

# SLOVAKIA

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## 1. Introduction

### 1.1. Forests, forest ownership and forest management in Slovakia

The Slovak Republic covers a rather small area but the proportion of forest is relatively high compared to that of other European countries. In 2013, the area of forest land was 1,941,521 hectares, or 41% of the total land area. Slovak forest are characterised by highly levels of diversity, with both coniferous (39.3%) and broadleaved species (60.7%) abundant.

Slovak forests represent an important natural heritage, reflecting their ecological and environmental worth, their economic value, and their cultural significance. All these values may be appreciated in a national, European and global context. A key document which defines the objectives and priorities of national forest policy, the National Forest Programme was designed with the aim of securing the sustainable forest management.

Forest land on the territory of the SR is owned by the State (40% of forest area) and non-state entities (44.8% of all forests). The category of non-state includes those under private, community, church, agricultural cooperative and municipal ownership. Remaining 15.2% of forest areas are forests of unidentified ownership.

An area of 53.9% of forest is managed by the 4 state organizations, the largest one is the state enterprise Forests of the Slovak Republic, Banská Bystrica. The state enterprise manages also the forests of owners whose forest land has not been handed over to them for various reasons and land leased from the non-state subjects by contract, as well.

In the use of non-state subject is 46.1% of the total forest area. An organizational form of subjects in the non-state sector consists of land communities, civic associations,

business companies, natural persons recorded for business activity or without recording, as well as special units (commercial, contributory) of municipal office.

### 1.2. Overview of the country report

Slovakia has a complicated ownership structure of forests which results from historical and political factors. The main issue which had an impact on the development of forest ownership in Slovakia has been restitution process, after the year 1989. It was not only about the restitution of ownership's and users' rights but also about creation such conditions where owners themselves will be able to be effective farmers at their forest land resources

New forest owners try to diversify the activities carried out in forests. Besides the mostly used timber production they use it for other purposes which require new management goals. An average level of diversification in Slovakia is 20%, but in small private forestry it is only 6-7%. One of the opportunities for innovative forest management in Slovakia is the emerging debate on payments for ecosystem services, as well.

Forest owners that want to implement new management approaches have to comply with forestry and environmental legislation which is rather restricting. Lack of financial resources and lack of state financial support also present an obstacle to apply new management approaches.

The basis long-term goal of state forest policy is to ensure sustainable forest management based on appropriate use of its economical, ecological and social functions for the society and foremost rural areas. To ensure sustainable forest management is the use of forest management plan in forestry. Professional forest management is a legal

obligation of each forest owner irrespective of the property regime, ownership or land cover.

All ownership categories have some barriers in the adaptation of forest policies. Main barriers are: lack of association, political lobby, information, and they also lack funding from public sources.

## 2. Methods

### 2.1. General approach

According to the aims of the country report which is to give a comprehensive overview of forest ownership issues in the country, a mix of methods is applied. They include a literature review, secondary data, expert interviews as well as the expert knowledge of the authors.

Data include quantitative data (from official statistics and scientific studies) as well as qualitative data (own expert knowledge, expert interviews and results from studies). A literature review explicates the state-of-knowledge in the countries and contributes to a European scale state-of-art report. Case examples are used for illustration and to gain a better understanding of mechanisms of change and of new forest owner types. Detailed analyses of the collected data and case study analyses are done in subsequent work steps in the COST Action.

### 2.2. Methods used

Qualitative data collection relied on literature review (mainly scientific papers and reports) on restitution process in Slovakia, forest ownership structure changes, management approaches in Slovakian forestry and policy instruments relating to forest ownership.

In addition to qualitative data, quantitative data were also collected. Statistical data were gathered from the Compendium of the Slovak Forestry Statistics prepared by National Forest Centre-Forest Research Institute Zvolen, from the Reports on the Status of Forestry in the Slovak Republic (Green reports), from the statistical database of the Statistical Office of the Slovak Republic (SLOVSTAT) and also from different international and national scientific

studies on forest ownership.

For illustration and better understanding of the issues of new forest owners types, case examples as well as own expert knowledge was used.

## 3. Literature review on forest ownership in change

The COST Action national representatives aimed to review and compile information on changes in forest ownership in their countries based on scientific and grey scientific literature, including reports and articles in national languages and official statistics, formal guidance or advisory notes from official websites, etc.

The scope of the literature review is as follows:

- Forest ownership change (with a specific focus on new forest ownership types), private forest owners' motives and behaviour, management approaches for new forest owner types, and related policies and policy instruments.

The literature review consists of the following three steps: collection of all literature as defined relevant, detailed description of 10 most relevant publications, and a 1-3 pages summary according to the structure given in the guidelines. The full list of literature includes grey literature, i.e. literature not easily accessible by regular literature search methods (unpublished study reports, articles in national languages, etc.). These detailed descriptions of publications can be found in the full single country report (website: [http://facesmap.boku.ac.at/index.php/library2/cat\\_view/94-country-reports](http://facesmap.boku.ac.at/index.php/library2/cat_view/94-country-reports)). The literature review contains the following questions: Which research frameworks and research approaches are used by research? What forms of new forest ownership types are identified? Which specific forest management approaches exist or are discussed? Which policies possibly influence ownership changes in the country and which policy instruments answer to the growing share of new forest owner types?

### 3.1. Research framework and research approaches

The problem of non-state forest sector in Slovakia has been particularly studied in the 1990s and marginally in other contexts later. This fact allows to introduce new innovative methodologies in the procedures and to fill the gaps of information.

Main themes covered by the studies in Slovakia are focused on the description on non-state forest sector as a whole. New private forest owners were not really in the centre of interest. Only exception is the ongoing research project VYNALES implemented by National Forest Centre and Technical University Zvolen, which is directly connected with the main topics of the Action, but only preliminary non-published results are available so far ([www.ipoles.sk](http://www.ipoles.sk)).

Project VYNALES (supported by the Slovak Research and Development Agency) is focused on the analysis of non-state forest sector in Slovakia, formation of interest groups and associations, determination of their priorities and goals. It also analyzes the impact of non-state forest ownership on the forestry policy, rural development policy and nature protection policy. The results will provide new working models and methods for forest owners.

Selected methodologies were based on literature review, questionnaires and interview surveys. Project VYNALES uses a combination of these methods of empirical research in sociology and political science with methods of geo-process services (using instruments of geographic information systems).

### 3.2. New forest ownership types

According to the reviewed literature no details on the number of new owners and their development over time are available. The only quantitative figures are for the aggregated groups of owners (Green report, 2013). From the qualitative research within project VYNALES we can assume that there are new categories of owners in terms of urban, absentee, and non-traditional owners.

The main distinction of “new ownership” from traditional ownership, in terms of structural attributes, outputs, goals and management

are described in the context of innovation in forestry (e.g. Dobšínská, Z., et al. 2010). “Innovative owners” improve their management practices and introduce new products and services. The main challenge for diversification of activities in private forest sector flows from national forest policy, represented by National forest program, and Rural Development Policy.

### 3.3. Forest management approaches

There are no many specific forest management approaches described in the Slovak literature. “New management approaches” are emerging in relationship to provision of recreational services or hunting activities (Sarvašová, Z. and Kovalčík, M. 2010). The possibilities to get direct payments for biodiversity conservation through RDP - Forest Environment or NATURA 2000 sites on forest land open the discussion on that new management approaches (Šálka, J. and Sarvašová, Z. 2011).

### 3.4. Policy change / policy instruments

On the one hand, private forest owners are affected by different social, economic and political impacts. On the other hand, also non-state forest actors (i.e. non-state forest owners and their interest group such as forest owners associations) in Slovakia have a permanent interest in the enforcement of its requirements towards various policies (e.g. nature conservation, rural development).

Issues related to the forest ownership structure, their interest groups, opinions and priorities were described in relation to the formulation and implementation of public policy measures. For example, papers directed at new forest owners expectations in forest planning (Sedmák et al. 2013), problems in implementation of nature conservation policy (Sarvašová, Z., et al. 2013) or in the context of formulation of rural development program (Dobšínská, Z., et al. 2012). Currently, research on this issue is of the particular relevance in the sustainable forest management, increasing competitiveness and the introduction of innovations in forestry, rural development,

and climate change or biodiversity or water protection.

## 4. Forest ownership

The aim of this chapter is to give a detailed overview of forest ownership in the country. The most detailed information on national level is often structured in different ways in different countries. In order to show the most accurate information, it was decided to use the national data sets in the country reports. In order to make this information comparable still, the information is also collected in an international format which is used in the Forest Resources Assessments by FAO. The transfer from national data sets to international definitions is, however, not always easy. This report therefore critically assesses in how far the national categories and definitions may be transformed into the international FRA data structure or in how far there are inconsistencies between them.

### 4.1. Forest ownership structure

#### 4.1.1. National data set

Ownership categories in Slovakia are classified as state, non-state and unknown ownership. The detailed structure of forests' ownership is given in Table 1 in the Annex.

#### State forests

The category of state forests represents forests owned by the State including military occupied land, managed by state agencies.

According to the Compendium of Slovak Forestry Statistics (2013), the State holds property rights to 40.0% of the total forest area (i.e. 777,599 ha), but manage 53.9% of forest (i.e. 1,046,288). Besides forests owned by the State, state agencies also manage forests leased from non-state owners and unclaimed forests (13.9%)

State forests are managed by the following state agencies: the Forests of the Slovak Republic, s.e. Banská Bystrica; Forest – agricultural Estate s.e. Ulič; and the State Forests of Tatra National Park. All these fall under the Ministry of Agriculture. The Military Forests and Estates, s.e. Pliešovce are administered by the Ministry of Defence.

#### Non-state forests

The category of non-state forests includes forests under private, community, church, agricultural cooperatives, and municipal ownership. The most common legal and organisational forms of non-state forest include: land associations; limited companies; shared companies; individual persons with or without a business licence; and administrative units (commercial, semi-budgetary) attached to municipalities.

Non-state forest owners who have legally settled their ownership rights own 44.8% of forest area (i.e. 869,124 ha) but manage 46.1% of forest (i.e. 895,233 ha). Non-state owners manage also leased forests (1.3%).

#### Private forests

Private forests are owned by individuals or families. Private forests generally cover a very small area (average size of private holding is only 2.8 ha). Private owners have the largest possibility of conducting the management. They can manage their forest on their own, lease it or set up forestry cooperative or land community (i.e. limited company and others).

#### Community forests

Community forests belong to property owned by many co-owners that cannot be divided, because forests are supposed to be managed as a whole. By adoption of Land Community Law No. 181/1995 the expiration of former entities that existed before community forests - as for example urbars, was set up. Also other duties for management of these forests were adapted – legal and economic status, method of management, expiration of legal entities and rights, duties and relations between members of the land association. More information on land associations are found on page 13.

#### Municipal forests

Municipality, as an owner of the forest, can manage its own property or rent it. Municipal forests are usually managed by subsidized or limited companies founded by the municipality. In Slovakia there are around 60 forest enterprises managing forests in municipal ownership, the biggest one is founded by the city Košice, which manage 19,432 ha of forest land. Many of them also



maintain parks and other green areas within their municipalities. Municipalities realize their ownership right through municipal office bodies, local council or company boards through the approval of the budget, balance sheet of the forest enterprise and management of the forest enterprise (director, deputy, staff numbers, etc.). Municipality does not intervene into expert forest management.

### **Church forests**

These are forests privately owned by churches and religious communities. They were established under the Act no. 282/1993 and no. 161/2005. Forests that were returned to church use to form an association, for example a company PRO POPULO Poprad, that was set up in 1991 and is charged to manage forest and agricultural estate in ownership of Roman Catholic bishopric of Spišské Podhradie (Sarvašová, Z. and Šiška, P. 2009; Weiss, G. et al. 2011). By the year 2013, forest land with an area of 70,500 ha has been returned to church, however there is still 2,810 ha of unsettled forest, which should be returned to church (Správa o transformácii....2013).

### **Unknown owners**

In Slovakia, there are still 294,798 ha of forests (i.e. 15.2% of the total forest area) with unidentified ownership. This category includes forests of owners who have applied for their property right, but their restitutions have not been completed yet; forest of unknown owners or owners with unknown residence. There is also a group of owners who still have not request for their restitution, refused to associate or have not submitted the required documents relating to their property (Green report, 2013)

#### **4.1.2. Critical comparison with national data in FRA reporting**

According to FRA categories, public ownership includes forest owned by the State and corporations established by municipalities. The forest area in this category reached 952,000 ha in 2013. According to the national definition, the category of private ownership includes only forests owned by individuals (around 206,000 ha).

However according to FRA, this category includes forests owned by individuals, business entities, co-operatives, religious institutions, and communities with a total forest area of 694,000 ha. Other type of ownership includes areas where ownership is unclear or disputed (295,000 ha). The data on ownership structure according to FRA categories are found in Table 2 in the Annex.

## **4.2. Unclear or disputed forest ownership**

According to the Report on the Transformation of Forest Land Ownership and Tenure (2013), it is still necessary to settle ownership rights to forest land with an area of 200,672 ha. The highest proportion of unresolved forests is in the category of private forests (156,909 ha). This fact is primarily caused by the character of private properties, majority of which are of small size with a lot of small individual owners or shared ownership. Therefore these cannot be identified easily on the ground and it is difficult to determine the borders of these small scale private forest properties. In the category of community forests, it is need to settle forest land with an area of 18,859 ha. In the category of municipal forest unresolved land represents an area of 1,579 ha, in the category of church forests it is an area of 2,810 ha and area of unresolved forest land of other owners is 20,515 ha.

## **4.3. Legal provisions on buying or inheriting forests**

### **4.3.1. Legal restrictions for buying or selling forests**

Fragmentation of forest property is considered as an unfavourable factor in sustainable forest management. In order to avoid fragmentation of forest land, legal restriction was enacted. According to the Act no. 180/1995 Coll. on Certain Measures for the Settlement of Ownership Rights to Land, in case of buying or selling forests, dividing of forests lands into parcels with an area of less than 0.5 ha is forbidden. This legal restriction does not apply to community forests.

#### 4.3.2. Specific inheritance (or marriage) rules applied to forests

In the Act no. 180/1995 Coll. on Certain Measures for the Settlement of Ownership Rights to Land, there is a specific inheritance rules applied to forest. Under current inheritance system, existing forest land can be divided into several parcels between heirs. If the area of new plot is less than 2 ha, the inheritor is obligated to pay a fee of 10% of the value of the land. In case of an area of less than 1 ha, the amount of the fee is 20% of the value of the forest land.

#### 4.4. Changes of the forest ownership structure in last three decades

##### 4.4.1. Changes between public and private ownership

The ownership structure in Slovakia has changed considerably during the last three decades and has been influenced by long term legislation amendments, particularly land reforms, and giving the institute of forest use superiority to forest ownership (Weiss, G. et al. 2011).

Private ownership and use of forests lasted until the year 1977, when forest Act no. 61/77 Coll. and the Act no. 100/77 Coll. on Management in Forests and State Administration of Forestry came into force and it abolished “de facto” private use of forests though private ownership “de jure” was preserved. At that time there were 99.14% of forests in the use of state forest organizations; cooperatives used 0.81% and private owners 0.05% of forests (Sarvašová, Z. and Tutka, J. 2005). During the Communist period, until the year 1991, forests were held and managed by state organizations (1,912,905 ha) and agricultural cooperatives (8,800 ha) which were under the supervision of the State Forest Enterprises (Schmithüsen, F. and Hirsch, F. 2010).

In 1991, the process of restitution started when the so-called Restitution Law came into force, which allowed the return and use of property to former landowners. All kinds of ownership (private, municipal, community, church and cooperative) have been restituted and are now equal in law. Currently, 44.8% percent of the country’s total forest area is in non-state ownership compared with the 57.8% originally subject to private, municipal, church, cooperative (urbariat) and community (komposeseorat) ownership.

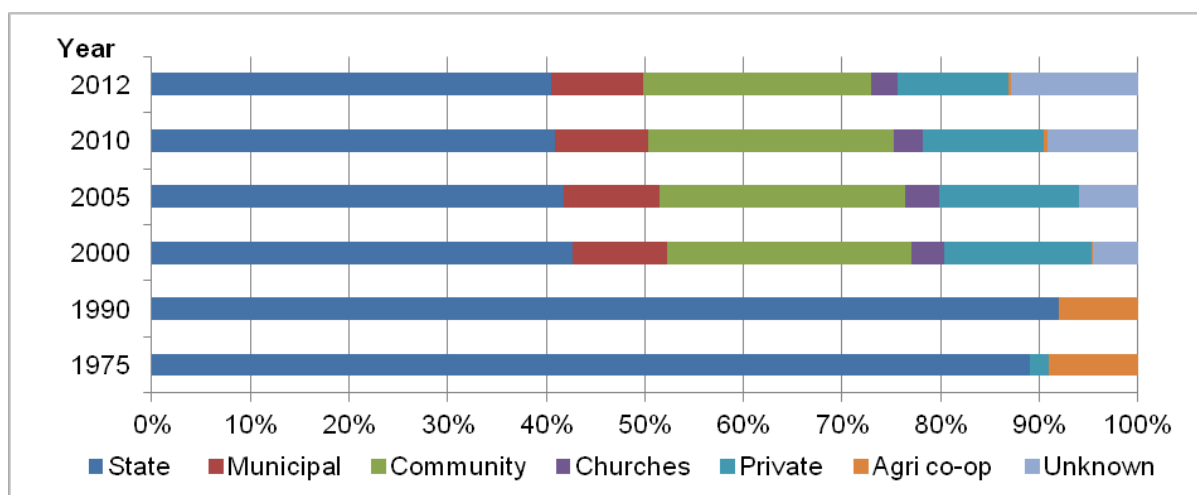


Figure 1: Changes of ownership's structure in Slovakia during 1975 – 2010  
(Forests in Slovakia 2009, Green report 2013)

##### 4.4.2. Changes within public ownership categories

In 1991, after the fall of communist regime, the monopoly of state organizations in

forestry was cancelled and the non-state sector was restored (Moravčík, M. et al. 2009). Area of forest land owned by the State has fallen to 40% since 1990.

#### 4.4.3. Changes within private forest ownership

Within a non-state ownership, a significant proportion of forests are joint-owned by more than 3,500 land associations, which manage more than 0.5 million hectares of forests. Meanwhile the sub-category of forest owned by agricultural co-ops has disappeared (they manage just 0.3% of forest). A specific category of forest ownership is forests of unknown owners (15.2%). Majority of these forests are of a very limited size, of individual or shared ownership, and impossible to identify in the field. In addition, there is a group of forest owners who still have not applied for their ownership right. The largest area of unresolved forests is in private hands. Nowadays, ownership's structure has had more or less established structure, which means that the structure of ownership's categories and size classes is almost completely stabilized. Finalization of the process of re-privatization should not be accompanied by some more substantial changes in this structure.

#### 4.4.4. Main trends of forest ownership change

Across Europe, the following drivers for ownership changes had been identified in the COST Action:

- Privatization, or restitution, of forest land (giving or selling state forest land to private people or bodies)
- Privatization of public forest management (introduction of private forms of management, e.g. state owned company)
- New private forest owners who have bought forests
- New forest ownership through afforestation of formerly agricultural or waste lands
- Changing life style, motivations and attitudes of forest owners (e.g. when farms are given up or heirs are not farmers any more)

Trends in forest ownership: New forest ownership through...	Significance*
• Privatization, or restitution, of forest land (giving or selling state forest land to private people or bodies)	3
• Privatization of public forest management (introduction of private forms of management, e.g. state owned company)	2
• New private forest owners who have bought forests	1
• New forest ownership through afforestation of formerly agricultural or waste lands	1
• Changing life style, motivations and attitudes of forest owners (e.g. when farms are given up or heirs are not farmers any more)	2

\*0 (not relevant); 1 (to some extent); 2 (rather important); 3 (highly important)

#### CASE STUDY 1: PRIVATIZATION AND RESTITUTION OF FOREST LAND IN SLOVAKIA

The privatization process started in 1991 when the Czechoslovak Republic Federal Assembly adopted the legal Act no. 92/1991 Coll. on State Property Transfer Conditions to Other Persons. However, Slovakian forests were excluded from the privatization process. Railway roads, Eastern Slovak transship centre in Čierna nad Tisou and Maťovce, forest soil and resources, buildings and facilities for forest industry and shares of state-owned forest enterprises and water courses were not privatized either (Weiss, G. et al. 2011).

An important part of the reforms after the year 1989 is a transformation of the ownership rights to forests. The reform consists of restitution of property to original owners and to a larger extent mainly of restitution of user's rights to owners who have not been formally withdrawn from the property. Equality of all kinds of ownership was assured firstly by Constitutional law and then by adoption of so-called "Land law" No. 229/1991 of the Coll. in May 1991 in Federal Assembly. Due to this change, all kinds of ownership were restored and made equal and a process of restitution of forest property to former owners has started altogether with diversified management of this property. Restitution concerned all estates that were taken by the state non-legally and then were socialized. Re-privatization should serve as a process that will improve the management of former state agricultural and forest land that was farmed in very ineffective way (Ilavský, J. 2001).

The restitution process created a new situation for former forest owners and their heirs, whose property rights had been interrupted during the socialist regime and who therefore had no knowledge of forestry. New owners with no experience of administering and managing private property joined together to form associations that could advocate for their interests in the formation of suitable economic, social, organizational and legislative conditions. For these "new" forest owners, interest or stakeholder organizations are a way of protecting and representing their common interests in the policy-making process (Weiss, G. et al. 2012a).

The return of forests to their former owners has stagnated since 1997, as in most of the unsettled cases the property is derelict, frequently in the ownership of shareholders, on cadastral territories with insufficient descriptive and geodetic information. Completion of this process will be possible after overcoming the existing legislative, technical and economic barriers (Ilavský, J. 2001, Schmizhüden, F. and Hirsch, F. 2010). Up to now about 100,000 subjects required restitution of ownership and users' rights to the area of about 1,044,177 ha. From the total area of 1,161,782 ha of original non-state forests, 961,110 ha of forest was returned. An area of 200,672 ha (17.27 %) of non-state forest has not been settled yet (Správa o transformácii....2013).

#### CASE STUDY 2: STATE FOREST ENTERPRISES REFORMS

Until 1990, forest management evolved in the framework of centrally planned economy. State forests (including military forests, school forests and forests managed by the Ministry of Industry) comprised 99% of the total forest area. Forest land was managed by forest enterprises, commercial organizations, directly connected with the state budget. Financing and budgets were centrally planned. Benefits from production activities (92% from wood products) were unable to cover costs and forestry was subsidized by the state budget. After 1991, state funds for forestry assistance have been utilized by offering subsidies. During last decades organizational management structure of the State forest has been modified (Mizaraite, D. et al. 2013).

Nowadays the area managed by state forests (including the rented forest from other non-state subjects and forest of unknown owners) consists about 54.6% or 1,059,000 ha of the total forests area in Slovakia. The forests under the ownership of the State are managed by 4 state forest enterprises, of which 3 state organization (the Forests of the Slovak Republic, s.e. Banská Bystrica; Forest – agricultural Estate s.e. Ulič; and the State Forests of Tatra National Park) fall under the Ministry of Agriculture and the last one (The Military Forests and Estates, s.e. Pliešovce) fall under the Ministry of Defence. The forest enterprises provide some of the forest management services, such as seed purchase or sale of wood by own capacities. The rest of forestry operations are performed by private companies. For example, external contractors carry out around 95 - 97% of felling operations and 98 - 99% of artificial forest regeneration and forest protection. State forest enterprises are working on self-financing condition with an obligation to deliver profits to state budget (Ambrušová, L. et al. 2013; Mizaraite, D. et al. 2013; Green report 2013).

#### 4.5. Gender issues in relation to forest ownership

No relevant data

#### 4.6. Charitable, NGO or not-for-profit ownership of the forests

This section is concerned with forests owned by organisations such as conservation and heritage NGOs, self-organised community-based institutions and other philanthropic ("Characterized or motivated by philanthropy; benevolent; humane" OED) organisations. The management objective for these forests is usually to deliver social or environmental

aims with maximisation of financial or timber returns as a secondary concern. Most owners are corporate and may invoke at least an element of group or participatory decision-making on management objectives and high ethical standards. It is possible for such ownership to be entirely private. However, the provision of public benefits (services (e.g. biodiversity, amenity, recreation etc.) which are free for everyone to enjoy or provide benefits to local communities (employment for disadvantaged people etc.) are sometimes recognised in the form of charitable registration. This in turn puts restrictions on the rights of the owners to use profits and to dispose of assets in exchange for tax exemptions and access to charitable funding.

Forests owned by ...	Yes	No	Uncertain
• Foundations or trusts		X	
• NGO with environmental or social objectives	X		
• Self-organised local community groups	X		
• Co-operatives/forest owner associations	X		
• Social enterprises		X	
• Recognized charitable status for land-owners		X	
• Other forms of charitable ownerships, namely:		X	



### **NGO with environmental or social objectives**

In 1993, in Slovakia there was established a civil association The WOLF Forest Protection Movement. The WOLF is creating a network of private reserves without any human intervention called Evolution forests®. Up to now, they have created nature reservations with an area of 1,036.73 ha. The WOLF's main goals include saving natural forests, detecting illegal activities in forests, contributing to changes in forestry legislation and enforcement of forest's and carnivorous animal's protection.

### **Self-organised local community groups**

In Slovakia, there are two legal forms of community forests:

- land association with legal entity
- land association without the status of corporate entities.

The land associations with legal entity are based on the contractual association of physical persons who are the owners of shares of common. These associations are typical corporations with special management bodies established in accordance with the provisions of the Act on Land Associations. The central management body of such land association is the plenary assembly of all shareholders. The main executive body of the land association with legal personality is the executive committee lead by the elected chairman as a legal representative of the land association. The supervisory board is the central control body of the land associations which consists of at least three members (Šulek, R. 2006). Generally, land associations with legal entity involve larger areas of forest land with favourable production and logging possibilities (Sarvašová, Z. and Šiška, P. 2010).

The land associations without legal personality are based on the free association of physical persons who are the owners of shares of common property. Such land association is represented by one authorized representative – because of this, there are not any special provisions on their organisation and administration and they perform their activities according to the general provisions of the Civil Code (Šulek, R. 2006). Usually, these associations

represent the cases of the management of small forest areas, with limited possibility of rational, productive management. The owners themselves undertake forest management activities. They use the timber either for their own consumption or sell it to different business entities. The main way by which small private forest owners can be involved in forest management is through participation in joint meeting at which collective decision are made regarding the exploitation of the timber resources of their forest (Sarvašová, Z. and Šiška, P. 2010). However, by adoption of Act no. 97/2013 on Land Association in May 2013, establishment of land associations without legal entity is forbidden. Existing land associations without the status of corporate entity must be transformed into associations with legal entity till the end of February 2014.

### **Co-operatives/forest owner associations**

Following political and social changes of 1990, different organization and interest group presenting their views were established. The activities of non-state forest owners are coordinated by the Council of the Non-state Forest Owners Associations (established in 2006), which is an informal umbrella body of non-state forest owners representing the interests of: the Union of Regional Associations of non-Sate Forest Owners in Slovakia (10 members, owns 276,200 ha of forest area), the Association of Municipal Forests in Slovakia (60 members, owns 146,125 ha of forest area), the Union of Diocesan Forests in Slovakia (13 members, owns 40,000 ha of forest area), and the Association of Private and Cooperative Forests Owners in Banská Bystrica County (534 members, owns 134,011 ha of forest area). The main roles of forest owners associations in Slovakia are to: coordinate activities for ensuring the sustainable management and productivity of forest land; influence the drafting of policy proposals and legislative documents; and train their members. There is still a substantial group of owners managing around 33% of non-state forests who do not belong to any association (Sarvašová, Z. et al. 2011; Weiss, G. et al. 2012a; Weiss, G. et al. 2012b).

Another group of associations are land associations with legal entity. In this case forest land belongs to more co-owners and

cannot be divided, because forest is managed as a whole. They usually involve larger areas of forest land with favourable production and logging possibilities (Sarvašová, Z. and Šiška, P. 2010).

#### 4.7. Common pool resources regimes

Commons - forest common property regimes (CPR) are resource regimes where property is shared among users and management rules are derived and operated on self-management, collective actions and self-organization (of rules and decisions). Examples of traditional CPR regime are pastures, forest land communities in Sweden, Slovakia, Romania Italy and other European countries or irrigation systems in Africa or Asia. The number of new common property regimes is growing and it is challenge of this Action to transfer knowledge and skills of traditional CPRs to new CPRs and vice versa. Example of new CPR regime is community woodlands in UK, established in last 20 years mainly in Scotland, Wales. Our interest in "traditional" and "new" common pool resources regimes (CPRs) in European forest, is based on the understanding that robust resource regimes are critical for sustainable forest management regardless of the property rights. Ongoing practice shows that local land users (without ownership share) leased use agreement may also be CPR regime if they

have the rights to determine management rules typical for commons (e.g. self-organisation and shared rights and responsibilities). Thus proper rules on management (harvesting, decision making and conflict resolution mechanism, cost/benefit sharing, sanctioning etc) are key for sustainable use of CPR regimes.

Forest common property in the area of Slovakia originates from the 18th century, when Austrian empress Maria Theresia in 1767 had issued special decree on the land ownership of Hungarian noblemen and their serfs. In 1898, the act specifying legal status of common property was issued in the Hungarian part of the monarchy – the common property was defined as a form of indivisible property owned by the group of local inhabitants and their heirs in a form of ideal portions (so-called land association, in Slovak "urbar association"). The institution of common property as a special type of ownership of pastures and forest land, formed as it was described, has survived in the area of Slovakia up till now. The legal act from 1898 has been valid in Slovakia till 1995, when new Act on Land Associations was introduced. However, in the 20th century, the forest ownership structure including common property of forest resources has been significantly changed. Forest common property is the most important type of ownership in the Slovak non-state forestry sector.

#### CASE STUDY 3: FOREST COMMON PROPERTY IN SLOVAKIA

At the present time, there are 2,791 land associations managing forest common property – 1,455 of them do not dispose of legal personality while 1,336 of them are land associations created as legal persons. Land associations are obliged to manage their forests according to the rather strict forest management plans – they must protect forest land and forest stands, utilise them rationally and improve them permanently, systematically and in accordance with the advanced biology, technology and economic knowledge. Moreover, they must ensure the proper management of their forests by the professional foresters with required education and experience in order to manage all forests in a sustainable way. The control of their forestry practice is performed through a system of the state administration bodies (the central authority of forestry state administration is the Forestry Section of the Ministry of Agriculture, the local authorities of forestry state administration are district and county forest offices).

The most common management problems are financial situation, conflict arising from interests of the forest owners (local communities) and interests of the society (the State) in the field of nature protection and the process of forest certification (Šulek, R. 2006).

A new Law has been enacted on Land Association (act no. 97/2013) which states that all land associations without legal personality are obliged to change its legal form to legal personality till the 28<sup>th</sup> of February 2014. This was problematic mainly for the small association with an area less than 50 ha. They have the possibility to change the legal form to association according to the Civic Code (association contract) or Commercial Code (legal person).

## 5. Forest management approaches for new forest owner types

The Action is interested if there are any new forest management approaches that specifically address new forest owner types, or that could be particularly relevant for new forest owner types. We are aware that there is not much awareness for this and that there is not much literature available, however, we are convinced that this is an issue: if owners have different goals for their forests there must be new kinds of management, if they have not the skills any more to do it themselves then there must be new service offers, etc. There are assumingly implications in silviculture, technology, work organisation, business models, etc. Such new approaches may be discussed under the key word of new ownership types but often not.

### 5.1. Forest management in Slovakia

The largest forest management subject is the state enterprise Forests of the Slovak Republic, Banská Bystrica. The state enterprise manages also the forests of owners whose forest land has not been handed over to them for various reasons. The enterprise manages also land leased from the non-state subjects by contract, all together 53.9% of forests (Green Report, 2013). The forests under the ownership of the state are being managed by the 4 state organizations of forestry as follows: Lesy SR, š. p. Banská Bystrica (Forests of the Slovak Republic, state enterprise, Banská Bystrica), Lesopoľnohospodársky majetok, š. p. Ulič (Forest-Agricultural Estate, state enterprise, Ulič), Štátne lesy TANAP-u (State Forests of the Tatra National Park) and Vojenské lesy a majetky SR, š. p. Pliešovce (the Military Forests and Estates of the Slovak Republic, state enterprise, Pliešovce). First three organizations belong to the competence of the sector of the Ministry of Agriculture of the Slovak Republic. The Military Forests and Estates of the Slovak Republic, state enterprise, Pliešovce) belongs to the competence of the sector of the Ministry of Defence of SR.

The non-state sector recently manages 45.4% of forest stands. In this are included the private (7%), municipal (8.6%), and church forests (1.4%), as well as forests of agriculture co-operatives (0.4%) and in shared ownership (28%). Gap of 12.8% forests of unknown owners are managed by the state organisations of forestry (Green Report, 2013).

Reconstituting the sector of non-state forests was influenced by not very favourable public climate as well as by actual situation in the cooperation with state sector. With a very few exceptions non-state subjects started without any financial means, any mechanization or technical means as well as without administration and technical equipment for forest production and access to the market (Weiss, G. et al. 2011). Whole process of forests restitution was accompanied by many problems, which are specific for each individual region of Slovakia.

Alegal and organizational form of subjects in the non-state sector consists of land communities with or without legal entity, associations founded according to the Civil Code, business companies, natural persons recorded for business activity or without recording, as well as special units (commercial, contributory) of municipal office.

What concerns functionality of respective legal-organizational forms in non-state sector, we distinguish in fact two cases. The first case is larger lands with favourable production and logging possibilities and management develops quite positively. These subjects usually employ professional foresters. Second case represents management of small area forests, where is the possibility of rational management limited. Usually the owners themselves carry out forest works. They use logged timber either for own consumption (especially heating) or they sell timber to various entrepreneurial subjects.

They either do it by themselves or lease the forest management rights to private companies or state forest enterprises. The contracts can be short (for timber harvesting) or longer (for all the forest management activities required by national law regarding silvicultural activities).

## 5.2. New or innovative forest management approaches relevant for new forest owner types

New forest owners try to diversify the activities conducted in forests. Besides the mostly used timber production they use it for other purposes which require new management goals. According to quantitative analysis of data from Economic Accounts for Forestry average level of diversification in Slovakia is in average 20%, but in small private forestry only 6-7% (Sarvašová, Z. and Kovalčík, M. 2010).

- Forest owners associations used financial resources from EU funds to improve the infrastructure (build forest trails, paths, cycling routes, renovating cottages, etc.) and so promote the recreational function of the forest (see Case study box: Urbariat Velky Kliz, page 19).
- NATURA 2000 payments for biodiversity conservation. Forest owners can get direct payments per hectare for not managing the forests in areas listed as NATURA 2000 sites. This was a measure supported under the Rural Development Programme 2007-2013. The financial support was granted as an annual payment for forest land in designated NATURA 2000 areas. The applicant had to be a forest owner or forest owners association owning at least 1 hectare of forest land and could not manage his land in any way.
- Biomass production where they plant fast growing trees.
- New business model in the form of market for forestry services is being developed at present.

## 5.3. Main opportunities for innovative forest management

Planned sustainable forest management has a long tradition in the territory of the Slovak Republic. History of sustainable forest management (SFM) in Slovakia is characterized by many institutional changes.

Forest act no. 61/1977 Coll., adopted during the socialist period, promoted large scale forest management which applied less sustainable management principles. There are currently several levels of forest management planning in the Slovak Republic. The most complex strategic national planning instrument is the National Forest Programme at the political level. Lower level planning is represented by Forest management plans which are elaborated for forest management units (minimum forest area is 1,000 hectares) for the period of 10 years. Professional level of forest management is ensured by the Forest manager who is a licensed individual guaranteeing expert treatment of forest property for the forest owner in accordance with the law (Sarvašová, Z. et al. 2014, forthcoming). Using FMP at practical management is obligatory for all kind of forests in Slovakia. The duty of elaboration of FMP, list of its mandatory components and exact descriptions of steps and terms/dates applied at FMP elaboration process are stated in the Act on Forests no. 326/2005 Coll. The elaboration process results in only one FMP proposal, which is considered to be the optimal (Sedmák, R. et al. 2013).

Advisory services have a long tradition in Slovakia. Not only FOAs but also the state provides advisory services for forest owners. Advisory services are provided by state forestry administration (ministry, forest offices and specialized state organizations), by professional forest managers and private companies dealing with forest taxation and FMP elaboration. FOAs also provide advisory services to their members.

One of the opportunities is the emerging debate on payments for ecosystem services. At present, no PES are implemented in Slovakia though.

## 5.4. Obstacles for innovative forest management approaches

The main challenges lay in the public perception of forests. Historically, forests have been perceived as a good that serves everybody. There is still free access to forests and no willingness of people to pay for the services that forests provide for society.



Forest owners that want to implement new management approaches have to comply with forestry and environmental legislation which is rather restricting. Forest owners have to manage their forests according to the approved FMP. The plan contains obligatory measures containing exact descriptions of steps and terms/dates that need to be followed by the forest owner. The licensed forest manager oversees the whole process and ensures compliance with the law. In protected areas there are even more restrictions resulting from the nature

conservation law which prohibits certain forestry measures in different protection areas according to the protection level.

The accessibility to forests is also one of the obstacles. Building forest roads has always been the hot topic among foresters and forest owners.

Lack of financial resources and lack of state financial support also present an obstacle to apply new management approaches. At the moment no PES are implemented in Slovakia.

#### CASE STUDY 4: URBARIAT VELKY KLIZ

The Urbariat Velky Kliz is a joint-ownership form of 600 forest owners with the total area of 786 hectares. The annual felling rate is approx. 800 m<sup>3</sup>, from which half of it is used for fuel wood. The urbariat offers also various recreational services for the visitors of their forests: accommodation in forest cottage "Spring", children facilities near the forest cottage, sport path "From Swell to Spring with Squirrel", football playground "Swell", hiking trails - marked in detail with accompanying leaflet, cycling routes, forest pedagogic activities for school kids and families with children, forest guided tours on selected issues (observing wildlife population), forest touristic on marked trails, rest places with fireplace, tables, benches and shelters ([www.ipoles.sk](http://www.ipoles.sk)).

## 6. Policies influencing ownership development / Policy instruments for new forest owners

Policy and ownership are related in various ways: Policies directly or indirectly influence ownership development or even encourage or create new forms of ownership; and policy instruments are emerging that answer to ownership changes, including instruments addressed to support new types of owners e.g. through advisory services, cooperative or joint forest management, etc.

### 6.1. Influences of policies on the development of forest ownership

#### 6.1.1. Restitution process

After November 1989, in Slovakia, similarly with many other countries, restitution has been the main issue which influenced the ownership structure.

Equality of all kinds of ownership was assured firstly by Constitutional Law and then by adoption of so-called "Land Law" no. 229/1991 Coll. in May 1991 in Federal Assembly. Due to this change all kinds of

ownership were restored and made equal and a process or restitution of forest property to former owners has started altogether with diversified management of this property. It concerns all estates that were taken by the state non-legally and then were socialized.

Re-privatization should serve as a process that will improve the management of former state agricultural and forest land that was farmed in very ineffective way. Re-privatization, started also in 1991 with Land law no. 229/1991 Coll., should serve as a process that will improve the management of former state agricultural and forest land that was farmed in very ineffective way.

Implementation of the Act on Land as well as other restitution acts represented a considerably complicated process because of complicated ownership in Slovakia and difficult registration in the terrain. For all that it was not only about the restitution of ownership's and users' rights but also about creation such conditions where owners themselves will be able to be effective farmers of their forest land resources (Bútor, P. 1999).

Different behaviour of state institutions during adoption or reduction of forest owners' rights, as well as during their restitution, had a great effect on this process. Though the substance of differences results from different political situation in given periods and neglected

works on keeping records on and applying ownership's rights, former forest owners as well as public expected much more positive approach on the side of the state. Up to now about 96,000 subjects required restitution of ownership and users' rights to the area of about 994,000 ha (49.5 % of the total area of the forest land resources).

### **6.1.2. Legislation**

Most recent law is the Act on Land Communities no. 97/2013 Coll., effective from the 1<sup>st</sup> of May 2013, according to which communities without legal entities had to be transformed into legal subjects. Otherwise, they will be abolished.

### **Afforestation of agricultural land**

The first afforestation of agricultural land was supported under the Rural Development Program in 2004- 2006 and also in the same program for the period 2007-2013. This arrangement was implemented by the Slovak government by regulation no. 150/2008 Coll. based on the conditions for granting payments for the first afforestation of agricultural land. Eligible for support were persons working in agriculture on area of at least 1 ha of agricultural land, which were: owners of agricultural land proposed for afforestation or owners associations with legal entity, tenants of agricultural land proposed for afforestation or association of tenants with legal entity with the consent of its owner. Afforestation after timber harvesting is obligatory under the Act no. 326/2005 Coll., on Forests.

## **6.2. Influences of policies in forest management**

Professional forest management using FMP is compulsory for all ownership types with forests exceeding 50 hectares since 1930. The basic long-term goal of state forest policy is to ensure sustainable forest management based on appropriate use of its economical, ecological and social functions for the society and foremost rural areas. The main tool for ensuring SFM is FMP (Act on Forests).

Some changes came after 1989 where the shift to better management in the aspect of ensuring all forest functions was installed and

the Forest Law was revised in 1991 and 1993. In the past evolution of the forest management the trend to intensify the state influence on forest owners was visible. Nowadays, after the new Act on Forests in 2005, a tendency is to minimize this influence. This change resulted in outsourcing the FMPs elaboration to private companies.

Today FMPs are perceived as a tool of the state, forest owners, forest administrators and forest managers for sustainable forest management. In the past FMP weren't elaborated for private forest owners and for small forest areas. Today it is elaborated for the whole area of the country. The expenses regarding the elaboration are covered by the state. The Ministry of Agriculture charged the National Forest Centre with the selection of FMP producer in the form of public procurement. The forest manager can charge other natural and legal persons with the elaboration of FMP but has to cover the expenses by himself. Plans can be elaborated by adept and technically skilled natural and legal persons who have trade permission in this area. FMPs are elaborated for the period of 10 years for each forest unit (the whole area of Slovakia is divided into forest units). FMPs are authorized by the Regional Forest Office.

The use of FMP in forestry is to ensure sustainable forest management. Professional forest management is a legal obligation of each forest owner irrespective of the property regime, ownership or land cover. Each forest owner (forest manager) has a legal obligation to ensure forest management of his forests according to existing FMP for that forest unit by an Authorized forest manager if he does not have the required knowledge. Authorized forest manager is a natural person who has the license given by the state for conducting forest management in the forest.

## **6.3. Policy instruments specifically addressing different ownership categories**

### **6.3.1. Compensations**

Non-state forest owners are compensated for restricted common management due to restrictions and measures of ban and other

conditions resulting from the Act no. 543/2002 Coll., on Nature and Landscape Protection. The compensation for the restriction of common management should be understood as: (i) exchange of land for other suitable land in state ownership, (ii) lease of land, (iii) repurchase of land to the State, (iv) contractual treatment or (v) financial compensation.

The amount of financial compensation is determined by the difference between cost and revenues in case of common and restricted forest management. The person entitled to a financial contribution corresponding to the restriction of common management is a land owner, with the exception of owners of private protected areas and their buffer zones. If the land is in co-ownership, the entitled person is a representative appointed by co-owners.

### **6.3.2. Legislative instruments**

Act no. 83/1990 Coll., on Association of Citizens, prescribes that everyone can associate and create interest group, regardless of the number of members.

Act on Forests 2005. Amendment of this Act should allow the support of associations of non-state forest owners with a small acreage, and the proposal area is 50 ha. This acreage is based on the experiences and needs and is a minimal acreage for sustainable forest management with the assumption of regular income from forest management.

Act no. 247/2006 Coll., on the Promotion of Agriculture and Rural Development, provide a support for association of forest owners to the property of 50 ha in the associations with the legal entity and also counselling and education, establishment and activities of regional associations of forest owners.

Act no. 543/2007 Coll., on the Competence of Government in Providing Support in Agriculture and Rural Development, where the paying agency created by the Ministry decides on the granting of aid under a special regulation and on the provision of advance payment, decisions on state aid in the agriculture, food, forestry and fisheries.

Act no. 274/2006 Coll., on Detailed Rules on Aid for Agriculture, Food and Forestry sectors. Support for association of forest

owners to the property of 50 ha to the associations with the legal entity.

### **6.3.3. Concept of agriculture development for 2007- 2013**

Concept of agriculture development for 2007-2013, Part Forestry, Priority 3.2 Ensuring the interests and needs of forest owners and local communities - Use of property in accordance with the principles of sustainable forest management, conservation forestry in disadvantaged areas in terms of environmental improvement, landscape and cultural functions of forests; support of association of forest owners with small areas.

Association of small scale forest owners has a great importance from the viewpoint of rational management of non-state forests. Entities managing larger forest-land parcels with more favourable age structure and harvesting possibilities are generally more profitable. Therefore, one of the main task of this Priority is to support association of small scale forest owners with insufficient income from management due to natural production condition into communities with legal entity.

### **6.4. Information needs and factors affecting innovation in policies**

All ownership categories have some barriers in the adaptation of forest policies. Main barriers are lack of association, political lobby, information, and they also lack funding from public sources.

Actors in political field influence programs in forestry sector in the form of acts for private forest and their implementation. The results of this process depend on the reactions of private forest owners as well as the ecological basis for growth and use of the forest. The State Forestry Administration should intervene in the market mechanism and do not leave only market self-regulation to the forest management. It should work on the reallocation of funds to create additional economic motives, which should be oriented to eliminate or mitigate the disadvantages of forest with small properties, which would ultimately lead to increased efficiency production of wood, raw material, but also to

strengthen implementation of production functions. Also, measures to ensure awareness of the intentions of the state forest

policy in relation to small forest owners are very important.

#### CASE STUDY 4: RDP 2009-2013 FORMULATION

The institutional provisions of rural development programs (RDP) expect the involvement of several actors, which allows the bargaining process with the aim of improving the consistency of rural development policy. At the beginning of the entire formulation process the ministry set a hierarchical list of actors who should be contacted to participate in the formulation process of RDP. Among the actors were the FOAs in Slovakia, represented by their chairs. The partners participated in the preparation of incentives, recommendations and comments. The actors were divided into working groups according to the particular axes of the RDP. The FOAs representatives played an active role in the RDP formulation process. In the working group 1 they agreed together with other forestry actors on the selected measures that represented priority areas of interest of the concerned actors. For example, the bases for draft of measures in the case of forestry actors were measures from the previous SOP Agriculture and Rural Development 2004–2006. It concerned measures: sustainable forest management and forestry development, sub-measure: investments to improve and rationalize forest silviculture and protection, harvesting, primary processing and sale of raw wood and other forest production (investments bringing net profit) and public investments (investments bringing no profit). The final form of the document emerged from the working groups, so we can conclude that FOAs influenced the proposed forestry measures (Dobšínská, Z. et al. 2013).

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## 7. References

- Ambrušová, L., Halaj, D., Ilavský, J. and Marttila, J. (2013) *Atlas of the forest sector in Slovakia*. Working papers of the Finnish Forest Research Institute 257. Vantaa: Finnish Forest Research Institute. Available at: [www.metla.fi/julkaisut/workingpapers/2013/mwp\\_257.htm](http://www.metla.fi/julkaisut/workingpapers/2013/mwp_257.htm)
- Biermann, F., Abbott, K., Andresen, S., Bäckstrand, K., Bernstein, S., Betsill, M. M., Bulkeley, H., Cashore, B., Clapp, J., Folke, C., Gupta, A., Gupta, J., Haas, P. M., Jordan, A., Kanie, N., Kluvánková-Oravská, T., Lebel, L., Liverman, D., Meadowcroft, J., Mitchell, R. B., Newell, P., Oberthür, S., Olsson, L., Pattberg, P., Sánchez-Rodríguez, R., Schroeder, H., Underdal, A., Camargo Vieira, S., Vogel, C., Young, O. R., Brock, A. and Zondervan, R. (2012) *Navigating the Anthropocene: Improving Earth System Governance*: Science (335): 1306-1307, 10.1126/science. 1217255
- Bútor, P. (1999) 'Stav odovzdávania vlastníckych a užívateľských práv k lesným pozemkom a problémy tohto procesu' (Present state of the process of returning ownership and user rights to forest properties and associated problems), *Súčasnosť a budúci vývoj neštátneho lesníckeho sektora SR: zborník z konferencie s medzinárodnou účasťou* (Present and Future Development of the Slovak non-state Forestry Sector – Conference Proceedings), pp. 26-30. (in Slovak)
- Compendium of Slovak Forestry Statistics (2013). Zvolen: National Forest Centre – Forest research Institute
- Dawson, T. P., Rounsevell, M. D. A., Kluvánková-Oravská, T., Chobotová, V. and Stirling, A. (2010) *Dynamic properties of complex adaptive ecosystems: implication for the sustainability of service provision*. In Biodiversity and conservation (19), 10\_2843-2853. ISSN 0960-3115. doi. 10.1007/S10531-010-9892-Z
- Dobšínská, Z., Šálka, J., Sarvašová, Z. and Lásková, J. (2013) *Rural development policy in the context of actor-centred institutionalism*, Journal of Forest Science, vol. 59 (1), pp. 34–40.
- Dobšínská, Z., Sarvašová, Z. and Šálka, J. (2010) *Changes of innovation behaviour in Slovakian forestry*, The Annals of The Stefan cel Mare University of Suceava. Fascicle of The Faculty of Economics and Public Administration, vol. 10(2/12), pp. 71-80.
- Ministry of Agriculture of the Slovak Republic in cooperation with the National Forest Centre - Forest Research Institute Zvolen (2009) *Forests in Slovakia*, [Online], Available at: <http://www.mpsr.sk/en/index.php?navID=17&id=26> [14 Feb 2014]
- Green Report (2013) Report on the State of the Slovak Forests., [Online], Available at



- www.mpsr.sk/index.php?navID=123&id=8163 [14 Feb 2014]
- Hatiar, S. et al. (1994) *Koncepcia rozvoja neštátnych lesov* (Conception of Non-state Forests Development). Zvolen: Forest Research Institute. (in slovak)
- Harrington, R., Anton, Ch., Dawson T. P., De Bello F., Feld Ch. K., Haslett J. R., Kluvánková-Oravská, T., Kontogianni, A., Lavorel, S., Luck, G. W., Rounsevell, M. D. A., Samways, M. J., Settele, J., Skourtos, M., Spangenberg, J. H., Vandewalle, M., Zobel, M. and Harrison, P. A. (2010) *Ecosystem services and biodiversity conservation : concepts and a glossary*. In: *Biodiversity and conservation* (19), 10: 2774-2790. ISSN 0960-3115. doi. 10.1007/s10531-010-9834-9
- Ilavský, J. (2001) *Preparedness of Private Owners for the Management of Forest in the Slovak Republic*. In: Niskanen, A. and Väyrynen, J. (eds.). *Economic Sustainability of Small-Scale Forestry*. EFI Proceedings No. 36. Joensuu: European Forest Institute. pp. 53-60
- Ilavský, J. (2004) *Transformácia, či privatizácia v podniku, ktorý hospodári so štátnymi lesmi? (Transformation or Privatization in the Enterprise that Manages State Forests?)* Slovenské lesokruhy, vol. 5-6 pp. 43-45. (in slovak)
- Klacko, S. and Gregus, L. (1999) *Legislatívny rámec reprivatizácie lesov a možnosti ich spoločného obhospodarovania (Legislative framework of forest re-privatization and possibilities of joint management of forests)*. Súčasnosť a budúci vývoj neštátneho lesníckeho sektora SR: zborník z konferencie s medzinárodnou účasťou (Present and Future Development of the Slovak non-state Forestry Sector – Conference Proceedings), pp. 33-35. (in slovak)
- Kluvánková-Oravská, T., Chobotová, V. and Smolková, E. (2013) *The Challenges of Policy Convergence: The Europeanization of Biodiversity Governance in an Enlarging EU*. Environment and Planning C: Government and Policy (31): 401 – 413. doi:10.1068/c1034j
- Kluvánková-Oravská, T. (2013) *Governing natural commons: forest regime*. In: Kluvánková, T., Jílková, J. and Kozová, M. (Eds.) *From governing to governance reconsidered*. VERBUM. Catholic University Ružomberok: 19-28: ISBN 978-80-561-0066-0
- Kluvánková, T., Finka, M., Kováč, U. and Jílková, J. (2013) *Governing under the complexity and uncertainty*. In: Kluvánková, T., Jílková, J. and Kozová, M. (Eds.) *From governing to governance reconsidered*. VERBUM – Catholic University Ružomberok: 85-89: ISBN 978-80-561-0066-0
- Kluvánková-Oravská, T. et al. (2010) *From government to governance? New governance for water and biodiversity in enlarged Europe*. Alfa printing, 233S: ISBN 978-80-87197-28-8
- Kluvánková-Oravská, T., Chobotová, V., Banszak, I., Sláviková, L. and Trifunová, S. (2009) *From Government to Governance for biodiversity: The perspective of central and eastern European transition countries*. In: *Environmental Policy and Governance* (19), 3: 186-196. ISSN 1756-932X
- Konôpka, J. et al. (1999) *Analýza vývoja a súčasného stavu lesného hospodárstva Slovenskej republiky (1990-1998) (Analysis of the Development and Current State of the Forest Economy in Slovakia)*. Bratislava: Príroda a.s. (in slovak)
- Konôpka, J. (2004) *Erneuerung der Privatforstwirtschaft in der Slowakischen Republik (Restoration of private forestry in the Slovak Republic)*. Lesnícky časopis – Forestry Journal, vol. 50 (2), pp. 183-194. (in German)
- Mendes C., A., Stefanek, B., Feliciano, D., Mizaraite, D., Nonic, D., Kitchoukov, E., Nybakk, E., Duduman, G., Weiss, G., Nichiforel, L., Stoyanova, M., Mäkinen, P., Alves, R., Milijic, V., and Sarvasova, Z. (2011) *Institutional innovation in European private forestry: the emergence of forest owners' organizations*. In G. Weiss, D. Pettenella, P. Ollonqvist and Slee, B. eds. *Innovation in forestry: territorial and value chain relationships*, pp. 68–86. Wallingford, UK, CAB International.
- Mizaraitė, D. et al. (2013) *Structural Changes of State Forest Enterprises in Estonia, Latvia, Lithuania, Slovakia and Serbia since 1990* (unpublished).
- Moravčík, M. et al. (2009) *Vízia, prognóza a stratégia rozvoja lesníctva na Slovensku. (Vision, Prognosis and Development Strategy of Slovak Forestry)*. Zvolen: National Forest Centre. (in Slovak)
- Paavola, J., Gouldson, A. and Kluvánková-Oravská, T. (2009) *Interplay of actors, scales, frameworks and regimes in the Governance of biodiversity*. In: *Environmental Policy and Governance* (19), 3: 148-158. ISSN 1756-932X
- Petrášová, V., Linderová, R. and Gecovič, M. (1996) *Lesnícke informácie: Vývoj organizácie a riadenia lesníctva na Slovensku (Forestry Information – the Development of Organization and Management of Forestry in Slovakia)*. Zvolen: Lesnícky výskumný ústav, (in slovak)
- Reprivatizácia lesov v Slovenskej republike k 31. decembru 1995: Štatistické čísla a grafy.

- (Reprivatization of Forests in Slovakia until 31<sup>st</sup> December 1995: Statistical Numbers and Tables), Bratislava: Štatistický úrad SR, 14 p. (in Slovak)
- Slovstat. 2012. Data from the statistical database of the Statistical Office of SR. Available: <http://portal.statistics.sk/showdoc.do?docid=4>,
- Šálka, J. and Sarvašová, Z. (2011) **Politika rozvoja vidieka a lesníctvo na Slovensku. 1.vyd.. Zvolen: NLC, 57 p. ISBN 978-80-8093-145-2**
- Sarvašová, Z. (2010) *Innovations in recreational services from the viewpoint of forest enterprises*. Journal of Landscape Management, vol. 1(1), pp. 56-60
- Sarvašová, Z. and Tutka, J. (2005) *Change in the Ownership and Management of Forests in Slovakia*, Small-scale Forestry in a Changing Environment. Lithuanian Forest Research Institute, 2005. Pp. 200-207.
- Sarvašová, Z. and Šiška, P. (2009) *Slovakia: Returning the forests to their original owners*. In: Carter, J. And Voloshyna, N. (Eds.) *How communities manage forests: selected examples from around the world*. L'viv: Galyc'ka vydavnycha spilka, Ltd. pp. 36-40.
- Sarvašová, Z. and Kovalčík, M. (2010) *Challenges for diversification of activities in private forest sector in Slovakia*. In: Medved, M. (ed.): *Small Scale Forestry in a Changing World: Opportunities and Challenges and the Role of Extension and Technology Transfer: Proceedings of the conference, 6-12 June 2010, Bled, Slovenia* [CD-ROM]. Ljubljana, Slovenian Forestry Institute. Slovenian Forest Service, pp. 683-696
- Sarvašová, Z., Lásková, J., Dobšinská, Z. and Šálka, J. (2011) *Záujmové skupiny v lesníctve. (Interest groups in forestry)*. In: Hajdúchová, I, (eds.) *Proceedings of the International Scientific Conference Financovanie 2011 Lesy-Drevo*. Zvolen: Technical University in Zvolen, pp. 137-142 (in Slovak)
- Sarvašová, Z., Šálka, J. and Dobšinská, Z. (2013) *Mechanism of cross-sectoral coordination between nature protection and forestry in the Natura 2000 formulation process in Slovakia*, *Journal of Environmental Management*, vol. 127, pp. S65-72.
- Sarvasova, Z., Dobsinska, Z. and Salka, J. (2014) *Public Participation in Forest management planning: the Case of Slovakia*. iForest. - Accepted. Forthcoming.
- Schmithüsen, F. and Hirsch, F. (2010) *Private Forest Ownership in Europe*. Geneva timber and forest study paper 26. Geneva: United Nations, p. 110.
- Sedmák, R., Fabrika, M., Bahýľ, J., Pôbiš, I. and Tuček, J. (2013) *Application of simulation and optimization tools for developing forest management plans in the Slovak natural and management conditions*. In: Tuček, J., Smreček, R., Majlingová, A. and Garcia-Gonzalo, J. (Eds.) *Implementation of DSS tools into the forestry practice*, Technical University in Zvolen, Slovakia, pp. 139-152.
- Slavíková, L., Kováč, U., Kluvánková, T. and Malý, V. (2013) *The role of property regime in sustainable forest management*. In: Kluvánková, T., Jílková, J. and Kozová, M. (Eds.) *From governing to governance reconsidered*. VERBUM – Catholic Universtiy Rožomberok: 45-60: ISBN 978-80-561-0066-0
- Správa o transformácii vlastníckych a užívacích vzťahov k lesným pozemkom (Report on the Transformation of Forest Land Ownership and Tenure) (2013). Bratislava: Ministry of Agriculture of the Slovak Republic. [in Slovak]
- Šulek, R. (2006) *Common-pool resources in Central Europe: Case study of forestry in the Slovak Republic*. IASCP Europe Regional Meeting. *Building the European Commons: from Open Fields to Open Source*. Brescia, Italy, pp. 23-25.
- Tutka, J. et al. (1999) *Návrh riešenia ekonomických problematík v novej právnej úprave o lesoch: výskumná správa (Proposal of Economic Issues Solution in New Legal Provisions on Forests – Research Report)*. Zvolen: LVÚ, 1999. (in Slovak)
- Tykkä, S., Weiss, G., Nichiforel, I., Nedelkovic, J. and Dobšinská, Z. (2010) *Innovation and Sustainability in Forestry in Central and Eastern Europe: Challenges and Perspectives (SUSI-CEE)*. European Forest Institute. Central-East European Regional Office (EFICEEC) Austria, p. 8.
- Weiss, G. et al. (2011) **INNOVATION AND SUSTAINABILITY IN FORESTRY IN CENTRAL AND EASTERN EUROPE: CHALLENGES AND PERSPECTIVES (SUSI-CEE). FINAL REPORT. EUROPEAN FOREST INSTITUTE, p. 249.**
- Weiss, G. et al. (2012a) *Success Cases and Good Practices in Forest Owner's Organizations in Eastern European Countries*. Food and Agriculture Organization of the United Nations, Rome, p 38.
- Weiss, G. et al. (2012b) *Review of forest owners' organizations in selected Eastern European countries*. Forestry Policy and Institutions Working Paper No 30., Food and Agriculture Organization of the United Nations, Rome, p. 45.

## 8. Annexes

### 8.1. Forest ownership structure – detailed tables

#### 8.1.1. Ownership's structure of forests in Slovakia

Table 1: Ownership's structure of forests as of 31.12. 2013

Ownership category		State	Private	Community	Church	Agri co-op	Municipal	Non-state together	Unknown owners
Forest land	Ha	777,599	206,246	432,314	50,624	5,590	174,350	869,124	294,798
	%	40.0%	10.6%	22.3%	2.6%	0.3%	9.0%	44.8%	15.2%

Source: Compendium of Slovak Forestry Statistics 2013

#### 8.1.2. Ownership's structure of forests according to FRA

Table 2: Ownership structure according to FRA

FRA 2010 Categories	Forest area (1000 ha)	Forest area (1000 ha)
	2005	2013
Public ownership	996	952
Private ownership	823	694
...of which owned by individuals	275	206
...of which owned by private business entities	68	56
...of which owned by local communities	480	432
...of which owned by indigenous/tribal communities	0	0
Other types of ownership	113	295
Total	1932	1941

The forest area in the category of public ownership decreased from 996,000 ha in 2005 to 952,000 ha in 2013 (decrease by 4.5%). In the category of private, forest area fell by 15.7%. However, forest land increased

in the category of other types of ownership by 182,000 ha. Changes in particular ownership categories arose due to more accurate evidence of forest land, ongoing inheritance and restitution processes.