

Policy change through the lens of private forest owners' business cooperation: A case study of Slovenia and Slovakia

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Abstract

The transition to a market economy in some former socialist countries such as Slovenia and Slovakia have led to a remarkable change in private forest ownership, more specifically to the emergence of a large number of private forest owners (PFOs) with limited knowledge and experience in forest management. Since then, PFOs have posed a challenge for implementing EU and national forest policy goals. To support efficient private forest management and policy implementation, governments have responded by proposing various policy instruments, including PFOs business cooperation. Therefore, the aim of this study is to analyse and compare a PFOs business cooperation as a policy instrument and the role that external events have on forest policy change related PFOs cooperation. Implementing the Advocacy Coalition Framework this study is based on a longitudinal analysis of forest-related policy documents (1993–2024) at three points in time. The results confirm that normative policy core beliefs remain stable over time, while external events such as the restitution process, EU accession and changed socio-economic conditions (e.g., GDP growth, decline in rural population and lower dependence of PFOs on income from agriculture and forestry) have caused changes in secondary beliefs. Financial support from the state budget and EU funds has been provided to encourage PFO business cooperation, but the interest of PFOs to join such cooperation has been limited. While economic support is crucial, it alone is not sufficient to increase the willingness of PFOs to engage in business cooperation. Greater use of informational policy instruments is needed to motivate PFOs to engage.

Key words: longitudinal policy analysis; advocacy coalition framework; secondary beliefs; small-scale private forest owners; business cooperation

Editor: Ivana Živojinović

1. Introduction

Forests cover 35.0% of the total European land area and provide important ecosystem services and economic benefits to its owners and society (Forest Europe 2020). Due to different historical, legal and social circumstances, forest ownership patterns vary greatly across the Europe (UNECE/FAO 2020). Since the 1990s, there has been a notable increase in private forest ownership in many European countries (UNECE/FAO 2020). This shift is particularly evident in the former socialist countries in the Baltic, Central-East and South-East Europe, where with the transition to a market economy, the restitution processes began and triggered important changes in the

forest ownership structure (Živojinović et al. 2015; Weiss et al. 2019). One obvious result of this process has been the fragmentation of forest land ownership (Hartvigsen 2014), which led to the emergence of a large number of small-scale private forest owners (hereafter PFOs). The restitution process has also been accompanied by different changes in the national forest-related legal framework and in the diversification of forest policy instruments (UNECE/FAO 2020). These new forest legal frameworks have given different property rights to PFOs to make decisions in operational management and in the formulation of forest management objectives (Nichiforel et al. 2018). According to Nichiforel et al. (2018), PFOs in the jurisdictions of the former social-

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ist countries have a low degree of freedom to make and implement decisions about their forest land. Legislation still adheres to a state-centred approach to private forest management despite the transition period and is quite strict, especially on harvesting and management rights (Bouriaud & Schmithüsen 2005; Nichiforel et al. 2020). Although PFOs were formally recognised as important actors in forest policy implementation in former socialist countries, their abilities to influence the policy formulation process remained limited (Avdibegović et al. 2010; Dobšínská et al. 2020; Pezdevšek Malovrh & Avdibegović 2021; Stojanovski 2022; Hrib et al. 2024), undermining their trust in the state administration assistance and leaving them with an aftertaste of previous regime practices (Hrib et al. 2018). Since the 1990s, heterogeneity among PFOs in the former socialist countries has also increased. This is reflected in a growing proportion of non-traditional, urban, passive or absentee PFOs, reflecting the general demographic trends related to population aging and urbanisation (Weiss et al. 2019). All these changes pose a challenge for implementing different European Union (hereafter EU) and national forest and forest-related policy goals (UNECE/FAO 2020).

Governments in the former socialist countries have responded to concerns about the implementation of forest policy goals by proposing a wide range of different policy instruments (Hartvigsen 2014). Among them, they have recognized PFOs business cooperation, both among themselves and with forest service providers (hereafter business cooperation)¹ as one of the key policy instruments to support more efficient private forest management and to facilitate the implementation of different forest and forest-related policy goals (Glück et al. 2010; Sarvašová et al. 2015; Šálka et al. 2016; Pezdevšek Malovrh et al. 2017, 2022; Jarský et al. 2018; Stojanovski 2022). Therefore, different mix of policy instruments were designed and put in place to promote PFOs business cooperation. For example, regulatory policy instruments often mandate compulsory joint management, as seen in Hungary and Romania (Weiss et al. 2012a; UNECE/FAO 2020). Forest laws also promote various organizational forms, such as e.g., forest owners' organizations in Estonia (Pöllumäe et al. 2014) or PFO's associations, forest leases, producer groups under the Common Agricultural Policy (CAP), machinery rings, and cooperatives in Slovenia (Pezdevšek Malovrh et al. 2022, 2023a) or civic associations of individuals whose forest and agricultural estates have been resituated in Slovakia (Weiss et al. 2012a; Jarský et al. 2018; Halušková 2022). Economic instruments are mainly used to support cooperation between PFOs through financial support for establishment of PFOs' organizational forms and their activities (e.g., in Czech Republic, Estonia, Slovenia, Romania) (Weiss et al. 2012a; Pöllumäe et al. 2014; Jarský 2015;

Hrib et al. 2018; Pezdevšek Malovrh & Avdibegović 2021). In addition to that in some countries PFOs who cooperate have precedence in obtaining funds (e.g., in Slovenia for funds under CAP) (Haeler et al. 2023) or state pays for the cost of developing a forest management plan by PFOs organization (e.g., Lithuania) (Pivoriūnas & Girdžiusas 2019). Informational instruments include providing information to raise awareness about benefits of PFOs business cooperation, providing advice and support to stimulate and increase the engagement of PFOs' in business organizational forms (Pöllumäe et al. 2014; Pezdevšek Malovrh et al. 2023b).

Previous studies in former socialist countries focusing on PFO business cooperation have mainly focused on why various organizational forms were established (Weiss et al. 2012a, 2012b; Pöllumäe et al. 2014; Sarvašová et al. 2015; Pezdevšek Malovrh & Laktić 2017), the factors influencing the establishment, development, professionalism and efficiency of organizational forms (Glück et al. 2010; Leban 2014; Iveta & Pezdevšek Malovrh 2021; Plevnik & Pezdevšek Malovrh 2021; Pezdevšek Malovrh et al. 2023; Uhan et al. 2023) and their main activities (Milijic et al. 2010; Weiss et al. 2012a, 2012b; Černač & Pezdevšek Malovrh 2020; Hrib et al. 2024). Another set of studies focused on understanding why PFOs cooperate in different organizational forms and which factors influence their readiness to cooperate (Pezdevšek Malovrh 2010; Pezdevšek Malovrh et al. 2010, 2022). In previous studies also the importance of forest policy instruments, especially informational and economic policy instruments, was recognized to support PFOs business cooperation, particularly in countries where such cooperation is not widespread (Sarvašová et al. 2015; Pezdevšek Malovrh et al. 2017; Aurenhammer et al. 2018; Hrib et al. 2018, 2024).

Although the above-mentioned studies have provided a comprehensive overview on PFOs business cooperation, they have not adequately explained how forest policy changes over time to support PFO business cooperation. Therefore the aim of this study is to fill this research gap by analysing and comparing a) the main forest policy goals, b) the reasons why forest policy supports PFOs business cooperation, c) the policy instruments that support this cooperation in a longitudinal analysis in two former socialist countries, namely Slovenia and Slovakia, and the role that external events (political, economic and social changes) have on forest policy change. Slovenia and Slovakia were selected as case study countries as they share the same historical and socio-political background (former socialist countries), similar natural conditions driving forest management, similar property rights index in forestry (Nichiforel et al. 2018), as well as similar development paths of forest policy and PFOs business cooperation. The comparison of two similar former

¹ PFOs can cooperate with other PFOs in forms like cooperatives, companies owned by PFOs, machinery rings, PFOs' associations. They can also cooperate with forest service providers through long-term business cooperation (e.g., forest management or forest lease) or through short-term business cooperation (e.g., timber harvesting and skidding services, silvicultural and protection work services, timber and wood chips transportation, buying timber on forest road).

socialist countries clearly shows how far the development paths can diverge.

1.1. Conceptual framework

In forest policy analysis, several theoretical approaches have been used in the past to examine policy change (Arts 2012). Among these, the Advocacy Coalition Framework (hereafter ACF) (see Sabatier 1988; Sabatier & Jenkins-Smith 1999; Sabatier & Weible 2007; Jenkins-Smith et al. 2017) is considered one of the most suitable and applied theoretical lenses (Sotirov & Memmler 2012). Therefore, the ACF was used in this study to analyse the development and change of forest-related policy in the context of PFOs business cooperation in Slovenia and Slovakia.

With its aim of reflecting on and explaining policy change in complex policy arenas, ACF proposes that policymaking takes place in *policy subsystems*. The policy subsystem is the primary unit of analysis when it comes to understand policy making and policy change. Policy subsystems are defined by the actors involved, the policy issue, and its territorial boundaries (Sabatier & Jenkins-Smith 1999). This policy analysis will cover the national forest policy subsystems. However, it should be noted that in the context of PFOs business cooperation, the forest policy subsystem includes also other forest-related policies (e.g., agricultural policies) (Hysing & Olsson 2008).

The ACF distinguishes between different types of policy beliefs based on scope and tendency to change (Sabatier & Weible 2007). This study will focus on *normative and empirical policy core beliefs* as well as *secondary beliefs* (Table 1).

Normative and empirical policy core beliefs are understood as territorial and thematic components of policy core beliefs. Normative policy core beliefs may reflect the basic orientation and essential value priorities for the policy subsystem and identify whose welfare in the policy subsystem is of greatest concern. These beliefs are relatively stable. Empirical policy core beliefs include overall assessments of the seriousness of the problem, basic causes of the problem, and the preferred solutions for addressing the problem. These beliefs can change more

easily as new insights, knowledge and experiences are accumulated (Sabatier & Jenkins-Smith 1999).

Secondary beliefs refer to a subset of the policy subsystem or the specific policy instruments to achieve the desired outcomes outlined in the policy core beliefs. Secondary beliefs include empirical beliefs related to specific aspects, operational goals, strategies, and measures/instruments related to parts of the policy subsystem, such as specific program rules, and budgets, required to implement the policy core beliefs.

While the general assumption of the ACF states that policy core beliefs define advocacy coalitions, they tend to remain relatively stable, while secondary beliefs tend to change (Sabatier & Jenkins-Smith 1999). The ACF distinguishes between *major and minor policy changes*. The former is defined as a change in policy' core beliefs, implying substantial changes in problem perception and resolution, while the latter implies changes in policy's secondary beliefs (Sabatier & Jenkins-Smith 1999).

ACF also distinguishes between *relatively stable parameters* and *external subsystem events* that have impact on the policy subsystem. Relatively stable parameters are a set of very stable factors that may be internal or external to the policy subsystem. These can be described as basic characteristics of the problem area and the distribution of natural resources, basic socio-cultural values and the social structure. In contrast, external subsystem events include changes in political systems, socio-economic conditions, changes in the systemic governing coalition, and changes in other policy subsystems (Jenkins-Smith et al. 2017). External subsystem events are described in the ACF as those system beliefs that are subject to significant fluctuations over the course of a few years and thus serve as important stimuli for policy change.

For our subsequent analysis, this results in three hypotheses relating to the ACF propositions:

1. Policy changes in the forest policy subsystem did not affect normative policy core beliefs.
2. Empirical policy core beliefs remained stable throughout the analysed time period in both countries.
3. Due to the influence of external factors, in particular changing economic, social and political conditions, changes in secondary beliefs related to PFO business cooperation have emerged.

Table 1. Framework to distinguish beliefs expressed in forest and forest-related policy documents.

Theory driven questions		Questions for empirical analysis
Policy core beliefs		
Normative policy core beliefs	• Which are basic orientation and value priorities for the policy subsystem? • Whose welfare in the policy subsystem is of greatest concern?	• What are the main forest policy goals? Are some of these goals prioritized? • Which groups are of the greatest concern?
Empirical policy core beliefs	• How are problems described and how, and by whom, should they be handled?	• What are the main problems recognized? • Who should address the problem (e.g., government/markets/public/experts)? • With what type of policy instruments (e.g., regulative/informative/economic) should the problem be addressed?
Secondary beliefs		
Secondary beliefs	• Which specific beliefs, operational goals, strategies and measures should be taken into account?	• Which policy instruments were developed to support PFOs business cooperation?

2. Material and methods

This study is based on a longitudinal analysis of forest-related policy in two case study countries, namely Slovenia and Slovakia. In order to explore and compare forest policy development in the context of PFOs' business cooperation and the role that external events (political, economic and social changes) have on forest policy change, the main policy documents in both countries were analysed at three points in time (Table 2). The first period (1993–2006) was selected because the first Forest Acts (1993 in Slovenia, 2005 in Slovakia) and the first national forest strategic documents (1996 in Slovenia, 1993 in Slovakia) were adopted after the change of political regime as well as both countries accessed the EU in 2004. The second period (2007–2013) was selected because the first major amendments in the Forest Acts were made, and National Forest Programmes were adopted in both countries in 2007. The third period (2014–2024) was selected because the second major amendments in the Forest Acts were made and more measures from the Rural Development Programme (hereafter RDP) and the CAP were foreseen for PFOs cooperation.

The criteria for selecting documents for analysis were that they should: a) illustrate the essence of the national government's forest policy core beliefs, b) address PFOs' business cooperation and c) be comparable over time.

The analysis of the documents was done following the questions presented in Table 1 (that are based on the ACF) using MAXQDA software (VERBI Software 2021). First, each document was coded. Second, key citations were inserted into an Excel table. Third, the information in the Excel tables was analysed and summarized by each country team. This step was followed by a collaborative discussion to ensure the reliability and validation of the results across countries. Finally, the tables presented in this article were formed.

2.1. General description of case study countries

In Slovenia, forests cover 58.8% of the country's territory, making it one of the most forested countries in Europe, while the forest area in Slovakia is 41.4% (Ministry of Agriculture and Rural Development 2024; Slovenia Forest Service 2024) (Table 3). The ownership structure varies between countries. In Slovenia private forest ownership predominates (77%), while in Slovakia 59% of forests are owned by non-state forest owners (8% municipalities, 12% individuals, 17% communal, 5% cooperatives, and 17% unregistered) (Ministry of Agriculture and Rural Development 2024; Slovenia Forest Service 2024). Private forest property is small-scaled and fragmented in both countries, with an average forest property size of 3.2 hectares in Slovenia and 2.9 hectares in Slovakia (Sarvašová et al. 2015; Operational Programme for the Implementation of the National Forest Programme 2022–2026 2022).

Private forest management is deficient in both countries, as evidenced by the unexploited potential of forests. This is reflected in the low level of implementation of silviculture and protection works, the continuously lower total annual timber harvest, and the inefficient use of public funds for investments in forests (Moravčík et al. 2024; Slovenia Forest Service 2024). Consequently, deficient private forest management has led to the failure to achieve several goals in both countries' National Forest Programmes (Action Plan of the National Forestry Programme 2009–2013 2009; Operational Programme for the Implementation of the National Forest Programme 2022–2026 2022).

Forest governance in Slovenia and Slovakia is guided by a comprehensive legal framework. In both countries, the National Forest Programme (in Slovenia last National Forest Programme was adopted in 2007, but forestry is guided by its operational programmes that were adopted

Table 2. List of analysed forest-related policy documents in different analysed time periods.

	1993–2006		2007–2013		2014–2024	
	Slovenia	Slovakia	Slovenia	Slovakia	Slovenia	Slovakia
National Forest Programme	X (1996)		X (2007)	X (2007)		X (2024)
Operational Programmes or Action Plans				X (2008)	X (2016, 2022)	X (2024)
Forest Act	X (1993)	X (2005)	X (2007)	X (2007)	X (2014, 2023)	X (2014, 2023)
Rural Development Programme	X (2000, 2004)	X (2000, 2004)	X (2007)	X (2007)	X (2014)	X (2014)
CAP					X (2023)	X (2023)
Agricultural Land Act	X (1996)	X (2004)	X (2011)	X (2008)	X (2016)	X (2023)
Agricultural Act	X (1996)	X (1998, 2003)	X (2008)		X (2014)	

Table 3. Basic characteristics of case studies countries.

	Slovenia	Slovakia
Region	Central Europe	Central Europe
Historical socio-political background	Post-socialists' country	Post-socialists' country
Political system	Unitary	Unitary
Forest cover (%) ¹	58.8	41.4
Forest sector contribution to GDP (%) ²	1.9	2.6
Forest ownership distribution ¹	State (20%) Private (77%) Municipal (3%)	State (41%) Municipal (8%) Individual forest owners (12%) Communal (17%) Cooperatives (5 %) Unregistered (17%)
Forest ownership characteristics ¹	Small-scale and fragmented	Small-scale and fragmented
Average forest property size ³	3.2 ha	2.9 ha
PFO business cooperation	Limited	Limited

Note: ¹(Ministry of Agriculture and Rural Development 2024; Slovenia Forest Service 2024), ²(Forest Europe 2020), ³(Operational Programme for the Implementation of the National Forest Programme 2022–2026 2022; Sarvašová et al. 2015).

in 2017 and 2022) is a basic strategic document that aims to define the national policy of sustainable and multifunctional forest management (Ferlin 2013; Sarvašová et al. 2014). The first Forest Act, adopted in 1993 in Slovenia and in 2005 in Slovakia², formed the legal backbone of today's forest governance. Both Forest Acts were fundamentally amended in 2007 and 2014. In both countries, PFOs must manage their forests in accordance with the legislation and the forest management plan.

The PFO business cooperation has a long tradition in Slovenia and Slovakia, as PFOs were members of agricultural and forestry cooperatives during the socialist period (Jeromel & Winkler 2005; Šulek 2006; Weiss et al. 2012a). In the 1990s, there was a change in PFOs business cooperation, in both countries due to changing socio-economic and political conditions.

In Slovenia, PFOs business cooperation in the form of machinery rings began in 1994, with 37 machinery rings currently active (Dolenšek 2021). The machinery rings are mainly active in agriculture, with only 18.3% of members providing forest management services within the machinery ring (Pezdevšek Malovrh et al. 2022). Voluntary PFOs' associations were established in 2001, and currently 24 local associations are active (Forest Owners Association of Slovenia 2024), although these associations are interest associations and do not engage in business-related activities (Uhan 2022). Only one of these PFO associations expanded their activities on business level by establishing cooperative (Pezdevšek Malovrh & Laktić 2017), while other remained as interest PFO associations. The PFOs association of Slovenia was founded in 2006 and is an organization that connects the local associations of PFOs at the national level (Plevnik & Pezdevšek Malovrh 2021). Based on that, it can be concluded that PFOs business cooperation is very rare in Slovenia. In contrast, forest owners' associations

have played a significant role in shaping the non-state forest sector in Slovakia after 1989, although their primary aim was interest representation, not business cooperation. The first voluntary association of non-state forest owners was established in 1991, followed by the Union of Regional Associations of Non-State Forests in 1996, which today represents 10 regional associations (Šálka et al. 2016).

PFOs in Slovenia and Slovakia can also cooperate with forest service providers through short-term or long-term business cooperation. In Slovenia, short-term cooperation with forest service providers in regular forest management is rare, as PFOs mainly carry out this work by themselves or with the help of the family (Ščap et al. 2021). More common is that kind of cooperation is in case of salvage logging (Stare et al. 2025). In Slovakia, 95% of silvicultural and logging activities are provided by forest service providers within short-term business cooperation (Štěrbová et al. 2018). Long-term business cooperation with forest service providers is rare in both countries (Kovalčík 2019; Iveta & Pezdevšek Malovrh 2021; Uhan et al. 2023).

Despite several attempts to foster PFO cooperation, including government incentives, these efforts have largely failed due to the reluctance of PFOs to associate in both countries. Currently less than 1% of PFOs in both countries are members of business organizational forms (Pezdevšek Malovrh et al. 2023a; Sarvašová & Dobšínská 2023).

3. Results

In this section the results are presented according to ACF (Table 1), beginning with the normative policy core

²The development of the Forest Act (2005) in Slovakia involved significant amendments to existing legislation between 1991 and 1995. From 1995 to 1998 the amended forest legislation has been stabilized and widely introduced into forest practice and in 1998 the first serious ideas about the adoption of new Forest Act appeared. Forest Act then entered into force in June 2005 (Šulek 2010).

beliefs, followed by empirical policy core beliefs and secondary beliefs. In the last subsection external events that drive policy change related to PFOs business cooperation are presented.

3.1. Normative Policy Core Beliefs

Orientation of basic value priorities

The orientation of basic value priorities of Slovenian forest policy was introduced in 1993 with the adoption of the first Forest Act after the political regime change and has remained more or less stable since then. It lays down the general rules for the use and management of forests in order to ensure close-to-nature and multifunctional forest management (equally prioritizing ecological, economic, and production functions). This concept was extended in 2007 (second analysed period) when sustainable forest management was introduced. The situation is similar in Slovakia, where the normative basis of Slovakian forest policy was introduced in 2005 with the adoption of the Forest Act and has remained stable since then. It lays down the general rules for the use and management of forests in order to ensure sustainable and multifunctional forest management. In 2020 (third analysed period) the concept of close-to-nature forest management was included in the legislation (Table 4). The basic value principles, as foreseen by the ACF, have not changed in both countries. Only slight modifications have been made to the concept of sustainable forest management, which has evolved over time into either multifunctional or close-to-nature forest management, but the overall core belief of managing forests for future generations has remained stable.

Overall goals for the policy area

Although the orientation of basic value priorities in Slovenia and Slovakia remained stable during the analysed period, the prioritization of the overall goals for the policy area changed in both countries. In Slovenia, the main goal

of forest policy in the first analysed period (1993–2006) was to ensure the sustainable development of forests while maintaining biodiversity. In the second analysed period (2007–2013), the climate change and biodiversity goals gained importance by defining the standing forest as an essential carbon sink and including 70% of Slovenia's forest area in the EU Natura 2000 forest protection network. In the last analysed period (2014–2024), climate change has gained importance, especially by ensuring carbon sinks in forests, and adapting forest management practices to mitigate climate change. In Slovakia, the main goal of forest policy in the first analysed period (1993–2006) was to ensure multifunctional use of forests and to emphasize non-productive forest functions while maintaining ecologically stable and healthy ecosystems. In the second analysed period (2007–2013), the focus was on multifunctional and close-to-nature forest management, but similar to Slovenia, climate change mitigation and adaptation gained importance. The economic efficiency of the forestry sector was also one of the overarching goals of forest policy in the second analysed period. In the last analysed period, the overall policy goals prioritize sustainable and multifunctional forest management that takes into account ecological, environmental, and socio-economic aspects (Table 4).

Groups/entities of greatest concern

Since the main goal of Slovenian forest policy is multifunctional forest management, the perception of forests as a resource needed for multiple use for the benefit of forest owners, people in rural areas and society in general was recognized in all three analysed periods. In contrast, in Slovakia, the group of major concerns has changed over the analysed period. In the first analysed period (1993–2006) the focus was on ensuring the equality of all ownership types, providing non-productive forest functions to society and ensuring the sustainability of the wood-processing sector, while in the second analysed period (2007–2013) it was on the forest sector and small-scale PFOs, and in the last analysed period (2014–2024) it was extended to society, especially in rural areas (Table 4).

Table 4. Normative policy core beliefs over the analysed time period.

Time period	1993–2006	2007–2013	2014–2024
Slovenia			
Orientation of basic value priorities	Close-to-nature, multifunctional forest management	Additional focus on sustainability	No change
Overall goals for the policy area	Sustainable development of forests, while maintaining biodiversity	Additionally, climate change and biodiversity gained importance	Climate change gained importance
Groups/entities of greatest concern	Forest owners, rural areas and society	No change	No change
Slovakia			
Orientation of basic value priorities	Sustainable and multifunctional forest management	No change	Additional focus on close-to-nature forest management
Overall goals for the policy area	Multifunctional forestry, non-productive forest functions and maintaining ecologically stable and healthy ecosystems	Multifunctional and close-to-nature forest management, climate change mitigation and adaptation (stable forests) and economy of the forest sector are emphasized	Sustainable and multifunctional forest management addressing ecological and environmental aspects and socio-economic areas
Groups/entities of greatest concern	Forest owners, society, wood-processing industry	Forest sector and forest owners (mostly small-scale PFOs)	Society, especially in rural areas

3.2 Empirical policy core beliefs

Main problems related to private forest management recognized

Since the early 1990s, the dominating narrative of Slovenian forest policy has focused on deficient private forest management. However, some changes in the perception of the problem can be observed in the analysed periods. Small-scaled and fragmented private forest property, lack of knowledge about forest management among new PFO (after restitution) and changing socio-demographic characteristics of PFOs were identified as the main problem of deficient private forest management in the first analysed period (1993–2006). In the second and third analysed period deficient private forest management is still recognized as a problem, but it is not directly associated with small-scaled and fragmented forest property and PFO characteristics. In addition, in the second and third analysed period under-use of forests for additional income from activities such as hunting, beekeeping, non-wood forest products collection, tourism and recreation, and low engagement of PFO in forest management planning were identified. In Slovakia no specific problems related to private forest management are identified in the analysed policy documents (Table 5).

Responsibility to address the problems related to private forest management

The government in Slovenia shapes forest policy through determination of policy goals and instruments, while the public forestry service (Slovenia Forest Service) provides extension services to PFOs in different fields related to forest management. Therefore, in all analysed periods,

the government and the public forestry service were recognized as entities that should address the problem of private forest management and thus PFO business cooperation in Slovenia. The situation is similar in Slovakia. The government is responsible for forest policy, and thus also for PFO business cooperation in all analysed periods (Table 5).

Types of policy instruments

Since the first Forest Act entered into force (over all analysed periods), forest policy in both countries is heavily dominated by regulatory policy instruments, and therefore forest management, regardless of ownership should be carried out in accordance with legislation and forest management plans.

Economic and informational policy instruments have been introduced to support the regulatory policy instruments. In Slovenia, private forest management is supported from budget funds for financing and co-financing investments in forests (silvicultural and protection forest work) and from RDP funds (for the purchase of new mechanization and investments in forests), which are available for all forest owners in all analysed periods (economic policy instruments). In the third analysed period (2014–2024), a Forest fund was established (additional funds/compensations are available for PFOs for implementation of Natura 2000 measures). In Slovakia, too, the achievement of the forest policy goals is largely financed from the RDP (economic instruments). In addition, the state provides compensation payments for the implementation of nature protection and subsidies for close-to-nature forestry (only in the third analysed period, since 2017).

Table 5. Empirical policy core beliefs related to private forest management over the analysed time period.

Time period	1993–2006	2007–2013	2014–2024
Slovenia			
Main problems recognized	Deficient forest management (especially in privately owned forests) Private forest property fragmentation Lack of PFO knowledge Changed characteristics of PFOs	Deficient forest management (especially in privately owned forests) Under-use of forest for additional income Low-level of PFOs engagement in forest management planning	No change
Who should address the problem	Government and public forestry service	No change	No change
With what type of policy instruments	Regulatory (heavily dominated): forest management in accordance with legislation and forest management plans Economic: budgetary and RDP funds Informational: free extension service for all forest owners	No change	Economic: Forest fund is available for PFOs
Slovakia			
Main problems recognized	No problems recognized specifically related to private forest management	No change	No change
Who should address the problem	Government and forest owners with help of professional forest managers	No change	No change
With what type of policy instruments	Regulatory (heavily dominated): forest management in accordance with legislation and forest management plans Economic: budgetary and RDP funds Informational: advisory services provided by state forestry administration free of charge; extension services provided by professional	No change	No change

In Slovenia, the public forestry service prepares forest management plans regardless of forest ownership and offers free extension service to all forest owners (public and private) (regulatory and informational policy instruments). In Slovakia, the elaboration of forest management plans is also paid from the state budget, and the state plays a stable role in the provision of informational policy instruments, which are made available to all forest owners free of charge by the state forestry administration. However, forest owners, including the PFO, are required to appoint a certified forest manager at their own expense to oversee their management activities, report to the state forestry administration and provides extension services. They serve as an intermediary between the PFO and forestry administration and ensures professional forest management (Table 5).

3.3. Secondary Beliefs Related to Private Forest Owners' Business Cooperation

Since the 1990s, various organization forms were established and policy instruments designed and put in place to promote and support PFOs business cooperation in Slovenia and Slovakia.

Organizational forms

In Slovenia, in the first analysed period (1993–2006), the first stimulus for PFOs business cooperation came from agricultural legislation, where machinery rings and cooperatives were promoted. Agricultural legislation also supports forest leasing throughout the analysed period. In line with agricultural legislation, the Forest Development Programme (1996) promoted cooperatives and other organizational forms (not specifically mentioned which one) and suggested that, in order to ensure, the success of timber market, voluntary cooperation of individual timber suppliers should be promoted. In the second analysed period (2007–2013), the PFOs business cooperation was promoted in the National Forest Programme (2007) and the machinery rings were recognized and financially supported in the Forest Act (2007). In the last analysed period (2014–2024), the PFOs business cooperation with forest service providers and producer groups were additionally recognized and financially supported under the CAP. Under the intervention IRP07 “*Investments in the purchase of new machinery and equipment for work in the forest*”, PFOs' associations, agricultural commons, groups of private forest owners, tenants that have concluded forest lease contracts, producer groups under the CAP, cooperatives and PFOs companies have precedence in granting funds. During this, period the PFOs short-term business cooperation with forest service providers was also emphasized in order to accelerate salvage logging as major natural disturbances occurred at that time. In Slovakia, in the first analysed period (1993–2006), the

stimulus for creating land associations came from legislation regarding ownership of agricultural land and other agricultural property, landownership, land registry and lands of joint ownership. The PFOs business cooperation was supported by government grants for the association of small-scale forest owners. The support was for office equipment and operational costs. The financial support still exists today, but the amount of resources is low. In the second period, the PFOs cooperation was supported within the National Forestry Programme (2007). In the last analysed period, the same situation applies as in Slovenia. Under the CAP, the same measures to support the PFO business cooperation were adopted (Table 6).

Reasons why forest-related policy supported PFOs business cooperation

Governments did not usually play a major role in the establishment of PFOs business organizational forms, which were generally led by powerful individuals following a bottom-up approach. Nevertheless, they were often initiated through informal government support (e.g., by public forestry service employees in Slovenia). Therefore, forest policy in the analysed period supported PFOs business cooperation to overcome various problems related to private forest management in both countries. In Slovenia, in the first analysed period (1993–2006), forest policy supported PFOs business cooperation mainly to increase the efficiency of private forest management, to help PFOs to obtain budget funds for forest investments more easily, to make timber sales more profitable, to promote education of PFOs, to provide PFOs with information on forest management and to represent the interests of PFOs towards the government. In the second analysed period (2007–2013), the reasons expanded to include improving the quality of life in rural areas and improving opportunities for PFOs to purchase new forestry machinery. In the last analysed period (2014–2024), the forest policy supports the PFOs business cooperation mainly to increase the efficiency of private forest management, to improve the possibilities for PFOs to buy new forest machinery and use of modern forest technology, and to increase the share of joint timber marketing. In Slovakia, there were fewer changes in the analysed period when it comes to why forest policy support PFOs business cooperation. In general, PFOs business cooperation through all analysed periods, was supported mainly to enhance the stability of forest ecosystems, increase the competitiveness of the Slovak forest industry and improve the efficiency and safety of forestry operations. Additionally, the RDP from 2004 to 2006 also focused on PFOs business cooperation with a view to more efficient and ecological use of forest machinery (Table 6).

Policy instruments

In all analysed periods forest-related policy documents in Slovenia and Slovakia recognized the importance of PFO business cooperation (voluntary) to overcome forest

Table 6. Secondary beliefs related to PFOs business cooperation over the analysed time period.

Time period	1993–2006	2007–2013	2014–2024
Slovenia			
Forms of PFO business cooperation	Associations of individuals who sell timber, Cooperatives, Machinery rings, Other forms of business cooperation	Capital cooperation of PFO, Machinery rings	PFO cooperation with forest service providers, Producer groups under CAP, Machinery rings
Reasons to support PFO business cooperation	Increase the efficiency of forest management, obtain funds from the budget based on public tenders, more profitable timber sales, organization of training, and advocacy of members interests.	Increase the efficiency of forest management, improve the quality of life in rural areas, increase the possibilities of PFO to buy new forestry machinery	Increase the efficiency of forest management, increase the possibilities of PFO to buy new forest machinery and use modern forest technology, increase the proportion of joint timber marketing
Policy instruments supporting PFO business cooperation	Legislation recognizes PFO business cooperation (voluntary) Financial support for establishment (since 2002)	No change	Additionally, financial support for the establishment and initial operation of collective forms of cooperation in the forestry sector
Slovakia			
Forms of PFO business cooperation	Association of small-scale forest owners	Not specified	Not specified
Reasons to support PFO business cooperation	Enhance the stability of forest ecosystems, increase competitiveness, improve efficiency and safety of forestry operations	No change	No change
Policy instruments supporting PFO business cooperation	Financial support for establishment from RDP and national funds	RDP 2007–2013 terminated support to PFO business cooperation National support – no change	Financial support for the establishment and initial operation of collective forms of cooperation in the forest sector

management related problems. Financial support from the state budget for the establishment of machinery rings has been available in Slovenia since 2002. Similarly, PFO business cooperation in Slovakia was also introduced in the first analysed period within the first operational programme under SAPARD (RDP 2004–2006, 2004) but PFOs showed no interest for it. In all analysed periods, national payments were made to cover the operational costs of forest owners' associations. In the last analysed period (2014–2024), in both countries, the CAP provides financial support for the establishment and initial operation of collective forms of cooperation in the forest sector (Table 6).

3.4. Main External Events Related to Private Forest Owners' Business Cooperation

According to the ACF, external events could be one of the primary explanations for the policy change. In Slovenia and Slovakia, a number of external events were mapped in analysed forest-related policy documents (Table 7). In accordance with the ACF, external events are divided into three categories (political, economic and social).

In the first analysed period (1993–2006), forest policy changes related to PFO business cooperation were primarily driven by political external events. The transition from socialism to democracy led a process of restitution in both countries, which significantly changed the socio-economic conditions within the forest policy subsystem. The restitution process in Slovenia and Slovakia began in 1991, when the acts on denationalisation were passed (Act on denationalization of Republic of Slovenia 1991,

Act on the Regulation of Ownership Relations to Land and Other Agricultural Property 1991). The implementation of denationalisation began in 1992 in Slovenia, and in 1991 in Slovakia (back then Czechoslovakia) (Act on denationalization of Republic of Slovenia 1991, Act on the Regulation of Ownership Relations to Land and Other Agricultural Property 1991). This process led to the emergence of numerous small-scale PFOs that lacked knowledge and experience in forest management. Additionally, economic factors such as GDP growth in both countries and a decreasing unemployment rate in Slovenia (as opposed to an increase in Slovakia) played an important role.

In the second analysed period (2007–2013), policy changes continued to be influenced by political external events, in particular the accession of both countries to the EU in 2004. This political change led to further changes in socio-economic conditions. Both countries experienced sustained GDP growth and a decline in unemployment rates, which contributed to a decrease in the rural population and dependence of PFOs on income from agriculture and forestry (RDP of the Republic of Slovenia for the period 2007–2013 2006, RDP of the Slovak Republic for the period 2004–2006 2004, RDP of the Slovak Republic for the period 2007–2013 2007). Accession to the EU also opened up new markets and created favourable conditions in timber market (RDP of the Republic of Slovenia for the period 2007–2013 2006, RDP of the Slovak Republic for the period 2004–2006 2004). In addition, general shift to renewable energy resources and climate changes led to a higher demand for timber, which encouraged PFOs for business cooperation (Resolution on the National Forest Programme 2007, National Forest Programme of the Slovak Republic

Table 7. Main external events that drive policy change over the analysed time period.

Categories of external events	External events	1993–2006		2007–2013		2014–2024	
		Slovenia	Slovakia	Slovenia	Slovakia	Slovenia	Slovakia
Political	Changes in political regime	X	X				
	Restitution process	X	X	X	X		
	Accession to the EU	X	X	X	X	X	X
	Access to EU funds	X	X	X	X	X	X
Economic	GDP and economic growth	X	X	X	X	X	X
	Timber market			X	X	X	X
	Emergence of new markets within the EU economic area			X	X		
Social	Fragmented forest property	X	X	X	X	X	X
	Emergence of new types of PFOs after restitution process	X	X				
	Labour market	X	X	X	X		X
	Declining rural population			X	X	X	X
	Rural population no longer reliant on income from agriculture and forestry			X		X	X
	Increasing societal demands for forest use				X	X	X
	Impacts of climate change			X	X	X	X

2007–2013 2007). Additionally, the PFOs had access to EU funds under the RDP, which supported purchase of new machinery in both countries and forming producer groups in Slovenia (RDP of the Republic of Slovenia for the period 2007–2013 2006, RDP of the Slovak Republic for the period 2004–2006 2004, RDP of the Slovak Republic for the period 2007–2013 2007).

In the third analysed period (2014–2024), policy changes were mainly driven by social and economic external events (RDP of the Republic of Slovenia for the period 2014–2022 2013, RDP of the Slovak Republic for the period 2014–2022 2014). The large number of small-scale PFOs with fragmented forest property faced additional pressure from evident effects of climate change and growing societal demands on forest use (Operational Programme for the Implementation of the National Forest Programme 2022–2026 2022, Action Plan of the National Forestry Programme 2009–2013 2009). There is still economic growth in Slovakia, while it declined in Slovenia (CAP of the Republic of Slovenia for the period 2023–2027 2022, CAP of the Slovak Republic for the period 2023–2027 2023). The rural population continued to decrease, and dependence of PFOs on income from agriculture and forestry was lower in both countries (CAP of the Republic of Slovenia for the period 2023–2027 2022, Operational Programme for the Implementation of the National Forest Programme 2022–2026 2022, CAP of the Slovak Republic for the period 2023–2027 2023). Conditions on the timber market were affected by natural disturbances, which led to lower timber prices in both countries (Operational Programme for the Implementation of the National Forest Programme 2022–2026 2022, National Forest Programme of the Slovak Republic for the period 2025–2030 2024). In both countries, the COVID-19 pandemic also had a significant impact on timber prices (Ministry of Agriculture and Rural Development 2023; SURS 2025). Climate change had a significant impact on forest policy in Slovenia, which supported the cooperation of the PFOs with forest service providers, and there was a general belief in both countries that salvage logging could be better managed through

joint forest management approaches (Operational Programme for the Implementation of the National Forest Programme 2022–2026 2022).

4. Discussion

Normative policy core beliefs remained stable

Despite the policy change related to PFOs business cooperation that occurred during the analysed period, the normative policy core beliefs remained stable. In the last decade, EU forest-related strategic documents highlight the increasing multifunctional role that forests will play in the transition to a sustainable and climate neutral future (Pecurul-Botines et al. 2023).

Therefore, it is not surprising that the normative policy core beliefs in both countries try to enhance multifunctional forest management practices. Sustainable, close-to-nature and multifunctional forest management is nowadays rooted and generally accepted concept of forest management regardless of ownership, which ensures sustainable timber supply and provision of multiple ecosystem services (Diaci 2006).

Only slight modifications in normative policy core beliefs over analysed periods, emphasizing either sustainable (Slovenia) or close-to-nature forest management (Slovakia), support the ACF's claim that policy core beliefs are resistant to change (Weible et al. 2009). This is in line with other research using ACF as a theoretical framework for analysing forest-related policy processes and changes (Winkel & Sotirov 2011; Sotirov & Memmler 2012; Sarvašová et al. 2013; Sotirov & Winkel 2016; Sotirov et al. 2021). Hypothesis 1 can therefore be confirmed.

Stability in empirical policy core beliefs

In Slovenia and Slovakia empirical policy core beliefs remained stable over the analysed period, with only a minor change in Slovenian forest policy subsystem in the second analysed period (2007–2013). The main

problem associated with private forest management in Slovenia is related to the deficient private forest management, which retrieves from small-scaled and fragmented private forest property and a lack of knowledge about forest management among PFOs mainly as a result of restitution process. The problem is ongoing and has not been sufficiently resolved to date, which is challenging given that 77% of Slovenian's forests are privately owned (Operational Programme for the Implementation of the National Forest Programme 2022–2026 2022). The situation is slightly different in Slovakia, where specific problems related to private forest management were not identified in the analysed policy documents. As only 12% of forests are privately owned, they do not constitute a major political actor (Sarvašová et al. 2015; Ministry of Agriculture and Rural Development 2023). Therefore, after the restitution process, PFO have limited autonomy in decision making in both countries. As a result, policy decisions continue to prioritize stability over adaptation to new PFO demands.

Like most of the former socialist countries, the Slovenian and Slovakian forest policy subsystems are still heavily dominated by state-centred forest regulatory frameworks with strict government oversight. Therefore, in both countries, PFOs must perform forest management in accordance with legislation and forest management plans, which are prepared by forestry administration for free of charge. In addition, PFOs forest management is supported by economical and informational policy instruments. This aligns with findings from Nichiforel et al. (2020) that current forest governance approaches in former socialist countries are very diverse and that most of the South-East European countries still base their forest policy system on strong regulations. Since the first Forest Act entered into force, forest policy in both countries was heavily dominated by regulatory policy instruments. Economic and informational policy instruments have been introduced mainly to support the regulatory ones. In Slovakia there was no change in forest policy instruments that support private forest management, while in Slovenia, there was minor change in the third analysed period (2014–2024) in economic policy instruments. A Forest fund was established which among other also provide additional funds/compensations available for PFOs for implementation of Natura 2000 measures. However, the amounts of money in this fund are limited (approximately 6% of the whole Forest fund budget). Furthermore, the stability in entity responsible to address problems related to private forest management, could be explained with highly restrictive scope for decision making by PFOs, as public forestry actors are responsible for obligatory forest management planning (Nichiforel et al. 2018). Regulatory, economic, and informational policy instruments have been consistently applied in both countries, leading to a reinforcement of empirical policy core beliefs rather than a shift in perspective. Based on this, hypothesis 2 could be confirmed.

PFO business cooperation is promoted with limited effectiveness of policy instruments

In both countries, analysed forest-related policy documents emphasize the importance of PFO business cooperation. In Slovakia, PFOs started to cooperate in 1991 (Šálka et al. 2016), when organizational forms were established through informal government initiatives, to provide representatives of non-state owners to advocate their rights in the restitution process (Dobšínská et al. 2020). In Slovenia, PFOs started to cooperate later (in late 1990s') as the initiative was inspired by existing organizational forms from abroad (Mori et al. 2006; Pezdevšek Malovrh 2010; Pezdevšek Malovrh et al. 2022). PFO business cooperation has been promoted mainly as small-scaled and fragmented forest property hinder sufficient forest management.

Despite the availability of various economic and informational policy instruments, the engagement of PFOs in organizational forms remains low in both countries, as less than 1% of PFOs are members of such organizational forms (Pezdevšek Malovrh et al. 2023a, Sarvašová & Dobšínská 2023). The review of the international scientific literature on PFOs' cooperation made by Pezdevšek Malovrh et al. (2024) summarizes that economic and informational policy instruments are crucial in fostering PFO business cooperation but highlights that their effectiveness is often limited due to factors such as historical distrust in organizational forms, and small-scaled forest property. In many former socialist countries, there is a persistent distrust of collective actions due to past experiences with forced collectivization. This historical distrust makes PFOs reluctant to join different business organizational forms, even when financial incentives are available (Hrib et al. 2024). The small-scale and fragmented private forest property structure, hinder efforts to form effective cooperative structures (Pezdevšek Malovrh et al. 2022). Additionally, many PFOs remain unaware of the benefits of business cooperation (Pöllumäe et al. 2014; Sarvašová et al. 2015; Weiss et al. 2019; Sonnhoff et al. 2021; Pezdevšek Malovrh et al. 2024) such as facilitating access to funding and increasing the profitability of their forest holdings. This lack of awareness lowers their inclination to engage into such cooperation. Moreover, the complexity of the funding programs and associated bureaucratic procedures can discourage PFOs from engaging, particularly small-scale PFOs (Dobšínská et al. 2024).

External events influenced forest policy change, including the development of forest policy instruments addressing PFO business cooperation

Throughout the three analysed periods (1993–2024), the most influential external events of forest policy change were the restitution process and EU accession (political external events).

The restitution process in both countries is identified as one of the main drivers that started significant changes

in the forest ownership structure (UNECE/FAO 2020). For the forestry sectors of both countries, it was one of the major challenges faced in the last three decades (Jarský et al. 2018; Vlahek & Damjan 2024), because it brought many changes to national forest policies and regulations. In addition, the restitution has had positive effects, on governance processes (Jarský et al. 2018) resulting in the establishment of various PFOs' organizations which primarily aim was interest representation of PFOs in the policy processes (Pezdevšek Malovrh et al. 2011; Sarvašová et al. 2014). The restitution process did not affect PFOs business cooperation in both countries, because none of the PFO business cooperation forms were primarily formed to influence restitution process.

The accession to the EU (political external event) has fostered policy change related to PFOs business cooperation in both countries, as new financial incentives were available under RDP and CAP (economic external events).

These political changes (regime change, restitution process and accession to the EU) have also been reflected in the changed socio-economic conditions in the forest policy subsystem. Especially, emergence of new PFOs owning small and fragmented forest property after restitution process (social external event) and economic growth resulting in decrease in the rural population as well as lower dependence of PFOs on income from agriculture and forestry sector (social and economic external events) reflected in forest management deficiencies (Moravčík et al. 2024; Slovenia Forest Service 2024). The results show that these changes in socio-economic conditions fostered the development of policy instruments that support PFO business cooperation, mainly with the aim to increase the efficiency of private forest management, enhance the stability of forest ecosystems and increase the competitiveness of forest sector. The same reasons why forest policy support PFO business cooperation was recognized by number of previous studies (e.g., Sarvašová et al. 2015, Šálka et al. 2016, Pezdevšek Malovrh et al. 2017, 2022; Jarský et al. 2018; Stojanovski 2022).

The results show that both countries made some adjustments in policy instruments related to PFOs business cooperation, mainly in adopting financial incentives under RDP and CAP, and in the national budget, but its approach to PFO business cooperation was rather static and therefore ineffective. The findings of this study align with the ACF's notion that secondary beliefs are flexible and responsive to external events (Sabatier & Weible 2007) and with other studies that have also found influence of external events on policy change (e.g., Weiland 2010; Niedziałkowski et al. 2012; Albulescu et al. 2022; Halušková 2022). Therefore, hypothesis 3 can be confirmed.

Limitations of the research

Our study focuses only on Slovenia and Slovakia, which may limit the generalization of the results to countries

or regions with different socio-economic and political contexts. The study relies only on document analysis and expert knowledge and focuses on forest policy instruments but does not consider other factors influencing PFOs behaviour. Conducting a longitudinal analysis is always a challenge when it comes to maintaining consistency and comparability of data.

5. Conclusion

This paper examined, explained and compared policy core beliefs, secondary beliefs and policy change in the context of PFO business cooperation in two different former socialists' countries, namely Slovenia and Slovakia. By applying the Advocacy Coalition Framework, it confirms its main notions that normative core beliefs remain stable over time, while external events such as the restitution process and EU accession provoked policy change in secondary beliefs. In all analysed periods forest-related policy documents in Slovenia and Slovakia recognized the importance of voluntary PFO business cooperation to overcome forest management related problems. Financial support from the state budget and EU funds was aimed at promoting PFO business cooperation, but the interest of PFOs to join such cooperation has been limited. While economic support from national and EU funds is seen as crucial for enhancing PFO business cooperation, it alone is not sufficient to increase PFOs' willingness to engage. Informational instruments emphasizing the benefits of such cooperation should be used more widely. The study provides valuable insights into the understanding of forest policy dynamics and the role that external events have on PFO business cooperation. Future research could build on these findings by conducting interviews or surveys with PFOs and policy makers to gain deeper insights into their policy beliefs and business cooperation dynamics. This approach would complement the document analysis and offer a more comprehensive understanding of the factors influencing forest policy changes.

Acknowledgements

The results and this article are part of emerging Ph.D. at Biotechnical Faculty, University of Ljubljana of Z. U. and her supervisor prof. Š. P. M., PhD., and co-supervisor Res. Assoc. A. J., PhD., with the title: »Influencing factors on the business organization of private forest owners in Slovenia«. Z. D. was supported by the Slovak Research and Development Agency under contract no. APVV-20-0429 and Czech National agency for agricultural research (NAZV) grant QK23020008.

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