

SWOT ANALYSIS:
State of forests in north – western part of
POLAND



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The State Forest (*Lasy Państwowe*), full name: **The State Forests National Forest Holding** (*Państwowe Gospodarstwo Leśne Lasy Państwowe*) is a Polish governmental organization that manages state-owned Polish forests on behalf of the Polish State Treasury. The organization does not have a legal personality and is required to be financially self-sufficient. It was founded in 1924 and oversees about 7.6 million hectares of forested terrain (as of 31 December 2012, Central Statistical Office), which puts the forest cover at 29.3%.

The territory managed by the State Forests covers about 77.3% of Polish forests. The State Forests do not manage Poland's National Parks (2% of Poland's territory). They are however involved in managing of forests in Landscape Parks (which cover a slightly more than 8% of Poland's territory). 18.7% belong to private owners and other 2% are owned by other governmental entities (such as local self-government or the Agricultural Property Agency).

The State Forests has a three-layer organisational structure: General Directorate, 17 Regional Directorates and 430 Forest Districts. It employs around 25 thousand people, including nearly 16 thousand personnel in the Forest Service. The Act on Forests of 28 September 1991, with amendments, makes the State Forests responsible for forest management to ensure general protection of forests, sustainable maintenance, continuity and sustainable use of all forest functions and increase of forest resources.

The State Forests, whenever natural, social and economic conditions allow, complies with international agreements which include: the Forestry Principles and Agenda 21 adopted at the 1992 Earth Summit in Rio de Janeiro; the Declaration of European Forestry Ministers with regard to the protection of European forests (Strasbourg 1990, Helsinki 1993, Lisbon 1998, Vienna 2003, Warsaw 2007, Oslo 2011); and the Kyoto Protocol of 1997 concerning the role of forests in carbon sequestration. Since Poland's accession to the European Union on 1 May 2004, the State Forests has been implementing, within its remit, the programme Natura 2000.

Afforestation

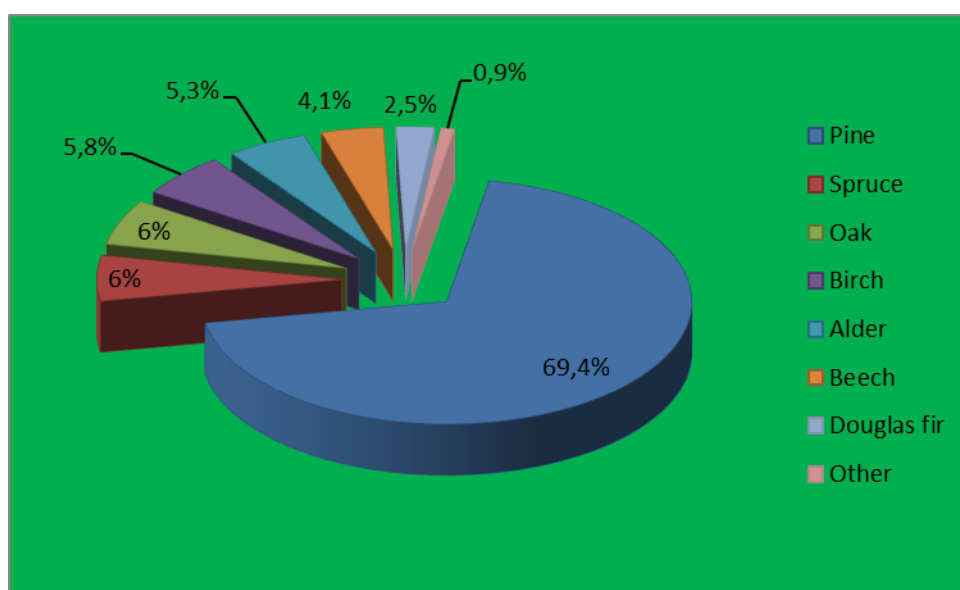
The basis for all afforestation in Poland is the "National programme for the augmentation of forest cover", which was commissioned by the Ministry of the Environment, Natural Resources and Forestry and was prepared by the Forest Research

Institute. The programme was adopted for implementation by the Council of Ministers on 23 June 1995. The main aims of the programme are to increase forest cover to 30% by 2020 and to 33% by 2050, to ensure an optimal spatial and temporal distribution of afforestation and to set ecological and economic priorities and tools for its implementation.

Habitat structure

Forests in Poland mainly occur in areas with the poorest soils, which is reflected in the structure of forest habitat types. Coniferous forest habitats predominate, accounting for 51.2% of the total forest area, while broadleaved forest habitats account for 48.8%. In both groups, upland habitats occupy 5.9 % of the forest area and mountain habitats 8.7%.

Species composition



Share by area of dominant species of the State Forests Holding, National Parks, private and commune-owned forests (2010).

The geographical distribution of habitats is, to a great extent, reflected in the spatial structure of dominant tree species. Apart from the mountain regions where spruce (west) and spruce and beech (east) are the main species in stand composition,

and a few other locations where stands have diverse species structure, in most of the country prevail stands with pine as the dominant species.

Coniferous species dominate in Polish forests, accounting for 69.9% of the total forest area. Pine accounts for 59.5% of the area of forests in all ownership categories, for 61.3% in the State Forests and for 56.3% in the privately-owned forests. Poland offers optimal climatic and site conditions for pine within its Euro-Asiatic natural range, which resulted in the development of In the period 1945–2012, the species structure of Poland's forests substantially changed, which is evident in the increased share of stands with the prevalence of broadleaved species. In the State Forests, where these changes are monitored annually, the increase was from 13% to 23.2%. However, the share of broadleaved stands is still below the potential level which is determined by the structure of forest habitats, even though their total area has increased (Forests in Poland 2013).

Regional Management of State Forests (RMSF) in Szczecin

RMSF in Szczecin since 1945 has been responsible for the forests in the north-western part of Poland. There are 35 Forest Districts which administrate in this area, 2 Complexes of Storehouses and Forest Transportation Centre. Within this area can be find 3 national parks, 5 landscape parks and many nature reserves as well as nature-landscape complexes.

Basic statistics:

| | |
|--|------|
| Administrative range – km ² , more than | 18 |
| Total area – ha, approximately | 690 |
| Total forest area – ha, around | 656 |
| Protection forest area – ha, slightly more than | 169 |
| Average age of the tree stands – years | 56 |
| Average wood stock – m ³ /ha | 229 |
| Average restocking and afforestation – ha/year | 6000 |

Tree species structure:

| | |
|--------------------------------|-------|
| Pine & larch | 77.8% |
| Spruce & Douglas fir | 2% |
| Beech | 4.7% |
| Oak, Maple, Sycamore, Ash, Elm | 5.5% |
| Birch, Robinia | 3.8% |
| Alder | 5.6% |
| Hornbeam | 0.1% |
| Other deciduous trees | 0.2% |

Site structure

Dry and fresh coniferous forests – 30%, mixed forests – 57%, deciduous forests – 8%, alder forests – 5%. A large part of forests occupy wastelands and formerly arable areas. The amount of deciduous and mixed forests managed by the RMSF in Szczecin is larger than the Polish average. The supervised private forests constitute only 1% of the total forest area. In 1999, the RMSF in Szczecin, as one of the first forest managements in Poland was awarded an International Well-Balanced Forest Economy Certificate – which vindicates its management practices.

Forest Education

Promotional Forest Complexes (PFCs) were established within the State Forests as part of the national policy on forests and to comply with the provision of the Forest Act. The PFCs provide an excellent ground for pursuing the principles of forest management which integrate goals such as nature protection, sustainable utilisation of forest resources and participatory management of forests as a public resource.

Location and general statistics

The "Bukowa and Goleniowska Primeval Forests" PFC is situated in approximately 30 kilometres to the south-east of Szczecin and embraces the whole of the Bukowa Primeval Forest and the southern part of the Goleniowska Primeval Forest. Established on July 1st 1996 on the grounds of the Szczecin Regional Directorate of State Forests, it occupies the entire acreage of Kliniska Forest District and the limits of the Rozdoły range belonging to the Gryfino Forest District. The total area of the PFC amounts to 32.8 thousand hectares.

The rich hydrographical network (the river-basin of the Oder, as well as the Ina and Płona and lake Miedwie) and the fact that this is one of the warmer regions of Poland (with an average annual temperature of 8.30C) have meant that all types of forest for lowland habitats occur here. In the Bukowa Primeval Forest over half of the stands of trees are beech (followed by oak and alder) and in the Goleniowska Primeval Forest, pine reigns supreme (89%).

The "Bukowa and Goleniowska Primeval Forests" PFC are a habitat for many rare plants and animals. Among others to nest here are: white-tailed eagle, black stork, black and red kite and lesser spotted eagle. There are also almost 30 species of protected plants, among other things wild service, Pomeranian woodbine, purple Turk's cap lily and 18 species of orchids.

Natural features and protected objects

The scenic and natural qualities of these grounds located south-east of Szczecin were the reason behind the establishment of the "Beech Forest" Szczecin Landscape Park and the "Lower Oder Valley" Landscape Park, whose northern section lies within the borders of this PFC.

Within the "Bukowa and Goleniowska Primeval Forests" PFC's borders are seven nature reserves that altogether occupy an area of over 504 hectares. Five of these are forest nature reserves, connected with stands of beech as their names testify: the "Prof. T. Dominik Beech Springs", "Beech Ravines", the "J. Jachowski Spring Beech" and the "S. Kownas Grassy Beech Wood". The fifth beech nature reserve is the "J. Lewandowski Kołowskie Parowy". The two remaining nature reserves are the landscape "Wzgórze Widokowe nad Międzyodrzem" and the "Kurowskie Błota" ornithological reserves.

A place with especially precious natural history value is the Dendrological Garden in Glinna. On an area of nearly 4 hectares, it holds over 1000 specimens of trees and shrubs, amounting to 470 species and varieties originating from Europe, Africa, Asia and both Americas. The most precious trees include a 30-year old giant sequoia (unfortunately, the largest and oldest, approximately 120-year old specimen of giant sequoia in Poland has died in consequence of freezing temperatures and the activities of the honey fungus), an 180-year old big bud hickory, a 120-year old silver fir and a 30-year old dawn redwood. Among the shrubs deserving special attention is a collection of

15 species and varieties of magnolia and five species of "stewarcja" from South-east Asia.

Educational features

The Nature and Forest Education Centre of the Kliniska Forest District is situated approximately 30 kilometres from the centre of Szczecin, on the A3 international highway: Scandinavia – Poland – Germany. The Centres main operations include conducting small group and outdoor classes for children and young people, method workshops for teachers, lectures, seminars and conferences.

The facility has at its disposal a conference and teaching hall that sits 100 persons (with audio-visual equipment and a computer – with the possibility to project images onto a large screen and with access to the Internet), exhibition rooms (with interchangeable natural history exhibitions) and a library. Additional teaching resources are its botanical and entomology show-cases, herbariums, magnifying glasses, binoculars etc.

Close to the Centre is an instructional square with special visual instruction boards illustrating the functioning, threats to and protection of forest ecosystems, an umbrella roofed area with a place for a camp-fire, playgrounds, a 3 kilometre-long educational and walks trail with 14 stopping places presenting the basic rules for management and protection of coniferous stands in woodland habitats and an approximately 50 kilometre long bicycle trail linking both forests, as well as a catering facility and a car park.

This facility is built without any so-called architectural barriers, thanks to which it is easily accessible for the handicapped.

The nature and forest information point in Glinna (at the Gryfino Forest District) is situated approximately 20 kilometres from Gryfino and 25 kilometres from Szczecin, in the village of Glinna, on the main Gryfino – Stare Czarnowo highway. This information point's chief activities are outdoor classes for children and young people, the organisation of competitions and the provision of information about the area.

The point is composed of: an opensided umbrella roofed area for approximately 100 persons, a catering facility around a central fire-place, educational and playgrounds,

parking space and a campfire area. Directly adjacent is a Dendrology Garden and the starting point for both an educational and bicycle trail. **The "In Search of Green Land's Mysteries" educational nature trail in Glinna** introduces the visitor to some of the plant communities occurring in the Bukowa Primeval Forests. Its chief value lies in the possibility to see behind the scenes and learn about forest management in a forest serving several functions.

The trail is approximately 4 kilometres long and it takes approximately 2-3 hours to walk. The trail consists of 12 stopping places. The first of these is the Dendrology Garden, followed by the "Forest ABC...", "Functions of forest ecosystems", "Conservation of natural richness of forests", "Soil pit", "Forest protection", "Seed management", "From seed to green giant", "One step before nature", "Small-size water storage", "A chlorophyllous world of the Beech Primeval Forest", "The world of animals and management of their resources".

The facility is open all year round – from dawn to dusk. The activities are carried out from March to November. Guides are available from the guardian of the Dendrology Garden or in the Gryfino Forest District headquarters.

SWOT analysis

| | 1. Strengths | 2. Weaknesses |
|-----------------|---|---|
| Internal origin | <ul style="list-style-type: none"> - the organization does not have a legal personality and is required to be financially self-sufficient, - highly educated employees, - promotion possibilities, - improving vocational training and skills, - forests are accessible for everyone (recreation and tourism), - possibility of gathering and picking of forest-floor produce, - free society education for everyone, - more promotional forest complexes (PFCs), - more protective forests, - internal communication in the State Forests, | <ul style="list-style-type: none"> - unnecessary interference of the Polish government in forest economy, |
| | 3. Opportunities | 4. Threats |
| External origin | <ul style="list-style-type: none"> - creating more forest educational points, - promoting ecological and multifunctional forest management, - raising awareness about the environmental protection and the sustainable forest management, - building greater public confidence in foresters, | <ul style="list-style-type: none"> - manipulation of public opinion (media), - rise of prejudice against nature conservation among society, - lack of understanding the concepts of environmental protection, - difficulty with preservation of valuable natural objects for the next generations, - abiotic threats (wind, snow, disturbances in water relations, low and high temperatures), - biotic threats (insects, pathogenic fungi, animals), - anthropogenic threats (forest fires, air pollution), |

According to the international assessment standard which takes into account the land associated with forest management, the forest area in Poland, as of 31 December 2012, was 9.37 million hectares. This figure ranks Poland in the group of countries with the largest forest area in the region, after France, Germany and Ukraine (Fig 2).

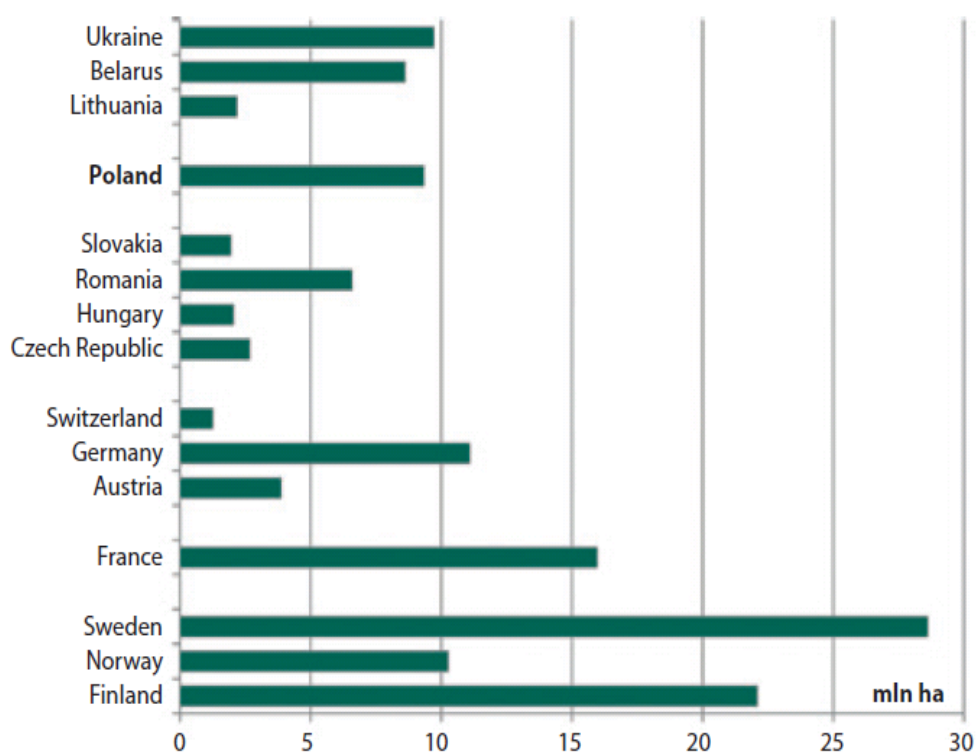


Fig. 2. Total forest area (SoEF 2011)

Countries where a large proportion of the land area is unsuitable for any other use but forestry, for example marshlands or mountain regions, have a distinctly greater forest cover (Scandinavian countries, Austria, Slovakia). Countries with forest cover lower than that in Poland are Ukraine, Hungary and Romania, and in Western Europe—France and Great Britain. At the end of 2012, Poland’s forest cover measured by the international assessment standard amounted to 30.6% and was lower than the European average (32%, exclusive of the Russian Federation)(Fig 3).

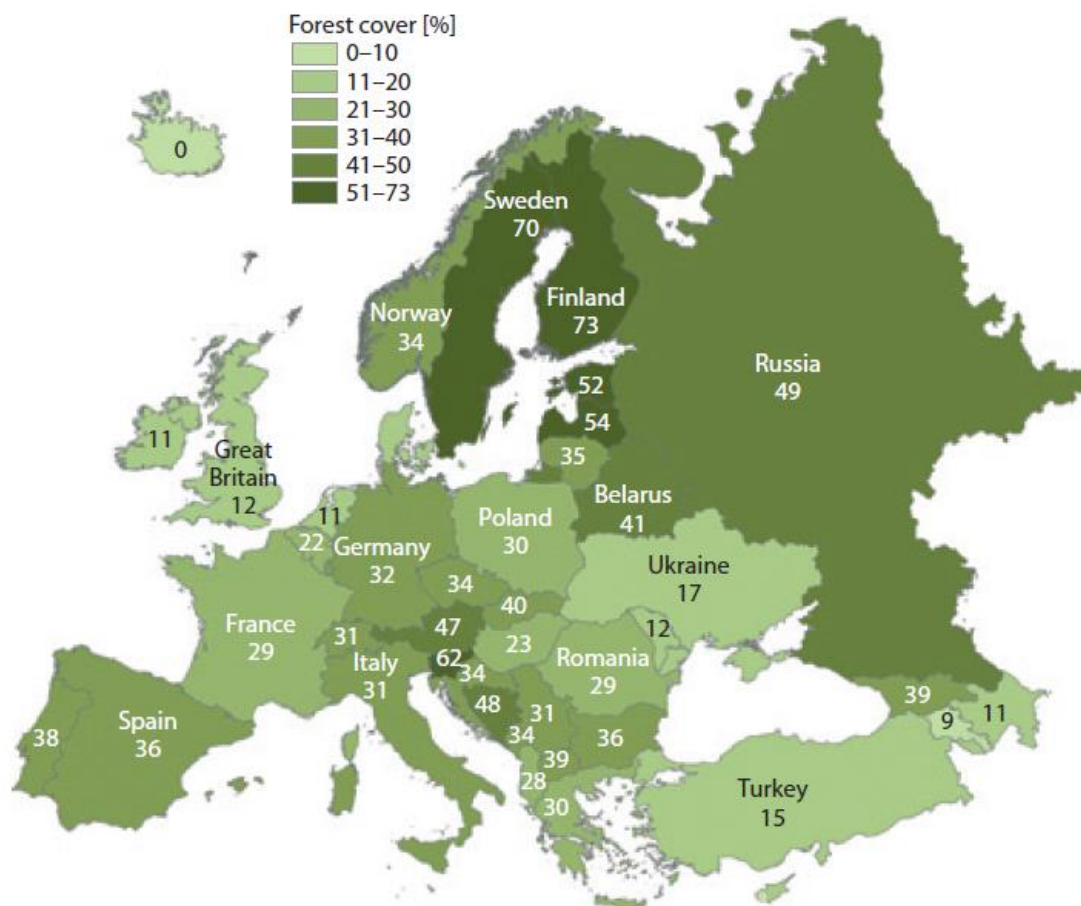


Fig. 3. Forest cover in the analysed countries (SoEF 2011)

In countries with low population density, these values are markedly higher; their forest cover is higher than the average. The forest area per capita in Poland (0.24 ha) is one of the lowest in the region (Fig 4).

In our climatic and geographical zone, forests are the most natural formation. They are a crucial element of ecological balance, life continuity, landscape and neutralisation of contaminants, thus counteracting environmental degradation. Forests, as a form of land use, assure biological production with a market value and help to shape the quality of human life.

Forest ecosystems are the most valuable and best represented component of all forms of nature protection in Poland and account for over 37.3% of the land area under legal protection. The share of protected forests in the total forest area is 40.7%, while the share of protective forests – mainly water-protective, those around cities and those

in areas damaged by industry – 39%. The areas of Natura 2000 network cover about 20% of the country's land area. Within the State Forests, Special Protection Areas for birds (SPAs) cover 2214 thousand hectares (31.8% of the State Forests territory) and Sites of Community Importance (SCIs) – 1641 thousand hectares (23.5%).

Poland's forests are under constant threat from abiotic, biotic and anthropogenic factors, to a greater degree than almost anywhere else in Europe.

References

The report is based on the materials obtained from:

1. Forests in Poland 2012 / 2013.
2. The State Forest in Figures 2012 / 2013.
3. The Act on Forests of 28 September 1991.

Useful reading

1. PFC in our region (Szczecin): The Bukowa and Goleniowska Primeval Forests.
- http://www.lasy.gov.pl/dokumenty/in_english/files/13_gates_to_the_forest_kingdom-pdf/
2. More about Erasmus Forest.
- <http://esn.pl/en/content/erasmus-forest-0>
3. Forests in Poland 2013.
- http://www.lasy.gov.pl/dokumenty/in_english/files/forests-in-poland-2013/view
4. The State Forests in Figures 2013.
- http://www.lasy.gov.pl/dokumenty/in_english/files/the-state-forests-in-figures-2013/view
5. http://www.lasy.gov.pl/dokumenty/in_english/files/forest_and_forestry_in_eu-pdf/view

Glossary

Promotional forest complex (PFC) – a forest area of special ecological, educational and social value, established for the purpose of promoting sustainable forest management and protection of natural resources.

Protective forests – forests under special protection because of their functions or vulnerability to threats.