinschaft') are good examples of successful joint forest management and occur under different names (e.g. 'Urbargemeinden' in Burgenland and 'Waldgenossenschaften' in Thüringen). Although the internal structure of these forest communities is different, the role of ownership, mutual responsibilities and possibilities for forest management are common for all (Illyés and Nießlein 1997).

There is a successful forest community ('Sumska zajednica') in Beocin, Serbia, that was established in 1903 by 79 owners. They purchased roughly 193 ha of the forest 'Plemicko dobro' on Fruska Gora (from Beocin to Brankovac peak) from three Austro-Hungarian nobles. The aim of the association was to help its members – mainly poor peasants – to secure some additional income and satisfy their needs for wood for their households through a common management of the forests (Nonic 2004). This forest community is the only one in the region that has survived many historical changes of the state and its administration. Today it has 77 members.

The ownership of these forests is divided into 'ideal parts' (Table 5.5) and each owner has a certain number of ideal parts dating back to the purchase in 1903, and subsequently by inheritance and trade among its members. The ideal parts must remain within the forest community and cannot be to anyone other than members of the community. The assembly of members decides who can buy part of forest for sale – those with smaller shares have priority. If no one is interested, the organisation buys the share. Because of this regulation, no change of ownership or the total area has been registered in cadastre during its 100 years' existence.

³ The term 'community forest' (or 'corporate forest') is used here in the sense of FAO (2000) as follows: the formal type of organisation in which individual ownership is transferred into shares of members. The entire membership area is then jointly managed.

⁴ The term 'joint forest management' is used here in the sense of FAO (2000) as follows: it represents contract-based agreements between a defined number of forest land owners to create a larger joint property by the integration of smaller individual units.

Table 5.5. Current participation of the owners in the Forest Community.

Size of forest part	Number of owners	Number of ideal parts	Part for distribution (m ³)	
			per owner	total
1 1/2	1	1.5	18	18
1 1/4	1	1.25	15	15
1 3/4	21	21	12	252
2/3	1	0.75	9	9
1/2	2	1.33	8	16
1/2	27	13.5	6	162
1/3	12	4	4	48
1/4	8	2	3	24
1/6	4	0.67	2	8
∑	77	46	—	552

Source: Our Century (2003).

Based on the size of their shares, the owners have different shares in the produced fuel wood and timber. The distribution of shares shows that the vast majority of the owners have small shares and only two have larger shares than one ideal part.

Ownership and the right to manage the forest are determined by the initial contract made when the association was established. It states that the owners will ‘jointly possess and enjoy the forest’, with wood distribution based on the ideal parts owned.

Today, the principle of wood distribution is the division of 552 m³ into 46 integral parts, resulting in 12 m³ per ideal part. The rest of the harvest will be sold and profits divided according to the shares.

The entire area is part of the Fruska Gora National Park – most belonging to level II of protection which means that all management activities are determined by the corresponding Forest Management Plan and by the Spatial Plan of Fruska Gora.

So far the owners have respected the determined silvicultural and harvesting regime. At present, there is a forest engineer (who is also a member) in charge of technical forest management tasks within the Fruska Gora National Park.

5.4.2 Private Forest Owners’ Associations

As mentioned above, numerous workshops for private forest owners within the FAO projects⁵ have produced an increased interest of owners that want to associate. An overview of the private forest owners’ associations is given in Table 5.6.

⁵ FAO project FAO/TCP/YUG/2902(A): “Institutional Development and Capacity Building for the National Forest Program” (www.forestserbia-fao.sr.gov.yu) and FAO project GCP/FRY/003/FIN: “Forest Sector Development in Serbia” (www.forestryprojectserbia.org).

Table 5.6. Private forest Owners' Associations in Serbia.

Association – Municipality	Year of establishment
Rastiste – Bajina Basta	2006
Milicinica – Valjevo	2006
Podgorac – Boljevac	2006
Zlot – Bor	2006
Krivelj – Bor	2006
Brestovac – Bor	2006
Bigrenica – Cuprija	2007
Selacka – Zajecar	2007
Negotin – Negotin	2007
Mackov Kamen – Krupanj	2008

Source: Milijic (2007).

During 2006, the following private forest owners' associations (PFOA) were formed: Rastiste-Bajina Basta, Milicinica-Valjevo, and Podgorac-Boljevac, followed by three more in Bor municipality: Zlot, Krivelj and Brestovac.

In May 2007, the seventh association was established in Bigrenica, in the municipality of Cuprija. By the end of 2007, two more associations were formed: Selacka in the municipality of Zajecar and Negotin in the municipality of Negotin. In February 2008, the association Mackov Kamen was formed in the municipality of Krupanj in Western Serbia.

These associations are NGOs and their statutes and overall aims are similar - to represent the interests of their members (Milijic 2007). Their focus, however, is not on joint forest management as each owner manages his own forests while the association coordinates joint work such as forest infrastructure and marketing activities. Training and cooperation with other associations and institutions is also carried out jointly.

Data on forest area of associated forest owners are available for the associations in the municipalities of Bor and Boljevac (Table 5.7).

The average size of forest property of associated forest owners is larger than the Serbian average. Due to their economic interests, the owners of larger properties act as entrepreneurs.

Further development of PFOAs will eventually lead to the establishment of forest management associations. Some associations, such as PFOA Podgorac, are considering this possibility and have progressed by making efforts to develop a forest management plan for the whole associated forest area.

Among the existing PFOAs, Podgorac is a good example for other associations and unorganised forest owners as it:

- 1) represents its members' interests
- 2) carries out joint work on forest infrastructure
- 3) carries out joint forest management
- 4) carries out the joint marketing of forest products

Table 5.7. Forest area of associated owners in the municipalities of Bor and Boljevac.

Nr.	Association	Members	Forest area (ha)	Average forest property (ha)
1.	Podgorac	49	510	10.4
2.	Zlot	31	279	9.0
3.	Krivelj	21	132	6.3
4.	Brestovac	23	117	5.1
	Total	114	1,038	9.1

Source: Milijic (2007).

In addition, they produce charcoal, trade timber and supply harvesting services as contractors of the Public Enterprise ‘Srbijasume’.

The representatives of PFOA Podgorac have participated in the preparation of the Forest Development Strategy of the Republic of Serbia and the National PEFC standard. They have also applied for financial incentives for forest road construction and training for their members. In 2008, PFOA Podgorac received financial support for forest road construction from the Ministry of Agriculture, Forestry and Water Management.

Other associations are less active at present – some are still in the discussion process about their main activities while others, like the association in Bor (Krivelj and Zlot), try to rely on the experiences of PFOA Podgorac and cooperate with it.

The example of PFOA Podgorac clearly shows that the establishment of a well-organised system of public support (financial, advisory and technical) can encourage activities of associations and stimulate unorganised forest owners to associate. However, this process needs more time to develop.

Although there are ten PFOAs, an umbrella organisation of forest owners in Serbia has not yet been established due to the fact that most of the local associations are not working in full strength. Members are not willing to support them or do not see clear interest and benefits from such an organisation at the national level. The present forest legislation is not supportive enough for this and the local members do not have sufficient capacities and interests to succeed. However, some initiatives exist to establish an umbrella organisation, which deserves further support of the public forest administration.

5.5 Selection of the random sample for the door-to-door survey

The agreed common questionnaire for the door-to-door survey of private forest owners (Annex 1) comprises 42 questions on silvicultural, sociological, economic and institutional aspects as well as attitudes of private forest owners towards interest associations.

The sample design is based on the fact that a list of all forest owners does not exist. Under the assumption that between 60% and 70% of private forest owners lack an interest organisation, the sample size amounts to 350 according to the proportion method (Malhotra, 2007).

For the random selection of the 350 respondents, the cluster sample method was chosen and comprises the following three stages:

1. Determination of overlapping areas regarding percentage of forest area and percentage of private forest area.
2. Determination of settlements in overlapping areas.
3. Selection of individual respondents from population of forest owners.

The data source for the first step is the results of the National Forest Inventory (NFI), which was conducted from 2004 to 2006. It is the most reliable source regarding information on forest resources in Serbia. Since all data from NFI are given per municipality and maps related to the distribution of ownership are not available, the overlapping areas within municipalities are determined. For this purpose, a list with the top 40 municipalities regarding the percentage of forest area and a second list with the top 40 municipalities regarding the percentage of private forest area were made. Nine municipalities appeared on both lists; they were taken as overlapping areas for the settlement selection.

The second step included drawing up a list of all settlements within the chosen municipalities and randomly selecting 35 – the sources to determine this list were Municipality offices and Municipality web pages.

In the third step, between 30 and 60 persons (depending on whether in a rural or urban region) were randomly chosen for each settlement from election lists that are available in municipality and settlement offices. From the list, 10 private forest owners for each settlement were randomly drawn.

5.6 Results of quantitative analysis

5.6.1 Silvicultural aspects

The average size of a forest holding (Q19a) is 4.03 ha (Figure 5.2). About 63% of the forests are coppice forests; 20% are high forests; and 14% are mixed forests (Q19b). Most of the forests are broadleaved (88%); 2% are conifers; and 11% mixed (Q19c).

5.6.2 Sociological aspects

Approximately 62% of the respondents are more than 50 years old with 29% between 50 and 60 years (Q35). Most are individual owners, while 38% share their properties with their parents or other family members (Q36).

Some 67% live less than 5 km from their forests and 9% more than 20 km (Q37). Most are inhabitants of rural areas with 74% living in settlements with less than 1,000; only 9% live in settlements of more than 20,000 (Q38).

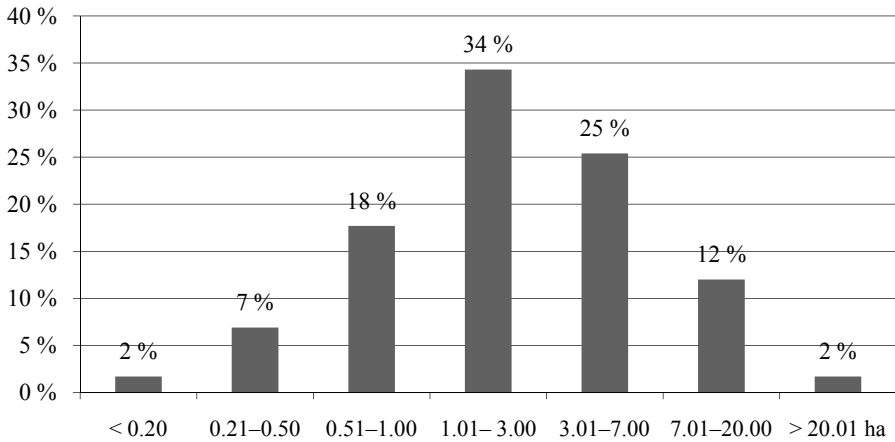


Figure 5.2. Average size of individual private forest property.

The majority of forest owners are pensioners (31%) and farmers (30%) (Q39); 14% are unemployed; and 11% are manual workers (Figure 5.3).

Most of the respondents (52%) have elementary school or lower education with 42% having high school qualifications (Q40). Only 6% have college or university education.

Almost all respondents inherited their forest properties and all intend to leave the forest to their children (Q41).

5.6.3 Economic aspects

Some 47% of the respondents regard their forests as a gain while 18% consider it as a burden (Q20). About 35% are in the middle of the Lickert scale. During the last 10 years, 7% of the respondents bought forest areas while only 1% sold them (Q21).

About 86% of the respondents indicate that their forests are fragmented with 6.1 parcels on average; the average size of a parcel is 0.6 ha (Q23).

Regarding forest use (Q22), 97% use the forest for fuel wood and 39% use it for saw log production both for domestic purposes. About 20% of the respondents use the forest for fuel wood production for sale, and only 11% produce industrial wood for sale (Figure 5.4).

Only 9% consider the returns from timber sale and domestic use as important for the household income. However, for 50% of the respondents the forest as a source of fuel wood for domestic use is very important for the household budget (Q-24). The average volume of wood harvested every year is 15 m³ (Q25). Most forest owners (57%) are prepared to cooperate with others, especially in forest road construction and maintenance (Q26).

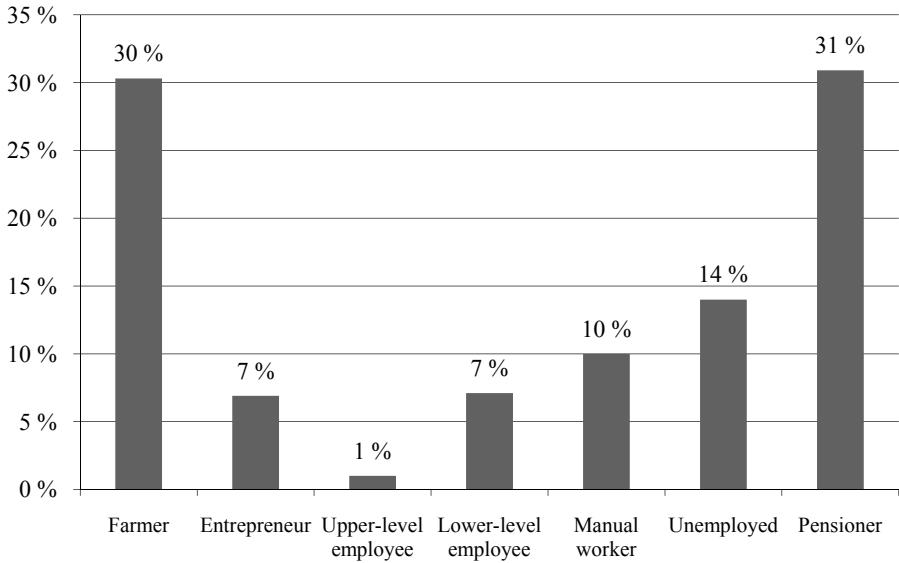


Figure 5.3. Occupation of private forest owners.

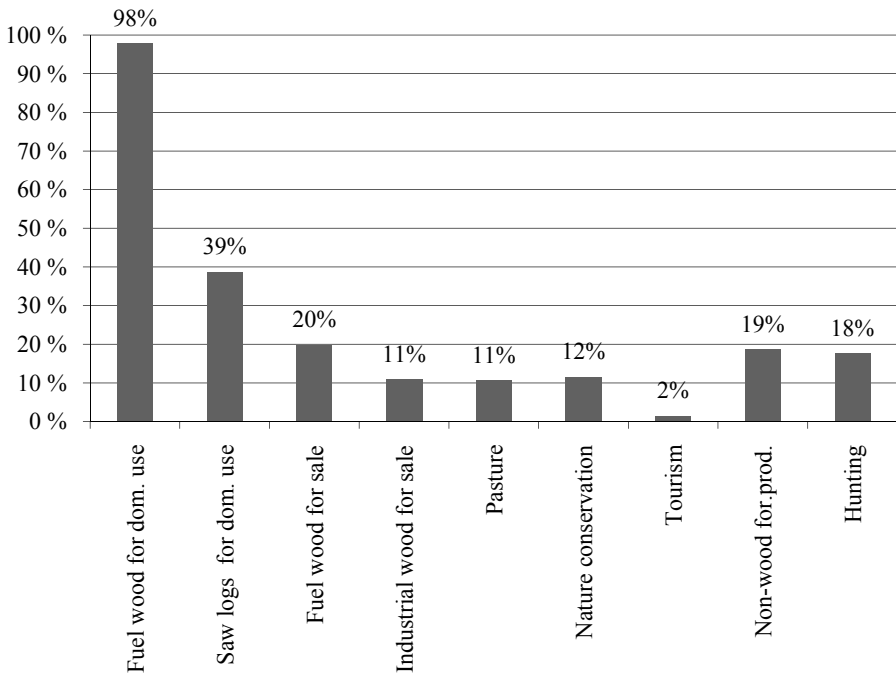


Figure 5.4. Main use of private forests.

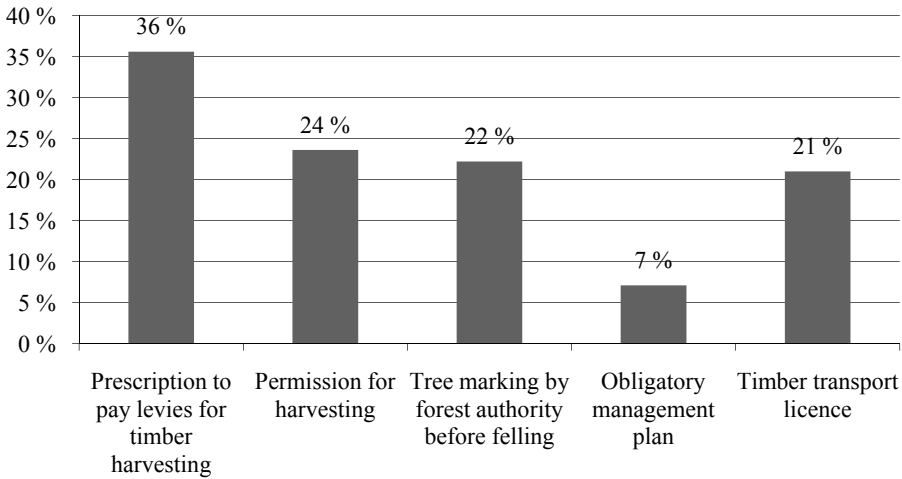


Figure 5.5. Most restrictive legal regulations regarding private forest owners.

5.6.4 Institutional aspects

About 88% of the respondents know exactly where their forest estates are located. Among these 71% claim that the boundaries of their estates are visible and almost all indicate that their land is registered in the land register (Q27). Some 93% did not have any ownership disputes with other claimants during the last 10 years (Q28).

Concerning legal regulations, some 29% of the respondents are familiar with regulations concerning private forest owners while 68% are not so sure about their legal rights and obligations (Q29). About 36% of the respondents indicate that the most restrictive regulation for private forest owners is the obligation to pay levies for harvesting, followed by the obligation to obtain a harvesting permit (24%), tree marking by a forest official before cutting, and timber transportation licences (Figure 5.5, Q30).

Regarding the quality of information about forest management, 38% of the respondents regard the information obtained from public forest enterprises as very good or good and the same percentage consider it very bad or bad. For about one quarter, the quality of information is between good and bad (Q31).

About 37% of respondents consider the effects of legal regulations as very severe on the benefits from their forests, while 42% claim the opposite (Q32).

More than 94% of the respondents have not received any subsidies from the state. This result confirms the fact that there are no subsidies for forest owners by the state, except those for free seedlings (Q33).

5.6.5 Attitudes towards private forest owners' associations

Only 20% of Forest owners in Serbia claim that their interests are represented very well or well; 55% consider that their interests are represented only a little or not at all. One quarter of the respondents did not answer this question (Q-3).

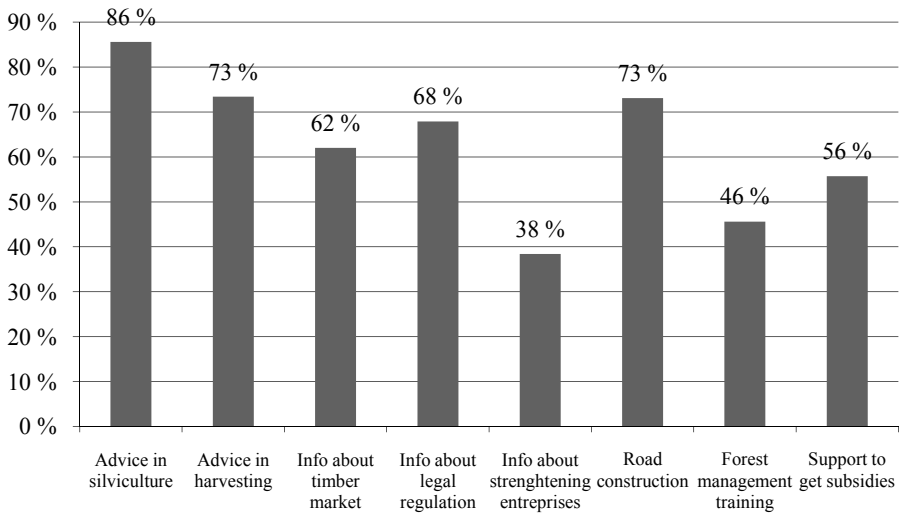


Figure 5.6. Services required from PFOA aiming at improving forest management.

With regard to advice in forest management, 51% lack such an interest organisation of private forest owners very much or much; 35% lack it a little bit or not at all (Q4).

Private forest owners expect from such an organisation advice in silviculture and harvesting; support in road construction and maintenance; and information on legal regulations and on the timber market (Figure 5.6; Q 8).

Figure 5.7 shows the relationship between respondents who expect a PFOA to give support in forest management (Q4) and their readiness to engage themselves in its formation (Q16).

With regard to representing interest at the national level by lobbying in favour of private forest owners, the situation is similar: 52% claim that they lack such an organisation very much or much, while 34% say that they need such an organisation a little bit or not at all (Q5).

The lobbying activities required from a PFOA are aimed at the provision of subsidies, tax breaks and subsidies, the reformulation of forest legislation and acceleration of the restitution process, etc. (Figure 5.8; Q9).

The respondents have a fairly good understanding of the tasks of a PFOA. About 91% state that its basic goal is to support its members; 83% consider that it should provide all kinds of services for efficient forest management; and 73% indicate that it aims at representing interest at the national level (Q7).

When ranking the institutions regarding provision of services in forest management (Q10), the majority ranked the state forest enterprise at the top (54%), followed by PFOA (37%) and public forest administration (9%). Rating these institutions with regard to the provision of forest services in forest management yields similar results (Q11).

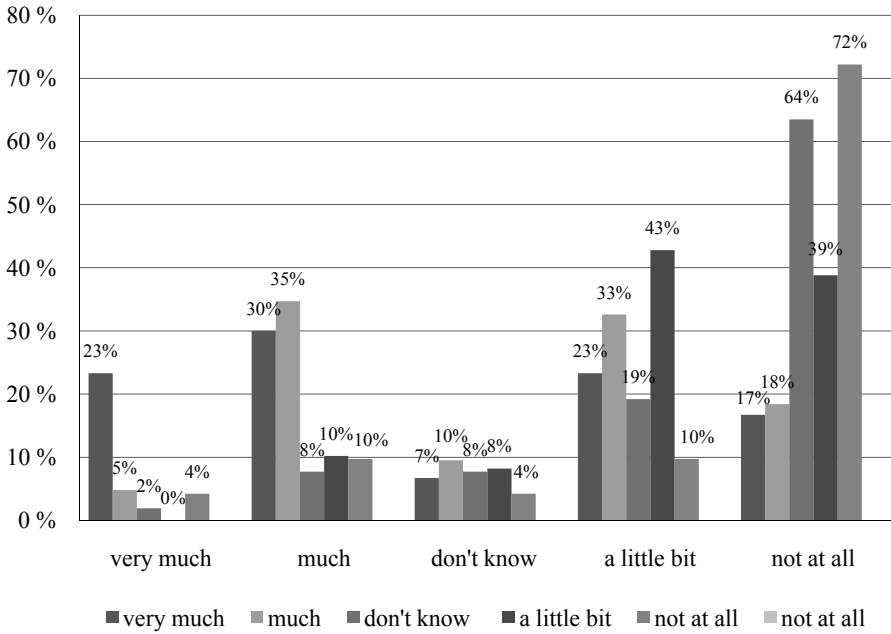


Figure 5.7. Correlation between Q4 and Q16.

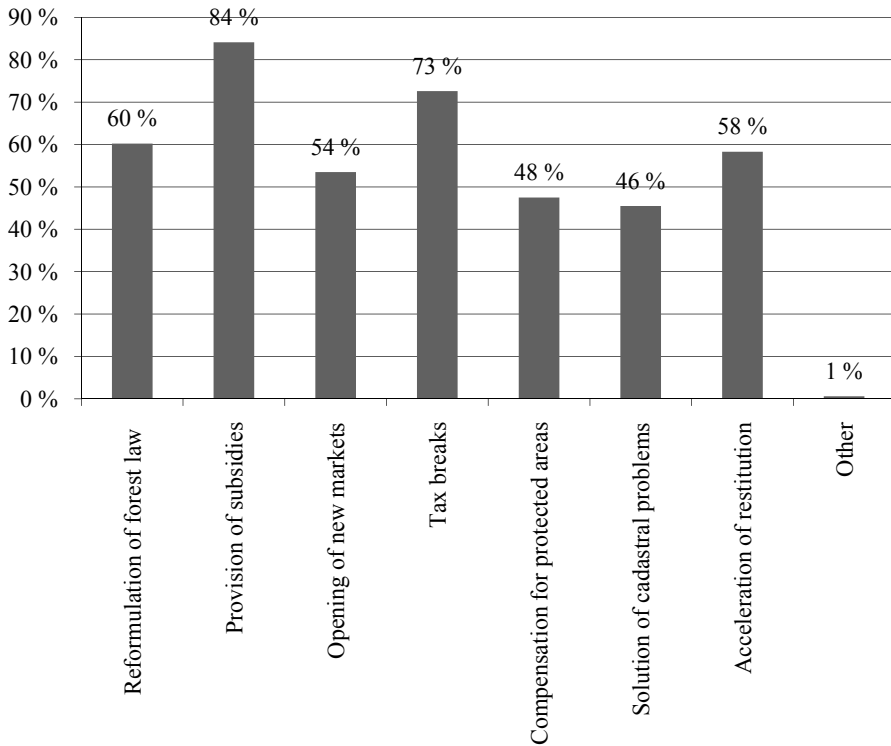


Figure 5.8. Lobbying activities required from a PFOA.

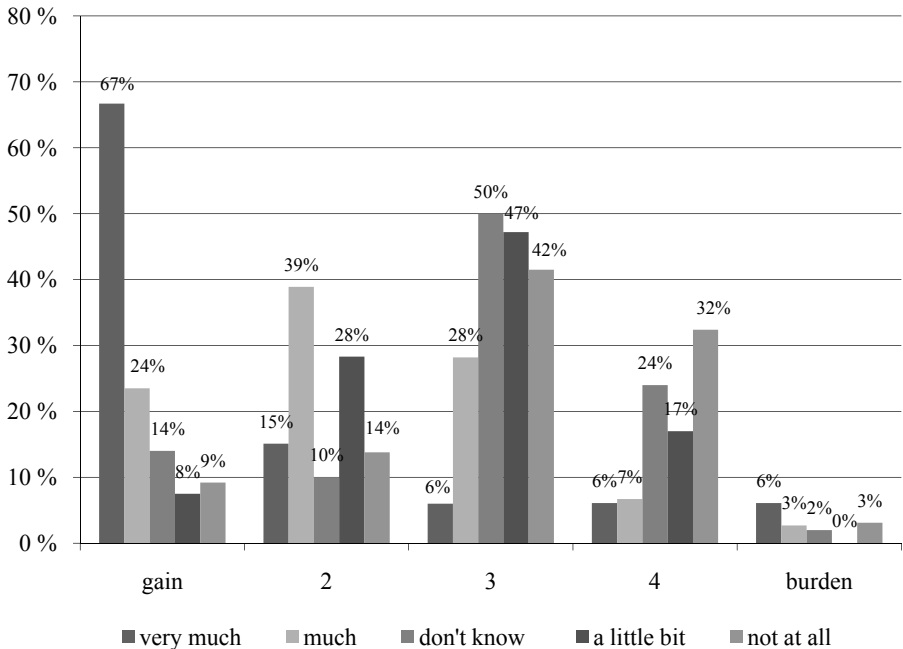


Figure 5.9. Correlation between Q5 and Q20.

Concerning the representation of private forest owners' interests (Q12), the respondents rank PFOAs highest (63%), followed by state forest enterprise (31%) and public forest administration (5%). Again, this result is confirmed by rating the institutions between most and least favoured (Q13).

Regarding the correlation between Q5 and Q20, it can be concluded that most of the owners who lack a PFOA for interest representation consider their forests as a gain; conversely, those who do not need interest representation consider their forests a burden (Figure 5.9).

Almost all respondents (99%) state that they are not members of private forest owners' associations (Q14); however, they would be prepared to join such an association voluntarily if the performance of the association were positive (58%) or economic advantages for its members (73%) might be expected (Q15).

One quarter of the respondents is very much or much prepared to participate in the formation of a private forest owners' interest organisation, while two thirds are not prepared to engage themselves (Q16).

Most respondents (54%) reject compulsory membership in a private forest owners' interest organisation while 29% support this idea (Figure 5.10; Q17).

There is a correlation between support for compulsory membership in a PFOA (Q17) and the readiness to engage in its formation (Q16). Owners who reject compulsory membership are also not prepared to engage themselves in its establishment (see Volume 2, Chapter 4).

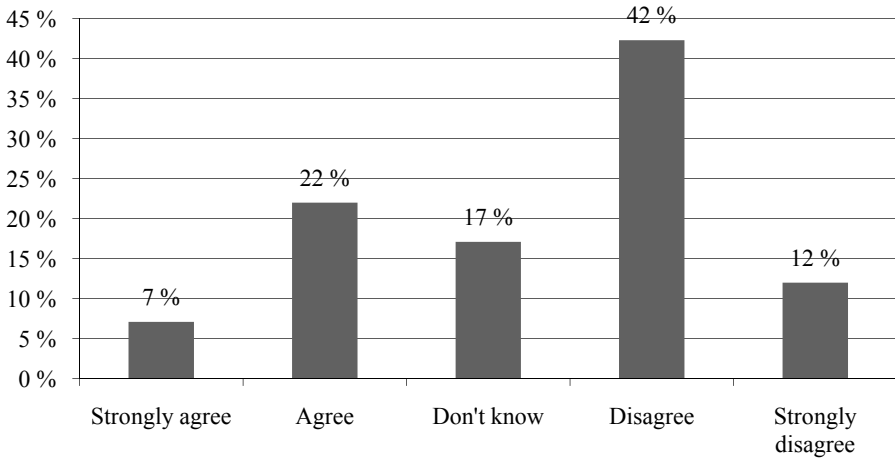


Figure 5.10. Private forest owners' attitudes on obligatory membership in PFOA.

5.6.6 Cluster analysis

Based on a cluster analysis, three groups of private forest owners can be distinguished: drivers (31%), supporters (35%) and free riders (34%).

Some 79% of the 'drivers' lack private forest owners' interest associations for support in forest management and 52% for interest representation. Owners from this cluster need all listed services from a PFOA, while most of them need information on legal regulations and support in preparing the necessary documentation to obtain subsidies. Some 42% are prepared to engage themselves in the formation of a PFOA and 24% support the idea of obligatory membership.

The drivers own the largest forest properties – more than one half own forest properties larger than 3 ha. About 55% of them consider the forest as a significant source of income and over 59% of them harvest more than 10 m³ annually. Most of the owners from this cluster are not prepared to cooperate with other owners, apart from forest road construction and maintenance.

The most restrictive regulations for the forest owners from this cluster are the prescription to pay levies for timber harvests; obtaining a harvesting permit; tree marking by a forest authority before felling; and obtaining a timber transport licence. Most respondents from this cluster have high school or university education.

About 59% of the 'supporters' lack the support of a PFOA in forest management and 65% in interest representation. They need the following services from a PFOA: support in silviculture, information on the wood market, and help in forest road construction and maintenance. About half are not prepared to engage themselves in the establishment of a PFOA, while 36% are prepared to do so. Some 54% support the idea of obligatory membership, while 18% are strictly against it.

The size of forest property per capita in this cluster is the same as above – 1 to 3 hectares. Most forest owners from this cluster consider their forests as a significant source for their household income (63%) while only 18% consider the forest as a burden.

About 62% of supporters harvest more than 10 m³ per year. The majority is prepared to cooperate with other forest owners in sharing harvesting equipment and road construction and maintenance, but not in sharing costs for the elaboration of forest management plans.

The most restrictive regulations for supporters are the prescription to pay levies for timber harvests; obtaining a harvesting permit; tree marking by a forest authority before felling; and obtaining a timber transport licence. The respondents from this cluster have college or high school qualifications in most cases (61%).

About 60% of 'free riders' do not feel the need for private forest owners' associations for forest management, and 63% do not need them for interest representation. They are not interested in the benefits of a PFOA. In addition, the majority (93%) is not prepared to engage themselves in activities of the associations; about 70% are against obligatory membership.

The size of forest property per capita varies between 1 and 3 hectares. Although almost half are undecided whether their forests are a gain or a burden, 45% of them consider the income from forest as significant for their household budget. Most use their forests for fuel wood production for domestic purposes. The most restrictive legal regulation for them is the obligation to pay levies for timber harvesting.

The free riders have mainly lower school qualifications.

5.6.7 Factor analysis results

The factor analysis identified the following four basic factors, which explain almost 63% of the variance: 1) variables on propensity of forest owners to cooperate with each other (30%); 2) variables related to domestic consumption of timber and fuel wood (20%); 3) variables related to the lack of interest organisations in terms of forest management and interest representation (14%); and 4) variables related to whether forest property is a gain or a burden to forest owners (7%).

5.7 Results of qualitative analysis

Table 5.8 contains the main topics and the interviewees of the in-depth interviews (see also Annex 2d).

5.7.1 Sustainable forest management of private forests

Table 5.9 gives an overview of the opinions of political actors who were interviewed about sustainable forest management by private forest owners.

Table 5.8. Matrix of topics and interviewees.

Topic	PA		PbE		PP				FSRO		PvE		IGF									
	DF	MAFW	RD	MESP	SS	NP	SRS	RP	SPO	DS	LP	SPS	FF	IF	FN	SGS	ISF	CC	HA	PFOA		
III-2a	+	+	+	-	+	+	+	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+
III-3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(III-7b)	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IV-9	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
V-12	+	+	+	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
V-14-1	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
V-15-1	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
V-16-1	-	+	+	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

+ Advocates
 - Opponents
 +/- Indifferent

Abbreviations in Column 1 (Table 5.8) explained:

- III-2a: Do you believe that private forest owners can manage their forests in a sustainable way?
 III-3: Are private forest owners a homogenous group?
 III-7b: Are private forest owners discriminated by the current forest legislation?
 IV-9: Do private forest owners need public support to sustainably manage their forests?
 V-12: Do you support strengthening the role of private forest owners through lobbying in forest policy processes?
 V-14: Do you support the formation of independent private forest owners' associations?
 V-15a: Do you think that voluntary private forest owners' associations are the appropriate approach?
 V-16a: Do you believe that compulsory membership in private forest owners' associations is possible in B-H?

Abbreviations of the organisations in Columns 2 and 7 explained:

- PA: Public administration
 MAFW-DF: Ministry of Agriculture, Forestry and Water Management Directorate for forests
 MAFW-RD: Ministry of Agriculture, Forestry and Water Management – Department of Rural development
 MESP: Ministry of Environment and Spatial Planning
 PbE: Public enterprises
 PE-SS: Public enterprises Srbija sume
 PE-NP: Public enterprises National Park
 PP: Political parties (PP)
 RP-SPO: Right-wing party
 RP-SRS: Right-wing party
 LP-SPS: Left-wing party
 LP-DS: Left-wing party
 FSRO: Forest science and research organisation
 FF: Faculty of Forestry
 IF: Institute for Forestry
 PvE: Private enterprises
 FORNET: Private Company
 SGS: Private Company
 IGF: Interest groups – Forestry (IGF)
 ISF: Initiative for sustainable forestry
 CC: Chamber of Commerce
 HA: Hunting association
 PFOA-LA: Private forest owners (local) association

Table 5.9. Do You Think that sustainable forest management is possible in private forests? (III-2a)

Institution	Advocates	Indifferent	Opponents
Public administration	MAFW-DF		
	MAFW-DF		
	MAFW-DF		
	MAFW-RD		
	MAFW-RD		MESP
Public enterprises	PE-SS		
	PE-SS		
	PE-SS		
	PE-NP		
Political parties	RP-SRS		RP-SPO
			LP-DS
	LP-SPS		
Forest science and research organisations	FF		
	IF		
Private Enterprises	FORNET		
	SGS		
Interest groups Forestry	ISF		
	CC		HA
	PFOA-LA		
	PFOA-LA		

(Abbreviations see Table 5.8)

The fragmentation of private forest holdings makes sustainable forest management more difficult; however, there is a tradition of good forest stewardship in Serbia. Almost all respondents agree that sustainable management in private forests is possible.

However, the representative of the Chamber of Commerce argues as follows “Private forests are not harvested enough due to old householders who are not able to harvest their forest as allowable forest potential.” The majority of representatives of non-forestry organisations state that SFM in private forests is only possible under the following conditions: consolidation of fragmented forest holdings, the provision of state support, or the formation of interest associations.

The representatives of local associations say that “All forest owners can manage their own properties in a sustainable manner.”

The majority of respondents emphasised the following preconditions for sustainable management of private forests in Serbia: associating private forest owners, state support, financial incentives, and training private forest owners.

5.7.2 Are private forest owners a homogeneous group?

Table 5.10 gives the opinions of the representatives of the relevant institutions and organisations as to whether private forest owners are a homogeneous or heterogeneous group.

All respondents agree that private forest owners are a very heterogeneous group.

The representative of the rural department says that “Thus far, this group has not recognised its own interests, nor has the group of private forest owners been viewed by the related institutions.” This is the consequence of the neglected relations between the state and the private sector in the socialistic period.

Most of the respondents, such as representatives of public enterprises, local associations, private companies and NGOs, emphasise the “different behaviour of two basic groups of private forest owners: active and passive”. Active owners carry out harvesting in their forests on a regular basis – each or almost every year. Passive owners, in turn, are those who live far from their forest holdings and are not in a position to use them regularly. In addition to these two groups, there is a third group of entrepreneurial forest owners, for whom the forest represents a very significant source of income with timber harvesting a significant activity.

Some respondents point to main differences within the group of private forest owners, such as “social status, education and employment” (PE-NP); some emphasise the “state of forests and the size of forest lots” (NGO-ISF); and others (Chamber of Commerce) refer to the heterogeneous interests of private forest owners by stating that “This can be a great threat to forming an association.”

5.7.3 Discrimination by forest legislation

Table 5.11 gives the respondents' opinion on the treatment of private forest owners in the Forest Law.

Almost all respondents, except the uninformed ones who are undecided, agree that “The treatment of private forest owners in the existing Forest Law from 1991 is inadequate.” Further, “They are not treated in the same way as the state forest enterprises.” In addition, all respondents agree “Private forest owners are neglected and discriminated in the existing Forest Law.” Some of the responses are as follows:

- “They don't have any choice, and every decision is imposed on them.” (NGO-ISF)
- “They don't have any institutions that can support them.” (Chamber of commerce).

Some respondents, such as the representatives of scientific institutions and NGOs, state that “Private forest owners did not participate at all in the reformulation of

Table 5.10. Are Private forest owners a homogeneous group? (III-3)

Institution	Advocates	Indifferent	Opponents
Public administration			MAFW-DF
			MAFW-DF
			MAFW-DF
			MAFW-RD
			MAFW-RD
Public enterprises			MESP
			PE-SS
			PE-SS
			PE-SS
Political parties			PE-NP
			RP-SRS
			RP-SPO
			LP-DS
Forest science and research organisations			LP-SPS
			FF
Private Enterprises			IF
			FORNET
Interest groups Forestry			SGS
			ISF
			CC
			HA
			PFOA-LA
			PFOA-LA

(Abbreviations see Table 5.8)

the existing Forest Law. Therefore, their interests were not represented during the negotiation process.” In addition, they claim that “The existing Law is imposed on them without the possibility of choice.”

The representatives of local private forest owners’ associations consider that “In the existing Law there are only demands and obligations imposed on private forest owners and no support by the state at all.”

Representatives of the ministry responsible for forestry state that the private forest owners are “Discriminated by the existing Law which is very old.” They also claim that “The new Law in which private forest owners will be treated alike, state forest enterprises will soon replace the existing Law.”

In addition, representatives of other institutions who are familiar with the draft of the new Forest Law (version 5.0; 2008) demand that “Equal treatment has to be

Table 5.11. Are forest owners discriminated according to current legislation? (III-7B)

Institution	Advocates	Indifferent	Opponents
Public administration	MAFW-DF		
	MAFW-DF		
	MAFW-DF		
	MAFW-RD		
	MAFW-RD		
Public enterprises	MESP		
	PE-SS		
	PE-SS		
	PE-NP		
Political parties	RP-SRS		
	RP-SPO		
	LP-DS		
	LP-SPS		
Forest science and research organisations	FF		
		IF	
Private Enterprises	FORNET		
	SGS		
Interest groups Forestry	ISF		
	CC		
	HA		
	PFOA-LA		
	PFOA-LA		

(Abbreviations see Table 5.8)

prescribed for all ownership categories.” However, left-wing party representatives claim that “Private forest owners will have a privileged status in the new Law.”

5.7.4 Public support of forest management

The opinions of the interviewees on public support for sustainable forest management of private forests owners are unanimous (Table 5.12). They agree that public support for private forest owners is necessary.

Most of the respondents argue that state support should consist of “Financial incentives for the establishment of private forest owners’ associations and their activities, provision of subsidies and training as well as an extension service for

Table 5.12. Do forest owners need public support for forest management? (IV-9)

Institution	Advocates	Indifferent	Opponents
Public administration	MAFW-DF		
	MAFW-DF		
	MAFW-DF		
	MAFW-RD		
	MAFW-RD		
	MESP		
Public enterprises	PE-SS		
	PE-SS		
	PE-SS		
	PE-NP		
Political parties	RP-SRS		
	RP-SPO		
	LP-DS		
	LP-SPS		
Forest science and research organisations	FF		
	IF		
Private Enterprises	FORNET		
	SGS		
Interest groups Forestry	ISF		
	CC		
	HA		
	PFOA-LA		
	PFOA-LA		

(Abbreviations see Table 5.8)

forest management.” The representatives of the Faculty of Forestry call for “Multiple support, mainly in training and in covering all challenges private forest owners are faced with.”

In detail, public support comprises “The promotion of sustainable forest management; support of entrepreneurial behaviour; creation of favourable market conditions; more financial means and transparent ways of distribution.”

5.7.5 Need for lobbying and extension service

The respondents’ opinions on the need for lobbying and an extension service in forest management are presented in Table 5.13.

Table 5.13. Which services should be supplied by PFOAs (V-12)

Institution	Lobbying	Both	Forest management
Public administration	MAFW-DF		
	MAFW-DF		
	MAFW-DF		
	MAFW-RD	MAFW-RD	
			MESP
Public enterprises		PE-SS	
	PE-SS		
	PE-SS		
		PE-NP	
Political parties		RP-SRS	
	RP-SPO		
		LP-DS	
		LP-SPS	
Forest science and research organisations		FF	
			IF
Private Enterprises	FORNET		
	SGS		
Interest groups Forestry			ISF
		CC	
	HA		
		PFOA-LA	
		PFOA-LA	

(Abbreviations see Table 5.8)

It is striking that lobbying and both lobbying and the extension service are supported by the same number of interviewees. Some propose that “They should be conducted simultaneously, lobbying at the national and the extension service at the local level.”

The representatives of private forest owners’ associations’ emphasise that “Both lobbying and advising are very important.” However, they add that “Lobbying is more important at the moment.” Most of the other respondents agree that “Subsidies as well as tax relieves can only be obtained by lobbying.”

Only a small number of respondents argue that “Advising is more important since it can be provided much faster than lobbying services.”

However, most respondents agree that the position of private forest owners can be improved by the “Formation of a private forest owners’ interest organisation at the national level.”

The representative of the Democratic Party states that “At first, it is necessary to establish the measures of support and then the advisory service.” Most of the respondents agree that the existing forest service of PE ‘Srbijasume’ for private forest owners is insufficient and demand that “The service should be more efficiently organised.”

It is significant to point out that the Head of the Rural Development group of the MAFW – contrary to the consultant in the same institution - argues that “While both lobbying and advising are important, the emphasis should be on lobbying at the moment.” The executive manager of PE ‘Srbijasume’ shares this opinion.

5.7.6 Formation of independent interest associations

The interviewees’ opinions about the formation of independent organisations of private forest owners are presented in Table 5.14.

Almost all respondents consider independent interest associations of private forest owners as the best solution to represent the owners’ interests. The majority of respondents support the idea of strengthening the position of private forest owners by establishing their interest association; the representatives of rural development consider it a ‘key activity’.

Some recommend the establishment of such an independent association at the national level by representatives of local and regional associations, with logistic and advisory support of related forestry institutions.

To establish such an organisation, some propose “To provide the adequate legislative and financial framework for the support of private forest owners in order to fulfil the basic purpose of an association.”

The representative of the Chamber of Commerce considers that “Based on an independent PFOA, private forest owners will actively take part in decision making within the forest sector at the national level.”

The following advantages of independent interest associations are expressed as follows:

- easier articulation of forest owners’ interests
- stronger voice of forest owners in the forest sector
- independence in interest representation

and barriers:

- low awareness of private forest owners
- inactivity of private forest owners
- bad experience from previous period
- lack of initial means
- existing Forest Law

Table 5.14. Strengthening the position of PFOs by establishing independent PFOA (V-14-1)

Institution	Advocates	Indifferent	Opponents
Public administration	MAFW-DF		
	MAFW-DF		
	MAFW-DF		
	MAFW-RD		
		MAFW-RD	
	MESP		
Public enterprises	PE-SS		
	PE-SS		
	PE-SS		
	PE-NP		
Political parties	RP-SRS		
	RP-SPO		
	LP-DS		
	LP-SPS		
Forest science and research organisations	FF		
	IF		
Private Enterprises	FORNET		
	SGS		
Interest groups Forestry	ISF		
	CC		
	HA		
	PFOA-LA		
	PFOA-LA		

(Abbreviations see Table 5.8)

5.7.7 Voluntary membership

An overview of the respondents' opinions about voluntary membership in a private forest owners' organisation is presented in Table 5.15.

The representatives of almost all institutions are of the opinion that voluntary forest owners' associations at all levels are the best approach to strengthening the representation of private forest owners' interests. Only the representatives of some institutions hold the opposite position. For example, the representative of NGO-ISF says that "They have to see their clear interest." The representative of Forestry Institute claims that "They must have strong institutions behind them." In the present situation there is no incentive for a forest owner to join a PFOA and there are no benefits that an association could provide.

Table 5.15. Voluntary membership as a more convenient approach during interest representation when organising a PFO (V-15-1)

Institution	Advocates	Indifferent	Opponents
Public administration	MAFW-DF		
	MAFW-DF		
	MAFW-DF		
	MAFW-RD		
	MAFW-RD		
	MESP		
Public enterprises	PE-SS		
	PE-SS		
	PE-SS		
	PE-NP		
Political parties	RP-SRS		
	RP-SPO		
	LP-DS		
	LP-SPS		
Forest science and research organisations	FF		IF
Private Enterprises	FORNET		
	SGS		
Interest groups Forestry			ISF
	CC		
	HA		
	PFOA-LA		
	PFOA-LA		

(Abbreviations see Table 5.8)

The representative of the Chamber of Commerce emphasises that “They have to know what they get if they voluntarily join the association.”

The majority of respondents indicate the following incentives of a successful voluntary organisation of private forest owners: promotion of associating, training; subsidies; tax breaks; initial support for the establishment of an association; non-commercial work in forests; and the procurement of machinery, etc.

5.7.8 Compulsory membership

Table 5.16 presents the respondents’ opinions on obligatory membership in a national association of private forest owners based on a legally-binding instrument.

Table 5.16. Obligatory membership as a possible approach to establish a PFOA (V-16-1)

Institution	Advocates	Indifferent	Opponents
Public administration			MAFW-DF
	MAFW-DF		
	MAFW-DF		
	MAFW-RD		
	MAFW-RD		MESP
Public enterprises	PE-SS		
	PE-SS		PE-SS
	PE-NP		
Political parties	RP-SRS		
	RP-SPO		
	LP-DS		LP-SPS
Forest science and research organisations	FF		
	IF		
Private Enterprises			SGS
Interest groups Forestry	ISF		
	CC		
	HA		PFOA-LA
			PFOA-LA

(Abbreviations see Table 5.8)

This question reveals big differences in the respondents' opinions, independent of the institutions they represent. There are contradicting opinions within public forest administration, public enterprises, political parties and private companies. However, the representatives of the majority of institutions agree that "There is a possibility to establish such an association if the lawmaker decides to do so." However, as they claimed, the association with obligatory membership raises the question: "Is there any sense in establishing such an association?" In addition, they claim that "Such a solution will demand the formation of a new institution (Chamber of private forest owners or association of private forest owners) based principles of representing interests." (Directorate for Forest)

Most respondents who support obligatory membership indicate the following reasons: efficiency in its formation; a full complement of members; stronger

influence; a reliable partner for the state; secure budget and the possibility to accumulate financial means; and the possibility of using foreign funds.” Some claim that “It will be best if all private forest owners become members of the PFOA. Thus they will increase their position in the negotiation processes in forest policy.” (PE-NP) Other respondents argue that “They will easily realise their objectives,” or if all private forest owners are obligatory members of their interest association “they will have a stronger voice in the forest sector.” (NGO-ISF)

The main obstacles for compulsory membership are “The existing mentality and the rejection of imposed obligations, bad experiences with existing institutions such as Chamber of Commerce as well as apprehensions about corruption and cronyism.”

The opponents of obligatory membership argue that “As matters stand, its realisation will be very difficult when this measure is imposed.” They are afraid that “In such an organisation, forest owners would have really small influence within the organisation yet they would carry all the costs while the benefits accrue for a minority selected by the state.”

5.8 Summary and Conclusions

The high fragmentation of forest properties, the large number of forest parcels, forest property shared among family members and the expected further fragmentation of forest properties due to the existing Law on Inheritance are the underlying characteristics of private forest properties in Serbia. Although there are no exact statistical data on the average size of private forest property, the size of the forest parcel and the number of forest owners, the results of this research, especially those on average size of the forest property (4.1 ha) and number of forest parcels per owners (7.1) are significantly higher than in all other sources presented to date; however, these figures still show very small private forest lots in comparison to some European countries. The main results on species composition in private forests show the dominance of broadleaf forests, mostly coppice. These private forests which have low wood production (mostly for fuel wood) and are generally small, highly-fragmented parcels with a tendency for further downscaling are a very bad precondition to achieve economies of scale.

All these reasons suggest that the majority of private forest owners in Serbia are not in a position to manage their forests in an economically sustainable manner and that most of the production is related to fuel wood for their own needs. Taking into account all the above characteristics of private forest property, it is hard to assume that voluntary private forest owners’ interest organisations will be easily established without economic potentials and incentives.

Together with economic difficulties in private forest management, the Law on Inheritance and the tendency that all existing private forest properties will be divided among the heirs, the number of parcels will presumably increase significantly and the forest ownership will become under family rather than private ownership. As a consequence, it is to be expected that the perceived need to establish the associations of private forest owners will be reduced.

In terms of social and demographic characteristics, this research shows that the majority of forest owners are old (more than 60% of respondents are older than 50)

and since forest management operations demand a great deal of physical activities, the procurement of forest machinery will have a positive effect on private forest management overall. However, in undeveloped regions, which are characterised by migration, forest owners cannot manage their forests without the help of their relatives, whom they often lack.

In most cases, forest owners in Serbia (93%) are males - a historical trend which is expected to continue in the near future. The majority of forest owners are farmers (30%) or pensioners (31%) living in rural areas (74%) and close to their forest. There is a significant percentage of unemployed forest owners for whom forest is a major (the only source for some) source of income. This offers the possibilities to develop entrepreneurial initiatives in the forestry and wood industry, especially among the population of younger forest owners and those interested in educational programs related to the diversification of forest products.

Alternatively, a high percentage of forest owners who claim that the income originating from their forest properties is a significant contribution to their household budget, emphasise the role that private forests play in reducing poverty in rural areas, especially since most of the forest owners are pensioners, unemployed or farmers – the predominant occupation in rural areas.

The majority of forest owners are aware of the boundaries of their forest properties and did not have any ownership disputes in past years. This high percent cannot be taken as a reason for the non-existence of private forest owners' interest organisations - other reasons should be investigated.

Regarding the economic aspects of the survey, most respondents like their forests (94%). The situation varies in terms of viewing the forest as a gain or a burden - almost half of the respondents consider their forests as a gain while the rest have only small benefits from the forests or consider them a burden. The owners who consider their forest properties as a gain are the representatives of entrepreneurial spirit – individuals who can play an important role in the establishment and development of private forest owners' interest organisations. An especially important part of the group is those who use their properties for fuel wood and timber production intended for sale. Although the majority of respondents use fuel wood and timber for their own consumption, there are many of this latter group who prove that forest owners are a heterogeneous group from the economic point of view. In addition, the interviewed decision makers agree with the opinion on owner heterogeneity. Such characteristics of entrepreneurial forest owners are a precondition for the establishment of private forest owners' associations.

A significant percentage of forest owners claim that they do not know their rights and obligations (about 68%). This somehow indicates that forest owners are not sufficiently aware of their rights and responsibilities concerning their forest properties. It also means that professional and technical support to private forest owners provided by the public enterprises is not directed at providing the needed information on legislation and other issues; rather, it is only directed at implementing obligatory activities such as tree marking, etc.

In addition, a high percentage of forest owners consider that the obligations such as tree marking (46%), compensation for harvesting (53%) and licences for cutting (49%) and timber transport (45%) issued by a forest official are very restrictive. Such a high negative response rate on certain legislative restrictions should be considered as very important, especially since the new Forest Law is in the process

of approval. However, a large number of forest owners (41%) do not consider overall legislative obligations as severe, compared to the benefits which their forests provide them. Although the majority of private forest owners are not so much aware of current forest related legislation, they have recognised the strictest regulations; however, it can be emphasised that their collective action is questionable since their awareness of forest regulations is rather weak.

All relevant institutions' representatives consider that private forest owners are in an inadequate position and that they are discriminated by the existing Forest Law. Moreover, some of the decision makers consider that private forest owners are not at all represented in the existing Law. From the above, while it is clear that forest owners have the same obligations and restrictive measures, they do not have the same rights as state forest enterprises. These rights are especially related to state budget funds, which are available only to the state forest enterprises.

Most of the relevant institutions' representatives agree that there is a need of public support for the management of private forests in the form of subsidies, financial incentives and education directed at forest owners. It can be concluded that a significant change is recognised in the attitudes of institutions' representatives compared to the previous period, especially because in the previous period even a declarative support of private forest owners was lacking. This can be the consequence of clear goals and measures promoted in the process of passing the Forestry Development Strategy (OG 59/06) and a change in the view of the private sector's significance in Serbia - not just in forestry but in general.

In comparison to the previous period, decision makers have recognised that the existing forest regulation is very restrictive for private forest owners; they have shown a readiness to support private forest owners' organisations and to provide subsidies for private forest owners. These changes in the decision-makers' attitudes and the new direction toward the establishment of partner relations with private forest owners, although influenced by Serbia's orientation toward EU integration, have resulted in the changes in forest policy which are in favour of private forest owners' interests. This could eventually lead to an easier establishment of the owners' interest organisations.

This research shows that forest owners in Serbia have a clear need of interest groups for forest management at the local level, and for interest representation in forest policy definition and implementation at the national level. In addition, forest owners in Serbia understand the role of a PFOA, although most have not had the opportunity to become familiar with the work of the developed European countries private forest owners' associations. Forest owners are ready to cooperate with each other but only in the joint use of machinery and work on forest road construction. Most forest owners are ready to join private forest owners' associations if membership provides them with certain economic benefits. Such an attitude is justified mainly because the network of forest roads is in a very bad condition as by road construction, the owners would eventually open certain forest areas for exploitation. Such cooperation is the most cost-efficient for forest owners, especially if state subsidies can be provided for road construction. This example shows that the creation of certain entrepreneurially oriented groups inside the forest owners population – provided they are willing to invest their time and resources in the establishment of PFOA – could provide concrete benefits. This can also be related to the results of the cluster analysis, where it is clearly shown that there are many

drivers who can start things at their own expense in order to establish PFOA from which all will benefit.

However, the majority of forest owners (39%) are not prepared to engage themselves in the establishment of private forest owners' associations and the majority of forest owners (55%) are against the establishment of forest owners' organisations with obligatory membership. Such a result is understandable and can be expected because of very bad historical experiences with obligatory cooperatives from the socialist period, after which the owners lost their trust in obligatory organisations.

The attitudes of forest policy decision makers, related to organising private forest owners, show significant consistence in certain topics covered by the research. The differences between the attitudes are not so much visible between different groups (institutions/organisations) as between different representatives within one group (institution/organisation).

About half of the decision makers consider that lobbying is more important than advising - the others hold the opposite view. While the rest of the respondents claim that both lobbying and advising are needed, they agree that lobbying is more needed at present. Consequently, the majority of the respondents consider that private forest owners now need lobbying at the national level much more than advice on forest management.

It is necessary to emphasise that under present conditions, there is no organised system of support – there are only specific project activities in certain pilot regions. This obviously indicates that there is a need for an organised system of direct (financial) and indirect (advisory, educational) support in order for the private forest owners to associate. This would lead to the successful formation of forest owners' associations at the local, regional and national levels. Such associations would be the most adequate solution for small-scale forest owners who are the majority in Serbia.

It can be concluded that in the present conditions, with all forest policy processes still unfinished (new Forest Law, National Forest Action Program), lobbying is a very significant instrument with which to strengthen the position of private forest owners. On the other hand, it is significant to emphasise that a 'forest lobby' does not exist in the supreme system institutions, and there is not a single representative in the private forest sector who could lobby in favour of forest owners' interests.

Until recently, lobbying in favour of forest owners was performed by some representatives of the Directorate of Forests and local forest owners' associations but only to a certain extent. This indicates that it is necessary to provide an institutional representation of forest owners at the national level.

Private forest owners are equally interested in both lobbying at the national level and advice on forest management on issues such as education, the mutual use of forest machinery, wood sales and information sharing. All these can be selective incentives for PFOA members. Lobbying at the national level is also recognised by potential PFOA members, and it is especially important for Serbia since the preparation of the new Forest Law is in progress and owners do see the opportunity of procuring certain public goods for all forest owners.

There is an obvious need for the formation of an independent forest owners' organisation in Serbia, which will represent owners' interests in the forest policy process; however, the current Forest Law does not propose it nor enable it

– it certainly does not support it! At the same time, there is a need to avoid the politicisation and bureaucracy of such an independent organisation, which can be reflected in the possibility of high state influence or corruption. Independent interest forest owners’ associations, according to the attitudes of most of the respondents, are by far the best solution with which to represent the interests of forest owners. By establishing such an association, the influence of forest owners will grow and financial incentives become available.

Almost all respondents consider that while the best option for private forest owners’ associations is a voluntary approach, they claim that this can be done only if some selective financial initiatives are provided as a precondition.

However, most of the respondents agree that even an obligatory membership approach for private forest owners’ associations is possible and applicable under Serbian circumstances. Those in favour of this solution claim that an obligatory approach can be convenient because it provides an opportunity for representing all forest owners and thus the owners’ voice will be much stronger. Nevertheless, the main opponents of the obligatory approach are the representatives of local forest owners’ associations who are against all forced solutions and additional expenses.

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6. Commonalities and Differences for the Formation of Private Forest Owners' Interest Associations in Bosnia and Herzegovina, Croatia, Macedonia and Serbia

The following presents a comparison of the results of the surveys carried out of private forest owners in Bosnia and Herzegovina, Croatia, Macedonia and Serbia. For this purpose, the answers to the 42 questions (Q1–Q42) are grouped into silvicultural aspects, sociological aspects, economic aspects, institutional aspects and the attitudes of private forest owners.

6.1 Silvicultural aspects (Q19a–Q19c)

The forest acreage (Q19a) of private forest owners varies between 0.02 ha and 150 ha with significant differences between the four countries (Figure 6.1). The mean forest acreage are: 4.1 ha in Serbia; 3.6 ha in Croatia; 3.2 ha in Bosnia and Herzegovina (B-H); and 2.3 ha in Macedonia.

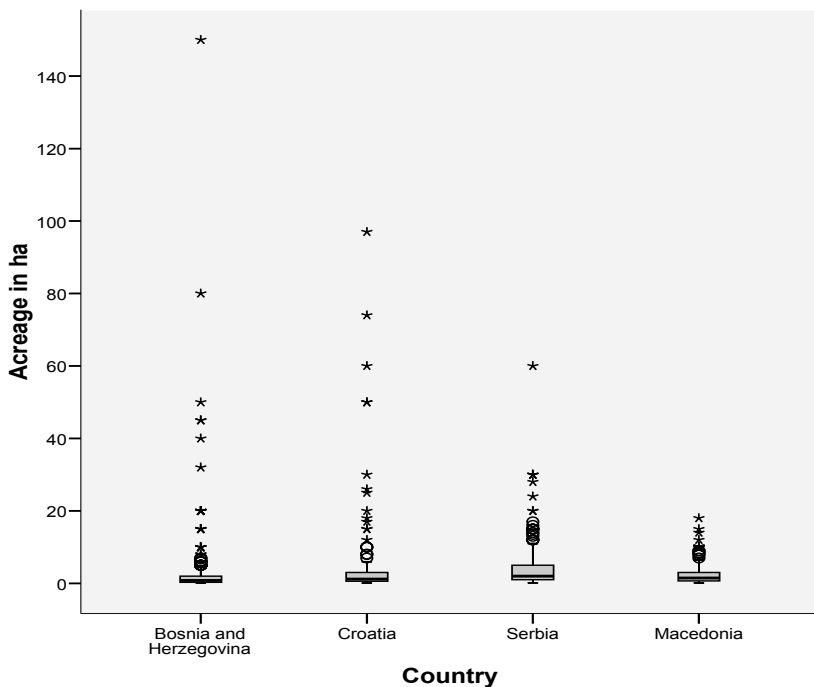


Figure 6.1. Forest acreage (in ha).

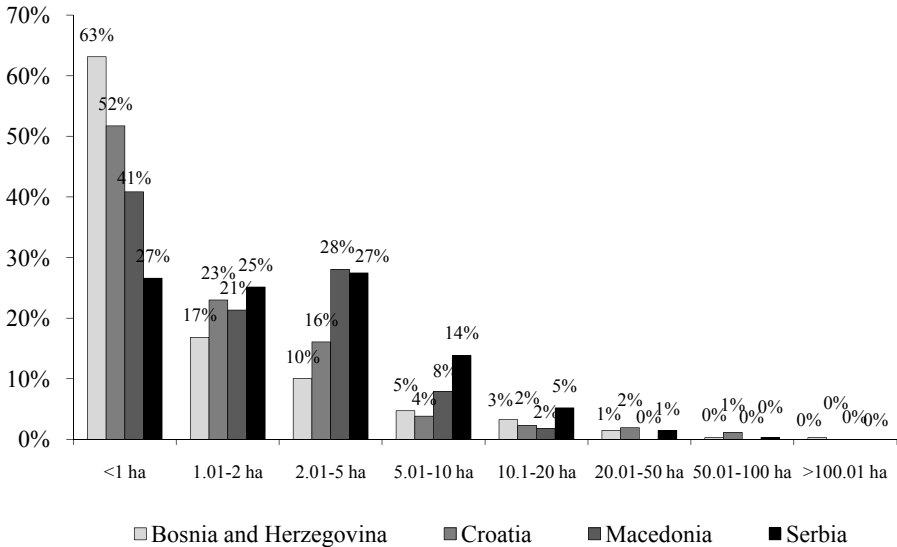


Figure 6.2. Number of Private Forest Owners According to Size Classes (in percent).

The number of forest owners according to size classes (Q19a) is presented in Figure 6.2. Most forest owners hold properties smaller than 1 ha. The percentage of forest properties smaller than 1 ha is greatest in B-H (more than 60%) followed by Croatia (48%) and Macedonia (40%); in Serbia only 27% own properties smaller than 1 ha. As shown in Figure 6.2, Serbian forest owners have the largest forest properties. In Serbia and Macedonia, in significant contrast to the other two countries, there are a high number of owners who possess forest properties between 2 and 5 ha (about 25%). Only a few owners, less than 10% in all four countries, own forest properties larger than 10 ha.

With regard to forest types (Q19b), the most frequent categories in all four countries are mixed and coppice forests (42% and 39%, respectively) compared with high forests (15%). There are significant differences in distribution of forest types in the four countries (Figure 6.3). Mixed forests dominate in Macedonia (65%), followed by B-H (47%), Croatia (38%) and Serbia (14%). Coppice forests prevail in Serbia (63%), while there are less than 36% coppice forests in the other three countries. High forests are most frequent in Serbia (19%), followed by Croatia (17%), B-H (15%) and Macedonia (7%).

Regarding species composition (Q19c), the most frequent forests are broadleaved (62%), followed by mixed forests (26%); there are only 5% coniferous forests in all four countries. Mainly broadleaved forests dominate in Serbia (88%), followed by Croatia (57%), Macedonia (53%) and B-H (47%). Mixed forests are found in Macedonia (45%) and B-H (38%). The highest percentage of coniferous forests is found in B-H with 13% (Figure 6.4).

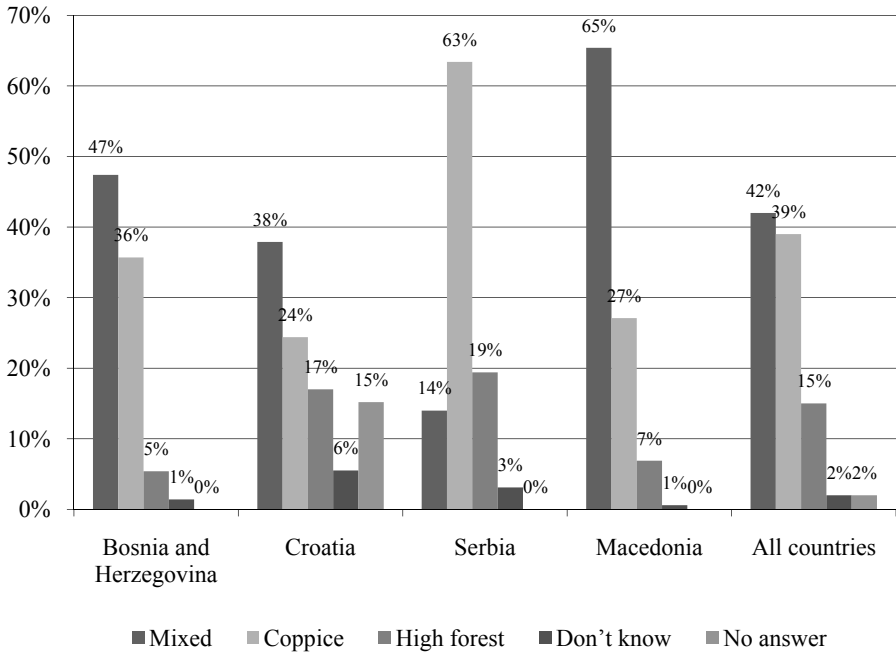


Figure 6.3. Type of forest, %.

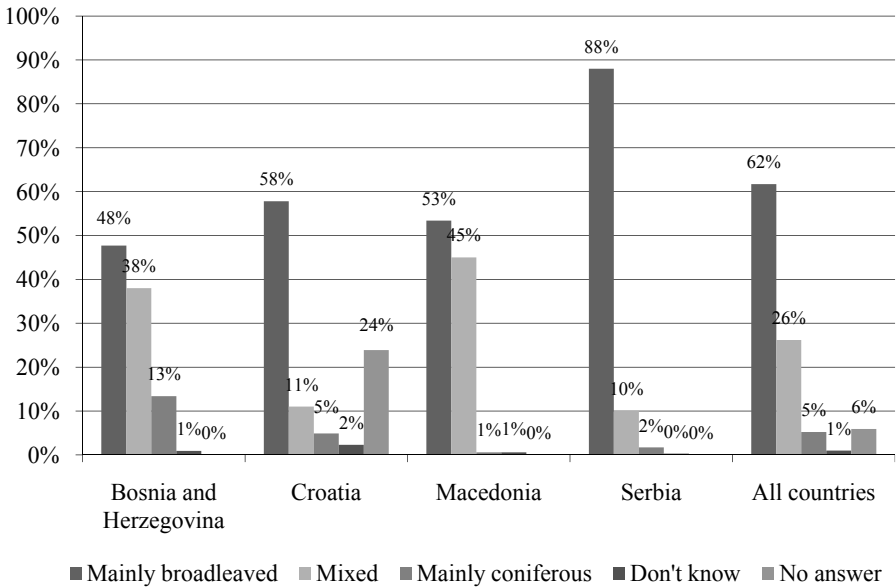


Figure 6.4. Species composition, %.

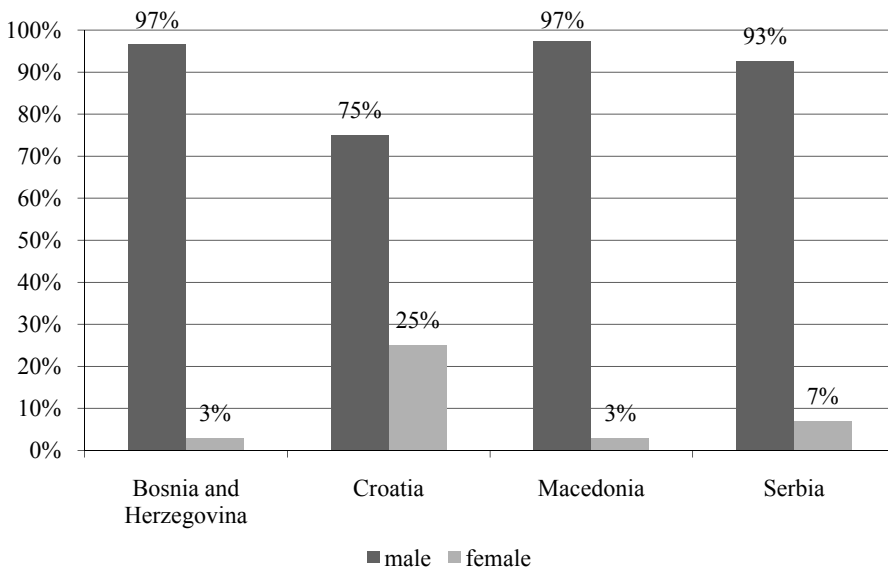


Figure 6.5. Distribution of forest owners by gender.

6.2 Sociological aspects (Q34–35, Q38–40)

Regarding gender, male forest owners (Q34) dominate at 90% of the whole sample. More than 97% of the respondents in Macedonia and B-H and 93% in Serbia are male; in Croatia one quarter of the respondents are female (Figure 6.5).

The average age (Q35) of the respondents is 53 years; there is no significant difference between the countries (Figure 6.6).

Regarding the size of settlements (Q38), most respondents live in small villages with less than 1,000 inhabitants (58%); only less than 5% of the respondents live in cities with more than 20,000. There are significant differences between the four countries (Figure 6.7) with the majority of respondents from B-H, Croatia and Serbia living in settlements with less than 1,000 inhabitants while more than 95% of Macedonian respondents live in larger settlements with more than 1,000 inhabitants.

Concerning occupation (Q39), farmers, unemployed people and lower-level employees amount to more than 55% of the respondents. There are significant differences between the countries (Figure 6.8) with more than 50% of the respondents being unemployed or pensioners in B-H, while in Croatia, farmers, lower-level employees and manual workers prevail at more than 60%. In Serbia, farmers and other occupations (pensioners) dominate at more than 60%. Macedonian forest owners are mainly unemployed (33%), lower level employees (21%) or farmers (17%).

With regard to education, most forest owners in all four countries have high school education, followed by vocational (17%) and elementary school education (25%); some 6% have university and vocational college qualifications, respectively.

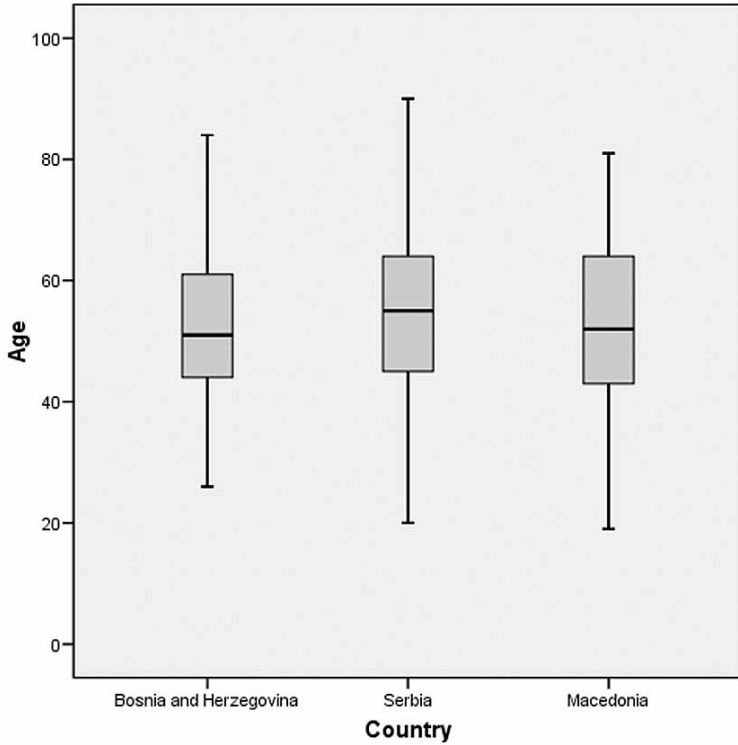


Figure 6.6. Age.

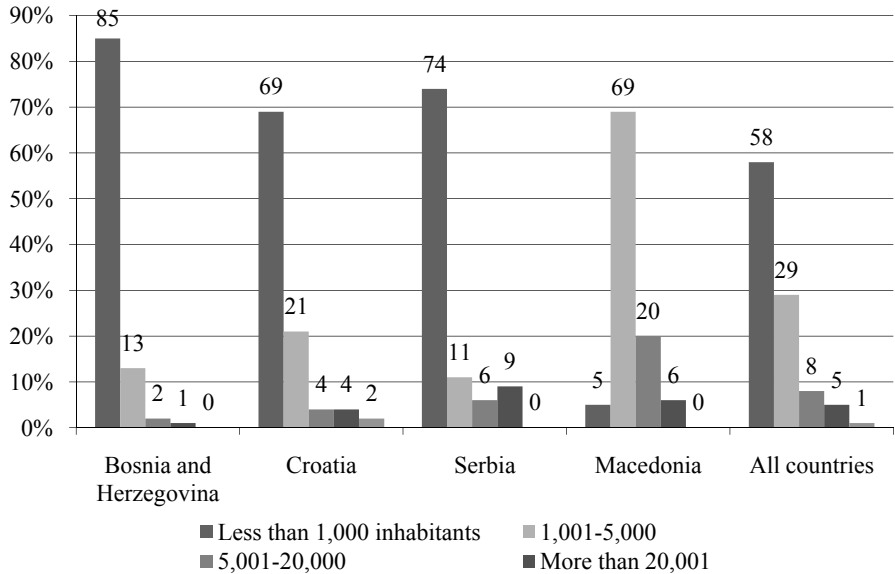


Figure 6.7. Size of settlements, %.

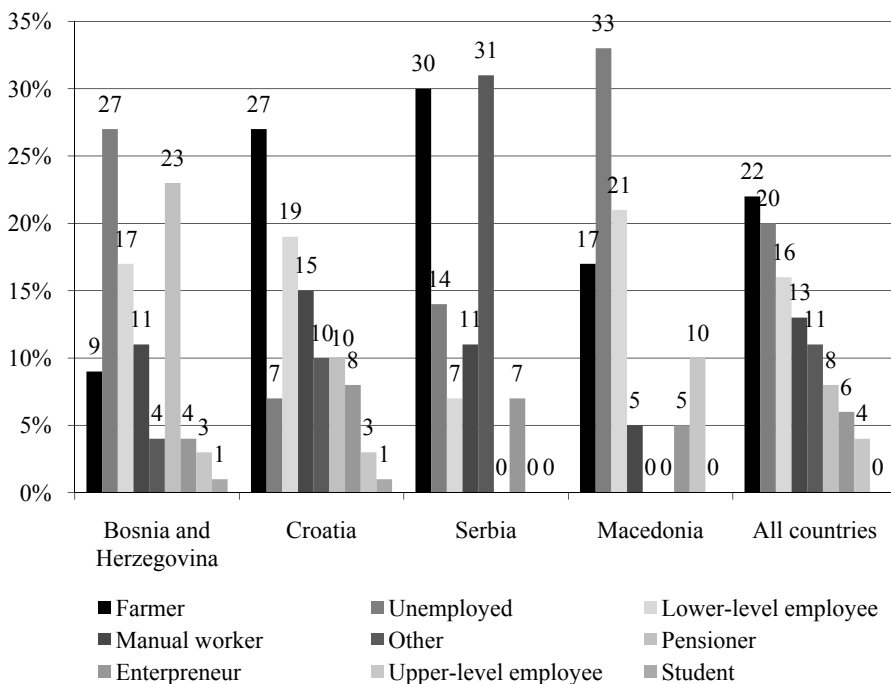


Figure 6.8. Occupation, %.

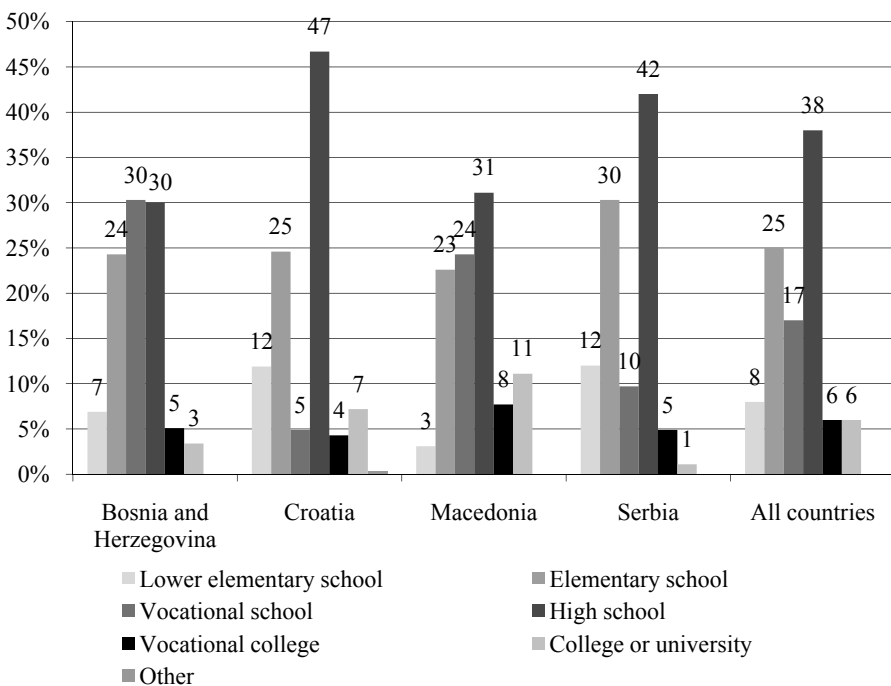


Figure 6.9. Education.

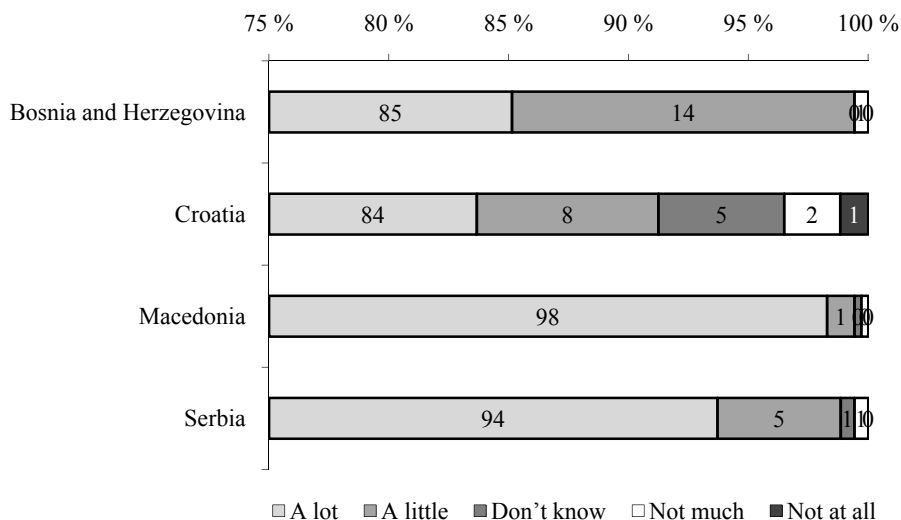


Figure 6.10. Appreciation of the forest.

There are again significant differences regarding education (Q40) between the countries (Figure 6.9). Respondents with vocational and high school qualifications dominate in B-H, while high and elementary school qualifications are the most frequent education categories in Croatia, Serbia and Macedonia. The share of university or college educated forest owners is very low (12%) and they are most frequent in Macedonia (11%), followed by Croatia (about 8%); in B-H and Serbia, the percentage is lower than 5%.

6.3 Economic aspects (Q1, Q20–26, Q36–37, Q41–42)

Although the majority of respondents declare that they like their forests a lot (Q1), the level of expressed appreciation differs significantly between the countries. It seems that Macedonian (98%) and Serbian (94%) private forest owners like their forest more than Bosnian (85%) and Croatian (84%) respondents (Figure 6.10).

This result complies with the answers to the question (Q20) whether the forest altogether is a gain or burden for the family. Again, there are more forest owners from Macedonia who consider the forest a gain (45%) compared to forest owners from the other three countries; around 27% of Bosnian forest owners respond that the forest is a burden for them. However, for most forest owners in all four countries the forest is a source of little income; the percentage varies between 36% for Croatia and 16% for Macedonia (Figure 6.11).

The highest number of respondents who have recently purchased forests (Q21a) was in Croatia (9%), followed by Serbia (6%), B-H (5%), and Macedonia (less than

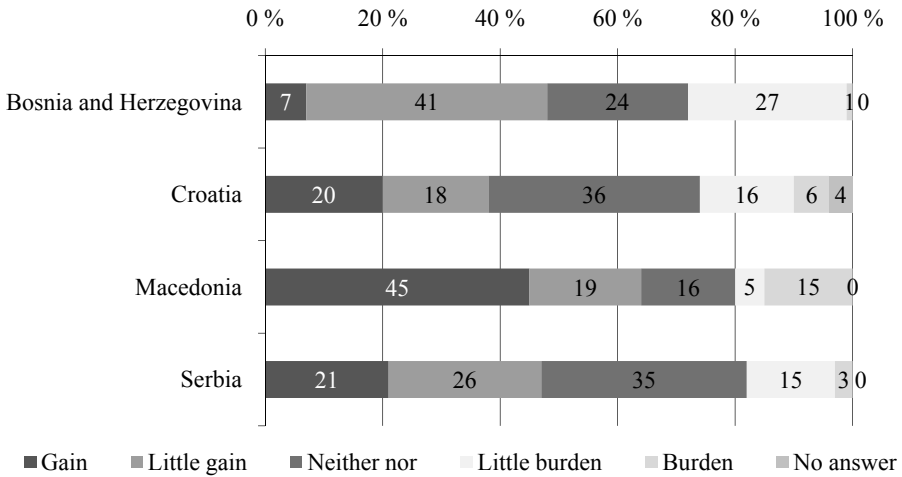


Figure 6.11. Forest – gain or burden.

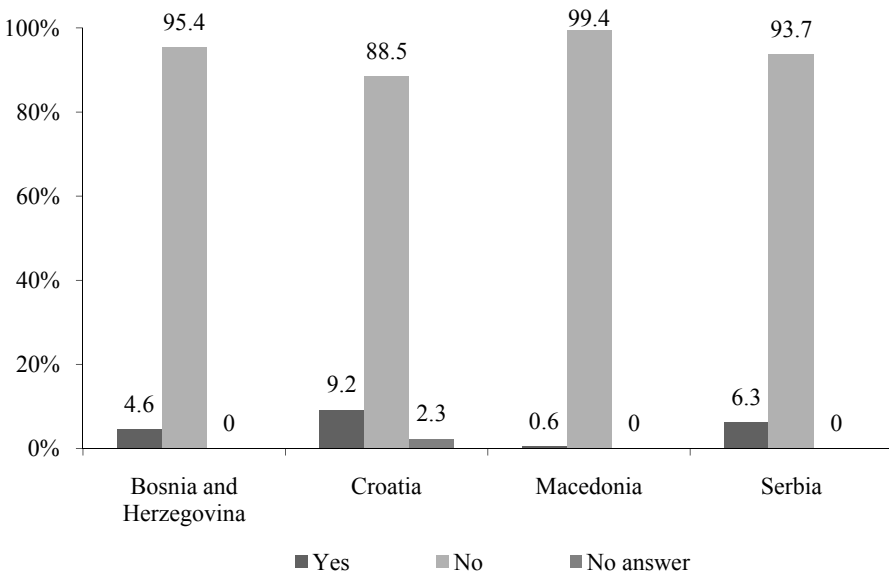


Figure 6.12. Forest purchases.

1%) (Figure 6.12). There are statistical differences between the countries: the largest average size of purchased forest land is recorded in Serbia while forest owners in other countries purchased smaller forest properties.

Forest sales (Q21b) are reported most often in Croatia (3.5%), followed by B-H (2%) and Serbia (1%), while Macedonian respondents did not declare any sales (Figure 6.13).

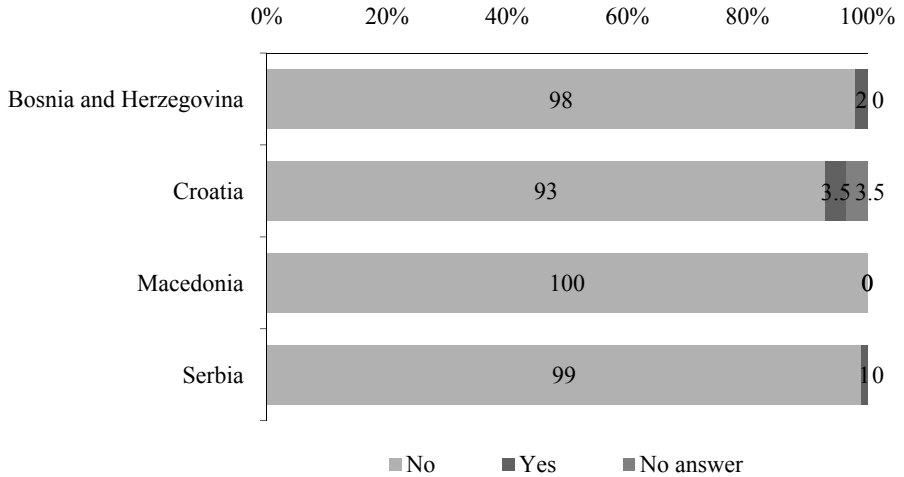


Figure 6.13. Forest sales.

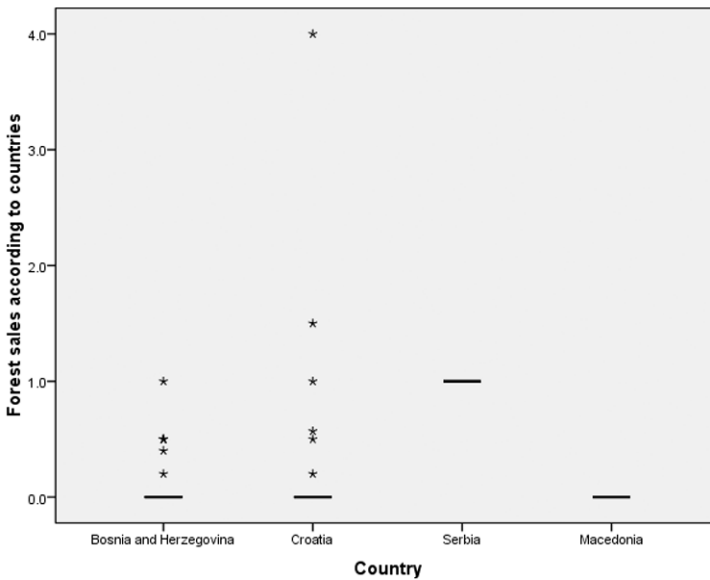


Figure 6.14. Forest sales by countries.

The largest average size of sold forest lots is recorded in Serbia (1 ha), while in B-H and Croatia very small parcels are sold (less than 0.02 ha) (Figure 6.14).

The main uses of forest (Q22) is statistically different in all four countries (Figure 6.15). Fuel wood and saw logs for domestic use are the most frequent uses in all four countries, but with different frequencies. The highest percentage of forest

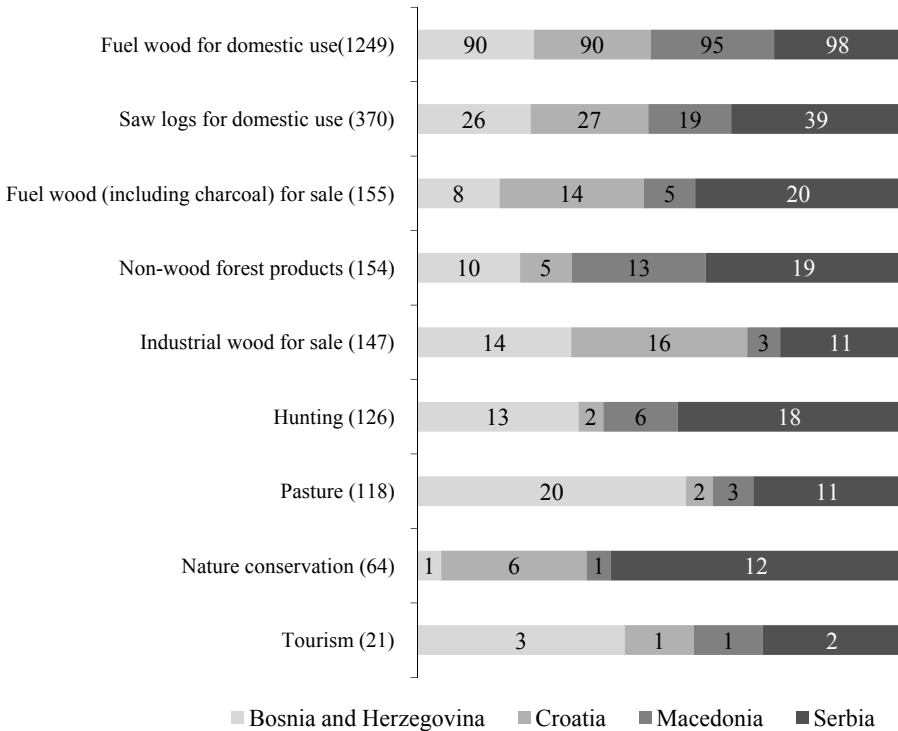


Figure 6.15. Main uses of forest.

owners who use forests for fuel wood production are in Serbia (98%), followed by Macedonia (95%) and Croatia and B-H (both 90%). Other main uses are found in varying intensity in the countries. Saw log production for domestic use is highest in Serbia (39%), along with fuel wood for sale production (20%), NWFP production (19%), hunting (18%) and nature conservation (12%). While Croatia has the largest share of forest owners who use their properties for production of industrial wood for sale (16%), Bosnia has the largest share of owners using forests as pastures (20%) and for touristic purposes (3%).

Private forests are most fragmented (Q23) in Serbia (in 86% of the cases), B-H (73%), Croatia (60%) and Macedonia (57%) but at different degrees (Figure 6.16). In Macedonia and Croatia there are more consolidated forests than in B-H and Serbia.

There are statistical differences regarding the number of parcels: Serbian forests are the most fragmented (about 7 parcels); less fragmented are Croatia and B-H (2 parcels) and Macedonian private forests are the least fragmented ones (Figure 6.17). The average size of an individual parcel ranges from the largest (1.6 ha) in Croatia to 1.2 ha in B-H, 0.7 ha in Serbia and 0.5 ha in Macedonia (Figure 6.18).

Most respondents indicate that timber sales do not contribute to their yearly household income much (Q24a). Only less than 10% of the forest owners in Serbia, Macedonia and Croatia declare that the contribution of timber sales to the yearly household income is important, while the percentage in B-H is less than 5% (Figure 6.19).

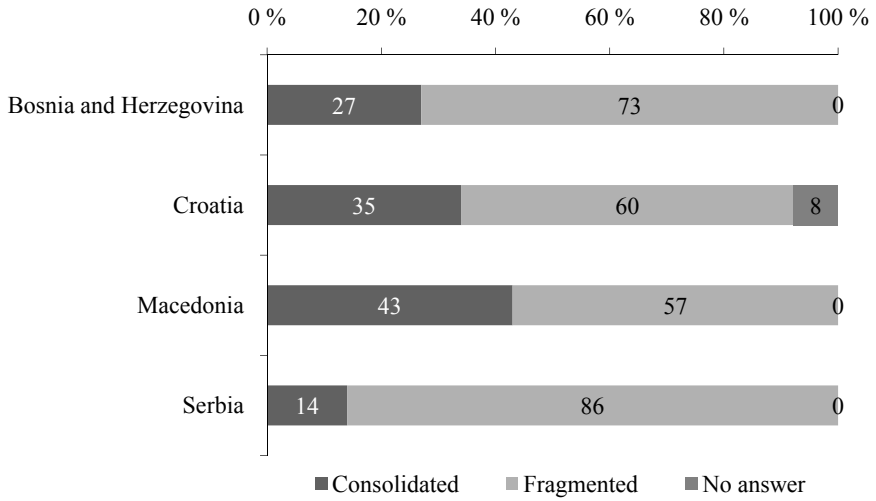


Figure 6.16. Fragmentation of forests.

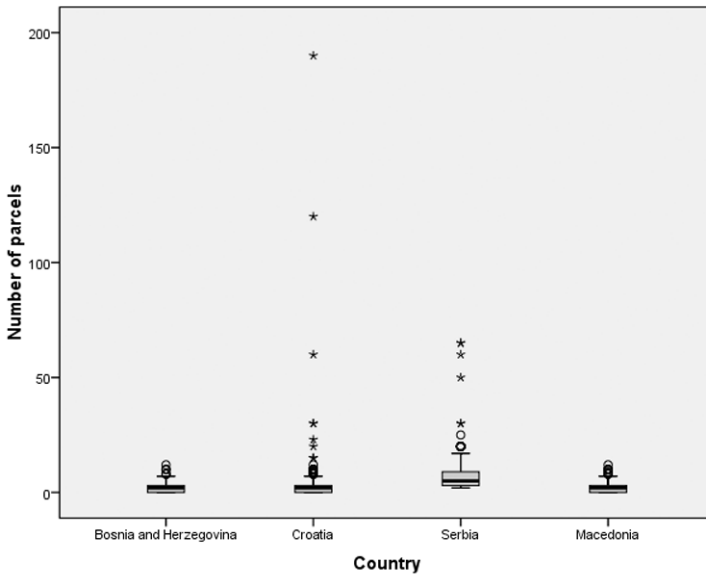


Figure 6.17. Number of forest parcels.

There are similar results for the contribution of the privately owned forest to the yearly household income in terms of domestic use (Q24b) – around one half of the Macedonian (52%), Serbian (50%), and Croatian (48%) forest owners indicate a very high or high contribution to the yearly household income, while this contribution is less in B-H (23%) (Figure 6.20).

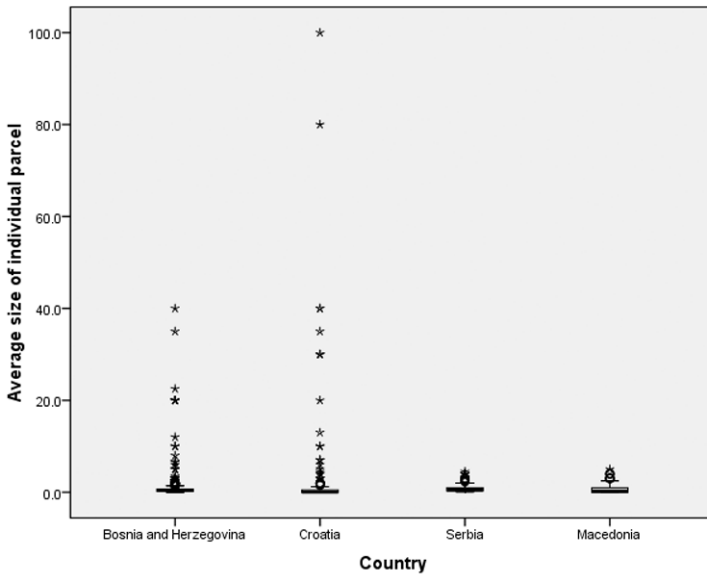


Figure 6.18. Average size of individual forest parcels (in ha).

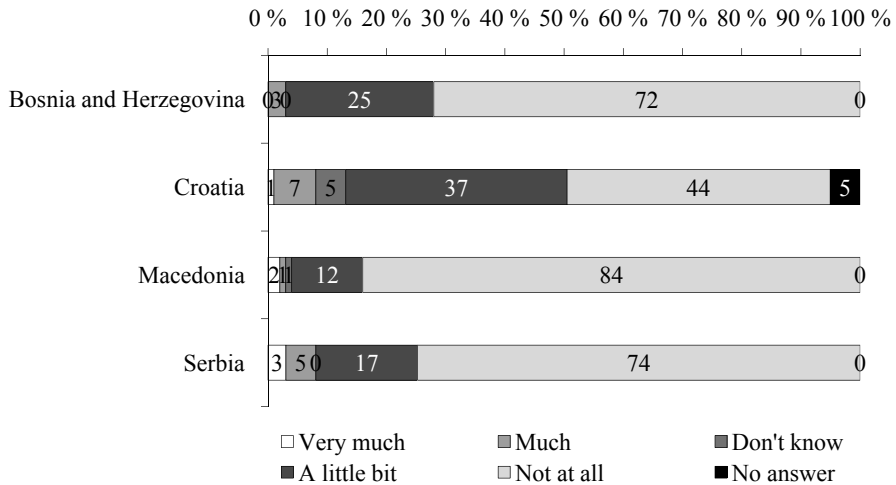


Figure 6.19. Timber sales.

With regard to yearly or periodical harvesting (Q25), Serbian forest owners harvest their forest most often almost every year (in 81% of all harvests), followed by Macedonian (54%) and Croatian (31%) owners. Bosnian owners harvest forests mainly periodically (in 73% of all harvests) (Figure 6.21). For the owners who

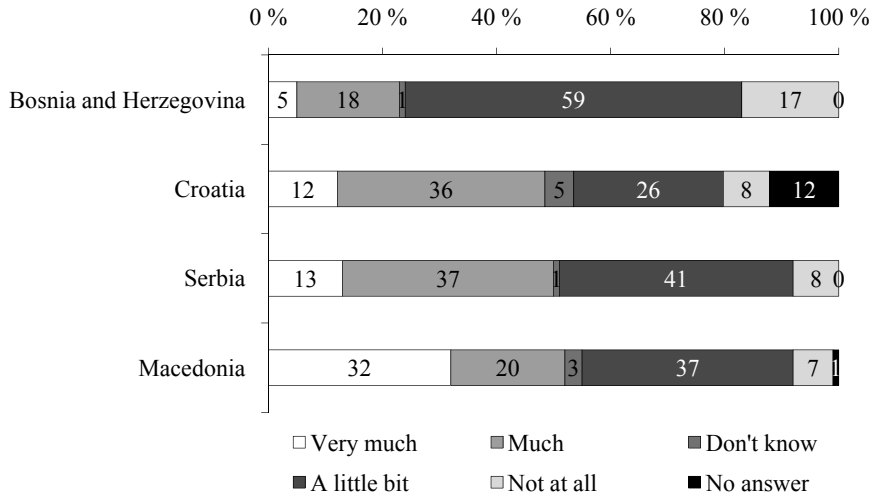


Figure 6.20. Domestic use.

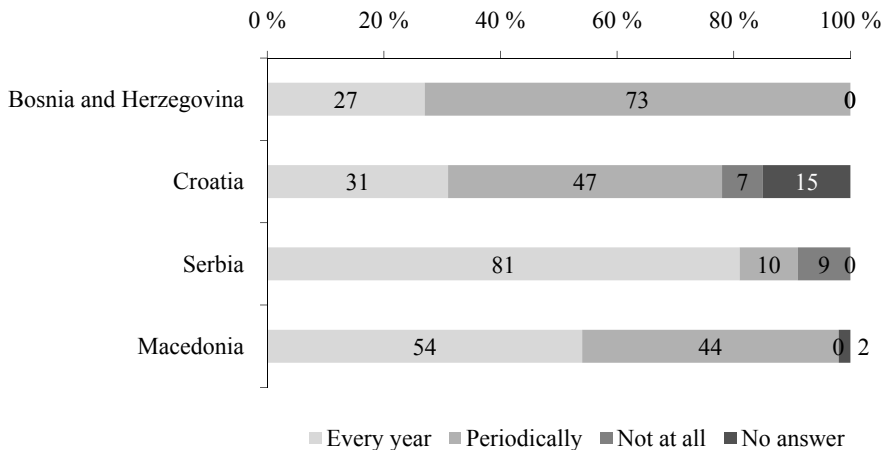


Figure 6.21. How often do you harvest trees?

harvest their forests every year, the volume is statistically different within the countries: the highest quantity is cut in Serbia (about 16 m³), followed by Croatia (12 m³), Macedonia (9 m³) and B-H (6 m³) (Figure 6.22). There are also differences regarding the intervals of periodically cut wood: Serbian owners indicate the largest cutting interval (about 4 years), followed by Bosnian and Macedonian owners (3 years) (Figure 6.23).

The readiness to cooperate (Q26) differs significantly between the countries (Figure 6.24). All forest owners declare their readiness to cooperate first and

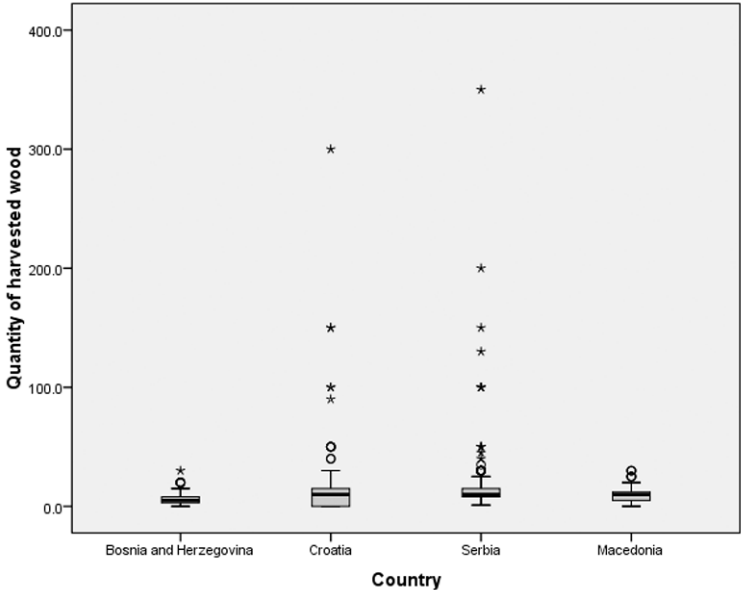


Figure 6.22. Quantity of harvested wood (in m³).

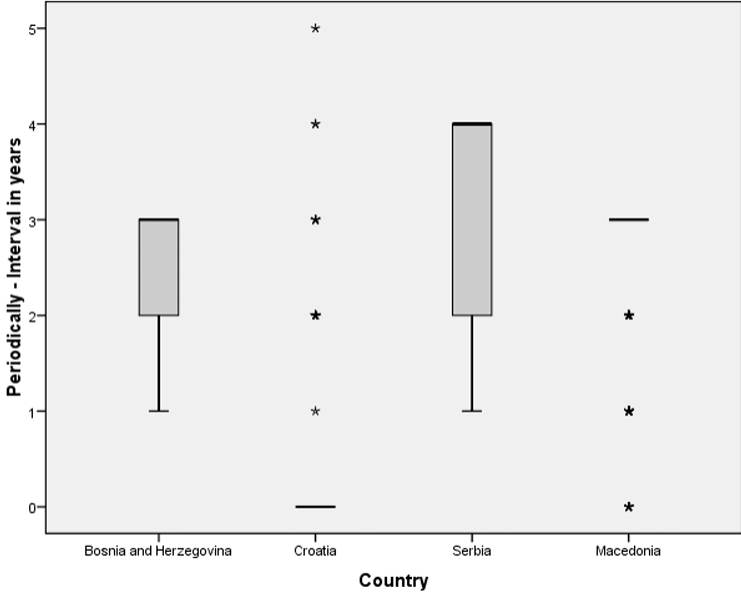


Figure 6.23. Intervals of harvested wood (in years).

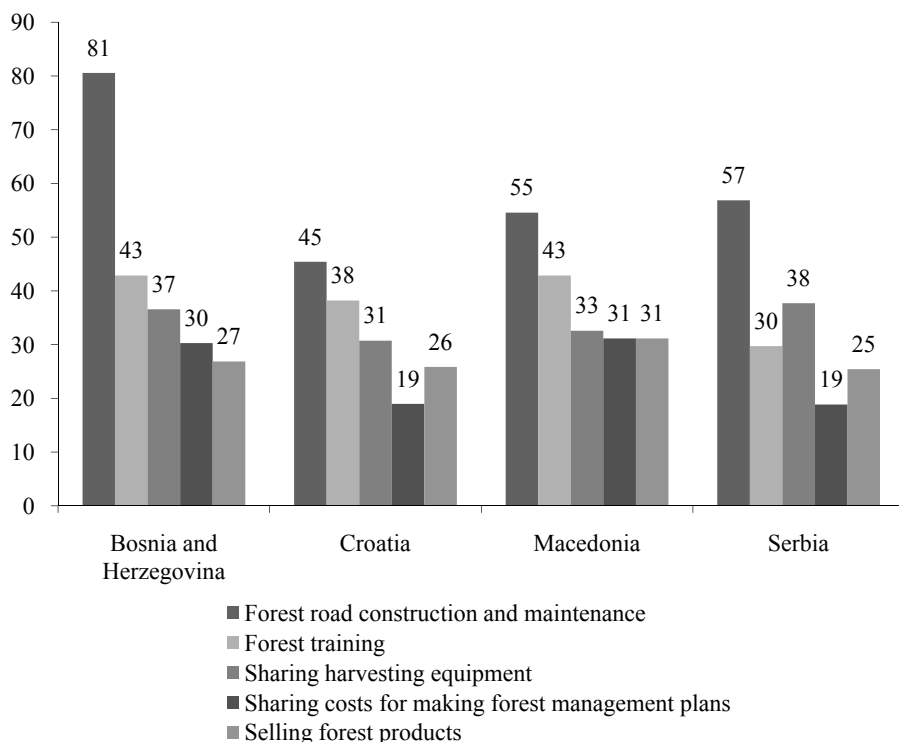


Figure 6.24. Readiness to cooperate.

foremost in forest road construction and maintenance (Q26a). The second priority is cooperation in forest training (Q26d) for the respondents from Bosnia, Macedonia and Croatia and cooperation in sharing harvesting equipment (Q26a) for Serbian respondents.

With regard to single or joint ownership (Q36), there are significant differences between the four countries (Figure 6.25): single owners dominate in Macedonia and Serbia (more than 60%), followed by Croatia (54%) and B-H (44%). Shared forest property with relatives is found in 95% of forest properties in B-H and 65% in Macedonia. In Croatia, some 40% of shared forest property are shared between married couples, while in Serbia about the same percentage is shared with parents and relatives, respectively.

The distance from home to forest (Q37) is the shortest in B-H (less than 4 km). In the other countries distances vary between 7 and 10 km (Figure 6.26).

Regarding acquisition (Q41), forest properties are usually inherited (Figure 6.27). In Serbia, B-H and Macedonia, more than 90% of the forest properties are inherited and only 70% in Croatia. In rare cases, forest properties are bought – most often this is the case in Croatia (more than 10%).

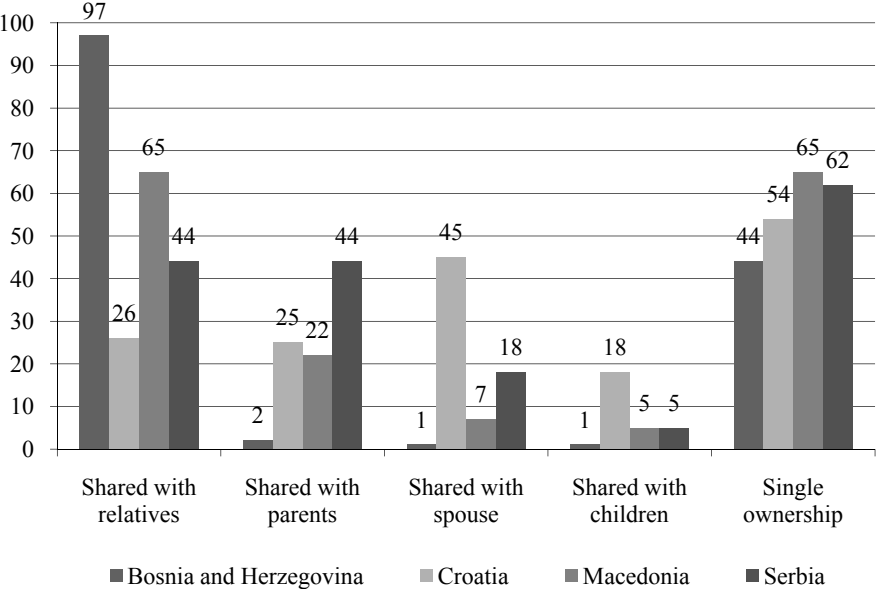


Figure 6.25. Forest ownership types.

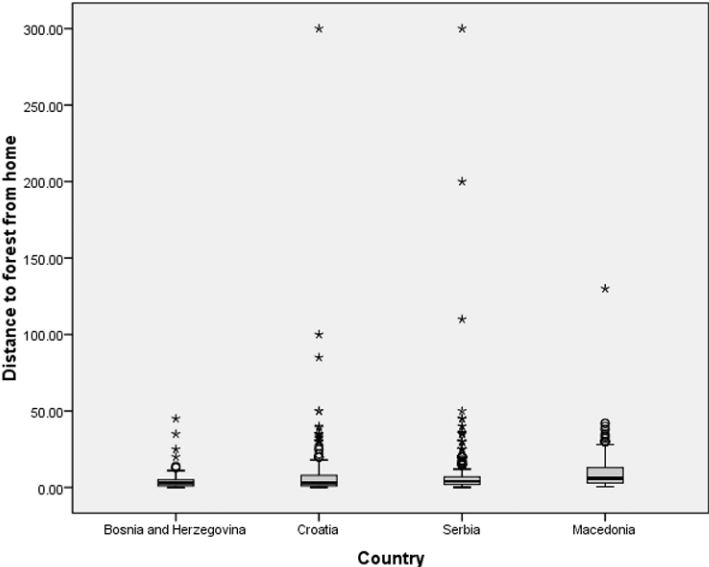


Figure 6.26. Distance to forest from home, in km.

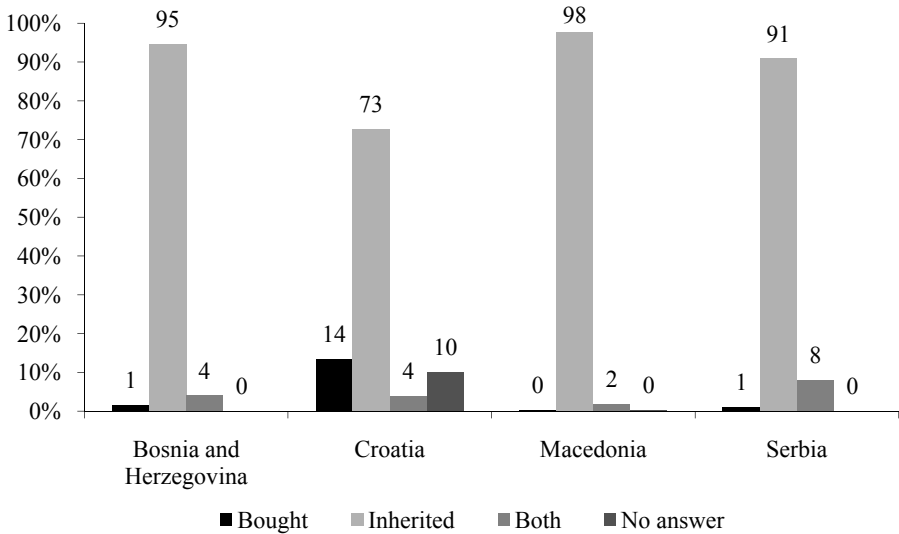


Figure 6.27. Forest acquisition.

The large majority of forest owners intend to convey the forest (Q42) to their children, in Serbia, Macedonia and B-H more than 95% of the respondents. However, in Croatia about 8% of the respondents intend to sell their forest in the future (Figure 6.28).

6.4 Institutional aspects (Q27–33)

The majority of forest owners know the boundaries (Q27) of their private forest property (about 90%); however, more than 10% of the respondents in Serbia do not know them with the percentage lowest in Macedonia. The differences between the four countries are significant (Figure 6.29).

In most cases, the boundaries are visible on the ground; however, 15% of the respondents indicate that they are not visible. Again there are significant differences between the four countries: the highest number of invisible boundaries is in Serbia; the lowest in Macedonia (Figure 6.30).

Ownership disputes (Q28) are existent in less than 15% of all cases; in Croatia 13% indicate such disputes, 11% in B-H, 6% in Macedonia and only 5% in Serbia (Figure 6.31).

With regard to awareness of forest regulations (Q29), 70% of forest owners are not aware of such regulations (Figure 6.32). There are, however, significant differences between the countries (Figure 6.32): in B-H more than 90% are not aware of forest regulations, in Serbia 68%, in Croatia 65% and 53% in Macedonia.

Contrary to Q29, the respondents suffer from restrictive legal regulations concerning private forest owners (Q30). The prescription to pay levies for timber

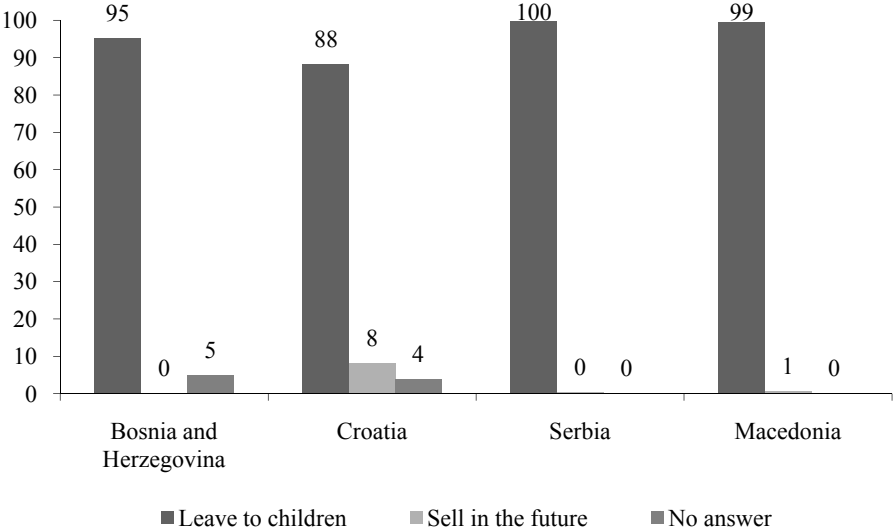


Figure 6.28. Conveyance of forest.

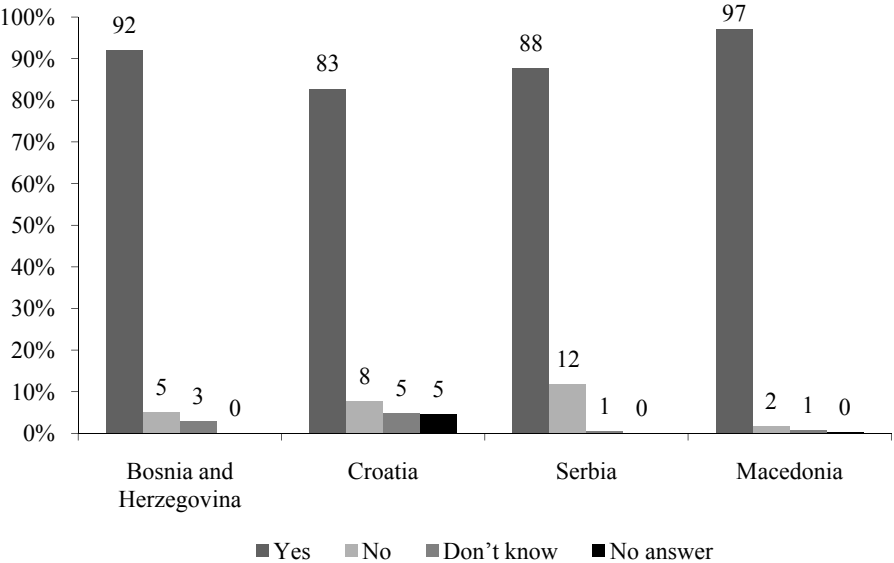


Figure 6.29. Forest owners' knowledge of the forest boundaries.

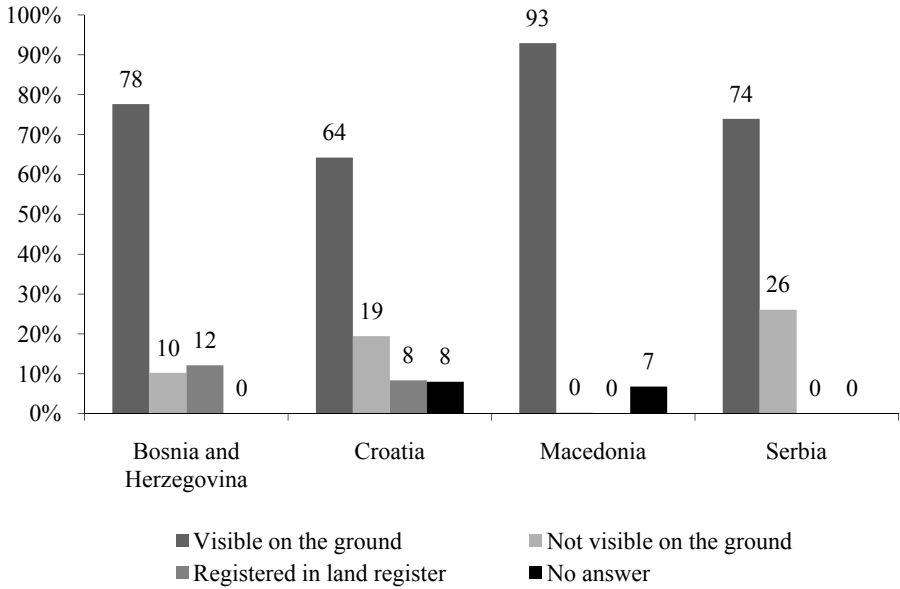


Figure 6.30. Boundaries' visibility.

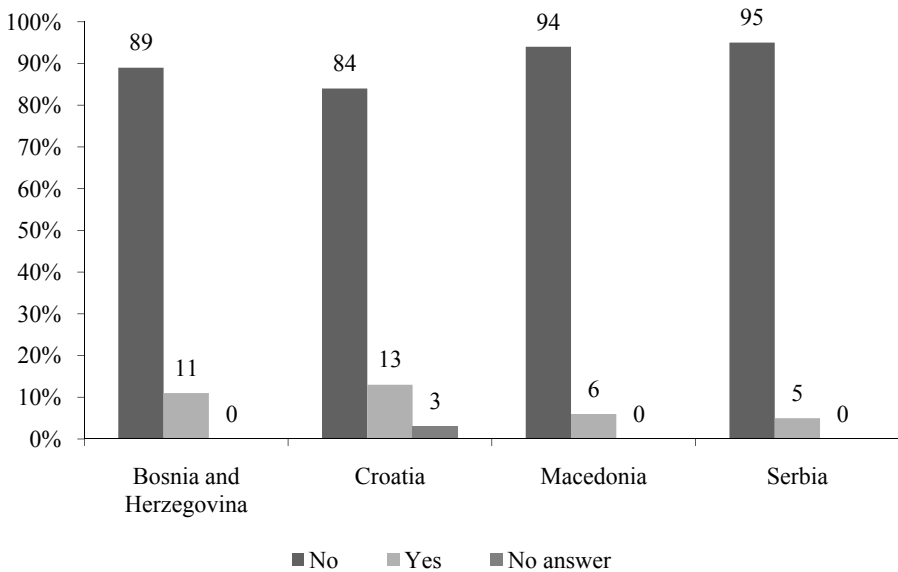


Figure 6.31. Ownership disputes.

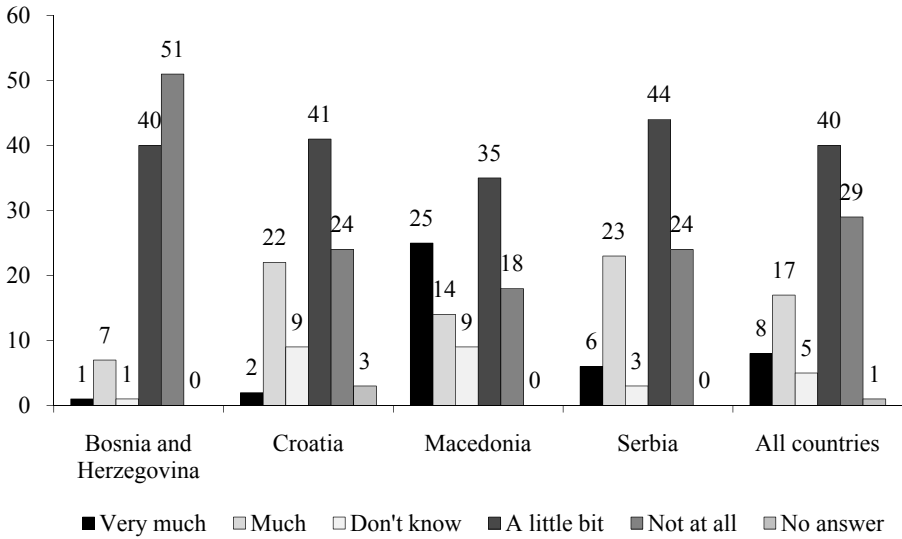


Figure 6.32. Awareness of forest regulations.

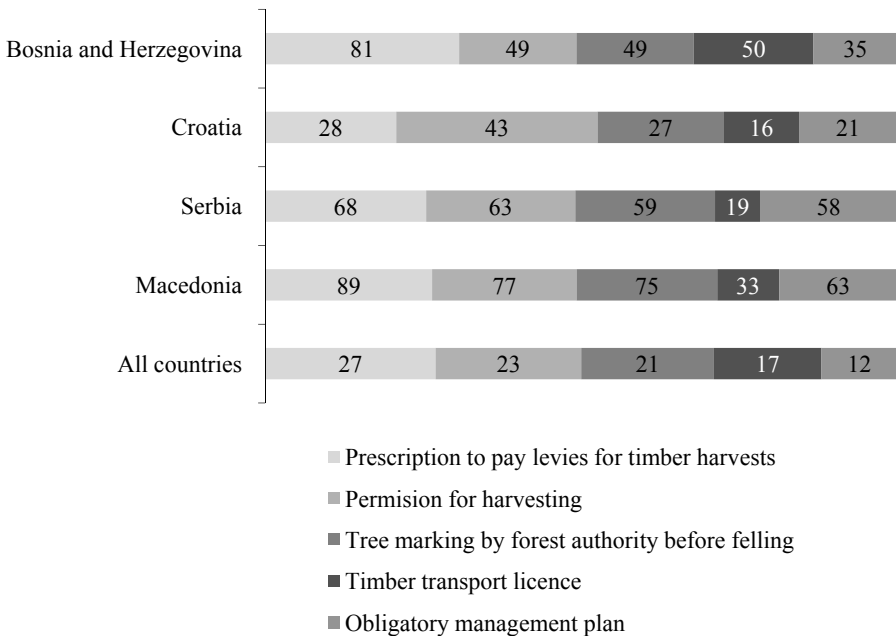


Figure 6.33. Most restrictive legal regulations.

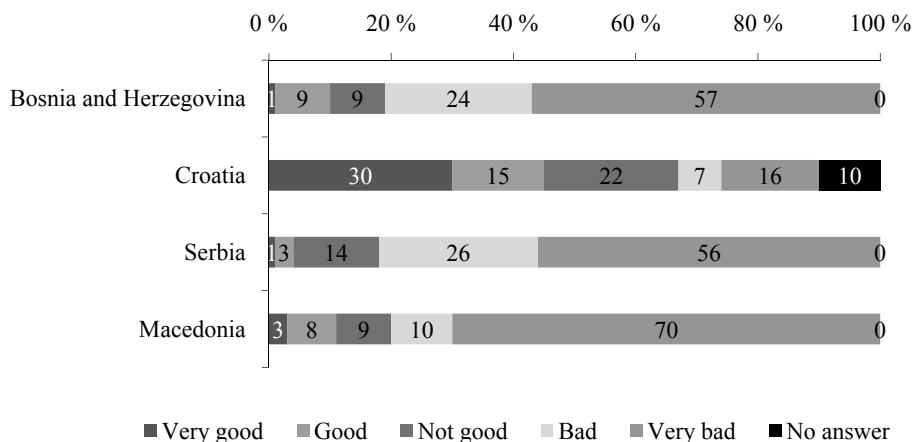


Figure 6.34. Assessment of the quality of information on forest management from Public Forest Administration (PFA).

harvests and permits for harvesting and tree marking by the forest authority before felling are indicated as the most restrictive (Figure 6.33). The perception of individual legal regulations significantly varies in the four countries (Figure 6.33): the prescription to pay levies for timber harvests has priority in Macedonia (89%), Serbia (68%) and B-H (81%), while the permit for harvesting has priority in Croatia (43%).

The respondents find the quality of information on forest management obtained from public forest administration, the state forest enterprise, private forest owners' interest associations and other NGOs (Q31) mainly very bad. The level of dissatisfaction varies significantly between the countries.

Regarding the quality of information obtained from public forest administration, 81% of Bosnian forest owners consider it as bad or very bad; this is similar to Serbia and Macedonia where 82% and 80% of the respondents consider information from PFA as bad or very bad, respectively. However, 45% of Croatian owners consider the information from PFA as good or very good (Figure 6.34).

Regarding information from the state forest enterprise, the majority of respondents from B-H (83%) and Macedonia (80%) consider it as bad or very bad; Serbian (38%) and Croatian (14%) forest owners consider it as good or very good (Figure 6.35).

Regarding information from NGOs, 98% of the respondents in Serbia and 99% in B-H consider it as bad or very bad while the percentage in Macedonia is 82%. In Croatia, 19% of forest owners consider it good or very good (Figure 6.36).

The effects of existing forest regulations on the benefits from the forest (Q32) are assessed differently from country to country. In Croatia, 23% of the respondents are of the opinion that the regulations are not so severe; however, 46% of the Bosnian, 64% of the Macedonian and 37% of the Serbian owners disagree (Figure 6.37).

Regarding subsidies from public forest administration (Q33), not one owner from B-H has ever received subsidies; however, several forest owners from other

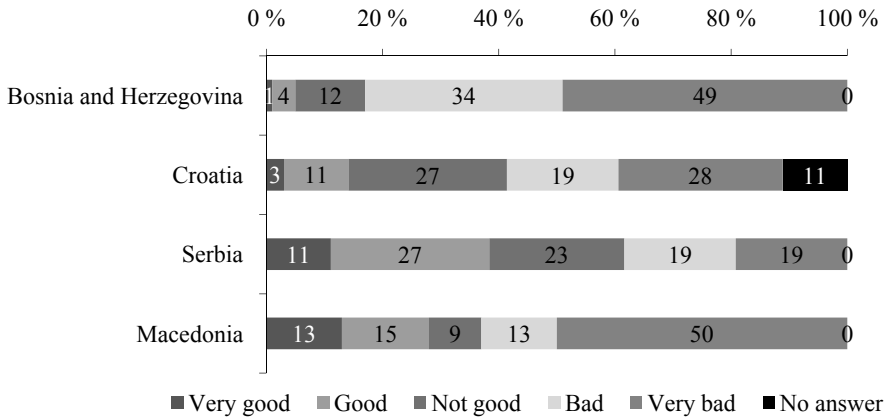


Figure 6.35. Assessment of the quality of information on forest management from State Forest Enterprise (SFE).

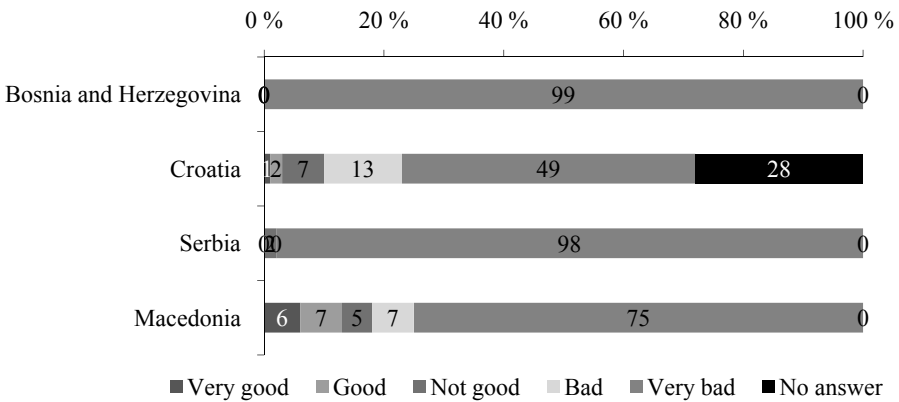


Figure 6.36. Assessment of the quality of information on forest management from NGOs.

countries (0.8–6%) reported on their receipt. The highest share of forest owners who received subsidies is in Serbia (6%) and Croatia (3%); in Macedonia less than 1% received some form of subsidy (Figure 6.38).

6.5 Attitudes (Q2 – 18)

When private forest owners seek information on forest management (Q2), 37% of them address their questions to the state forest enterprise; more than 20% to the public forest administration; and more than 10% do not raise any questions. The situation

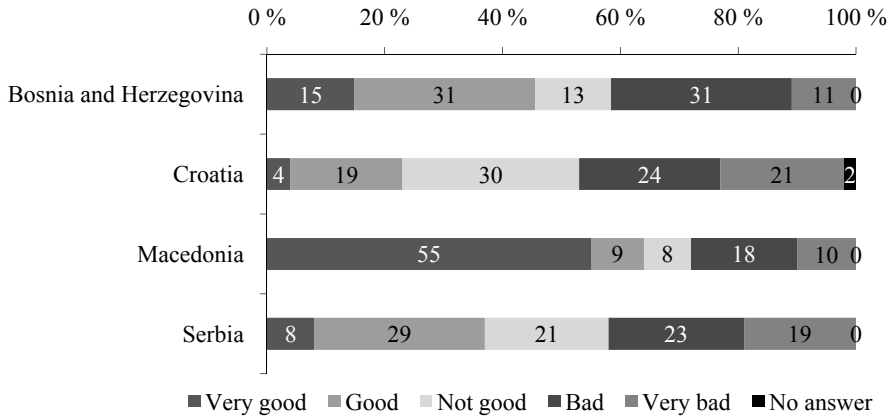


Figure 6.37. Assessment of the effects of existing forest regulations on the benefits from the forest.

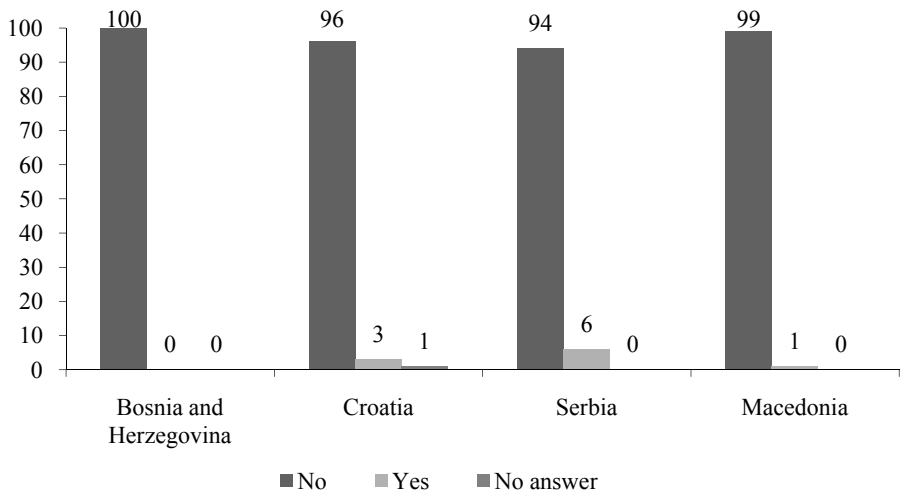


Figure 6.38. Receipt of subsidies.

in the countries is significantly different. The majority of Serbian and Macedonian forest owners receive information from state forest enterprises and Croatian and Bosnian owners from public forest administration. There is a significant share who use relatives and neighbouring forest owners as a source of information in B-H and Croatia (Figure 6.39).

Regarding the representation of private forest owners' interests by the public forest administration, the state forest company and private forest owners' interest associations (Q3), most respondents are not very satisfied. However, more than 20%

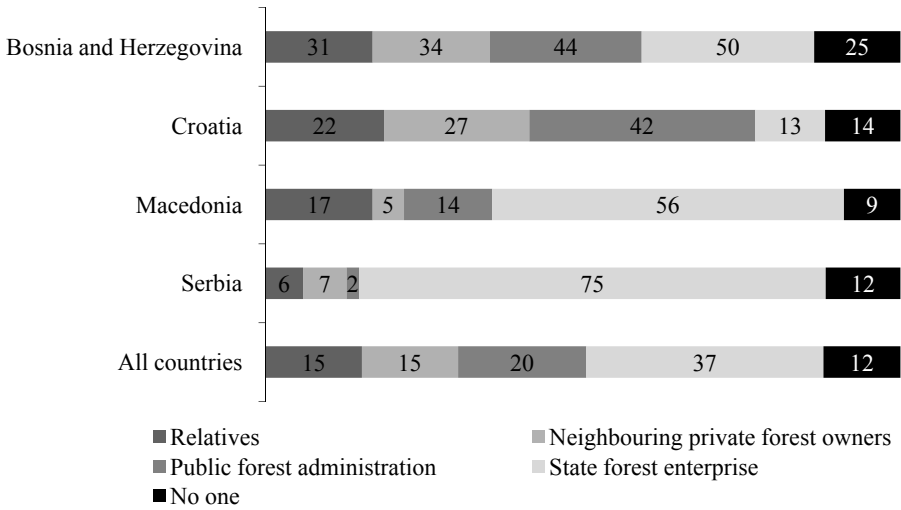


Figure 6.39. Sources for information on forest management.

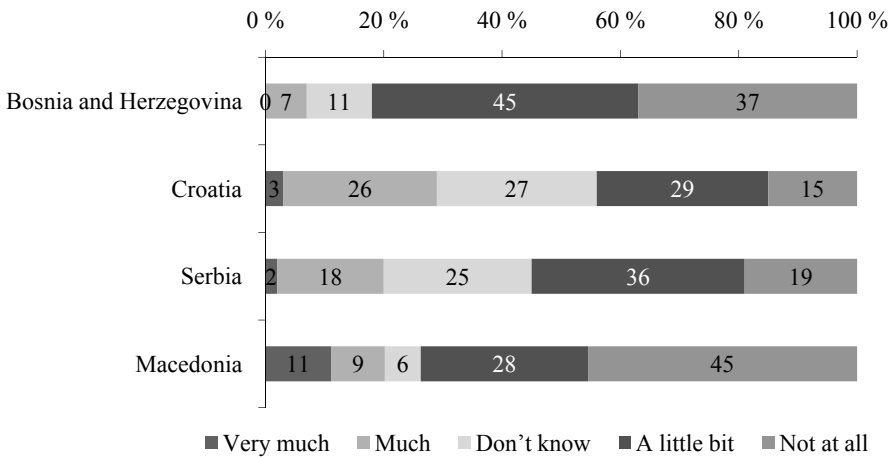


Figure 6.40. Satisfaction with present interest representation.

of forest owners from Macedonia, Serbia and Croatia are very satisfied or satisfied (Figure 6.40).

In general, the respondents lack a private forest owners’ interest association for forest management or extension service (Q4); the intensity of their need differs between countries. Macedonian (74%) and Bosnian (77%) forest owners lack the PFOA most compared to Serbia (51%) and Croatia (45%) (Figure 6.41).

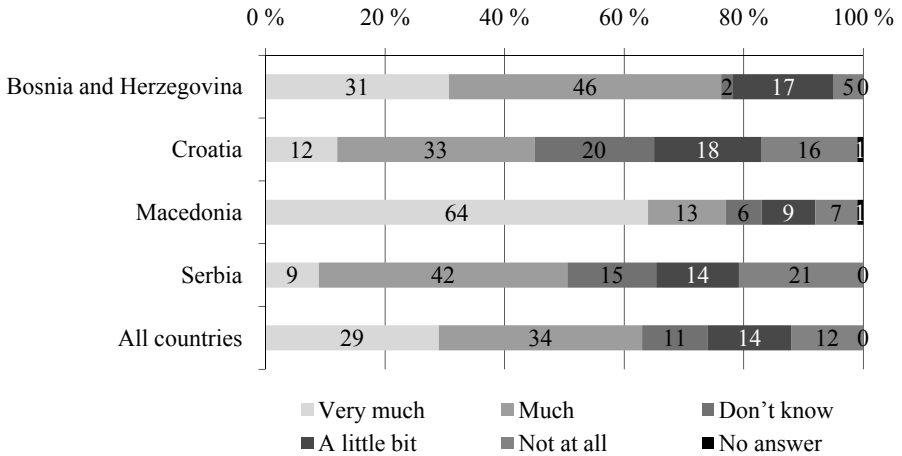


Figure 6.41. Lack of an interest association for forest management.

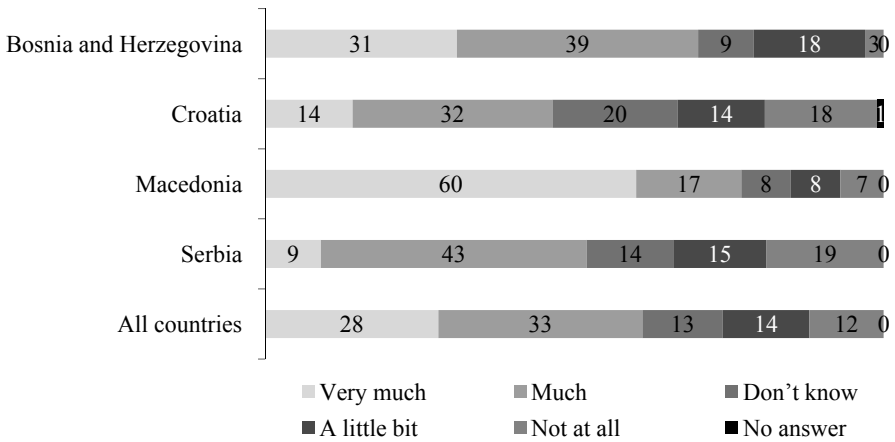


Figure 6.42. Lack of an interest association for lobbying.

Similarly, the respondents lack a private forest owners' interest association for lobbying their interests (Q5) in the political system. The percentage of those lacking lobbying activities of a PFOA is highest in Macedonia (77%), followed by B-H (70%) and Serbia (52%); the percentage is lowest in Croatia (46%) (Figure 6.42).

As shown in Figure 6.43, the majority of forest owners do not address public forest administration, state forest enterprises and PFOA when it comes to problems to be resolved (Q6). This is especially the case in B-H where 64% answered 'not at all', followed by Croatia (46%), Serbia (42%) and Macedonia (41%). The largest

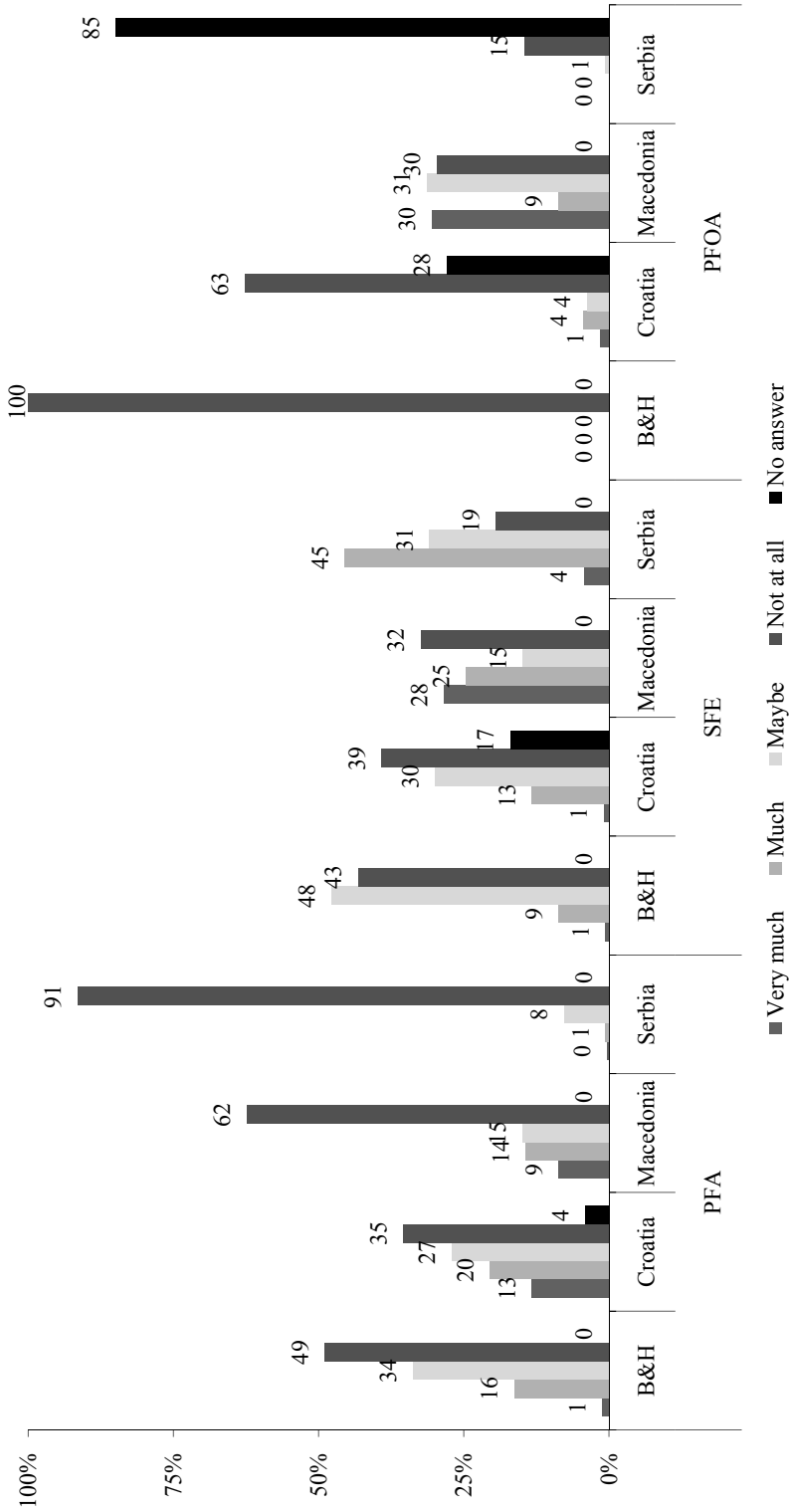


Figure 6.43. Institutions addressed for problems in forest management.

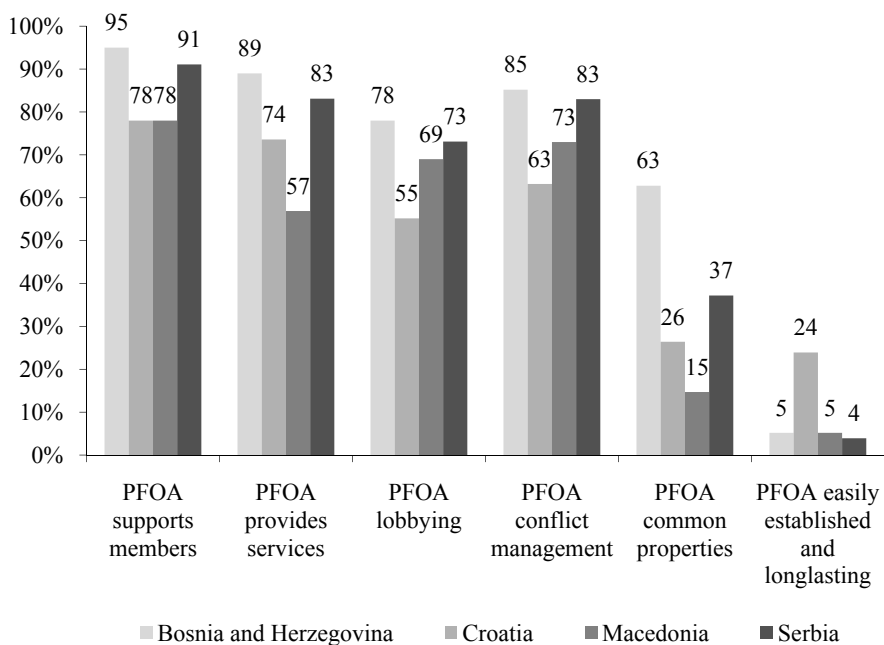


Figure 6.44. Answers to knowledge questions, %.

percentage of forest owners who do address those institutions is found in Macedonia (38%) and in other countries from 18% in Croatia to 9% in B-H.

In order to determine whether the private forest owners are familiar with the tasks of private forest owners' interest associations (Q7), the following 'knowledge questions' were raised. The answers differ significantly among the four countries (Figure 6.44):

- 'PFOA supports its members': endorsed by 95% from Serbia and B-H, and by 80% from Croatia and Macedonia,
- 'PFOA provides services in forest management': endorsed by more than 80% in B-H and Serbia, 70% in Croatia and 55% in Macedonia
- 'PFOA represents the interests of PFOs': endorsed by more than 70% in B-H, Macedonia and Serbia, but 54% in Croatia
- 'PFOA serves for conflict management': majority supports
- 'PFOA is a shared common property': majority disagrees
- 'PFOA is easily to be established': majority disagrees

Regarding expected services in forest management from a PFOA (Q8), most forest owners from Serbia expect services in advice in silviculture (86%), followed by advice in harvesting (73%) and support in forest road construction and maintenance (73%). The situation is similar in Macedonia, while owners from B-H first of all expect services in forest road construction (82%) and support in the provision of subsidies (76%). In Croatia, owners expect most advice in harvesting (43%),

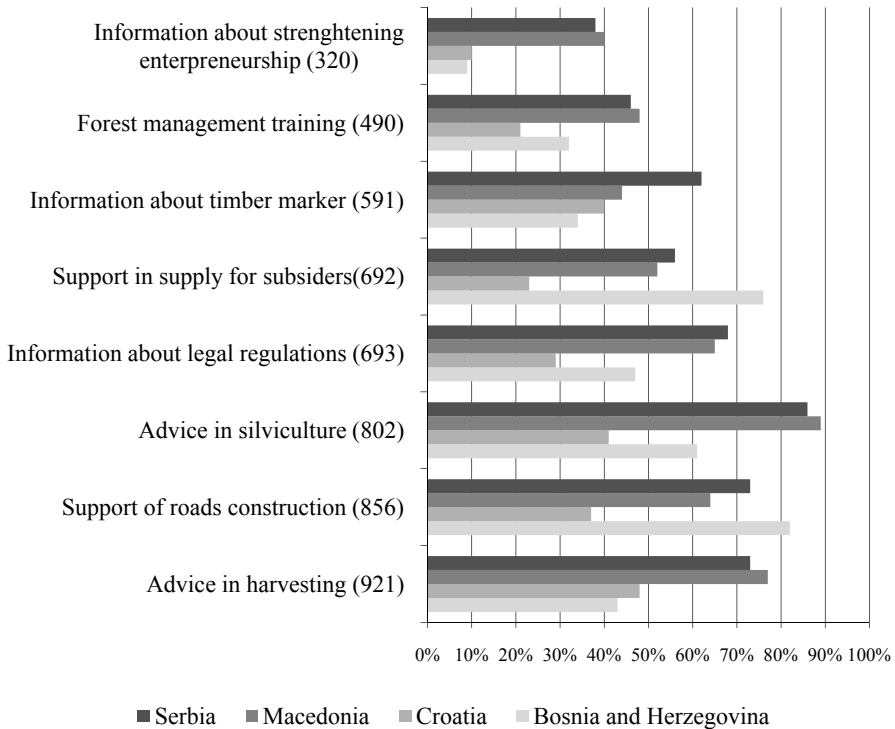


Figure 6.45. Expected services of a PFOA for improving forest management.

followed by advice in silviculture (41%) and information on the timber market (40%) (Figure 6.45).

Regarding expected services of a PFOA in interest representation (Q9), most private forest owners from Serbia expect the provision of subsidies (84%), followed by tax breaks and exemptions (72%) and the reformulation of the Forest Law (60%). Macedonian forest owners expect the reformulation of the forest law (94%), tax breaks and exemptions (60%) as well as the provision of subsidies (53%). The situation is similar in B-H with a slight difference in the third priority – the solution of forest cadastre problems (55%). Croatian private forest owners expect the provision of subsidies (68%), the solution of cadastral problems (31%) and the opening of new markets (30%) from a PFOA (Figure 6.46).

Regarding membership in a private forest owners' interest association (Q14), the highest rate of membership was found in Macedonia (about one third of the body). In Serbia and Croatia, the membership rate is much lower, while in B-H no respondent is a member of a private forest owners' interest association (Figure 6.47).

The respondents indicate the following preconditions for joining a private forest owners' interest association voluntarily (Q15): economic advantages for members (31%); positive performance of association (28%); no or very low membership fee (26%); and independence of state administration (15%). There are significant

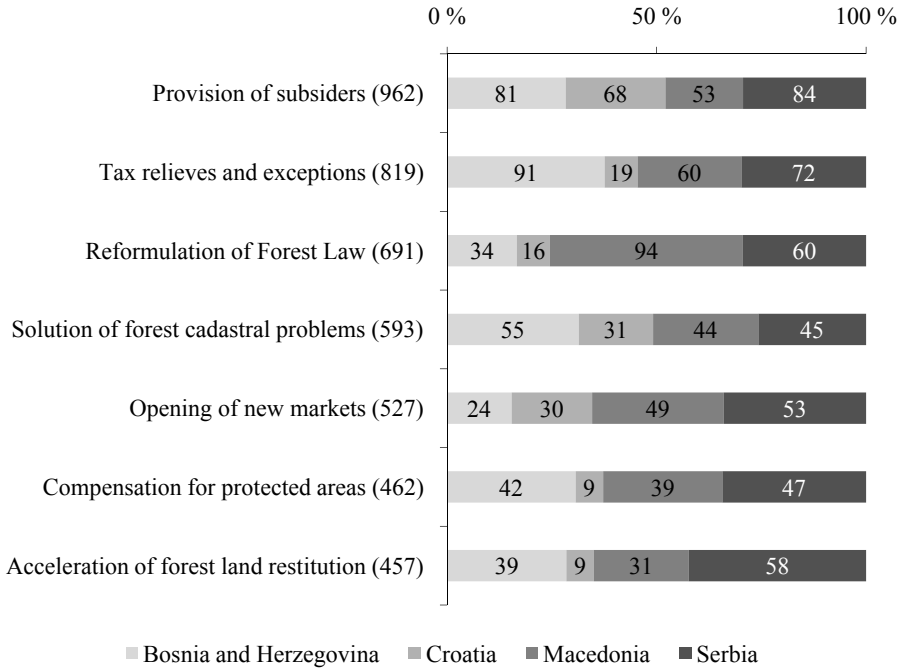


Figure 6.46. Expected activities of a PFOA in interest representation.

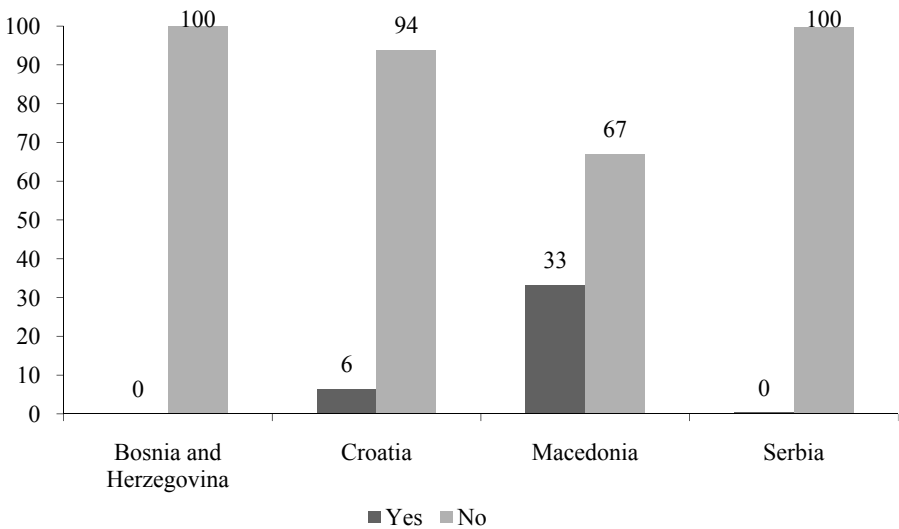


Figure 6.47. Membership in a private forest owners' interest association.

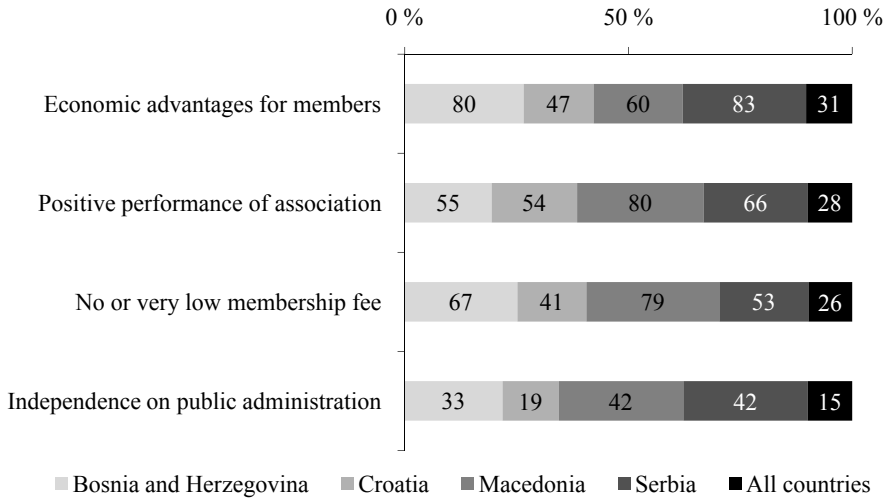


Figure 6.48. Preconditions for membership in PFOA.

differences between the countries (Figure 6.48): Bosnian (80%) and Serbian (83%) respondents prefer economic advantages; Croatian respondents prefer positive performance (54%); and Macedonian respondents favour positive performance (80%) and no or very low membership fees (79%).

With regard to the readiness of the respondents to engage themselves in the formation of a private forest owners' interest association (Q16), one third is very much prepared but more than 25% of the respondents are not prepared. The situation differs significantly between the four countries (Figure 6.49): some 50% of Bosnian owners and one third of the respondents from Macedonia and Croatia are prepared to engage themselves; however, in Serbia only less than one third of the respondents are prepared.

There are also significant differences related to compulsory membership (Q17). This idea is supported by 63% of Bosnian, 47% of Macedonian, 37% of Croatian and 29% of Serbian respondents (Figure 6.50).

When the respondents are asked about their pro and contra arguments regarding compulsory membership in their interest association (Q18), their reactions are presented below (Figure 6.51–6.55).

Regarding the restriction of personal freedom (Q18a), more than 65% of Bosnian respondents disagree while only about 30% of Croatian and Serbian respondents disagree.

Concerning the argument that an interest association better serves the interests of members (Q18b), 78% of the Bosnian, 52% of the Croatian, 42% of the Macedonian and 37% of the Serbian respondents endorse this argument.

The statement that an interest association provides better services for its members (Q18c) is similarly supported as the previous one.

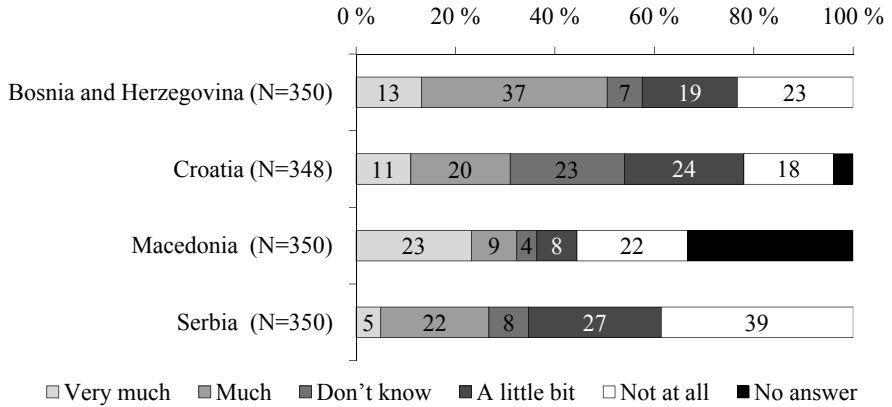


Figure 6.49. Engagement in the formation of a forest owners' interest association.

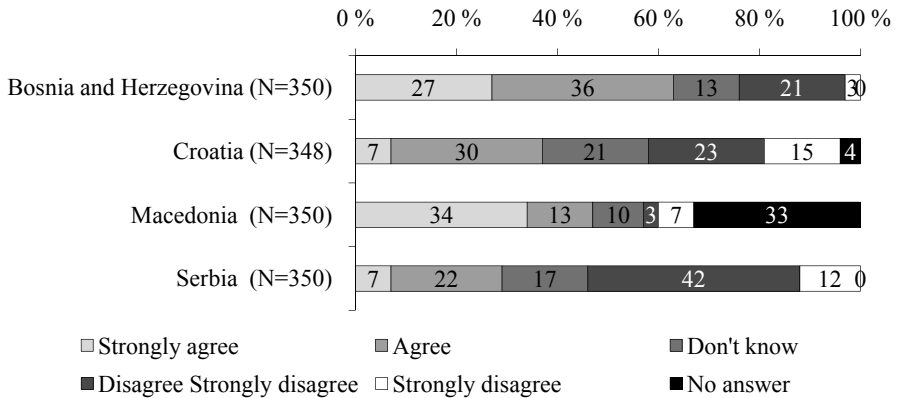


Figure 6.50. Support of compulsory membership.

More than 60% of Bosnian respondents believe that private forest owners' interest associations do not fit in with the national political system (Q18d); the respondents of the other three countries share the same opinion but with smaller percentages.

The strongest belief that obligatory membership increases the political strength of private forest owners (Q18e) is expressed by Bosnian respondents (66%), with moderate agreement from Macedonian (39%) as well as Croatian and Serbian respondents (27% respectively).

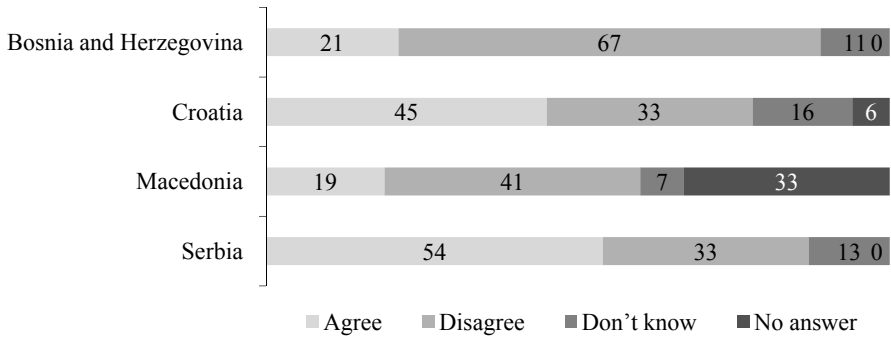


Figure 6.51. Does compulsory membership represent a restriction of personal freedom?

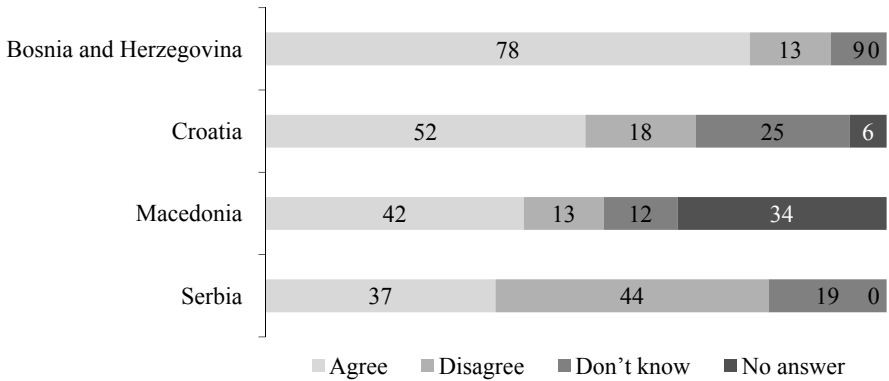


Figure 6.52. Compulsory membership serves the interest of members better.

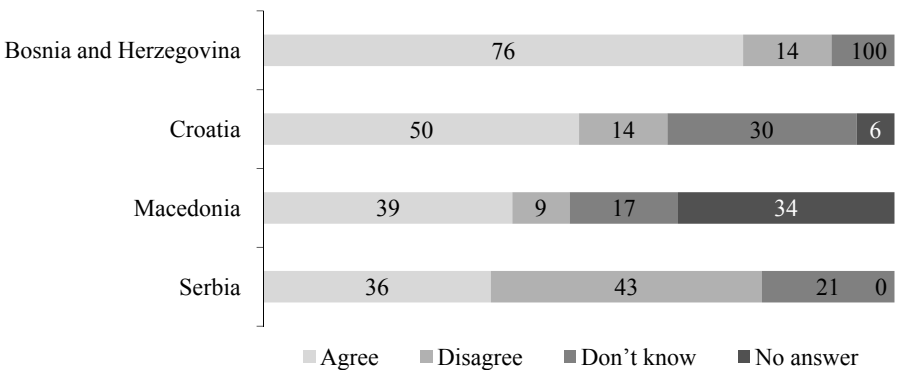


Figure 6.53. Compulsory membership provides better services for the members.

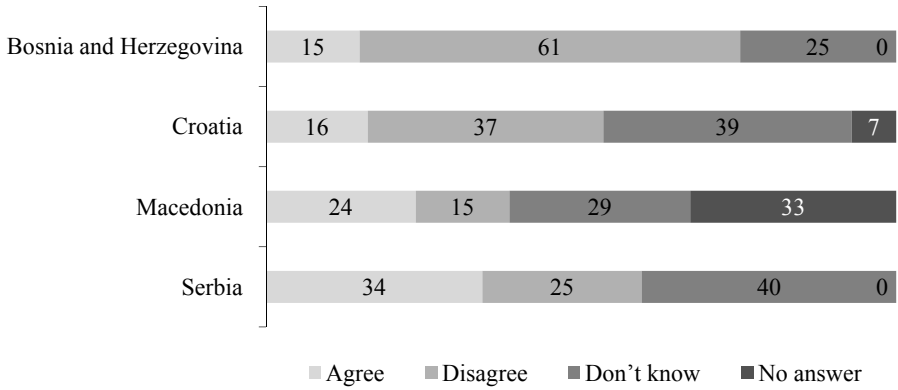


Figure 6.54. Compulsory membership does not fit in the national political system.

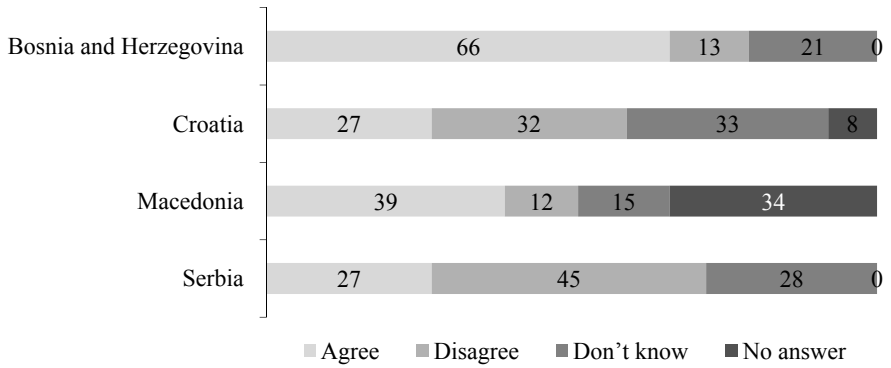


Figure 6.55. Compulsory membership increases political strength of private forest owners.

Annex 1. Main results (country percentages or means and standard deviation SD) of the survey of private forest owners in Bosnia and Herzegovina (BH), Croatia (C), Macedonia (M), Serbia (S) and Total (T)¹

Question	Percentage* or Mean/SD
Q1: How much do you like your forest? A lot (1); A little (2); Don't know; (3); Not much (4); Not at all (5)	(% 1-2-3-4-5) BH: 85-14-0-1-0 C: 84-8-5-2-1 M: 98-1-0-1-0 S: 94-5-0-1-0 T: 90-7-2-1-0
Q2: Who do you contact for additional information on managing your forest? <i>(More than one answer possible)</i> a) Relatives b) Neighbouring private forest owners c) Public forest administration d) State forest enterprise e) Private forest owners' interest association (PFOA) f) Professional journals g) No one h) Other (please specify)	(% BH-C-M-S-T) 31-21-11-6-17 34-26-3-8-18 44-40-9-2-24 50-13-36-75-43 0-0-0-0-0 0-0-0-0-0 25-14-6-13-14
Q3: Are the interests of private forest owners appropriately represented in your country? Very much (1); Much (2); Don't know (3); A little; (4) Not at all (5)	(% 1-2-3-4-5) BH: 0-7-11-45-37 C: 3-26-27-29-15 M: 12-9-6-28-45 S: 2-18-25-36-19 T: 4-15-17-35-29
Q4: Do you lack an interest association of private forest owners which supports you in managing your forest properly? Very much (1); Much (2); Don't know (3); A little (4); Not at all (5)	(% 1-2-3-4-5) BH: 0-31-46-2-17-4 C: 1-12-33-20-18-16 M: 1-64-13-6-9-7 S: 0-8-42-15-14-21 T: 0-29-34-11-14-12
Q5: Do you lack an interest association of private forest owners which represents the interests of all private forest owners by lobbying policy decision makers? Very much (1); Much (2); Don't know (3); A little (4); Not at all (5)	(% 1-2-3-4-5) BH: 0-31-39-9-18-3 C: 1-14-33-20-14-18 M: 0-60-17-8-8-7 S: 0-9-43-14-15-19 T: 0-28-33-13-14-12

* No answers equal the remainder to 100 percent

<p>Q6: Which institution do you like to address when you have forest problems to solve?</p> <p>a) Public forest administration: Very much (1) (2) (3) (4) Not at all</p> <p>b) State forest enterprise: Very much (1) (2) (3) (4) Not at all</p> <p>c) Private forest owners' interest association, if available: Very much (1) (2) (3) (4) Not at all</p>	<p>a) (% 1-2-3-4) BH: 1-16-34-49 C: 13-20-27-35 M: 9-14-15-62 S: 0-1-8-91 T: 6-13-21-60</p> <p>b) (% 1-2-3-4) BH: 1-9-48-43 C: 1-13-30-39 M: 28-24-15-32 S: 4-45-31-19 T: 8-23-31-33</p> <p>c) (% 1-2-3-4) BH: 0-0-0-100 C: 1-4-4-63 M: 30-9-31-29 S: 0-0-1-15 T: 8-3-9-52</p>
<p>Q7: Do you agree with the following description of a private forest owners' interest association?</p> <p>a) The main objective is the support of members: Agree (1); Disagree (2); Don't know (3)</p> <p>b) They supply all kinds of services for efficient forest management: Agree (1); Disagree (2); Don't know (3)</p> <p>c) They represent the members' interests by lobbying state institutions: Agree (1); Disagree (2); Don't know (3)</p> <p>d) They are shared private forest properties: Agree (1); Disagree (2); Don't know (3)</p> <p>e) They contain problems to reach common solutions acceptable to the majority of members: Agree (1); Disagree (2); Don't know (3)</p> <p>f) They are easy to establish in the long term: Agree (1); Disagree (2); Don't know (3)</p>	<p>a) (% 1-2-3) BH: 95-3-2 C: 79-6-13 M: 78-5-17 S: 91-2-7 T: 86-4-10</p> <p>b) (% 1-2-3) BH: 86-3-11 C: 74-5-18 M: 57-16-27 S: 83-3-14 T: 75-7-17</p> <p>c) (% 1-2-3) BH: 78-9-13 C: 55-12-30 M: 68-12-20 S: 73-3-23 T: 69-9-22</p> <p>d) (% 1-2-3) BH: 18-64-18 C: 42-27-27 M: 60-13-27 S: 33-39-28 T: 38-36-25</p> <p>e) (% 1-2-3) BH: 85-1-14 C: 65-9-22 M: 72-7-21 S: 84-3-13 T: 77-5-17</p> <p>f) (% 1-2-3) BH: 56-7-35 C: 30-26-37 M: 52-7-22 S: 67-4-29 T: 56-11-31</p>

<p>Q8: Which services (in detail) do you expect from a private forest owners' interest association in order to improve forest management in your forest?</p> <p>a) Advice in silviculture b) Advice in harvesting c) Information on the timber market d) Information on legal regulations e) Information on strengthening entrepreneurship related to wood and non-wood products f) Support of forest roads construction and maintenance g) Forest management training h) Support in preparing the necessary documentation to get subsidies i) Other (please specify)</p>	<p>(% BH-C-M-S-T)</p> <p>61-39-89-75-66 42-46-77-64-57 33-38-44-54-42 46-28-65-59-50 9-9-40-33-23</p> <p>81-36-64-64-61 32-20-48-40-35 75-23-49-52-50 3-0-0-0-1</p>
<p>Q9: Which lobbying activities (in detail) do you expect a private forest owners' interest association to carry out in the interest of private forest owners?</p> <p>a) Reformulation of the Forest Law b) Provision of subsidies c) Opening new markets d) Tax breaks and exceptions e) Compensation for protected areas f) Solution of forest cadastral/land register problems g) Acceleration of forest land restitution h) Other (please specify)</p>	<p>(% BH-C-M-S-T)</p> <p>34-16-94-54-49 81-66-76-53-69 24-30-49-48-3839 90-19-60-65-59 42-9-39-43-33 55-30-44-41-42 39-9-31-52-33 1-0-0-0-1</p>
<p>Q10: Forest services for private forest owners, such as advice in silviculture, harvesting and the timber market can be provided by the following institutions; please rank them:</p> <p>a) Public forest administration: first (1), second (2), third (3)</p> <p>b) State forest enterprise: first (1), second (2), third (3)</p> <p>c) Private forest owners' interest association: first (1), second (2), third (3)</p>	<p>a) (% 1-2-3) BH: 40-31-29 C: 73-19-6 M: 8-40-52 S: 9-32-59 T: 32-30-37</p> <p>b) (% 1-2-3) BH: 19-48-32 C: 15-37-44 M: 33-44-23 S: 54-44-2 T: 30-43-25</p> <p>c) (% 1-2-3) BH: 40-21-39 C: 11-40-46 M: 58-25-37 S: 37-25-39 T: 37-25-37</p>

<p>Q11: Forest services for private forest owners, such as advice in silviculture, harvesting and the timber market can be provided by the following institutions; please rate them:</p> <p>a) Public forest administration: Most (1) (2) (3) (4) (5) least favoured</p> <p>b) State forest enterprise: Most (1) (2) (3) (4) (5) least favoured</p> <p>c) Private forest owners' interest association: Most (1) (2) (3) (4) (5) least favoured</p>	<p>a) (% 1-2-3-4-5) BH: 7-24-19-24-26 C: 40-24-24-3-5 M: 8-11-13-18-50 S: 4-13-22-30-32 T: 14-18-20-19-28</p> <p>b) (% 1-2-3-4-5) BH: 3-18-17-39-23 C: 5-17-34-18-19 M: 15-15-29-14-26 S: 33-28-16-12-11 T: 14-20-24-21-20</p> <p>c) (% 1-2-3-4-5) BH: 20-18-6-14-42 C: 8-18-32-17-19 M: 47-9-22-7-15 S: 13-31-23-21-11 T: 22-19-20-15-22</p>
<p>Q12: The representation of private forest owners' interests by lobbying political institutions can be carried out by the following institutions; please rank them:</p> <p>a) Public forest administration: first (1); second (2); third (3)</p> <p>b) State forest enterprise: first (1); second (2); third (3)</p> <p>c) Private forest owners' interest association: first (1); second (2); third (3)</p>	<p>a) (% 1-2-3) BH: 45-36-19 C: 50-38-9 M: 6-48-45 S: 5-24-71- T: 27-37-36</p> <p>b) (% 1-2-3) BH: 5-54-41 C: 15-27-54 M: 32-39-29 S: 31-61-8 T: 21-45-33</p> <p>c) (% 1-2-3) BH: 50-10-40 C: 31-32-33 M: 62-12-25 S: 63-16-21 T: 52-17-30</p>
<p>Q13: The representation of private forest owners' interests by lobbying political institutions can be carried out by the following institutions; please rate them:</p> <p>a) Public forest administration: Most (1) (2) (3) (4) (5) least favoured</p> <p>b) State forest enterprise: Most (1) (2) (3) (4) (5) least favoured</p> <p>c) Private forest owners' interest association: Most (1) (2) (3) (4) (5) least favoured</p>	<p>a) (% 1-2-3-4-5) BH: 6-27-28-19-21 C: 25-27-33-6-5 M: 4-12-15-21-49 S: 3-10-20-35-32 T: 9-19-24-20-27</p> <p>b) (% 1-2-3-4-5) BH: 1-8-18-41-33 C: 7-14-34-17-22 M: 17-13-28-18-25 S: 19-32-22-14-13 T: 11-17-26-22-23</p> <p>c) (% 1-2-3-4-5) BH: 25-16-7-11-41 C: 19-22-28-14-12 M: 48-12-19-9-12 S: 33-37-15-9-7 T: 31-21-17-11-18</p>

<p>Q14: Are you a member of a private forest owners' interest association (1) or not (2)?</p> <p>If you are a member go to Q19</p>	<p>a) (% 1-2) BH: 0-100 C: 6-93 M: 33-67 S: 1-99 T: 10-90</p>
<p>Q15: If you are not a member of a private forest owners' interest association, let us assume that such an association will be established in your region by some promoters. Under which conditions are you prepared to join it voluntarily? (<i>More than one answer possible</i>)</p> <p>a) No or very low membership fee b) Independence from public administration c) Positive performance of association d) Economic advantages for its members e) Other (please specify)</p>	<p>(% BH-C-M-S-T) 19-11-15-13-59 9-5-8-10-33 16-14-15-17-63 23-12-11-21-68 0-0-0-0-0</p>
<p>Q16: Are you prepared to engage yourself in the establishment of a private forest owners' interest association in your region? Very much (1); Much (2); Don't know (3); A little (4); Not at all (5)</p>	<p>(% 1-2-3-4-5) BH:13-37-7-19-23 C: 11-20-23-24-18 M: 23-9-4-8-22 S: 5-22-8-27 T: 13-22-10-20-26</p>
<p>Q17: What do you think about the idea that all private forest owners automatically become members of a PFOA by law? Strongly agree (1); Agree (2); Don't know (3); Disagree (4); Strongly disagree (5)</p>	<p>(% 1-2-3-4-5) BH: 27-36-13-21-3 C: 7-30-21-23-15 M: 34-13-9-3-7 S: 7-21-21-17-42 T:19-25-15-22-9</p>
<p>Q18: What is your opinion regarding the following statements on obligatory membership of private forest owners in their interest association?</p> <p>a) Restriction of personal freedom: Agree (1); Disagree (2); Don't know (3)</p> <p>b) Interest association serves better the interests of members: Agree (1); Disagree (2); Don't know (3)</p> <p>c) Interest association provides better services for their members: Agree (1); Disagree (2); Don't know (3)</p> <p>d) Does not fit in the national political system: Agree (1); Disagree (2); Don't know (3)</p> <p>e) Obligatory membership increases the political strength of PFOs: Agree (1); Disagree (2); Don't know (3)</p>	<p>a) (% 1-2-3) BH: 21-67-11 C: 45-33-16 M: 19-41-7 S: 54-33-13 T: 35-43-12 b) (% 1-2-3) BH: 78-13-9 C: 52-17-25 M: 42-13-12 S: 37-44-19 T: 52-22-16 c) (% 1-2-3) BH: 76-14-10 C: 50-14-30 M: 39-9-17 S: 36-43-21 T: 51-20-19 d) (% 1-2-3) BH: 15-61-25 C: 16-37-39 M: 24-15-29 S: 34-25-40 T: 22-34-33 e) (% 1-2-3) BH: 66-13-21 C: 27-32-33 M: 39-12-15 S: 27-45-28 T: 40-26-24 f) (% 1-2-3)</p>

f) Other (please specify)	BH: 0-0-0 C: 4-0-2 M: 0-0-0 S: 0-0-0 T: 1-0-1
Q19: Please give the following silvicultural data about your forest:	a) (Mean/SD) BH: 3/11 C: 3/10 M: 2/2 S: 4/5 T: 3/8
a) Acreage in ha	
b) Don't know the acreage	b) (% BH-C-M-S-T) 3-17-6-1
c) Type of forest: High forest (1); Coppice (2); Mixed (3); Don't know (4)	c) (% 1-2-3-4) BH: 15-36-47-1 C: 17-24-38-55 M: 7-27-65-1 S: 19-63-14-3 T: 15-38-41-3
d) Species composition: Mainly coniferous (1); Mainly broadleaved (2); Mixed (3); Don't know (4)	d) (% 1-2-3-4) BH: 13-48-38-1 C: 5-58-11-2 M: 1-53-45-1 S: 2-88-10-0 T: 5-62-26-1
Q20: Is your forest altogether a gain or a burden for you or your family? Gain (1) (2) (3) (4) (5) Burden	(% 1-2-3-4) BH: 7-41-24-27-0 C: 20-18-36-15-6 M: 45-19-16-5-15 S: 21-26-35-15-3 T: 23-26-28-16-6
Q21a: Have you bought or sold any forests during the last 10 years?	a) (% 1-2) BH: 95-5 C: 88-9 M: 99-1 S: 94-6 T: 94-5
a) Purchases: No (1) or yes (2)	
b) If yes, please specify size in ha	b) (Mean/SD) BH: 0.3/4.4 C: 0.2/1.6 M: 0.0/0.0 S: 1.9/2.3 T: 0.2/2.7
c) Sales: No (1) or yes (2)	c) (% 1-2) BH: 98-2 C: 93-3 M: 100-0 S: 99-1 T: 98-1
d) If yes, please specify size in ha	d) (Mean/SD) BH: 0.5/0.3 C: 0.7/1.3 M: 0/0 S: 0/0 T: 0.7/0.9

<p>Q22: What is the main use of your forest? (<i>More than one answer possible</i>):</p> <p>a) Fuel wood for domestic use b) Saw logs for domestic use c) Fuel wood (including charcoal) for sale d) Industrial wood for sale e) Pasture f) Nature conservation g) Tourism h) Non-wood forest products (berries, mushrooms etc.) i) Hunting j) Other (please specify)</p>	<p>(% BH-C-M-S-T)</p> <p>23-22-25-24-93 7-7-5-9-28 2-3-1-5-12 3-4-1-3-11 5-0-1-3-9 0-1-0-3-5 1-0-0-0-2 2-1-3-5-11 3-0-1-4-9 0-0-0-0-0</p>
<p>Q23: Is your forest</p> <p>a) consolidated (1) or fragmented (2)?</p> <p>b) If fragmented, what is the number of parcels</p>	<p>a) (% 1-2) BH: 27-73 C: 35-65 M: 43-57 S: 14-86 T: 30-70</p> <p>b) (Mean/SD) BH: 3/1.6 C: 6/16 M: 3/2.1 S: 7/8.0 T: 5/9.0</p>
<p>Q24: To what extent does your forest contribute to your yearly household income in terms of returns from timber sale and domestic use?</p> <p>a) Timber sale: Very much (1); Much (2); Don't know (3); A little (4); Not at all (5)</p> <p>b) Domestic use: Very much (1); Much (2); Don't know (3); A little (4); Not at all (5)</p>	<p>a) (% 1-2-3-4-5) BH: 0-3-0-25-72 C: 1-7-5-37-44 M: 2-1-1-12-84 S: 3-5-0-17-74 T: 2-4-2-22-69</p> <p>b) (% 1-2-3-4-5) BH: 5-18-1-59-17 C: 12-36-5-26-8 M: 32-20-3-37-7 S: 13-37-1-41-8 T: 16-28-2-41-10</p>
<p>Q25: Do you cut trees every year or periodically?</p> <p>a) Every year: Yes (1) or no (2)</p> <p>b) If every year, how much (in m3)?</p> <p>c) Periodically; Yes (1) or no (2)</p> <p>d) If periodically, how much (in m3)?</p>	<p>a) (% 1-2) BH: 27-73 C: 31-69 M: 54-56 S: 81-19 T: 49-51</p> <p>b) (Means/SD) BH: 8/4 C: 13/13 M: 11/5 S: 17/27 T: 13/19</p> <p>c) (% 1-2) BH: 73-27 C: 47-53 M: 44-56 S: 10-90 T: 42-58</p> <p>d) (Means/SD) BH: 4/2 C: 2/3 M: 2/1</p>

<p>e) If periodically, which intervals (in years)?</p> <p>f) Not at all</p>	<p>S: 2/1 T: 3/2 e) (Means/SD) BH: 3/0 C: 0/0 M: 3/0 S: 4/1 T: 2/1 f) (%) BH: 0 C: 7 M: 0 S: 9 T: 4</p>
<p>Q26: Are you prepared to cooperate with other forest owners in the following activities?</p> <p>a) Sharing harvesting equipment: Very much (1); Much (2); Don't know (3); A little (4); Not at all (5)</p> <p>b) Sharing costs for making forest management plans: Very much (1); Much (2); Don't know (3); A little (4); Not at all (5)</p> <p>c) Selling forest products: Very much (1); Much (2); Don't know (3); A little (4); Not at all (5)</p> <p>d) Forest training: Very much (1); Much (2); Don't know (3); A little (4); Not at all (5)</p> <p>e) Forest road construction and maintenance: Very much (1); Much (2); Don't know (3); A little (4); Not at all (5)</p> <p>f) Others (please specify): Very much (1); Much (2); Don't know (3); A little (4); Not at all (5)</p>	<p>a) (% 1-2-3-4-5) BH: 5-31-8-32-23 C: 8-23-14-27-24 M: 27-6-11-15-41 S: 6-32-3-24-35 T: 11-23-9-25-31 b) (% 1-2-3-4-5) BH: 3-28-9-34-27 C: 2-17-14-23-33 M: 24-7-10-12-47 S: 1-18-15-29-37 T: 7-18-12-25-36 c) (% 1-2-3-4-5) BH: 3-23-13-22-38 C: 5-21-10-26-31 M: 22-9-11-12-46 S: 3-22-6-24-45 T: 8-19-10-21-40 d) (% 1-2-3-4-5) BH: 10-33-8-32-17 C: 6-32-11-25-20 M: 30-13-8-13-36 S: 5-25-6-30-34 T: 13-26-8-25-27 e) (% 1-2-3-4-5) BH: 47-34-1-13-5 C: 15-30-8-22-16 M: 42-12-4-8-33 S: 14-43-2-16-25 T: 30-30-4-15-20</p>
<p>Q27: Do you know the boundaries of your private forest property?</p> <p>a) Yes (1) or no (2)</p> <p>b) If yes, are the boundaries visible (1) or not visible (2) on the ground?</p> <p>c) If yes, are the boundaries registered (1) or not registered (2) in the land register?</p>	<p>a) (% 1-2) BH: 92-8 C: 83-12 M: 97-3 S: 88-12 T: 90-9 b) (% 1-2) BH: 78-10 C: 64-19 M: 93-0 S: 74-26 T: 78-13 c) (% 1-2) BH: 12-</p>

<p>d) If no, are there land register problems (1) or not (2)? (Please specify)</p> <p>e) Don't know</p>	<p>C: 8- M: 0- S: 0- T: 5- d) (% 1-2) BH: 17-83 C: 4-96 M: 0-100 S: 0-100 T: 96-4 e) (%) BH: 3 C: 5 M: 1 S: 1 T: 2</p>
<p>Q28: Have you had ownership disputes with other claimants during the last 10 years? a) Yes (1) or no (2) b) If yes, why?</p>	<p>a) (% 1-2) BH: 11-89 C: 13-84 M: 5-95 S: 6-94 T: 9-90</p>
<p>Q29. Are you aware of forest regulations concerning private forest owners? Very much (1); Much (2); Don't know (3); A little (4); Not at all (5)</p>	<p>(% 1-2-3-4-5) BH: 1-7-1-40-51 C: 2-22-9-40-24 M: 25-14-9-35-18 S: 6-23-3-44-24 T: 8-17-5-40-29</p>
<p>Q30: What, in your opinion, are the most restrictive legal regulations concerning private forest owners: a) Prescription to pay levies for timber harvests b) Permission for harvesting c) Tree marking by forest authority before felling d) Obligatory management plan e) Timber transport license f) Other (please specify)</p>	<p>(% BH-C-M-S-T) 81-27-89-53-63 49-40-77-59-54 49-26-75-46-49 50-15-33-15-28 35-20-63-45-41 7-9-0-1-4</p>
<p>Q31: How do you appreciate the quality of information about your forest management obtained from: a) Public forest administration: Very good (1) (2) (3)(4) (5) very bad b) State forest enterprise: Very good (1) (2) (3)(4) (5) very bad c) Private forest owners' interest association: Very good (1) (2) (3) (4) (5) very bad d) Other NGOs: Very good (1) (2) (3)(4) (5) very bad</p>	<p>a) (% 1-2-3-4-5) BH: 0-9-9-24-57 C: 30-15-22-7-16 M: 3-8-9-10-70 S: 1-3-14-26-56 T: 8-9-13-17-50 b) (% 1-2-3-4-5) BH: 1-4-12-34-49 C: 3-11-27-19-28 M: 13-15-9-13-50 S: 11-27-23-19-19 T: 7-14-18-21-37 c) (% 1-2-3-4-5) BH: 0-0-0-4-95 C: 3-4-13-15-46 M: 30-14-17-3-35 S: 1-3-1-4-91 T: 8-6-8-6-67 d) (% 1-2-3-4-5) BH: 0-0-0-0-99 C: 1-2-7-13-49 M: 6-7-5-7-75</p>

e) Other: (please specify) Very good (1) (2) (3)(4) (5) very bad	S: 0-0-0-2-98 T: 2-2-3-6-80
Q32. How severe are the effects of existing forest regulations on the benefits from your forest ? Very severe (1); Severe (2); Don't know (3); A little (4); Not at all (5)	(% 1-2-3-4-5) BH: 15-31-13-31-11 C: 4-19-30-24-21 M: 55-9-8-18-10 S: 8-29-21-23-19 T: 20-22-18-24-15
Q33: Did you ever receive subsidies from public forest administration (1) or not (2)? If yes, for which purposes?	(%1-2) BH: 0-100 C: 3-97 M: 1-99 S: 6-94 T: 2-98
Q34: Is the respondent male (1) or female (2)?	(%1-2) BH: 97-3 C: 75-25 M: 97-3 S: 93-7 T: 90-10
Q35: Age of the respondent (in years)	Means/SD BH: 53/11 C: -/- M: 53 /13 S: 54/ 14 T: 53/ 13
Q36: What is the percentage of the forest owned by you alone? a) 100% (1) or less than 100% (2) b) If it is less than 100%, with whom do you share the forest property: with wife/husband (1); with parents (2); with relatives (3); with children (4)? (<i>More than one answer possible</i>)	a) (% 1-2) BH: 44- C: 54- M: 65- S: 62- T: 56- b) (%1-2-3-4) BH: 1-1-97-1 C: 32-17-19-13 M: 7-22-66-5 S: 17-43-43-5 T: 14-19-58-6
Q37. How far away is your forest from your home (in km)?	(Means/SD) BH: 4 /4 C: 7/19 M: 10/10 S: 8/21 T: 7/16
Q38: How many inhabitants are there in the settlement (village, town, city) of your home: Less than 1,000 (1); 1,001 – 5,000 (2); 5,001 – 20,000 (3); more than 20,001(4)?	(% 1-2-3-4) BH: 85-13-2-1 C: 69-21-4-4 M: 5-69-20-6 S: 74-11-6-9 T: 58-29-8-5

Q39: What is your occupation? a) Farmer b) Entrepreneur c) Upper-level employee d) Lower-level employee e) Manual worker f) Student g) Unemployed h) Other (please specify)	(% BH-C-M-S-T) 9-27-17-30-21 4-7-5-7-6 3-3-10-0-4 17-19-21-7-16 11-15-15-11-13 1-1-0-0-1 27-7-32-14-20 27-20-31-0-19
Q40: What is your education? a) Lower elementary school b) Elementary school c) Vocational school d) High school e) Vocational college f) College or university g) Other (please specify)	(% BH-C-M-S-T) 7-12-3-12-8 24-25-23-30-25 30-5-24-10-17 30-47-31-42-37 5-4-8-7-6 3-7-11-1-6 0-0-0-0-0
Q41: Did you buy the forest (1) or did you inherit it (2)?	(% 1-2) BH: 1-95 C: 13-73 M: 0-98 S: 1-91 T: 4-89
Q42: Do you want to leave your forest to your children (1) or do you want to sell it in the near future (2)? If you want to sell it, why?	(% 1-2) BH: 95-0 C: 88-8 M: 99-1 S: 100-0 T: 96-2

Annex 2. Guideline for and lists of in-depth interviews with forest policy decision makers

Annex 2.1 Guideline for in-depth interviews with forest policy Decision makers

University of
Faculty of Forestry

Date:

Place:

GENERAL INFORMATION

This interview is an integral part of the research project PRIFORT, related to organizing private forest owners in Western Balkan countries: Bosnia-Herzegovina, Croatia, Macedonia and Serbia. The PRIFORT project is financed by the Ministry of Agriculture, Forestry, Environment and Water Management of the Republic of Austria and supported by the European Forest Institute (EFI).

The starting point of the PRIFORT project is the lack of voluntary forest owners' associations in Western Balkan countries, and its goal is to define the preconditions of interest for organizing private forest owners.

Overall, the goal of the interviews is to determine the attitudes of forest policy makers and the representatives of relevant institutions/organizations towards the formation of private forest owners associations in Bosnia-Herzegovina.

All answers of the respondents will only be used for research purposes; all respondents will remain anonymous.

PART I – INFORMATION ON THE RESPONDENT AND INSTITUTION/ORGANISATION

- Name of the institution/organisation:
- The respondent's function (position and duties)

PART II – OPENING QUESTION

1. According to official data, private forests in your country occupy about 20% of the total forest area. However, compared to EU countries, private forest owners in your country are not represented by independent interests associations.
 - a) How is the position of your institution/organization related to these facts?
 - b) Who currently represents private forests owners in your country forest policy?

PART III – THE ROLE OF PRIVATE FOREST OWNERS IN B-H

2. How do you evaluate the role of private forests owners in your country?
 - a) Do you believe that private forests owners can manage their forests in a sustainable way?
 - b) How does your institution/organization evaluate the role of private forests owners?
3. Are private forests owners a heterogeneous or homogeneous group from the point of view of your institution/organization?
 - a) What are the differences and similarities between private and public forestry?
 - b) What are the consequences of these differences and similarities?

4. According to you, what should be the forest policy of private forests?
 - a) What should be the main forest management objectives from the viewpoint of private forests owners?
 - b) What should be the main demands of the state towards the management of private forests?
5. What are the concrete interests of your institution/organization related to private forests?
6. What are the demands of your institution/organization in relation to forest policy of private forests?
7. How are private forest owners treated in the existing Law on Forests?
 - a) Are they treated in the same way as public forest enterprises?
 - b) Are they privileged or discriminated?

PART IV – SUPPORT TO PRIVATE FOREST OWNERS IN YOUR COUNTRY

8. According to data from this study, the majority of private forest owners own less than 1 ha of forest. The average timber volume and mean annual increment in private forests are less than in state forests.
 - a) How is it possible to manage such a small forest unit efficiently?
9. Do you share the opinion that private forests owners need public support to sustainably manage their forests?
10. What is the position of your institution/organization on covering a certain amount of costs the 'appropriate management' of private forests?
11. What is the position of your institution/organization towards the proposal that the public should support private forest owners so that private forests also provide all the services of forests as an ecosystem?

PART V – INSTRUMENTS FOR STRENGTHENING ROLES/CAPACITY OF PRIVATE FOREST OWNERS IN FOREST POLICY PROCESSES (STRATEGY/LAW/FORESTRY DEVELOPMENT PROGRAM)

12. What do private forest owners need more of to strengthen their role: advice in sustainable forest management or lobbying in forest policy processes?
 - a) How can more advice in forest management be provided to private forest owners?
 - b) How can lobbying in forest policy processes be improved?
13. How do you assess the idea of strengthening the position of private forests owners by closer cooperation and the introduction of joint management (community forests)?
 - a) What are the advantages and obstacles?

14. How do you assess the idea of strengthening the position of private forest owners by the formation of an independent interest association?
 - a) What are the advantages and obstacles?

15. A very small number of private forest owners in your country are included in voluntary interest associations.
 - a) Do you think that the associations of private forest owners, established on a voluntary basis, are an appropriate approach to strengthen/represent private forest owners' interests?
 - b) What kind of incentives would help in forming a voluntary interest association of private forest owners?

16. In some European countries (e.g. Austria), there are obligatory interest associations of private forest owners (each private forest owner is automatically a member of an interest association by law).
 - a) Is the realisation of such a legislative solution possible in B-H circumstances?
 - b) What advantages and obstacles do you see?

Annex 2.2 List of in-depth interviews in Bosnia and Herzegovina

INTEREST GROUPS	INSTITUTION/ORGANIZATIONS DATE OF INTERVIEW
Public administration	MFBH1 30.12.2008
	MFBH2 30.12.2008
	MFRS1 21.01.2009
	MFRS2 22.01.2009
	CF 15.01.2009
	MEBH 16.01.2009
	MERS 21.01.2009
Public enterprises	SS 16.01.2009
	RS 12.02.2009
Political parties	P1 20.01.2009
	P2 28.01.2009
	P3 19.01.2009
	P4 21.01.2009
	P5 20.01.2009
	P6 21.01.2009
Forest science and research organizations	SA 12.02.2009
	BL 22.01.2009
Interest groups	AFET 27.01.2009
	PFOA 21.01.2009
	CFT 16.01.2009
	WC 27.01.2009

Annex 2.3 List of in-depth interviews in Croatia

Public administration (PA)

MRDFWM-PFD:	Ministry of Regional Development, Forestry and Water management – Dep. for Private Forests. – 29/01/09
MRDFWM-HD:	Ministry of Regional Development, Forestry and Water management – Directorate for Hunting. – 29/01/09
MoC	Ministry of Culture, Department for Nature Protection – 29/01/09
FES	Forest Extension Service 22/01/09 and 05/12/08

Public enterprises (PbE)

PE-HS:	Public enterprise Hrvatske šume d.o.o. 23/01/09
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Political parties (PP)

RP-HDZ:	Right party 25/02/09 phone interview
LP-SDP:	Left party 19/02/09
LP-HSS:	Left party 19/02/09

Forest science and research organisation (FSRO)

FF:	Faculty of Forestry 23/02/09
IF:	Institute for Forestry 10/02/09

Interest groups – Forestry (IGF)

NGO-GA:	Green Action 26/02/09
CCoC	Croatian Chamber of Commerce 11/02/09
CoFWI	Croatian Chamber of Forestry and Wood Processing Industry Engineers 23/01/09
PFOA-A:	Private forest owners association – alliance of PFOA 29/01/09
CFS	NGO Croatian Forest Society 27/01/09

Annex 2.4 List of in-depth interviews in Macedonia

INTEREST GROUPS	INSTITUTION/ ORGANIZATION	DATE OF INTERVIEW
Public administration	MZSW1	15.11.2008
	MZSW2	17.11.2008
	MZSW3	20.11.2008
	MZSW4	20.11.2008
	MZSPP1	22.11.2008
	MZSPP2	22.11.2008
Public enterprise	PE1	16.11.2008
	PE2	24.11.2008
	PE3	29.12.2008
	PE4	16.01.2009
National Association	NAPFO1	09.11.2008
	NAPFO2	28.11.2008
NGO's	NGO1	12.12.2008
	NGO2	15.01.2009
Scientific Institutions	FF1	03.12.2008
	FF2	09.12.2008
Political parties	PP1	12.01.2009
	PP2	13.01.2009

Annex 2.5 List of in-depth interviews in Serbia

INTEREST GROUPS	INSTITUTION/ ORGANIZATION	DATE OF INTERVIEW
Public administration	MAFW-DF1	28.11.2008
	MAFW-DF2	28.11.2008
	MAFW-DF3	28.11.2008
	MAFW-RD1	01.12.2008
	MAFW-RD2	01.12.2008
	MESP	24.12.2008
Public enterprises	PE-SS1	02.12.2008
	PE-SS2	02.12.2008
	PE-SS	15.12.2008
	PE-NP	03.12.2008
Political parties	RP-SRS	16.12.2008
	RP-SPO	01.12.2008
	LP-DS	05.12.2008
	LP-SPS	02.12.2008
Forest science and research organizations	FF	22.12.2008
	IF	01.12.2008
Private Enterprises	FORNET	26.11.2008
	SGS	01.12.2008
Interest groups Forestry	ISF	02.12.2008
	CC	15.12.2008
	HA	02.12.2008
	PFOA-LA1	12.12.2008
	PFOA-LA2	27.12.2008

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European Forest Institute Research Report 25

The project “Research into the Organization of Private Forest Owners’ Interest Associations in the Western Balkan Region (PRIFORT)” focused on the following four countries of the Western Balkan region: Bosnia and Herzegovina, Croatia, Macedonia and Serbia. The main objective of the project was to reveal the preconditions for the formation of independent interest associations of private forest owners in the region by theory-oriented empirical social research. For this purpose, quantitative door-to-door surveys of randomly selected private forest owners and qualitative in-depth interviews of consciously selected forest policy decision makers were carried out.

The report comprises the main results of the work. In Chapter 1 the main hypotheses of the interest group theories are scrutinized by empirical evidence of surveys of private forest owners and in-depth interviews of forest policy decision makers. Chapters 2 to 5 present a synopsis of the preconditions for the formation of private forest owners’ associations in Bosnia and Herzegovina, Croatia, Macedonia and Serbia, based on the results of quantitative and qualitative research. Finally, Chapter 6 deals with a comparison of the four countries with regard to all relevant aspects obtained by the surveys of private forest owners.

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