

The Slovak forest policy arrangement: Post-1989 residues and changes

LENKA HALUŠKOVÁ*

Department of Economics and Management of Forestry, Faculty of Forestry, Technical University in Zvolen, Zvolen, Slovakia

**Corresponding author: lenka.haluskova@tuzvo.sk*

Citation: Halušková L. (2022): The Slovak forest policy arrangement: Post-1989 residues and changes. J. For. Sci., 68: 395–412.

Abstract: After 1989, Central and Eastern European countries with planned economies launched a process of transformation. In the Slovak forest policy, the main changes have been in the structure of forest ownership, increasing the share of governance mechanisms within the decision-making, and the organization of the sector. The aim of the paper is to analyse the current Slovak forest policy arrangement in relation to the socialistic political history, via the Policy Arrangement Approach. The analysis is based on literature search and consultations with forest policy experts. In total, 55 scientific publications were analysed. Subsequently, the results were consulted with four national forest policy experts. Despite the three decades-lasting transformation process, in Slovakia, forest policy is characterised by a strong influence of governmental actors, centralisation, and prevailing hierarchical use of policy instruments. Nature protection actors enter the policy arena, for instance, to expand protected areas. The top-down planning has an impact on the forest owners' performance of rights to use their forests. Non-governmental actors attempt to enforce their interests through participation mechanisms, inter-ministerial commenting procedures, and voluntary instruments. Public opinion is turning towards nature protection and forestry as such has come under pressure with its traditionalist approach.

Keywords: actors; discourse; Policy Arrangement Approach (PAA); power resources; rules of the game

At the end of the 1980s, most forests in Central and Eastern Europe, including Slovakia, were in state use, with the hierarchical top-down management of forestry (Brodrechtová et al. 2018; Makrickiene et al. 2019; Scriban et al. 2019). However, Sedmák (2018) stated that socialist forestry was, in addition to maximising wood production, focused on multifunctional and sustainable man-

agement. Planning and management were based on the following ideas: (i) supremacy of societal needs over the needs of the individual, (ii) sustainability of forest management, (iii) functionally integrated management of large territorial units, (iv) full use of production potential. The main tools to achieve the objectives were forest management plans (FMPs) (Sedmák 2018), intended to fulfil

production as well as non-production functions of the forest. The ultimate aim of forest management planning was to achieve sustainability with maximum attainable economic evaluation (Sedmák et al. 2013).

After 1989, the process of transformation from centrally planned to market economy was launched (Bouriaud, Schmithüsen 2005; Teder et al. 2015). The basic goal of forest policy was redefined as “conservation, protection and enhancement of forests” (Konôpka 2018; Šulek 2010). In the forestry sector, the new political, economic and social situation resulted in the restitution, privatisation of some activities, and changes in the economy, governance and organization of the sector (Konôpka 2018). New actors have entered the forest policy area. For instance, the owners who wanted to use their forests. At the same time, restitution led to the fragmentation of ownership, with many small owners, while some having neither experience nor interest in forest management (Tuček et al. 2015).

Although forestry belongs to the largest employers in rural areas and is a provider of raw materials for industries (Brodrechtová et al. 2018), the official contribution of the forestry sector to the Gross Domestic Product (GDP) in Slovakia was only 0.7% (Green Report 2020). The estimated share of non-market ecosystem services to GDP is several times higher than the measured share from the production of market goods (Kovalčík 2018).

Policy Arrangement Approach. Arts and Leroy (2006) defined a policy arrangement as “the temporary stabilisation of the content and organization of a particular policy domain at a certain policy level”. The four dimensions of the policy arrangement according to Arts and Leroy (2006) are:

- *actors*, their interests and *coalitions* (including the opposition),
- redistribution of *resources* between these actors, leading to differences in *power* and influence
- *rules of the game* within an arrangement, in terms of *formal* procedures as well as *informal* rules and practices of interaction, and
- *policy discourses* that include norms and values, problem definitions and stakeholders’ attitudes to solving them.

Liefferink (2006) suggests starting the forest policy analysis by choosing one of the Policy Arrangement Approach (PAA) dimensions. He further states that the actor’s perspective is the most graspable for getting an overview of the political

arrangement of pre-determined issues. Through the actors, the other categories of power resources, rules and discourses materialise. For this reason, the dimension of actors has been chosen as a starting point (Figure 1). In this vein, the dimensions for the forest policy analysis are theoretically defined below.

The analysis of policy arrangement from an actor’s perspective begins with “the identification of relevant actors in the political process” (Liefferink 2006). The actor is one of the central concepts of political analysis. There are several approaches to defining an actor, through power, interests, or the impact on decision-making in a defined policy area (Weber 2012; Krott et al. 2014; Schusser et al. 2015). According to Krott et al. (2014), relevant actors are those involved in the formulation and/or implementation of forest policy. Schusser et al. (2015) define an actor as any entity that has a clear interest and at the same time the opportunity to influence policy in a given area. Domestic actors are governmental and non-governmental actors from various sectors, including individual public bureaucracies and environmental, social and business non-governmental organizations (NGOs) (Singer, Giessen 2017).

The behaviour of the actors is motivated by their *interests* (Krott et al. 2014). Šálka et al. (2017) define interests as “orientations in the actions of actors, expressing their wishes, ideas and requirements whose enforcement will benefit them”. Interest is not as constant as core beliefs or ideology (Sabatier 1988; Šálka et al. 2017). Actors with common interests tend to form *coalitions* (Sabatier 1988). Establishing interest groups and coalitions makes sense to protect and present common interests in the political process. Glück (2000) identifies three key interest groups concerning the forest: economic, environmental, and social. According to Krott (2010), every interest concerning forests is rooted in one of these three groups. Economic interests are associated with forestry ideology, are based on anthropocentric value orientation and promote the primacy of wood production based on sustainable management and professional competence. Ecological interests (Hysing, Olsson 2008) are based on the biocentric value orientation, and the goal is to preserve and protect the forest (Stern et al. 1995). Forest functions in the protection of biodiversity, adaptation and mitigation of climate change come to the fore. Among the social interests is the use of the forest for recreation and

<https://doi.org/10.17221/105/2022-JFS>

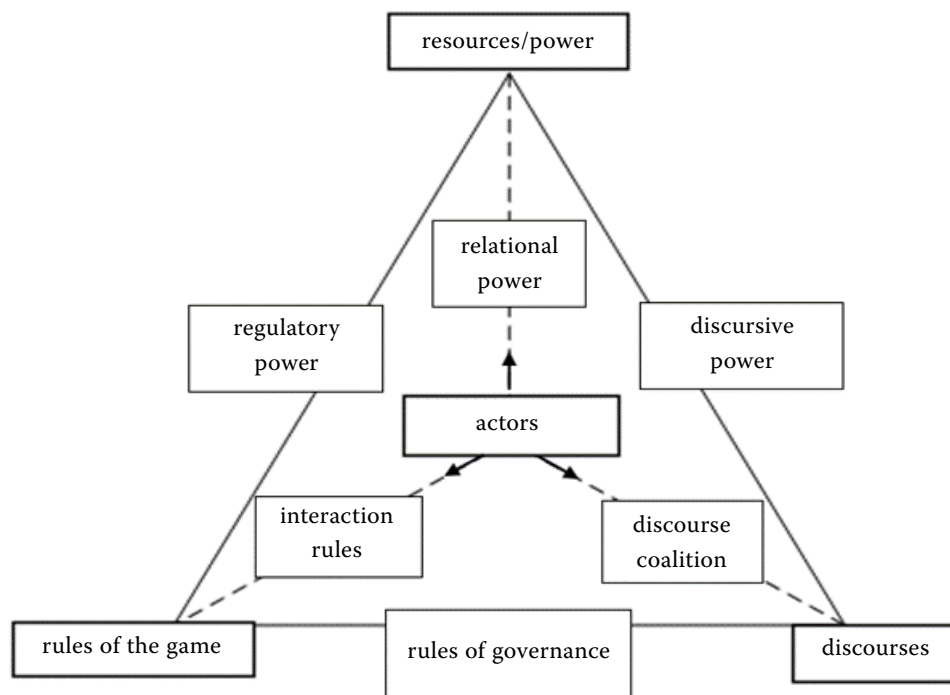


Figure 1 The tetrahedron: Analytical perspectives (Lieferrink 2006)

tourism, and an emphasis is on the aesthetic function (Šálka et al. 2017). As a result, three interest coalitions can be determined: economic, ecological and social coalition (Glück 2000, Krott 2010).

The *power* of actors is considered by many theorists to be a fundamental factor in the analysis of forest policy (Agrawal et al. 2008; Giessen et al. 2009; Weber 2012; Krott et al. 2014). The PAA in Lieferrink's understanding (Lieferrink 2006) views the power in the intentions of the actors toward each other, the so-called "relational power", expressing the opportunity of an actor to advance their interests against the interests of other actors. The power *resources* of actors are further classified as coercion, (dis)incentives, and dominant information (Krott et al. 2014). Power resources provide information on the redistribution of competencies determining the position of actors vis-à-vis other actors within a policy-making process (Arts, Buizer 2009).

The *rules of the game* set the policy arena. They determine the way the game should be played and within which boundaries (Arts, Buizer 2009). In the actor-oriented analysis, the rules are those that govern the interactions between the actors involved. They are both formal procedures and informal practices (Arts, Leroy 2006).

The setting of *formal rules* may lead to a hierarchical model, with the application of the principles

of "regulation and control" [command-and-control in Makrickiene et al. (2019)], or with the application of the principles of governance. The formal rules could be further divided into hierarchical and non-hierarchical. Formal hierarchical rules are either those mostly applied from the top-down perspective in the political administrative system or specific tools that actors can use to advance their interests. Hierarchical rules primarily represent the application of forest policy instruments. These instruments are regulatory, economic, and informational. Regulatory instruments include regulatory policy interventions that formally affect action through legally binding regulations. They determine how the target group should behave. Their application is based on the existence of a supervisory legal authority. Economic instruments are all political means that formally influence social and economic actions through the exchange of economic values. The political process uses economic mechanisms to achieve public objectives. Informational instruments influence action solely via information. Access to information and the opportunity to use it play a crucial role (Krott 2010).

Formal non-hierarchical rules represent the application of voluntary forest policy instruments and the application of forest governance mechanisms (Šálka et al. 2017).

Voluntary instruments are used in practice as free, voluntary decisions to meet social and environmental above-standard requirements beyond regulatory or financial support. The impetus for such action is the expectation of benefits.

The typical governance mechanisms within national forest policy arrangements are participation, coordination, market, and professional advising (Šálka et al. 2017).

Participation deals with enabling citizens and actors to participate directly or through representatives in the decision-making process and to demonstrate their interests (Makrickiene et al. 2019). Public participation may have various forms: direct involvement of citizens as individual persons or organized groups, exchange of information, expression of opinions and attitudes, etc. (Maier et al. 2014). Policy coordination is defined as “an activity that brings together actors, organizations and their networks across sectoral boundaries and enables processes that cross, extend or otherwise link sectoral and cross-cutting policies in their formulation, implementation and evaluation” (Shannon, Schmidt 2002). Legislatively anchored coordination mechanisms include inter-ministerial comment procedures, parliament committee meetings, and temporary inter-sectoral commissions are also used (Šálka, Sarvašová 2009). Professional advising takes place through campaigns or is intended for specific stakeholders (Šálka et al. 2017; Wilkes-Alleman 2021).

Informal rules are mechanisms that are not formally anchored but are based on the habits or hidden interests of the actors (Arts, Leroy 2006; Krott 2010). Informal mechanisms can also be found in all types of defined formal instruments. In the case of regulatory instruments, the biggest difference between the “formal ideal” and the “informal reality” is the informal distribution of power when enforcing decisions. Informal strategies also play an important role in economic instruments. Actors seek financial support in the face of informal benefits, which can be objectively counterproductive. According to Krott (2010), politicians tend to use information informally when performing their functions. Performance toward the public formally serves to raise awareness and to provide transparent information. Informally, it is connected with the own interest of its creator and tends to benefit him (Krott 2010).

Other specific informal aspects that emerge in the political process influencing the behaviour

and decision-making of actors, and policy-making as such are power/data/information networks, politicization, informal negotiations, and lobbying. In the background of formal procedures, informal negotiations may take place between the actors involved, for example when the actors discuss attitudes, determine the conditions and negotiate compromises before formal decisions are taken (Krott 2010). Based on the availability of power, information or data, actors tend to form informal coalitions, the so-called networks. Politicisation is a decision of the Office based on political grounds (Peters 1998). Non-meritocratic procedures in hiring employees, when expertise is not the deciding factor, but higher interests, have an impact on the effective functioning of the public policy and objective decision-making (Rada pre štátnu službu 2019). Lobbying can be defined as the interaction of a group or interest group with policymakers, either directly or indirectly, to influence current policy or to create a relationship conducive to shaping future policy to the benefit of that group or interests (Thomas, Klimovich 2013).

The PAA defines *discourses* as interpretive schemes ranging from formal policy concepts to popular narratives and storylines that give meaning to a given policy area (Dryzek 1997). Discourses are characterised by long duration. However, it does not rule out changes in the attitudes of influential actors that resonate in the media, science and politics (Arts et al. 2014). Šálka et al. (2017) define a discourse as “a form of public participation that is based on communication behaviour, i.e. the articulation of attitudes and interests in the political process through various means of communication”. Important tools of communication are mass media, linking science, politics, and the general public (Weingart et al. 2000). The analysis of discourses through mass media is a view into the wider social debate, a means of indirectly measuring the attitudes and values of society (Webb et al. 2008).

The objective of the paper is to analyse the current forest policy arrangement in Slovakia, considering changes and similarities compared to that before 1989. The categories for analysis are based on the PAA and its dimensions. The literature search within the last two decades is the main method, complemented by consultations with four national forest policy experts. The results of the litera-

<https://doi.org/10.17221/105/2022-JFS>

ture search and consultations can also contribute to identifying issues that have not been examined yet on the topic. Thus, the recommendations for further research are included in the Conclusion chapter of the paper.

MATERIAL AND METHODS

The literature search is a search for a set of written texts on a specific topic (Knopf 2006). Documents are data that originated in the past and were obtained by someone else than the researcher for purposes other than current research (Hendl 2016).

The first round of data collection was performed from July 2021 to September 2021. The second round, re-check, was performed from January 2022 to February 2022. The data included scientific publications during the period from 2000 to the beginning of 2022. The search was conducted on Google Scholar, in the Web of Science database, and the Technical University in Zvolen library.

The search keyword was “forest policy in Slovakia” in combination with PAA dimensions “actors”, “interests”, “coalitions”, “power resources”, “discourse”, and their synonyms. Considering the topic, the search included the literature in English as well as in the Slovak language. In total, 55 scientific papers included terms within the set criteria and thus they were furtherly analysed. For Table S1, summarising the analysed papers, see the Electronic Supplementary Material (ESM). In addition, two national reports on the state of forests, the so-called Green Reports, were analysed. In the discourse part, the grey literature search was included, as the scientific literature search was not sufficient to complete the dimension analysis.

After the first round of data search, the draft paper was distributed to four national forest policy experts who were asked for their comments, ideas and suggestions. The experts suggested shortening the introduction part, specifying some theoretical starting points, and the extension of sources of literature. The second round of search was subsequently conducted and the suggestions were incorporated into the paper.

RESULTS

Actors

Relevant actor identification. Governmental actors come from different levels of governance,

from national to local one, and are made up of forestry administration bodies, state forest organizations as well as nature conservation authorities, and public forestry institutions in charge of forest monitoring and science and research activities (Juerges et al. 2021). “From the point of view of forest policy, the most important component of the administrative system is the state administration of forestry (SAF)” (Šálka et al. 2017). The central body is the Ministry of Agriculture and Rural Development of the Slovak Republic (MARD SR). The military forests are administered by the Ministry of Defence of the Slovak Republic (MD SR). MARD SR performs state administration, including state professional supervision. The tasks of the Ministry in the forest management section are provided through the Forest Management and Wood Processing Section and its departments.

State organizations manage 51% of the total area of forest land, while state-owned forests account for 40%. The state manages also the forest lands of unidentified owners and of known owners based on a lease, a mutually concluded lease agreement and also based on the principles of the Civil Code relating to the common cause. The largest state enterprise Lesy SR (Forests of the SR) manages 76.5% of the area of the state-owned forests and 87% of the state-managed stands. Other three state forestry organizations are operating in Slovakia: State Forests of the Tatra National Park, Military Forests and Estates of the Slovak Republic and Agroforestry Estate Ulič. The remaining forest area is managed by non-state entities, private, communal, church, municipal and agricultural cooperatives (Green Report 2021).

The National Forest Centre (NFC), a state-established contributory organization under the auspices of the MADR SR, plays an important role in research. Furthermore, it ensures the tasks of the department in the field of education, work with the public, forest conditions mapping, reporting, and ensures the procurement of FMPs.

In matters of nature and landscape protection with an impact on forests, the management and control of administration are performed by the Ministry of Environment (ME SR). The contributory organization of the Ministry of Environment which is closely related to forest management is the State Nature Protection (SNP) of the SR. It performs tasks in the area of protection of animal and plant species, ensures the care of specially pro-

tected areas of nature and landscape and monitors the state of natural ecosystems. The SNP also issues statements on accidental logging and develops management plans for protected areas.

An important representative of the non-governmental political sector is the Union of the Associations of Non-State Forest Owners of Slovakia (UANSFOS), which unites regional associations of non-state forest owners. It covers the interests of the owners of private, communal, municipal and church forests (Hricová 2012). It is a pluralistic-type association in which the membership is voluntary. It serves to coordinate procedures to defend the common interests of owners and to create space for the formulation and implementation of forest policy by the group (Sarvašová et al. 2015).

The non-state non-political self-governing institution that cooperates in the formulation of economic, ecological and social policy in forestry, issues statements on expert problems in forestry and promotes the professional, social and economic interests of its members is the Slovak Forestry Chamber. It also participates in the preparation of forestry development concepts and legislation and proposes measures in the field of education, provides advice and carries out awareness-raising activities (Green Report 2020).

The interest association of the corporatist type, where one interest association represents the whole group which cooperates closely with the state, is the Slovak Hunting Chamber. Membership and contributions are mandatory in this type of association (Šálka et al. 2017). The Slovak Hunting Chamber protects and promotes the interests of its members in the exercise of the right to hunt. In carrying out its activities, it takes care to preserve values and traditions. The chamber is divided into 20 district chambers (Brodrechtová 2019).

In the field of science, research and education focused on forestry, in addition to the National Forest Centre, the Faculty of Forestry at the Technical University in Zvolen, the State Forest Research Station of the Tatra National Park, and the Institute of Forest Ecology of the Slovak Academy of Sciences (SAS) operate.

Interest groups dealing with forest certification are an example of a non-governmental actor who enters the scene of forest policy in the Slovak Republic. Programme for the Endorsement of Forest Certification (PEFC) Slovakia is an interest association of legal entities. Membership is voluntary,

it can be applied for by a legal entity that owns, manages forest land or uses forest land products, through an application, while consent to the articles of the association is required (Šálka et al. 2017). The Forest Stewardship Council (FSC) does not have a registered national initiative in Slovakia, it operates on the principle of a temporary national standard. According to the PEFC and FSC schemes, 66.4% of the total area of forest land is certified in Slovakia (Green Report 2020).

There are also several non-governmental organizations in Slovakia that focus on nature protection and environmental issues, which has an impact on forest policy-making and forest management. The most famous are the World Wildlife Fund (WWF), the Forest Conservation Group Wolf (VLK), the PRALES Civic Association, Daphne, the Tree of Life, and others (Brodrechtová 2019).

Interests and coalitions. Dobšínská and Šálka (2009) determined specific actors of the so-called economic coalition within the Slovak forest policy arrangement: state and non-state forest enterprises, associations of non-state forest owners, employers' unions, trade unions, timber enterprises and their interest associations, right-wing and conservative interest groups and political parties, with the support of forestry state administration, forestry science and research. State and non-state forest owners as well as managers place a priority emphasis on the production functions (Sarvašová et al. 2010; Dobšínská, Sarvašová 2016; Paluš, Krahulcová 2019; Juerges et al. 2021), as timber production is their main source of income from the forest (Tutka 2000; Kovalčík 2011; Brodrechtová 2019). According to the owners, logging and other activities in forests should stay under the competencies of the owners (Dobšínská, Sarvašová 2016). The interests of the owners can be summarized as caring for the forest, its health and aesthetics, with an emphasis on economic evaluation through logging. In addition to the production function, forestry actors also emphasize other forest functions, in line with forest management orientation on three pillars: economic, ecological and social (Moravčík et al. 2012), and consider the concept of close-to-nature forest management to be the starting point (Dobšínská, Šálka 2009; Moravčík, Konôpka 2009). However, the emphasis on production is still significant in Slovakia (Juerges et al. 2021). Juerges et al. (2021) from the package of provisioning ecosystem services point to a very significant demand

<https://doi.org/10.17221/105/2022-JFS>

for biomass in the country. Due to the limited number of wood processing plants with higher value-added production, a lot of wood is sold to biomass combustion plants or exported. On the one hand, it represents an income for forest owners, on the other hand, it results in the loss of quality wood that could be recovered on the market (Juerges et al. 2021).

The group of actors emphasising the regulating and supporting ecosystem services of the forest can be included in the so-called environmental coalition, which in Slovakia consists of ecologically oriented foundations, associations, interest groups and liberal-oriented political parties, and is supported by the Ministry of Environment, its budgetary and contributory organizations and ecologically oriented actors from science, research and education and FSC (Dobšínská, Šálka 2009). Regulating and supporting ecosystem services (ESs) are also a priority of the water sector in Slovakia, with an emphasis on water quality and supply. Nature conservation actors emphasize natural processes. The main interest is the ecological integrity of the forest with an emphasis on the protection of biodiversity (Sarvašová et al. 2013; Brodrechtová 2019). They promote as few interventions as possible in the largest possible area of the forest, which is contrary to the priority interest of forestry actors (Dobšínská, Šálka 2009; Sarvašová et al. 2020).

The interests of the general public in Slovakia are focused on the recreational functions of the forest, and can therefore be included in the so-called social coalition. Most respondents from the general public in Slovakia associate the forest with oxygen production and consider it a place for relaxation. A very low percentage (5%) of the respondents perceived the forest in the intentions of wood production (Výboštok et al. 2018). It is important to draw attention to the fact that there is also a conflict of interest within this coalition, for example between the public interested in tourism and recreation and hunters who prefer a high density of game populations (Juerges et al. 2021). Inhabitants are interested in mushroom and forest fruit harvesting, of provisioning ecosystem services (ES) and from the regulatory ones, they emphasise water quality (Brodrechtová 2019).

Power resources

Governmental forestry and nature protection actors have the greatest formal influence on other

actors within the forest policy arrangement. They influence the actions of other forest policy actors through laws, decrees, regulations, statements and expert opinions (Brodrechtová 2019).

The state and its bodies exercise their power mainly through coercion based on the monopoly to use force, responsibility to implement laws, and in the case of the forestry governmental actors, disposal of the ownership rights of state forests (Juerges et al. 2021). They also use financial incentives toward other actors and act as a source of information (Brodrechtová, Smreček 2018; Brodrechtová 2019). The forestry state administration ensures the preparation of the forest management plan (FMP), which represents one of the main instruments of enforcing the state policy in relation to forest owners. Forest owners' opinions should be part of the planning, but not necessarily included in the FMP (Bouriaud et al. 2013).

Furthermore, the owners are obliged to hire professional forest managers (Sarvašová et al. 2017), and in given circumstances they get economic motivation from the state. The hierarchical planning model of forest management in Slovakia has a strong influence on state and non-state forest owners (Šálka et al. 2015; Juerges et al. 2021) and is thus perceived in forestry practice (Galan 2021).

Nature protection governmental actors create, implement and control the application of forest legislation in protected areas, thus directly influencing forest owners and managers, which is a significant source of power over them. By entering into administrative proceedings, and formulating and approving FMP, they affect the activities of forestry governmental actors. The position of being able to enter into forest policy processes, to influence the activities of forestry governmental actors, forest owners and managers creates asymmetries in the degree of influence and the degree of bearing the consequences (Brescancin et al. 2018).

The power of the state forest enterprises is manifested mainly in shaping the business environment and setting trends in the timber and forestry services market (Teder et al. 2015; Brodrechtová, Smreček 2018; Štěrbová, Kovalčík 2020), which further has an impact on non-state owners. The largest forest enterprise Lesy SR has such a dominant position in the timber market that Šálka et al. (2016) considered it a source of market power (very high share of wood production) in the forestry sector in Slovakia. Governmental forestry and nature protection actors also work with the public, pro-

vide information and support forestry and environmental pedagogy (Šálka et al. 2017), thus exercising their source of power towards civil society (Halaj et al. 2022; Krykorková et al. 2022). Communication campaigns, rarely used in the forest policy practice in Slovakia, are also one of the examples (Wilkes-Allemann 2021).

Information based on expertise is the source of power of interest groups. One of the most important problems of associations in Slovakia and an obstacle to achieving the goals are the lack of funds for financing activities (Šálka et al. 2016). Šálka et al. (2016) considered interest associations of forest owners as the stable members of the forestry coalition in the process of formulating strategic policy documents and legislation, such as the National Forest Programme (Šulek 2010; Balest et al. 2016) and the Rural Development Programme. However, the negotiating position is relatively weak, which is the result of fragmentation (a large number of owners), voluntary membership and the strong influence of actors from agriculture and other sectors (Dobšínská et al. 2015). Associations create their agendas according to the specific problems they try to solve in the political process (Hricová 2012). Expertise in forestry plays an important role and forest owners' associations can provide expert information (Hricová et al. 2015), which could be a potential source of power over the state administration. Based on their expertise, the members of the association can influence other actors (Šálka et al. 2016). The limitation lies in the need for a joint agreement between the members of the forest owners' associations, as the position must reflect the common interests of its members (Hricová et al. 2015). However, the individual interests of the members often vary (Hricová 2012), which has a negative impact on the political influence of the association (Šálka et al. 2017). Hunting has a strong tradition in Slovakia. The transferred competencies of state administration are the source of the power of interest associations of hunters under the auspices of the Slovak Hunting Chamber. Membership and contributions are mandatory in this case, which increases the internal power potential of the association (Luptáková 2015).

Mainly information and moral stimuli, realized through lobbying, PR and participation in public discourse, is the source of the power of civil society actors. To promote their interests, environmental non-governmental actors are entering into forest

management planning processes. They often use their power resources toward forestry actors by entering into FMP-related proceedings or initiating legal proceedings. Non-governmental organizations, especially in the field of nature protection, are active in the media, they organize protests and blockades (Brodrechtová, Smreček 2018). Through engagement in the media and emotional activity, they greatly influence public opinion, which further affects the perception of forestry and foresters by the general public and the support of forestry activities by the public as such (Brodrechtová 2019).

Rules of the game

Formal rules of the game. Governmental actors in forestry and nature protection have the legislative and executive power, and thus the opportunity to create formal rules. The state uses regulatory tools in the form of forest law, thereby influencing the actions of forest owners. Regulation is enshrined primarily in forest legislation. Forest Act No. 326/2005 Coll. is the framework regulatory instrument of forest policy. The Act imposes binding prohibitions and orders on forest owners, but also on other actors, and thus hierarchically regulates the interactions between them. For example, it orders forest owners to preserve the forest on forest land or to ensure professional management (Šulek 2010). The law also regulates the relationship between the public and the owners by enshrining the free access of the public to the forest (Dobšínská et al. 2019). The features of the hierarchical model are present in the state administration as the central governmental actor of the forest policy, which represents a clearly defined hierarchy and established competencies, where orders and regulations are issued from the top down. "The state administration implements the decisions of superior institutions (legislation and executives) through various measures" (Šálka et al. 2017), which affect the condition and sustainability of the forest, the timber market and the provision of forest ecosystem services. The concept of nature protection is based on the regulatory protection of species and territories (Dobšínská, Šálka 2009). Act No. 543/2002 Coll. on Nature and Landscape Protection significantly reduces interventions in forests in the 4th and 5th protection zones (Šulek 2006). It is the restrictions imposed by this law that have a significant impact on forest land management (Dobšínská et al. 2013). 63% of the forest area of the Slovak Republic is lo-

<https://doi.org/10.17221/105/2022-JFS>

cated in the systems of protected areas (national and European). Natura 2000 sites make up 49% of Slovak forests (Sarvašová et al. 2020). Brodrechtová (2019) pointed out the incoherence of the Forest Act and the Nature and Landscape Protection Act. An example is the processing of timber from salvage felling in protected areas, where one law imposes an obligation to process it and the other prohibits it. In this case, the regulatory instruments collide (Dobšínská et al. 2020).

The economic instruments used by the state regarding forest management in Slovakia are the financing of public goods, the requirement of payment for the removal of forest land, compensation for damage to forest property and financial support. The forest provides ecological and environmental public beneficial functions. The state ensures their performance by supporting sustainable management from the state budget, obtained mainly through the collection of taxes. The economic instrument used by the state to protect the forest land is the imposition of the obligation to pay “compensation for the loss of non-productive forest functions in case of the exemption of forest land from fulfilling the forest functions” (Forest Act No. 326/2005 Coll.), the so-called levy for the removal of forest land. In case someone causes damage to forest property, e.g. in the form of pollution, they are obliged to make a correction or reimburse the increased costs incurred. Financial support can take the form of tax relief (Báliková et al. 2021) or direct support. In Slovakia, protective forests and forests for special purpose are exempted from the obligation to pay the land tax (Act No. 582/2004 Coll. on local taxes and local fees for municipal waste and small construction waste). If normal management is restricted by the implementation of legal standards, the owner or manager of the forest is entitled to compensation for the restriction of property rights. Direct financial support for forestry in Slovakia is provided through structural funds (from the EU budget and the state budget of the Slovak Republic) within the rural development policy (Jarský et al. 2014; Makrickiene et al. 2019; Juerges et al. 2021). It represents support to the prevention of forest damage, restoration of damaged forests, investments in forestry technologies, etc. The framework document for this support is the current rural development program.

The informational tools used in forest policy are advising, public relations and education. Information

sharing played an important role in the Natura 2000 implementation process when a public consultation was conducted with local stakeholders to examine their opinions and perceptions (Brescancin et al. 2018). The advice can be public, provided by state institutions and private, which is provided by forestry entities, and private companies that must meet the legal requirements. MADR SR created a system of voluntary public advising, provided by the NFC in Zvolen. Specific sources of information are the reports on the state of forests, which are called the Green Report and are processed annually under the auspices of the NFC (Dobšínská et al. 2019).

Elements of governance are reflected in the possibility for interest groups to participate in public policy-making (Sarvašová et al. 2014). The Ministry cooperates with other state administration bodies and with the public, forest owners, managers and administrators, associations and non-governmental organizations (Dobšínská 2009; Sarvašová et al. 2013; Šálka et al. 2017).

The main coordination tool used in forest policy practice in Slovakia is the inter-departmental comment procedure. During the strategic document adoption process the stakeholders have the option to pose their comments on the document proposal frequently used by interest groups (Sarvašová et al. 2012; Sarvašová et al. 2013; Šálka et al. 2016). An example of the application of the coordination process, with the involvement of the stakeholders from various interest groups, facilitated by the independent organization is the adoption of the new National Forest Programme for the period of 2022–2030.

The transition of forest enterprises to the supply method in the provision of silvicultural and logging work led to the creation of a strong forestry market, despite the high representation of the state form of forest ownership (Kovalčík et al. 2016).

A voluntary tool used by forestry actors in Slovakia is the environmental labelling of products (Paluš et al. 2018). The Slovak Forest Certification System (SFCS) has created a system of principles, criteria and indicators for Sustainable Forest Management evaluation. This involves the cooperation of interest groups involved in forest management, in compliance with the principles of consensus and transparency (Šálka et al. 2017; Paluš et al. 2021).

Informal rules of the game. The state administration in Slovakia has set activities and goals that result from the law as the main regulatory instru-

ment. In informal practice, it leads to negative impacts on a flexible response at the level of district offices.

Both governmental and non-governmental actors in forestry point to a lack of funding for forest management. They consider the funds from the Rural Development Program (RDP) to be used inadequately. Pressure from the European Union leads to the adoption of strategic documents which, however, are not subsequently implemented within the RDP. The issue of compensation and substitution for forest management restrictions and payments for the provision of forest ecosystem services has not been resolved either. Although a system of compensations for losses from the restriction of forestry activities in protected areas has been created for non-state actors, it is still unclear, and complicated, and its application is burdened by bureaucracy, lack of information and long duration (Šálka 2002; Bálíková et al. 2021; Bálíková, Šálka 2022). The informal relationship between individual public administration organizations is marked by the struggle for funds from the state budget as well as competence disputes in cross-cutting policies, e.g. forestry state administration versus nature protection state administration.

In addition to formal procedures, bureaucratic staff exchange information and negotiate agreements (Dobšínská, Šálka 2009; Maier et al. 2014; Brodrechtová 2019). The expertise of interest groups and the provision of information are not very desirable and relevant at the state administration level, as state authorities have information on state forest management, advisory services, individual forest management plans and economic indicators, which are processed on an annual basis (Šálka et al. 2016).

As reported by Šálka et al. (2017), the state administration and state forests tend to separate from other networks and create exclusive sectoral policy relationships. Dobšínská et al. (2013) drew attention to the existence of an informal network of actors involved in the formulation of public measures in forestry, composed of government officials, research institutions and interest groups. Forest owners' interest associations do not have any significant direct support from the government. Rather, they received support through an informal exchange of expertise with other countries and international organizations.

In forest management in Slovakia a low level of expertise of the key staff is present. Politically loyal people are appointed to management positions, which is an example of politicisation in the sector. Reorganizations are constantly taking place in the state enterprise LESY SR in connection with changes after the elections (Bálíková 2020).

Hunters' interest groups organise meetings and make contacts. Political actors are showing great interest in hunting, which increases the power of "hunting lobbying" (Luptáková 2015). Through lobbying and a large-scale campaign, the NGOs of the FSC and PEFC certification schemes have encouraged private and public forest owners to manage forests in line with their set standards, taking into account the environmental aspect (Juerges et al. 2021). In the field of certification, some multinational companies have their purchasing policy for products certified exclusively by the FSC scheme, which disadvantages the national initiative of the PEFC scheme (Brodrechtová 2019).

Discourse

The main sources of discourses in forestry are the interests and value orientations of the actors. The central actors entering the discourse on the topic of forests in Slovakia are governmental actors of forestry and nature protection (MADR SR, ME SR and their subordinate organizations), forest owners and managers, and non-governmental organizations in the field of nature protection and the general public. The discourse is shifting significantly from traditional media to social networks. Discourse research on forest policy in Slovakia is still at the outset (Dúbravská et al. 2021).

The current problem that has provoked an intense debate is the dispute between the Ministry of Agriculture and Rural Development of the Slovak Republic and the Ministry of Environment of the Slovak Republic and their representatives within political parties, NGOs and the public over the law amendment on the transfer of the national park governance competences from MADR SR to ME SR. The law amendment is supposed to be adopted by an abridged legislative procedure, by which non-governmental actors and the public are excluded from commenting (Šnidl 2021). Forest lands in national parks represent about 19% of the area of forest lands (Green Report 2021). The coalition of foresters, supported by opposition political parties, the Slovak Forest Chamber,

<https://doi.org/10.17221/105/2022-JFS>

the Slovak Hunting Chamber and private owners, is pushing for a review of the amendment and the regular legislative process. The coalition of environmentalists, supported by NGOs and citizens petition is pushing for the transfer of national park governance competences and enlargement of non-intervention zones in national parks from 20% to 75%, which according to them is the standard abroad (Lesmedium 2022).

Discourse contributions show the negative attitudes of representatives of state forest enterprises regarding the expansion of protected areas, which requires various FMPs, which limit their activities in the forest. There are two programs in force at the same time, namely the forest management program and the protected area management program, neither of which is formally superior to the other (Brodrechtová, Smreček 2018).

In the discourse of forest owners and foresters, the greatest emphasis is placed on the wood production function (including biomass production for energy), which comes into conflict with the use of forests in protected areas, where NGOs and nature conservation authorities enforce the so-called non-intervention regime (Sarvašová et al. 2020). Until about 2000, the so-called active protection was performed in the protected area, when the priority of foresters and environmentalists was to cope with consequences of disasters, prevent the outbreak of harmful agents and thus contribute to the preservation of the object of protection. During the adoption of the law on nature and landscape protection, environmentalists began to enforce the so-called passive protection, when forest decay is seen as part of natural processes that have become a new conservation goal. The priority interest was to keep protected areas at the highest level of protection for spontaneous development, and the related expansion of these areas to the highest possible extent (Kovalčík, Sujová 2018; Sarvašová et al. 2020).

The topic discussed in professional circles is the financing of forestry, concerning subsidies, compensations and payments for non-production services, which have not yet been effectively marketed. There are discrepancies in opinions on the focus of forest management on commodities, recreation, or traditional management (Tuček et al. 2015).

Non-governmental actors in nature protection have a negative opinion on exceeding the allowable cut due to salvage felling and increasing planned

logging in protective forests. As for salvage felling timber in protected forests caused by natural disturbances, foresters' interventions are limited by the nature protection legislation. Consequently, foresters blame environmentalists for the late processing of such timber, which, according to them, leads to the expansion of disturbed areas. The environmentalists further point to the inefficient water policy of the state (Brodrechtová 2019). NGOs use populism and simplification in forestry issues, which is further supported by giving publicity to corruption cases in the state forest enterprise (Brodrechtová et al. 2018). Nature conservation NGOs are much more active in the discourse directed at the general public than foresters, which in turn has an impact on the setting of public opinion in the country (Dobšínská et al. 2020). At present, changes in society's views and requirements towards forest ecosystems are noticeable. The reason is the increased awareness of the environment, as well as the perception of forestry beyond the provider of raw materials, as a tool for fulfilling the non-productive functions of the forest. Changes in public opinion and societal demands affect policymakers, forest owners and managers. While in the past the public opinion favoured traditional forestry, foresters and their work, today they are often criticized by the media and the public for their interventions in the forest and logging.

DISCUSSION

The literature search showed several papers concerning specific issues of national forest policies within Central and Eastern European (CEE) countries from a comparative perspective. Such as nature conservation policy implementation (Malovrh et al. 2019), the impact of ownership reforms and policy changes (Bouriaud, Schmithüsen, 2005), the effectiveness of national forest programs (NFPs) (Lengyel 2010; Winkel, Sotirov 2011), and others (e.g. Hazarika et al. 2021; Hochmalová et al. 2021).

A cursory literature search concerning the analyses of national forest policies in Central European countries showed the orientations on specific topics. Different theoretical approaches were used in the analyses. In Poland, the papers focused on public participation (Blicharska et al. 2011; Niedzialkowski et al. 2012), governance and discourses on Białowieża Forest (Niedzialkowski et al. 2012; Blicharska,

Van Herzele 2015; Logmani et al. 2017), state forest policy (Chudy et al. 2016), and the functioning of State Forest organizations (Matysiak, Kapuscinski 2007; Golos, Kaliszewski 2016; Szramka, Adamowicz 2017) were found. In the Czech Republic, the papers on specific issues dealing with forest management plans (Synek, Hrib 2019), National Forest Program (Balest et al. 2018), economic instruments (Jarský et al. 2014; Lojda, Ventrubova 2015), state forest administration (Hrib et al. 2021), and communication within the forestry sector (Riedl et al. 2019) are available in databases.

We applied PAA to analyse the similarities and changes of the Slovak national forest policy in relation to its socialistic history. As a side-effect, the search showed issues uncovered by recent research on the topic. The PAA was used in a similar context by Veenman et al. (2009) to describe the Dutch forest policy evolution in the past three decades. Arts, Buizer (2009) applied PAA to explain (institutional) discourse dynamics in the global forest governance context. Park and Youn (2013) analysed changes in the Republic of Korea concerning the urban forest policies. Beeko and Arts (2010) used PAA to explain Ghana forest policy changes impacted by the VPA initiative [similarly Ochieng et al. (2016) REDD+ impact in Peru]. Ayana et al. (2018) focused their national forest policy changes research in Ethiopia on the influence of environmental NGOs.

We suppose the pluses of the approach in being comprehensive as it covers the actors, institutional setting and discourse, thus the areas potentially affected by the political and socio-economic changes. Although the dimensions need to be defined precisely in accordance with a given context.

CONCLUSION

The results of the analysis based on the search of available literature are summarised in Table 1. The analysis of the national forest policy leads to the conclusion that the most influential actors of forest policy in Slovakia are still governmental actors. However, the degree of the influence of non-governmental actors on policy-making is constantly increasing through the application of elements of governance, for example, civil society participation. Further research into the elements of governance (participation, cross-sector coordination, multi-level governance and others) and also their mutual interactions concerning ac-

tors and coalitions in forest policy would bring the new knowledge of their functioning.

At present, a system of planned forest management is maintained in Slovakia, albeit modified. The emphasis on close-to-nature forest management is supported by Forest Act No. 326/2005 Coll. The goal of such management is age and tree-differentiated forest. In line with these objectives, the share of natural regeneration is increasing, which currently reaches 39.8% of the total restored area (Green Report 2021). The tools for ensuring the objectives of forest policy are, in particular, forestry legislation, the institute of Professional Forest Manager (PFM) and the Forest Management Plan (FMP), by which state administration bodies set, among other things, maximum logging levels, limits and restrictions in order to conserve forest resources. FMP is thus a state tool for sustainable forest management, in both state and non-state forests. Sedmák (2018) points out that the basic paradigms of socialist management are still reflected in the mandatory creation of forest management plans, which leads to conflicts between forestry and nature protection, as well as between small forest owners and the state. The basic orientation of forest management planning has largely been maintained. Despite changes in the ownership structure and design of forest enterprises, a strong tradition of “command-and-control” of forestry still prevails (Makrickiene et al. 2021). Further implementation and evaluation analyses of existing key tools form the basis for their improvement, as well as the design of new tools to ensure the ecosystem services.

The use of power and informal rules occur very often in forest policy in Slovakia and emerge as positive and negative factors affecting its effectiveness and legitimacy. A closer understanding of these elements through advice can lead to an increase in its success.

The discourse in Slovakia about forests mostly concerns traditional issues such as forestry and nature protection dispute, expansion of protected areas, logging restrictions, the dilemma of (non) processing of timber from salvage felling, limiting owners in economic benefits from the forest and inefficient process of obtaining compensation, disputes in forest management in the protected areas, etc. Actors outside the forestry sector, especially in the field of nature protection, engage more in the forest discourse. Discourse research is still in its infancy and needs to be examined more within Slovakia’s national forest policy research.

<https://doi.org/10.17221/105/2022-JFS>

Table 1. Policy arrangements approach dimensions in the Slovak forest policy

PAA dimension	Terms	Results
Actors	A: Relevant domestic actors A1 governmental actors A2 non-governmental actors	governmental: Ministry of Agriculture and Rural Development, Ministry of Defense, Ministry of Environment, state enterprises (SR Forests, State Forests of Tatra National Park/ converted to the Administration of TANAP in 03/2022, Military Forests and Estates of the Slovak Republic and Agroforestry Estate Ulič), National Forest Centre, State Nature Protection non-governmental: Union of the Associations of Non-State Forest Owners of Slovakia, Slovak Forestry Chamber, Slovak Hunting Chamber, Faculty of Forestry at the Technical University in Zvolen, State Forest Research Station of the Tatra National Park, Institute of Forest Ecology of the Slovak Academy of Sciences, Programme of the Endorsement of Forest Certification Slovakia, World Wildlife Fund, Forest Conservation Group Wolf (VLK), Prales Civic Association, Daphne, Tree of Life, and other non-governmental organisations
Power resources	A: Relational power of the actors vis-à-vis other actors	governmental forestry and nature protection actors: laws, decrees, regulations, statements, expert opinions, work with the public, forestry and environmental pedagogy; forestry governmental actors: ownership rights of state forests, forest management planning; nature protection governmental actors: legislation in protected areas, entering into administrative proceedings concerning forest management planning; state forest enterprises: shaping business environment, setting trends in the market; interests groups: information, entering into the process of formulating strategic policy documents and legislation, expertise; Slovak Hunting Chamber: transferred competencies of state administration; civil society actors: information, moral stimuli, PR, participation in discourse, entering into forest management planning, initiating legislation, protests, blockades
Formal rules of the game	A: hierarchical A1 regulatory instruments A2 economic instruments A3 informational instruments B: non-hierarchical B1 forest governance mechanisms B11 participation B12 coordination B121 interdepartmental comment procedure B13 professional advising B14 market B2 voluntary instruments	regulatory instruments: forest law, Act No. 365/2005 Coll. on forests, Act No. 543/2002 Coll. on nature and landscape protection; economic instruments: the financing of public goods, the requirement of payment for the removal of forest land, compensation for damage to forest property, compensation for the restriction of property rights, financial support (eg. tax relief, direct support); informational instruments: advising, public relations, education; governance mechanisms: participation in public policy-making, inter-departmental comment procedure, facilitation of strategic documents adoption process, forestry market; voluntary instruments: environmental labelling of forest products
Informal rules of the game	A: informal rules within A1 regulatory instruments A2 economic instruments A3 informational instruments B: other informal aspects B1 networks B2 politicization B3 informal negotiations B4 lobbying	within regulatory instruments: lack of flexibility in the state administration, informal struggles within public administration units, lack of implementation of strategic documents; within economic instruments: inadequate use of funds, insufficient functioning of the system of substitution and compensation payments; within informational instruments: information exchange and negotiating within the state administration, informal exchange of expertise with international actors; other informal aspects: the insufficient interest of the state in information from interest groups, state administration and state forests networking, networks of forestry government officials, research institutions and interest groups, forest owners', politicisation, hunting lobbying, lobbying and large-scale campaigns of NGOs

Table 1 to be continued

PAA dimension	Terms	Results
Discourse	<p>A: mass media discourse</p> <p>A1 the influential actors</p> <p>A2 sources of discourse</p> <p>A3 topics of discourse</p>	<p>actors: governmental actors of forestry and nature protection, forest owners and managers, non-governmental organizations in the field of nature protection and the general public;</p> <p>sources: different interests and value orientations of the actors;</p> <p>topics: national parks' administration change, disputes on the management in protected forests, active versus passive protection issue, financing of forestry, protected forest use issue; inefficiency of water policy</p>

PAA – Policy Arrangement Approach; NGO – non-governmental organization

Acknowledgement: I thank forest policy experts prof. Dr. Ing Jaroslav Šálka, Dr. Ing. Yvonne Brodrechtová, Ing. Zuzana Sarvašová, PhD. and Mgr. JUDr. Zuzana Dobšínská, PhD. for their fruitful comments, ideas and suggestions.

REFERENCES

- Agrawal A., Chhatre A., Hardin R. (2008): Changing governance of the world's forests. *Science*, 320: 1460–1462.
- Arts B., Buizer M. (2009): Forests, discourses, institutions: A discursive-institutional analysis of global forest governance. *Forest Policy and Economics*, 11: 340–347.
- Arts B., Leroy P. (2006): Institutional Dynamics in Environmental Governance. Dordrecht, Springer: 290.
- Arts B., Behagel J., Turnhout E., De Koning J., Van Bommel S. (2014): A practice based approach to forest governance. *Forest Policy and Economics*, 49: 4–11.
- Ayana A.N., Arts B., Wiersum K.F. (2018): How environmental NGOs have influenced decision making in a “semi-authoritarian” state: The case of forest policy in Ethiopia. *World Development*, 109: 313–322.
- Balest J., Hrib M., Dobšínská Z., Paletto A. (2016): Analysis of the effective stakeholders' involvement in the development of National Forest Programmes in Europe. *International Forestry Review*, 18: 13–28.
- Balest J., Hrib M., Dobšínská Z., Paletto A. (2018): The formulation of the National Forest Programme in the Czech Republic: A qualitative survey. *Forest Policy and Economics*, 89: 16–21.
- Báliková K. (2020): Implementačné a evalvačné analýzy ekonomických nástrojov na zabezpečovanie ekosystémových služieb lesa [PhD. Thesis]. Zvolen, Technical University in Zvolen. (in Slovak)
- Báliková K., Šálka J. (2022): Are silvicultural subsidies an effective payment for ecosystem services in Slovakia? *Land Use Policy*, 116: 106056.
- Báliková K., Dobšínská Z., Balážová E., Valent P., Šálka J. (2021): Forest land tax reductions – An effective payment for forest ecosystem services in Slovakia? *Central European Forestry Journal*, 67: 167–176.
- Beeko C., Arts B. (2010): The EU-Ghana VPA: A comprehensive policy analysis of its design. *International Forestry Review*, 12: 221–230.
- Blicharska M., Van Herzele A. (2015): What a forest? Whose forest? Struggles over concepts and meanings in the debate about the conservation of the Białowieża Forest in Poland. *Forest Policy and Economics*, 57: 22–30.
- Blicharska M., Angelstam P., Antonson H., Elbakidze M., Axelsson R. (2011): Road, forestry and regional planners' work for biodiversity conservation and public participation: A case study in Poland's hotspot regions. *Journal of Environmental Planning and Management*, 54: 1373–1395.
- Bouriaud L., Schmithüsen F. (2005): Allocation of property rights on forests through ownership reform and Forest policies in Central and Eastern European countries. *Schweizerische Zeitschrift für Forstwesen*, 156: 297–305.
- Bouriaud L., Nichiforel L., Weiss G., Bajraktari A., Curovic M., Dobsinska Z., Glavonjic P., Jarsky V., Sarvasova Z., Teder M., Zalite Z. (2013): Governance of private forests in Eastern and Central Europe: An analysis of forest harvesting and management rights. *Annals of Forest Research*, 56: 199–215.
- Brescancin F., Dobšínská Z., De Meo I., Šálka J., Paletto A. (2018): Analysis of stakeholders' involvement in the implementation of the Natura 2000 network in Slovakia. *Forest Policy and Economics*, 89: 22–30.
- Brodrechtová Y. (2019): Aktéri a ich moc pri obhospodarovaní lesov Slovenska- empirická analýza a poznatky z regiónu Podpoľania. Zvolen, Technical University in Zvolen: 185. (in Slovak)
- Brodrechtová Y., Smreček R. (2018): Aktéri a ich vplyv na obhospodarovanie lesov na Slovensku. In: *Správy z výskumu lesníckej fakulty pre prax*. Zvolen, Technical University in Zvolen: 24–31. (in Slovak)
- Brodrechtová Y., Navrátil R., Sedmák R., Tuček J. (2018): Using the politicized IAD framework to assess integrated forest management decision-making in Slovakia. *Land Use Policy*, 79: 1001–1013.

<https://doi.org/10.17221/105/2022-JFS>

- Chudy R., Stevanov M., Krott M. (2016): Strategic options for state forest institutions in Poland: Evaluation by the 3L Model and ways ahead. *International Forestry Review*, 18: 387–411.
- Dobšínská Z. (2009): Koordinácia a integrácia lesníckej politiky a politiky rozvoja vidieka: aktéri, vzťahy a procesy. In: Kovalčík M. (ed.): Aktuálne otázky ekonomiky a inováčnej politiky lesného hospodárstva Slovenskej republiky, Zvolen, Nov 9, 2010: 131–145. (in Slovak)
- Dobšínská Z., Sarvašová Z. (2016): Perceptions of forest owners and the general public on the role of forests in Slovakia. *Acta Silvatica et Lignaria Hungarica*, 12: 23–33.
- Dobšínská Z., Šálka J. (2009): Vzťahy lesníctva a ochrany prírody na Slovensku v kontexte prístupu advokačných koalícií. *Politologický časopis*, 4: 309–334. (in Slovak)
- Dobšínská Z., Šálka J., Sarvašová Z., Lásková J. (2013): Rural development policy in the context of actor-centred institutionalism. *Journal of Forest Science*, 59: 34–40.
- Dobšínská Z., Šálka J., Sarvašová Z. (2015): Politická moc záujmových združení. In: Sarvašová Z., Kovalčík M. (eds): Aktuálne otázky ekonomiky a politiky lesného hospodárstva Slovenskej republiky, Zvolen, Dec 10, 2015: 112–133. (in Slovak)
- Dobšínská Z., Sarvašová Z., Šálka J., Báliková K., Štěrbová M., Sujová K. (2019): Účinnosť nástrojov lesníckej politiky. Zvolen, National Forest Centre: 85. (in Slovak)
- Dobšínská Z., Živojinović I., Nedeljković J., Petrović N., Jarský V., Oliva J., Šálka J., Sarvašová Z., Weiss G. (2020): Actor power in the restitution processes of forests in three European countries in transition. *Forest Policy and Economics*, 113: 102090.
- Dryzek J.S. (1997): *The Politics of the Earth: Environmental Discourses*. Oxford, Oxford University Press: 220.
- Dúbravská B., Dobšínská Z., Sarvašová Z. (2021): Analýza mediálneho diskurzu k požiadavkám na zabezpečenie ekosystémových služieb lesa na území Mestských lesov Banská Bystrica. In: Hajdúchová I. et al. (eds): Finančná výkonnosť lesného hospodárstva a drevospracujúceho priemyslu v meniacich sa podmienkach. Zvolen, Technická univerzita vo Zvolene: 29–40. (in Slovak)
- Galan T. (2021): Vnímanie programu starostlivosti o lesy ako príkladu nástrojového mixu lesníckej politiky. [MSc. Thesis.] Zvolen, Technical University in Zvolen. (in Slovak)
- Giessen L., Kleinschmit D., Böcher M. (2009): Between power and legitimacy – Discourse and expertise in forest and environmental governance. *Forest Policy and Economics*, 11: 452–453.
- Glück P. (2000): Theoretical perspectives for enhancing biological diversity in forest ecosystems in Europe. *Forest Policy and Economics*, 1: 195–207.
- Golos P., Kaliszewski A. (2016): Social and economic conditions for providing public forest services in the State Forests National Forest Holding. *Sylwan*, 160: 91–99.
- Green Report (2020): Správa o lesnom hospodárstve v Slovenskej republike za rok 2019 Zelená správa (Green Report). Bratislava, Ministry of Agriculture and Rural Development SR, National Forest Centre: 53. (in Slovak)
- Green Report (2021): Správa o lesnom hospodárstve v Slovenskej republike za rok 2020 Zelená správa (Green Report). Bratislava, Ministry of Agriculture and Rural Development SR, National Forest Centre: 69. (in Slovak)
- Halaj D., Báliková K., Brodrechtová Y. (2022): The perception of an image of the state forest enterprise by general public in chosen region of the Slovak Republic. *Journal of Forest Science*, 68: 26–34.
- Hazarika R., Bolte A., Bednarova D., Chakraborty D., Gaviria J., Kanzian M., Kowalczyk J., Lackner M., Lstibůrek M., Longauer R., Nagy L., Tomášková I., Schueler S. (2021): Multi-actor perspectives on afforestation and reforestation strategies in Central Europe under climate change. *Annals of Forest Science*, 78: 60.
- Hendl T. (2016): The complexity of relational autonomy: A holistic approach to embodiment. *The American Journal of Bioethics*, 16: 63–65.
- Hochmalová M., Červená T., Purwestri R.C., Hájek M., Sloup R. (2021): Anchor of cultural forest services in the national forest policies of Central European countries. *Central European Forestry Journal*, 67: 212–229.
- Hrib M., Riedl M., Hýsková P., Maršík J., Jarkovská M. (2021): State forest administration performance in the Czech Republic: A case study of forestry legislation implementation in the South Bohemian Region. *Central European Forestry Journal*, 67: 248–257.
- Hricová Z. (2012): Úvod do výskumu priorít, motívov a postojov vlastníkov lesa k združovaniu. In: Kovalčík M. (ed.): Aktuálne otázky ekonomiky a politiky LH SR, Zvolen, Dec 6, 2012: 130–135. (in Slovak)
- Hricová Z., Ambušová L., Sarvašová Z., Dobšínská Z., Kajba M., Šálka J. (2015): Politická moc združení neštátnych vlastníkov lesov. Zvolen, National Forest Centre: 174. (in Slovak)
- Hysing E., Olsson J. (2008): Contextualising the Advocacy Coalition Framework: Theorising change in Swedish forest policy. *Environmental Politics*, 17: 730–748.
- Jarský V., Sarvašová Z., Dobšínská Z., Ventrubová K., Sarvaš M. (2014): Public support for forestry from EU funds – Cases of Czech Republic and Slovak Republic. *Journal of Forest Economics*, 20: 380–395.
- Juerges N., Arts B., Masiero M., Hoogstra-Klein M., Borges J.G., Brodrechtová Y., Brukas V., Canadas M.J., Carvalho P.O., Corradini G., Corrigan E., Felton A., Karahalil U., Karakoc U., Krott M., van Laar J., Lodin I., Lundholm A., Makrickiene E., Marques M., Mendes A., Mozgeris G., Novais A., Pettenella D., Pivoriunas N., Sari B. (2021): Power analysis as a tool to analyse trade-offs between ecosystem

- services in forest management: A case study from nine European countries. *Ecosystem Services*, 49: 101290.
- Knopf J.W. (2006): Doing a literature review. *PS: Political Science & Politics*, 39: 127–132.
- Konôpka J. (2018): K niektorým problémom súčasného lesného hospodárstva na Slovensku. In: Sarvašová Z., Kovalčík M., Moravčík M. (eds): Aktuálne otázky ekonomiky a politiky lesného hospodárstva Slovenskej republiky, Zvolen, Dec 12, 2018: 151–157. (in Slovak)
- Kovalčík M. (2011): Hodnotenie efektívnosti hospodárenia na lesnej pôde. *Forestry Journal*, 57: 166–177. (in Slovak)
- Kovalčík M. (2018): Efficiency of the Slovak forestry in comparison to other European countries: An application of Data Envelopment Analysis. *Central European Forestry Journal*, 64: 46–54.
- Kovalčík M., Sujová K. (2018): Vybrané aspekty ochrany prírody na Slovensku z pohľadu neštátnych vlastníkov lesa. In: Sarvašová Z., Kovalčík M., Moravčík M. (eds): Aktuálne otázky ekonomiky a politiky lesného hospodárstva Slovenskej republiky, Zvolen, Dec 12, 2018: 138–150. (in Slovak)
- Kovalčík M., Lichý J., Šulek R. (2016): Possibilities of outsourcing in condition of Slovak forestry. In: Hajdúchová I. et al. (eds): Finančná výkonnosť lesných podnikov. Zvolen, Technical University in Zvolen: 76–86. (in Slovak)
- Krott M. (2010): *Forest Policy Analysis*. Dordrecht, Springer: 323.
- Krott M., Bader A., Schusser C., Devkota R., Maryudi A., Giessen L., Aurenhammer H. (2014): Actor-centred power: The driving force in decentralised community based forest governance. *Forest Policy and Economics*, 49: 34–42.
- Krykorková J., Bálíková K., Šálka J., Surový P., Krott M., Stevanov M.Z. (2022): Comparing the performance of state forest enterprises in Czech and Slovak Republics with a focus on concessions. *International Forestry Review*, 24: 175–196.
- Lengyel A. (2010): Forest policy experiences on private forestry development in selected South East European countries. In: Tuomasjukka T. (ed.): *Forest Policy and Economics Support of Good Governance*. Joensuu, European Forest Institute: 75–80.
- Lesmedium (2022): LESmedium. Available at: <https://lesmedium.sk/casopis-letokruhy/2022/casopis-letokruhy-2022-02/vlastnici-si-chcu-svoju-p-du-v-chranenych-uzemiach-spravovat-sami> (in Slovak).
- Liefferink D. (2006): The dynamics of policy arrangements: Turning round the tetrahedron. In: Arts B., Leroy P. (eds): *Institutional Dynamics in Environmental Governance*. Dordrecht, Springer: 45–68.
- Logmani J., Krott M., Lecyk M.T., Giessen L. (2017): Customizing elements of the International Forest Regime Complex in Poland? Non-implementation of a National Forest Programme and redefined transposition of Natura 2000 in Białowieża Forest. *Forest Policy and Economics*, 74: 81–90.
- Lojda J., Ventrubová K. (2015): The grant policy of the forestry sector in the Czech Republic after 2013. *Zprávy lesnického výzkumu*, 60: 64–72.
- Luptáková E. (2015): Analýza politického potenciálu Slovenskej poľovníckej komory z pohľadu jej funkcionárov [MSc. Thesis.] Zvolen, Technical University in Zvolen. (in Slovak)
- Maier C., Lindner T., Winkel G. (2014): Stakeholders' perceptions of participation in forest policy: A case study from Baden-Württemberg. *Land Use Policy*, 39: 166–176.
- Malovrh Š.P., Paletto A., Posavec S., Dobšinská Z., Dordević I., Marić B., Avdibegović M., Kitchoukov E., Stijović A., Trajkov P., Laktić T. (2019): Evaluation of the operational environment factors of nature conservation policy implementation: Cases of selected EU and non-EU countries. *Forests*, 10: 1099.
- Makrickienė E., Brukas V., Brodrechtová Y., Mozgeris G., Sedmák R., Šálka J. (2019): From command-and-control to good forest governance: A critical interpretive analysis of Lithuania and Slovakia. *Forest Policy and Economics*, 109: 102024.
- Matysiak A., Kapuscinski R. (2007): The contemporary issues related to forest management in the State Forests National Forest Holding. In: Quo Vadis, Forestry? Sekocin Stary, Jun 29–30, 2006: 208–214.
- Moravčík M., Konôpka J. (2009): Stratégia rozvoja lesníctva na Slovensku. *Forestry Journal*, 55: 65–84. (in Slovak)
- Moravčík M., Sarvašová Z., Merganič J., Kovalčík M. (2012): Close to nature management in high-mountain forests of Norway spruce vegetation zone in Slovakia. In: Blanco J.A. (ed.): *Forest Ecosystems – More Than Just Trees*. Rijeka, InTech: 375–414.
- Niedzialkowski K., Paavola J., Jedrzejewska B. (2012): Participation and protected areas governance: the impact of changing influence of local authorities on the conservation of the Białowieża Primeval Forest, Poland. *Ecology and Society*, 17: 2.
- Ochieng R.M., Visseren-Hamakers I.J., Brockhaus M., Kowler L.F., Herold M., Arts B. (2016): Historical development of institutional arrangements for forest monitoring and REDD + MRV in Peru: Discursive-institutionalist perspectives. *Forest Policy and Economics*, 71: 52–59.
- Paluš H., Krahulcová M. (2019): Ensuring ecosystem services of forests with the emphasis on their production function. In: Chobanova R. (ed.): *Digitalisation and Circular Economy: Forestry and Forestry Based Industry Implications*. Proceedings of Scientific Papers, Varna, Sept 11–13, 2019: 55–60.
- Paluš H., Parobek J., Vlosky R.P., Motik D., Oblak L., Jošt M., Glavonjić B., Dudík R., Wanat L. (2018): The status of chain-of-custody certification in the countries of Central and South Europe. *European Journal of Wood and Wood Products*, 76: 699–710.

<https://doi.org/10.17221/105/2022-JFS>

- Paluš H., Krahulcová M., Parobek J. (2021): Assessment of forest certification as a tool to support forest ecosystem services. *Forests*, 12: 300.
- Park M.S., Youn Y.C. (2013): Development of urban forest policy-making toward governance in the Republic of Korea. *Urban Forestry & Urban Greening*, 12: 273–281.
- Peters B.G. (1998): *Managing Horizontal Government: The Politics of Coordination*. Ottawa, Canadian Centre for Management Development: 75.
- Rada pre štátnu službu (2019): *Správa o stave a vývoji štátnej služby za rok 2018*. Available at: https://radaprestatnuszbu.vlada.gov.sk/data/files/7194_sprava-o-stave-a-vyvoji-ss-2018.pdf (in Slovak).
- Riedl M., Jarský V., Palátová P., Sloup R. (2019): The challenges of the forestry sector communication based on an analysis of research studies in the Czech Republic. *Forests*, 10: 935.
- Sabatier P.A. (1988): An advocacy coalition framework of policy change and the role of policy learning therein. *Policy Sciences*, 21: 129–168.
- Sarvašová Z., Dobšínská Z., Šálka J. (2010): Inovačná politika a lesníctvo: Zmeny v inovačnom správaní aktérov LH SR. In: Kovalčík M. (ed.): *Aktuálne otázky ekonomiky a inovačnej politiky lesného hospodárstva Slovenskej republiky*, Zvolen, Nov 9, 2010: 90–100. (in Slovak)
- Sarvašová Z., Lásková J., Fodrek L. (2012): Foreign examples of public functions integration into the market mechanism. *Zprávy Lesnického Výzkumu*, 57: 63–73.
- Sarvašová Z., Šálka J., Dobšínská Z. (2013): Mechanism of cross-sectoral coordination between nature protection and forestry in the Natura 2000 formulation process in Slovakia. *Journal of Environmental Management*, 127: S65–S72.
- Sarvašová Z., Dobšínská Z., Šálka J. (2014): Public participation in sustainable forestry: the case of forest planning in Slovakia. *iForest – Biogeosciences and Forestry*, 7: 414–422.
- Sarvašová Z., Zivojinovic I., Weiss G., Dobšínská Z., Dragoi M., Gal J., Jarský V., Mizaraite D., Pollumae P., Šálka J., Schiberna E., Šišák L., Wolfslehner B., Zalite Z., Zalitis T. (2015): Forest owners associations in the Central and Eastern European Region. *Small-scale Forestry*, 14: 217–232.
- Sarvašová Z., Štěrbová M., Dobšínská Z., Šálka J. (2017): Poradenstvo poskytované odborným lesným hospodárom – čiastkové výsledky dotazníkového prieskumu. In: Hajdúchová I. et al. (eds): *Financovanie podnikov v lesnom hospodárstve*. Zvolen, Technical University in Zvolen: 171–178. (in Slovak)
- Sarvašová Z., Štěrbová M., Kulla L. (2020): Ako na zmiernenie konfliktov pri využívaní produkcie dreva v chránených územiach Slovenska? *Zprávy z lesnického výzkumu*, 65: 125–133. (in Slovak)
- Schusser C., Krott M., Movuh M.C.Y., Logmani J., Devkota R.R., Maryudi A., Salla M., Bach N.D. (2015): Powerful stakeholders as drivers of community forestry – Results of an international study. *Forest Policy and Economics*, 58: 92–101.
- Scriban R.E., Nichiforel L., Bouriaud L.G., Barnoaiea I., Cosofret V.C., Barbu C.O. (2019): Governance of the forest restitution process in Romania: An application of the DPSIR model. *Forest Policy and Economics*, 99: 59–67.
- Sedmák R. (2018): Systém hospodársko úpravnickeho plánovania na Slovensku – dozrel čas na zmenu? In: *Správy z výskumu lesníckej fakulty pre prax*. Zvolen, Technical University in Zvolen: 5–13. (in Slovak)
- Sedmák R., Fabrika M., Bahýľ J., Póbiš I., Tuček J. (2013): Application of simulation and optimization tools for developing forest management plans in the Slovak natural and management conditions. In: *Implementation of DSS Tools into the Forestry Practice*. Zvolen, Technical University in Zvolen: 139–152.
- Shannon M.A., Schmidt C.H. (2002): Theoretical approaches to understanding intersectoral policy integration. In: Tikkänen I., Glück P., Pajujoja H. (eds): *Cross-Sectoral Policy Impacts on Forests*, Savonlinna, Apr 4–6, 2002: 15–26.
- Singer B., Giessen L. (2017): Towards a donut regime? Domestic actors, climatization, and the hollowing-out of the international forests regime in Anthropocene. *Forest Policy and Economics*, 79: 69–79.
- Stern P.C., Dietz T., Guagnano G.A. (1995): The new ecological paradigm in social-psychological context. *Environment and Behavior*, 27: 723–743.
- Synek M., Hrib M. (2019): Analysing data sources' sustainability to support forest policy decision-making in the Czech Republic. *International Forestry Review*, 21: 92–107.
- Szramka H., Adamowicz K. (2017): Trends in modification of the status of the State Forests in Poland. *Sylvan*, 161: 355–364.
- Šálka J. (2002): Kooperationsbeziehungen im Fonds zur Förderung des Waldes der Slowakischen Republik. In: *Allgemeine Forst und Jagdzeitung*. Frankfurt am Main, J.D. Sauerlander's Verlag: 123–130. (in German)
- Šálka J., Sarvašová Z. (2009): Governance v lesníctve. Zvolen, Národné lesnícke centrum: 262. (in Slovak)
- Šálka J., Sarvašová Z., Ambušová L., Dobšínská Z., Hricová Z., Kajba M., Schwarz M. (2015): Procesný model pre záujmové združenia vlastníkov lesov. Zvolen, National Forest Centre: 166. (in Slovak)
- Šálka J., Dobšínská Z., Hricová Z. (2016): Factors of political power – The example of forest owners associations in Slovakia. *Forest Policy and Economics*, 68: 88–98.
- Šálka J., Dobšínská Z., Sarvašová Z., Štěrbová M., Paluš H. (2017): Lesnícka politika. Zvolen, Technical University in Zvolen: 275. (in Slovak)
- Šnidl V. (2021): Proti Budajovi sa sformovala hlučná facebooková scéna. Chce zabrániť presunu národných parkov

- pod štátnych ochranárov. Available at: <https://dennikn.sk/2498956/proti-budajovi-sa-sformovala-hlucna-facebookova-scena-chce-zabranit-presunu-narodnych-parkov-pod-ochranarov/> (in Slovak).
- Štěrbová M., Kovalčík M. (2020): Typology of contractors for forestry services: Insights from Slovakia. *Forest Policy and Economics*, 115: 102143.
- Šulek R. (2006): Common-pool resources in Central Europe: Case study of forestry in the Slovak Republic. In: IASCP Europe Regional Meeting, Brescia, Mar 23–25, 2006: 10.
- Šulek R. (2010): Principles of new forest legislation and policy in the Slovak Republic. In: Šulek R., Herbst P., Schmithüsen F.J. (eds): *Legal Aspects of European Forest Sustainable Development*, Proceedings of the 11th International Symposium, Zvolen, May 13–15, 2009: 106–110.
- Teder M., Mizaraitė D., Mizaras S., Nonić D., Nedeljković J., Sarvašová Z., Vilkriste L., Zalite Z., Weiss G. (2015): Structural changes of state forest management organisations in Estonia, Latvia, Lithuania, Serbia and Slovakia since 1990. *Baltic Forestry*, 21: 326–339.
- Thomas C.S., Klimovich K. (2013): Interest groups and lobbying in Latin America: Theoretical and practical considerations. *Journal of Public Affairs*, 14: 165–182.
- Tuček J., Navrátil R., Sedmák R., Brodrechtová Y., Smreček R. (2015): Participatívne scenáre a backcasting pri strategickom plánovaní obhospodarovania lesov. Zvolen, Technical University in Zvolen: 332. (in Slovak)
- Tutka J. (2000): Effects of a change in forestry inputs and outputs. *Zprávy Lesnického Výzkumu*, 45: 34–36.
- Veenman S., Liefferink D., Arts B. (2009): A short history of Dutch forest policy: The ‘de-institutionalisation’ of a policy arrangement. *Forest Policy and Economics*, 11: 202–208.
- Výboštok J., Pichlerová M., Pichler V., Navrátilová L., Dobšínská Z., Šálka J. (2018): Vnímanie lesa ako významnej zložky životného prostredia verejnosťou. In: Sarvašová Z., Kovalčík M., Moravčík M. (eds): *Aktuálne otázky ekonomy a politiky lesného hospodárstva Slovenskej republiky*, Zvolen, Dec 12, 2018: 101–106. (in Slovak)
- Webb T.J., Bengston D.N., Fan D.P. (2008): Forest value orientations in Australia: An application of computer content analysis. *Environmental Management*, 41: 52–63.
- Weber N. (2012): Reflections on theories in forest policy: Testing, combining or building? *Forest Policy and Economics*, 16: 102–108.
- Weingart P., Engels A., Pansegrau P. (2000): Risks of communication: Discourses on climate change in science, politics, and the mass media. *Public Understanding of Science*, 9: 261.
- Wilkes-Alleman J., Deuffic P., Jandl R., Westin K., Lieberherr E., Foldal C., Lidestav G., Weiss G., Zabel A., Živojinović I., Pecurul-Botines M., Koller N., Haltia E., Sarvašová Z., Sarvaš M., Curman M., Riedl M., Jarský V. (2021): Communication campaigns to engage (non-traditional) forest owners: A European perspective. *Forest Policy and Economics*, 133: 102621.
- Winkel G., Sotirov M. (2011): An obituary for national forest programmes? Analyzing and learning from the strategic use of “new modes of governance” in Germany and Bulgaria. *Forest Policy and Economics*, 13: 143–154.

Received: August 11, 2022

Accepted: September 12, 2022

Published online: September 27, 2022