

## ROMANIAN PRIVATE FOREST DISTRICTS - BETWEEN PRODUCTION AND BIODIVERSITY CONSERVATION

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**Abstract.** *The purpose of this paper is to briefly describe the Romanian private forest sector in relation to the performances of private forest districts and the involvement of these forest administration entities in biodiversity conservation activities. The initiation in 1991 of forest property restitution process and its further implementation has had a major influence on forest management and administration; in 2002 the first Romanian private forest district was established. By 2010, 117 private forest districts managing around 1.42 million ha of forest had been established, their number increasing to 138 in 2012. At the beginning of 2013, 14 private forest districts were providing the custody or administration of 16 Natura 2000 sites, while three forest districts were FSC certified. Biodiversity conservation and increasing high financial demands of the forest owners represent significant challenges for Romanian private forest districts in the attempt to balance the social, economic and environmental interests.*

**Keywords:** biodiversity, FSC certification, Natura 2000, private forest districts

### Introduction

Romanian forest property structure in the XIX, XX and XXI centuries had suffered substantial changes. Starting at Romanian provinces level and until now, data attesting the forest ownership structure and its management manner indicates a continue change, firstly generated by policies adopted during various periods. For example, the evolution of state-owned forest area (Table 1) shows that in 1930 the state owned 1.942 thousand ha (29.9% of the total forest area of 6.486 thousand ha), in 1990 the state owned and managed the whole forest area being (6.372 thousand ha), whilst it owned only 3.339 thousand ha in 2010, representing 51.25% of the total forest area of Romania.

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Table 1. Evolution of state-owned forest area

Year	1930	1947	1965	1990	2010
National forest area (thousands ha)	6,486	6,704	6,378	6,372	6,515
State-owned forest area (thousands ha)	1,942	1,963	6,378	6,372	3,339
% of state-owned forest of the total forest area	<b>29.9</b>	<b>29.0</b>	<b>100</b>	<b>100</b>	<b>51.2</b>

Sources: [18, 22, 24]

In the modern period, the functioning of the forestry sector, respectively the forestry regime introduction and implementation could not be assured without the establishment and operation of specialised institutions. Thus, since 1910 until 1930 the House of Forests (Casa Pădurilor) was operating as a state forestry administration, forest administration and guarding being performed via 14 regional directorates, 27 forestry regional units and 294 forest districts. In 1930, the new Law for Administration of Forests was enforced, the attributions of House of Forests being replaced by the services of the Autonomous House of State-Owned Forests (Casa Autonomia a Padurilor Statului) and of the Forestry Regime Directorate (Directia de Regim Silvic), whilst regulations regarding the forestry regime for all forests, regardless of ownership, started to be implemented [18]. After the establishment of the communist regime, in 1948, all Romanian forestlands, either privately-owned, belonging to local communities or to other legal entities have been transferred into state possession and administration [15]; the Ministry of Forestry was established, with 58 county forestry directorates and 467 forest districts, which were responsible for guarding, protection and development of forests belonging to the national forest fund [18]. After the fall of the communist regime, a reform of the forest sector was initiated, the first step in this intercession being realised in 1991 by the Romanian Government, which has embarked into the process of privatisation through restitution of forestland [2].

The forest restitution recognises the continuity of ownership rights of the owners and of their heirs, of local communities and institutions [3, 5] in the case of forest property hold before the nationalisation process in 1948. The restitution process has been carried out in three successive stages, based on three different laws that completed each other, namely Law no. 18/1991, Law no. 1/2000 and Law no. 247/2005 [14, 19, 23]. Furthermore, the process of transition towards the market economy has been a challenge also for Romanian forestry institutions.

While in the period 1990-2002 the responsibility for the management of forests, regardless of their owners, belonged only to the National Forest Administration (RNP) - Romsilva, which was structured into 42 directorates and 360 forest districts [1], in 2002 the first private forest district (PFD) was established in Bania village (Caras-Severin county) as an entity responsible for the administration and management of the forests owned by the local community [2]. The first regulatory documents defining the establishment and functioning of PFDs in Romania were the Governmental Ordinance no. 96/1998, Governmental Decision no. 997/1999 and the Ministerial Order no. 116 dated 13<sup>th</sup> of March 2002.

Regarding forest ownership, the Forest Code (Law no. 46/2008), specifies four different categories of ownership: (1) Public property of the state; (2) Public property of the local administrative-territorial units; (3) Private property of the local administrative-territorial units; and (4) Private property of individuals and legal entities. The same Code provides also the categories of entities allowed to undertake forest administration and/or forest services to different categories of owners (1, 2, 3, 4), namely the state forest districts (either within RNP Romsilva or PFDs). The PFDs could be established by different categories of forest owners (excluding the state) or by associations founded by such owners. Regarding the monitoring and controlling of the forestry regime implemented by the administrators of forest areas (state-owned or private forest districts ) the responsible bodies are the Territorial Inspectorates for Forestry Regime and Hunting (RFIs), public institutions representing in the territory the central public authority responsible for forestry (presently the Ministry of Environment and Climate Change).

As a consequence of all post-1990 ownership and institutional changes, at the end of 2010 the total forest area of Romania was managed and administrated by 463 forest districts: 325 state forest districts (belonging to RNP Romsilva) and 138 PFDs. The evolution, structure and features of the private forest districts and forest areas managed by these entities have been relatively poorly studied and reflected in the national and international publications [4, 9, 11, 12, 13, 16], a first relevant study on such topics being published in 2012 [2].

The purpose of this paper is to describe and characterise the evolution of Romanian private forest districts based on the analysis of certain production indicators provided by the PFDs for the year 2010 as well as their involvement in biodiversity conservation, in order to get a better understanding of the evolution, structure, economics and features of Romanian private forestry.

## **1. Methodology**

Detailed information on the existing authorised PFDs in 2010 was obtained from the official statistical reports (Silv forms), with the consent and support of the

central public authority responsible for forestry - the Ministry of Environment and Forests. These documents are requested every year by the National Institute for Statistics. At the first level, Silv forms are collected from the state or private forest districts by RFIs depending on territorial competence area of each control structure. For analysis, a Microsoft Excel database containing information from Silv forms of 117 PFDs was generated, their detailed location and RFI's control competence being shown in Table 2 and Figure 1. Data processing was performed by PDF stratification in groups according to their corresponding RFI, using the datasets from the four Silv forms (i.e. Silv 1 - Forest area (by ownership type, functional category and species) under administration; Silv 2 - Economic situation, investments and assets; Silv 3 - Harvested volume and area (by ownership type and species); and Silv 4 - Forest regeneration and seedling production). Additionally, the information on protected areas managed by PFDs, available on the web page of the public authority responsible for environment and the FSC database regarding the certified forest areas and the public reports issued by the certification body were assessed.

## **2. Results and Discussions**

### **2.1. Forest area, ownership and production of Private Forest Districts**

Since 2002, the number of PFDs has rapidly grown [21], due to the restitution of forestlands. In regions with large restituted forest areas, the number of these entities is also significant. RFI Braşov has within the range of its control the highest number of PFDs (37), followed by Cluj (30) and Oradea (20), on the last place being situated RFI Bucharest, with no PFDs within its area of responsibility (Table 2, Fig. 1).

In 2010, the 117 PFDs were administrating around 1.42 million ha of forest area, representing 21.5% of the total national forest fund (6.51 million ha), according to the statistical data provided by the National Institute for Statistics. Considering the percentage of privately managed forest area from the total forest area under the responsibility of each RFI, it can be noticed that in Braşov RFI almost 50% of the forest is managed by PFDs, followed by Cluj, with around 35%. A small percentage of forests managed by PFDs (less than 20%) is found in the areaa under the responsibility of Suceava, Ploieşti, Timişoara and Râmnicu Vâlcea RFIs (Fig. 2).

Regarding the ownership type of forest managed by PFDs, the most common one is the private property of individuals and legal entities (55%), followed by public property of the local administrative-territorial units (42%), whilst the private property of the local administrative-territorial units is modestly represented (Fig. 3a).

Table 2. Distribution of the total number of PFDs by RFI and the number of PFDs included in the study.

RFI	Total number of PFDs (2013)	Number of PFDs included in the study (2010)
Brașov	37	36
Cluj	30	29
Focșani	9	8
Ploiești	7	5
Suceava	14	3
Oradea	20	17
Timișoara	9	8
Râmnicu Vâlcea	12	11
Bucharest	0	0
<b>Total</b>	<b>138</b>	<b>117</b>

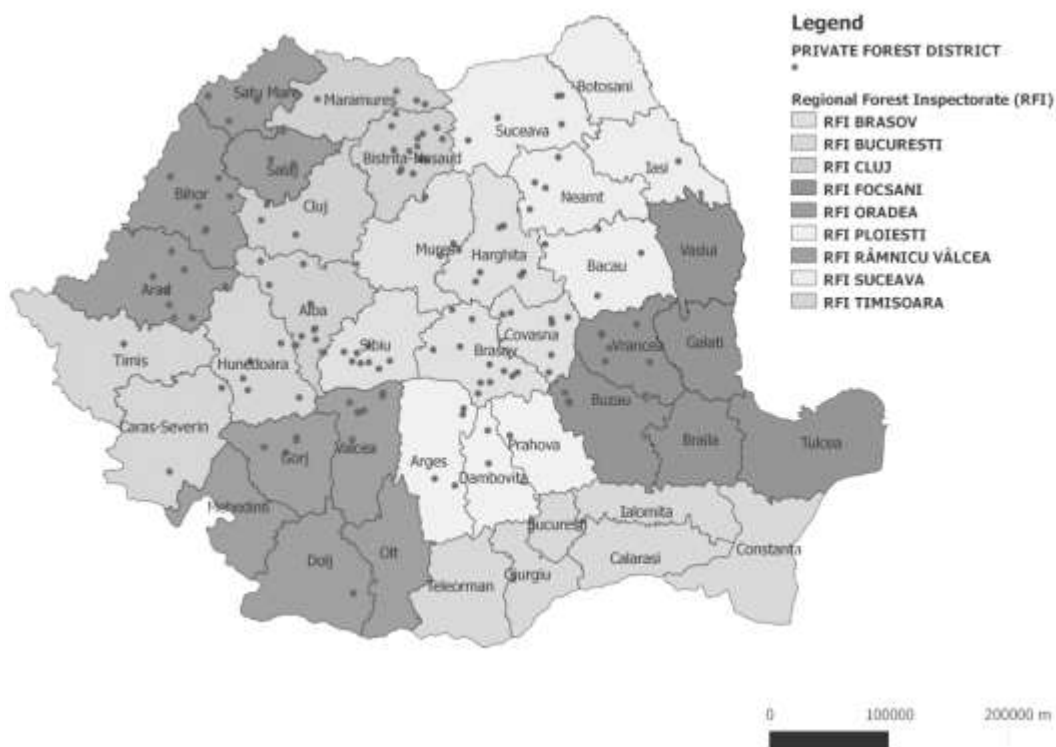


Fig. 1. National distribution of PFD offices and their allocation to RFIs.

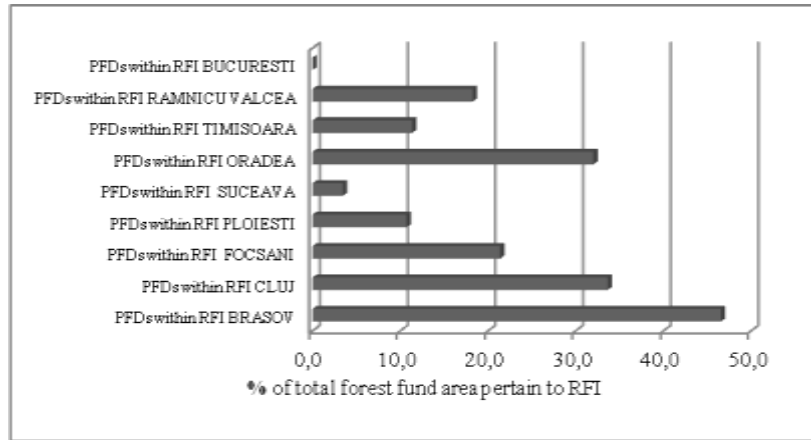


Fig. 2. Percentage of forest area managed by PFDs out of the total forest area under the RFI responsibility.

The largest forest area included in the category of private property of individuals and legal entities is found in Braşov RFI (where it represents 48% of the total forest area managed by PFDs), whilst this category of ownership reaches 99% of the total forest area managed by PFDs in Ploieşti, Focşani and Râmnicu Vâlcea RFIs. The percentage of the public property of the local administrative-territorial units managed by PFDs is higher in Transilvania and Banat (Western, North-Western and Central Romania): Cluj RFI (77%), Braşov RFI (49%), Timișoara RFI (47%) and Oradea RFI (42%) (Fig. 3b).

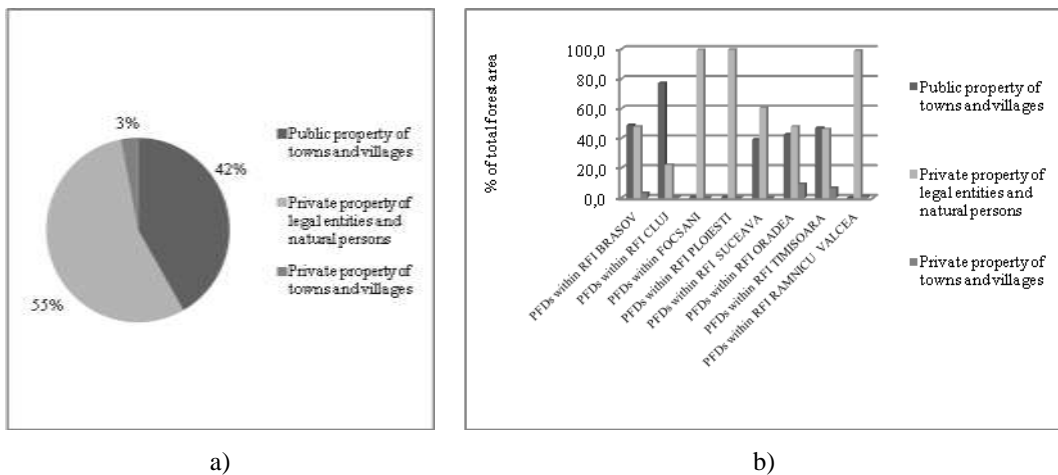


Fig. 3. Types of forest ownership managed by PFDs: a) national level, b) RFI level

In 2010, the volume of timber harvested by PFDs exceeded 5.8 million cubic meters [2], whilst forest regeneration was undertaken on an area of 5.61 thousand ha (excepting Cluj RFI, as data of Silv 3 form was not available), out of which 3.39 thousand ha of broadleaves and 2.22 thousand ha of conifers.

## 2.2. Biodiversity Conservation

By analysing the structure of the forest stands managed by PFDs it can be noticed that the forests from the Functional Group I (FG I - protection forests) represent a relatively high share of around 49%. According to Law no. 247/2005, the restitution of forests included in protected areas or having various special protection functions was allowed and this have led to a continuous increase of the share of forests from FG I managed by PFDs compared to 2006, when the percentage was 44% [2]. Large areas of protection forests are found in the PFDs under the responsibility of Râmnicu Vâlcea RFI (88%), Focșani RFI (85%) and Ploiești RFI (77%) (Fig. 8). The highest percentages of production forests are found within the range of RFIs Suceava (82%), Oradea (81%) and Brașov (66%).

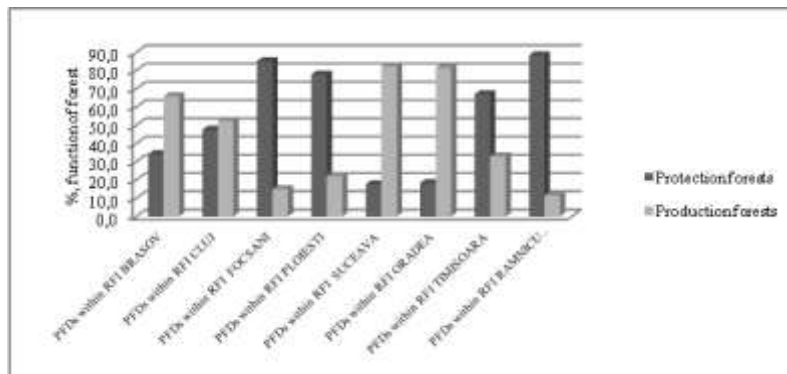


Fig. 8. Distribution of forest by functional categories (protection and production)

Regarding the protected areas management, this is performed based on a management plan elaborated by the administrators. The Government Emergency Ordinance no. 57/2007 has transposed the EC Habitats Directive and defines the management plan as being “the document which defines and assess the current situation of the natural protected area, defines the objectives, states the required conservation actions and regulates the activities that are allowed to be performed within the protected area’s territory, according to the management objectives” [28].

The elaboration of a management plan is a complex process which should involve all interested groups at local level and falls into the responsibility of:

- *the administrators* of the site/protected area designated after the consultation with the Advisory Board and the approval by Government Decision - for the sites requiring by law their own administration/management unit;

- *the custodians*, with the notice of the Environment Protection Agency and the approval of the Ministry of Environment and Forests - for the sites which do not require by law their own administration/management unit [28].

In Romania, Natura 2000 network was established in 2007 by declaring new SCI (Site of Community Importance) and SPA (Special Protection Area) and reached 19.28% of the country territory, compared to a proportion of 4.1% covered by protected areas in 1989 [8]. The PFDs are also directly involved in the management/administration of protected areas/Natura 2000 sites. In several situations, due to a poor collaboration between authorities, local communities, forests owners and forest administrators, the implementation of Natura 2000 Network has become a challenge for the PFDs [8, 16]. In 2013, 14 PFDs were recorded as custodians or administrators for a total number of 16 SCIs or SPAs, covering 394.23 thousands ha, out of which 291.13 thousands ha are Sites of Community Importance (SCIs) and 103.09 thousands ha are Special Protection Areas (SPAs). Taking into account the data provided by the National Institute for Statistics, in 2102 in Romania there were 4.14 million ha of SPAs and 3.69 million ha of SCIs [20], it results that 7% of the total SCIs' area and 2.8% of the total SPAs' area are under direct administration/custody of PFDs, which are involved in the elaboration and implementation of the management plans. Moreover, all the sites being managed by PFDs are situated within the alpine bioregion. Most of the PFDs have become custodians/administrators in 2010, excepting Lignum Voluntari Forest District, which became earlier a custodian of Pădurea Izvorul Alb site.

By referring to the biodiversity of these sites, the presence of certain bird species considered threatened at European Union level could be noticed. Among these the following species should be mentioned: *Ciconia ciconia*, *Crex crex*, *Tetrao urogallus*, *Aquila pomarina*, *Pernis apivorus*, *Ciconia nigra*, *Dendrocopos medius*, *Lanius collurio*, *Botaurus stellaris*, *Ixobrychus minutus*, *Ardea purpurea*, *Aythya nyroca*, *Porzana porzana*, *Egretta garzetta* or *Anser albifrons*. At the same time, in most of the considered sites a high concentration of large carnivorous was recorded (brown bear, grey wolf, lynx/wildcat). Certain sites (e.g. sweet chestnut forest from Baia Mare or Larion) have been established due to the presence of forest species concentrations or floristic diversity. For all these sites, the PFDs must be able to identify protection measures and to implement the



management plan in such a manner that the conservation attributes (values) for which the sites were established are not degraded. Therefore, important challenges for the custodians/administrators are related to the fight against poaching, anthropic activities in the sites/protected areas (e.g. building, uncontrolled tourism, bicycle riding, auto routes, flora tearing), overgrazing etc.

A significant problem faced by the PFDs that have taken into custody Natura 2000 sites is the lack of compensation mechanisms for the areas included in the sites. Stăncioiu et al. [16] mention the fact that G.E.O. no. 57/2007 does not detail the process and the methodology for compensation allocation (compensations only for private properties are foreseen). Furthermore, the same authors noticed the fact that the conservation restrictions must refer to the purpose for which the protected area was established, being carefully identified, without creating tensions between stakeholders or leading to unnecessary income losses to the owners by imposing certain restrictions.

Another mechanism for confirming the efficient management and for assuring the conservation of biodiversity is forest certification, which implies the compliance with performance standards specific to the forestry sector. By referring to FSC forest certification in Romania, the biodiversity conservation is assured by implementing Principle 6 (Environmental Impact) and Principle 9 (Identifying, protecting and monitoring the High Conservation Value Forests - HCVF) of the FSC standards of forest management [26]. Gullison [6] mentions that FSC certification scheme contains the some of the most rigorous standards for biodiversity conservation.

The forest certification has evolved rapidly in Romania in the last decade, in 2013 the total certified area reaching 2,386,934.7 ha [27] out of which 38,686.7 ha are private forests. In addition to the already certified PFDs other PFDs are in the process of FSC certification. At the same time, forest certification represents a voluntary market instrument, designed for reducing the illegal wood trade and for recognising and rewarding the efficient forest management, which increasingly becomes for many forest administrators/companies a surviving condition on the market international [7].

According to Gullison [6], forest certification influences positively the biodiversity conservation through several modalities:

- improving the forest management;
- identification and protection of the HCVFs;
- increased profitability.

*Improving the forest management.* Solving certain non-compliances with the FSC standard may lead to the improvement of forest management. Considering certain existing studies [6, 17], most of the non-compliances identified in the forest units by the auditing team are referring to issues related to biodiversity conservation. Thus, inappropriate use of chemicals (lack of methodology, inadequate concentrations) and their storage (referring to FSC Criterion 6.6), lack of certain measures for fighting the erosion, forest damages or lack of protection of threatened species (FSC Criterion 6.5) are some of the non-compliances identified in Romanian forests assessed for FSC certification [25]. Additionally, the lack of a monitoring system for the maintenance/improvement of certain conservation attributes has been the subject of some non-compliances identified by the auditing teams (FSC Criterion 9.4).

*Identifying the HCVPs.* Identification of High Conservation Value Forests represents an essential component in the FSC certification of forest management. FSC Principle 9 (FSC-STD-01-001) requires that the forests having high conservation value should be identified and monitored, assuring that the attributes for which they were recognised are not degraded or negatively affected [10]. Following this FSC Principle three certified PFDs identified a total area of 3.04 thousands ha of forests having High Conservation Value.

*Profitability of certification.* Forest certification represents a market instrument through which the owners promote (improve) the practices which promote biodiversity conservation, the market being an important driving factor for forest certification [7]. Obtaining certain market advantages would also be a stimulus for forest owners/administrators to adopt a sustainable forest management consistent fulfilling social, economic and environmental interests. Certification of some PFDs indicates that these units are able to fulfil certain international management requirements, and their yearly monitoring/supervision by the independent certifier proves the performance and the sustainability of the practiced management. The certification process is based on transparency, on consulting all interested factors/stakeholders and on complying with certain requirements regarding the sustainable management of the forest, balancing the social, economic and environmental interests. On the other hand, forest certification can represent in any moment an advantage on the market and an optimal manner of proving internationally the sustainable forest management.

### 3. Conclusions

Starting with 2002, PFDs have played an increasing role in Romania's forest management process, this type of administration becoming dominant in certain areas, especially where the proportion of restituted forestlands was massive. PFDs have become more important in Romanian forestry and have recorded noticeable performances in the process of private property administration and management.

Considering the territory allocated to each RFI, it can be noticed that PFDs are mainly found in the North-Western and Western Romania (RFIs Brașov, Cluj, Oradea). For example, PFDs under Brașov RFI manage 34.5% of the total area administrated by PFDs across Romania, and represent almost 50% of the total forest area monitored by this RFI.

The most common form of property is the private one – forest belonging to physical/natural persons and legal entities (55%), and in the case of some RFIs such as Râmnicu Vâlcea, Focșani, Ploiești this type of ownership represents the vast majority (in all of these three RFIs, the forest under private property of natural persons and legal entities represents 99%).

The turnover of the PFDs within RFI Brașov represents 44% of the total turnover of the PFDs, and along with RFI Cluj and Oradea reaches 75% of the total turnover of Romanian PFDs. This turnover is mostly represented by wood sale; yet in case of PFDs from Râmnicu Vâlcea, Focșani and Oradea RFIs the turnover is also constituted from providing certain forest services. On the other hand, only the PFDs from Brașov, Cluj and Timișoara RFIs realise income from commercialising certain non-timber forest products (edible mushrooms and wild fruits).

Large areas covered with regenerations are found in the PFDs within RFIs Brașov, Oradea and Râmnicu Vâlcea, the artificial regenerations reaching the highest percentages in the PFDs within Suceava RFI (58.7%) and Brașov RFI(31.3%). The number of seedlings used in the afforestation works reached 10.029 million seedlings.

Large areas of forests in the Functional Group I (forests with protection functions) are found in the PFDs under the responsibility of RFIs Râmnicu Vâlcea (88%), Focșani (85%) and Ploiești (77.8%).

In Romania, 14 PFDs are administrators/custodians of 16 protected areas/Natura 2000 sites, representing 7% of the total SCIs area and 2.8% of the total SPAs area at national level. Three PFDs have certified their forest management according to FSC standards and manage 3.04 thousands ha of forests having high conservation value. Biodiversity conservation, poor forestry knowledge and increasingly financial demands of the forest owners represent important challenges of the Romanian private forestry. An important aim of the PFDs is to balance the social, economic and environmental interests, in the context of an increasingly demanding society.

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