

HOW MANY PEOPLE ARE NEEDED TO MANAGE A FOREST IN EUROPE AND IN ROMANIA?

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Abstract

The total forest area in Europe accounts for 215 million hectares. In Europe, forest management is done both by private-owned and state-owned enterprises, companies, agencies or other structures. The European State Forest Association (EUSTAFOR) represents a forum of 33 national forest administrators (NFAs) originating from 22 countries, that are managing 30 million hectares of state-owned forests. The main aim of this study was to compare the data provided by EUSTAFOR for the NFAs regarding the managed forest areas. Secondly, the share of managed forest area per employee was assessed for each of the 23 members for which the information was available on the official website. The NFA that is managing the highest forest area is Metsähallitus (Finland), with more than 9 million hectares. As regards the average annual harvested wood quantity, the NFA from Poland, namely LASZ PAŃSTWOWE, is the leader, with more than 37 million cubic meters. Based on these results, it seems that the highest share of managed forests per one employee was recorded in the countries situated in the northern part of Europe, namely Norway, Finland and Sweden. ROMSILVA, together with the NFAs from Germany and England ranked on the last positions as regards the share of the managed forest area by one employee.

Key words: Europe, EUSTAFOR, forest management, ROMSILVA

INTRODUCTION

According to recent statistics, the total forest area in Europe accounts for 215 million hectares, out of which 165.9 million hectares are available for wood supply [6].

In the last decades, the restitution and the privatisation of the lands across Europe generated significant changes in forest land ownership [3]. In the former socialist countries, significant transformations occurred also in the economic and political systems [10]. Due to these changes, a decreasing of the state-owned forest area was recorded and new private-owned administration structures were founded.

Across European countries, there is a high difference regarding the ratio between the state-owned and private-owned forests. For example, Bulgaria is one of the countries with the lowest percentages of private-owned forests (13%), while in Portugal, almost all of the forest lands (98%) are in private ownership [7].

In most of the European countries, the state-owned forests are managed by the National

Forest Administrations (NFAs) that are members of the European State Forest Association (EUSTAFOR). EUSTAFOR represents a forum of 33 state forest agencies, companies and enterprises originating from 22 countries. In total, these NFAs are administering an area of more than 30 million hectares of forest stands, a high share of them being certified by independent certification bodies. Out of the total area, more than a quarter is included in several categories of protected areas [5].

As regards the employment rate, EUSTAFOR offers jobs for more than a hundred thousand people, mostly in rural areas [8].

In Romania, shortly after the fall of the communist era, changes started to occur in the ownership status of the forest fund, the area of the public-owned forests being reduced from 6.37 million hectares (in 1990) to 5.99 million hectares (in 2000) [2]. Also, a labor migration from the state enterprise to other private structures was recorded, ROMSILVA losing more than 13,000 employees in less than 12 years, from 39,561 employees (in 1991) to 25,830 employees (in 2003) [1].

In Romania, ROMSILVA is the main forest administrator that is managing more than 3.2 million hectares of state-owned forest lands through its more than 320 forest districts. ROMSILVA promotes a forest management that is focused on timber production, little attention being given to the management of non-wood forest products [4], [11].

The main aim of this study was to compare the data provided by EUSTAFOR for the NFAs as regards the managed forest areas. Secondly, the share of managed forest area per employee was assessed.

MATERIALS AND METHODS

The total area of the managed forest area [hectares], number of employees and the

annual wood harvested quantities [cubic meters] were centralized in an Excel file from the official website of EUSTAFOR [5].

In order to determine the number of the employees needed for managing a certain forest area in the case of each NFA, an easy arithmetic operation was applied, dividing the area of the administrated forests by the number of the employees.

RESULTS AND DISCUSSIONS

For 23 out of the 33 members of EUSTAFOR the complete datasets were available on the website. The total managed forest area, the total number of employees (both office and field staff) and the annual wood harvested quantity are given in Table 1.

Table 1. Total managed forest area, number of employees and annual harvested quantity

No	Country	Name of the company	Managed forest area [ha]	No of employees	Annual harvest [c.m.]
1	Austria	Österreichische Bundesforste AG	510,000	1,100	1,528,000
2	Belgium	Natuurinvest	42,300	43	107,000
3	Czech Republic	Lesy České republiky, s. p.	1,200,000	3,376	7,704,000
4	England	Forest Enterprise England	193,000	850	109,000
5	Estonia	Riigimetsa Majandamise Keskus	900,000	740	3,300,000
6	Finland	Metsähallitus	9,100,000	1,450	5,860,000
7	Germany	Landesbetrieb ForstBW	320,000	3,600	2,200,000
8	Germany	Bayerische Staatsforsten AöR	808,000	2,600	5,430,000
9	Germany	ThüringenForst AöR	197,000	1,360	1,200,000
10	Germany	Staatsbetrieb Sachsenforst	200,000	1,400	1,108,303
11	Germany	Niedersächsische Landesforsten	307,000	1,290	1,607,000
12	Germany	Landesbetrieb Forst Brandenburg	252,000	1,600	1,057,000
13	Germany	Landesforst Mecklenburg-Vorpommern	193,500	1,020	942,000
14	Ireland	COILLTE	397,000	790	1,680,000
15	Latvia	Latvijas valsts meži (LVM)	1,407,000	1,000	5,500,000
16	North. Ireland	Northern Ireland Forest Service	62,000	205	400,000
17	Norway	Statskog	1,007,000	130	355,000
18	Poland	LASY PAŃSTWOWE	7,294,000	25,300	37,759,000
19	Romania	ROMSILVA	3,202,000	16,500	8,972,000
20	Scotland	Forest Enterprise Scotland	390,000	830	3,600,000
21	Slovakia	LESY Slovenskej republiky, š. p.	893,000	3,500	4,206,000
22	Spain	MALFF of Catalonia	274,000	220	114,828
23	Sweden	Sveaskog	3,118,000	700	6,500,000

Source: EUSTAFOR, www.eustafor.eu

The NFA that is managing the highest forest area is Metsähallitus from Finland, with more than 9 million hectares (Fig. 1). The top three is completed by the NFAs from Poland and Romania, namely LASY PAŃSTWOWE (7.3 million hectares) and ROMSILVA (3.2 million hectares). The lowest managed forest areas by a state-owned enterprise are found in Northern Ireland and Belgium.

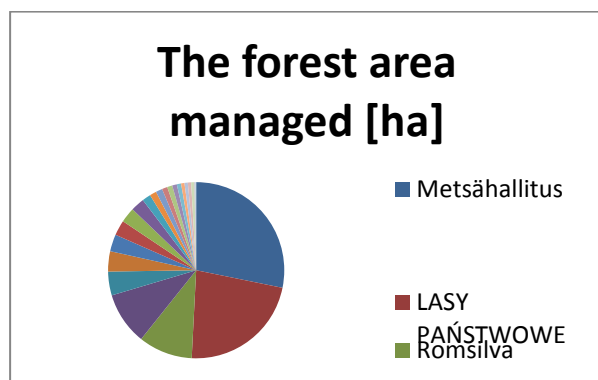


Fig.1. The area of the managed forests by the NFAs
Source: EUSTAFOR, www.eustafor.eu

The first two positions in the top of the NFAs with the highest number of employees are the forest state enterprises from Poland and Romania, respectively (Table 1).

As regards the annual harvested wood quantity, the NFA from Poland, namely LASY PAŃSTWOWE, is the leader, with more than 37 million cubic meters, followed by the NFAs from Romania, namely ROMSILVA (9 million cubic meters) and Czech Republic, namely Lesy České republiky (8 million cubic meters) (Fig. 2).

The share of managed forest area per one employee for each of the 23 members of EUSTAFOR is given in Table 2.

Based on these results, it seems that the highest shares were recorded in the countries situated in the northern part of Europe, namely Norway, Finland and Sweden. The main explanations consist in the fact that the forests from these countries are dominated by softwood species, especially Norway spruce [*Picea abies* (L.) H. Karst.] or pine (*Pinus* L.) monoculture and the terrain is plain, thus the timber harvesting is mainly done by forest machinery.

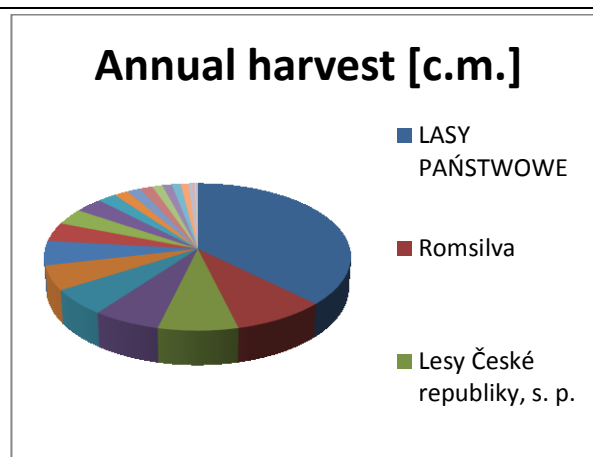


Fig.2. Annual harvested wood quantity
Source: EUSTAFOR, www.eustafor.eu

ROMSILVA, together with the NFAs from Germany and England ranked on the last positions as regards the share of the managed forest area by one employee (Table 2).

Table 2. The share of managed forest area per one employee

Name of the company	Managed area [ha]
Statskog	7,746
Metsähallitus	6,276
Sveaskog	4,454
Latvijas valsts meži	1,407
MALFF of Catalonia	1,245
Riigimetsa Majandamise Keskus	1,216
Natuurinvest	984
COILLTE	503
Forest Enterprise Scotland	470
Österreichische Bundesforste AG	464
Lesy České republiky, s. p.	355
Bayerische Staatsforsten AöR	311
Northern Ireland Forest Service	302
LASY PAŃSTWOWE	288
LESY Slovenskej republiky, š. p.	255
Niedersächsische Landesforsten	238
Forest Enterprise England	227
ROMSILVA	194
Landesforst Mecklenb-Vorpom.	190
Landesbetrieb Forst Brandenburg	158
ThüringenForst AöR	145
Staatsbetrieb Sachsenforst	143
Landesbetrieb ForstBW	89

Source: EUSTAFOR, www.eustafor.eu

CONCLUSIONS

The state-owned forest companies with the lowest numbers of employees and with the highest performance are located in the Northern Europe.

The National Forest Administration from Poland and Romania are managing the highest areas of forest lands, having also the highest numbers of workers.

If the managers of the NFAs with high number of employees would like that their enterprises to become more productive, they could analyze and adopt the best practices from the countries with similar forest management framework. This would be a great challenge by taking into consideration that big groups of people, such as the one from Romsilva, are highly heterogeneous, incorporating humans with different educational, social and cultural backgrounds [9].

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