

REVIEW

New Trends in Forest Policy of Poland

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The paper presents the milestones of forest policy of state in Poland. Some aspects of the current policy impacts are analysed: the growing standing volume from $8.45 \cdot 10^5$ in 1946 to $17.60 \cdot 10^5$ in 2002; the growing forest cover from 20.7% in 1946 to 28.5% in 2002; age structure of forest stands (increase in average age from 44 years in 1946 to 58 years in 2002); the progressing senescence; ownership structure dynamics (influenced, among others, by the implementation of programs of nationwide forestage growth); temporal pattern in the most important forest functions, the multiple use forestry, non-timber functions of Poland's forest.

The role of Promotional Forest Complexes as model solutions is emphasized. The significance of forest scientific research in improvement of the forest management is discussed. Importance of scientific programs for the policy makers and forest managers is briefly discussed following the example of Regional Operational Programs of National Policy on Forests. Some regional comparisons are provided of the east-central Europe.

Key words: forest policy, Forest Promotional Complexes, Poland, private forest, afforestation, state forests

Introduction

The traditionally high level of forest sciences and forestry in Poland had long allowed for the practically uninterrupted growth of the indices describing forest management efficiency. Foresters fulfilled the plans set up by the central administration. The civilization progress, growing population, particularly the urban population, have evoked the alteration of the old-days attitude of man towards forests: growing has been the attention paid to the non-productive functions of forest. The demands, frequently expressed during the transformation period, to privatisation, re-privatisation or those of environmentalists' organizations, gave the impulse for the activity meeting the people's expectations, as undertaken by foresters and state authorities.

The objective of the present paper is to identify and analyse the most important recent trends in forest policy of Poland and their implications. Special focus is due to the aims and priorities of state policy, to the assessment of the practical experience with Forest Promotional Complexes. Selected aspects of forest sciences and new international situation are discussed in the context of forest policy.

The State Forests have now in Poland 80 years of tradition. At present they manage over nearly 7 million ha which is equivalent of 78.4 % of total forest area in Poland (Zajęzkowski 2002). The highest priority of the state forest administration has always

been given to continuously improve (or at least maintain unchanged) the condition of forest for the benefit of generations to come. To achieve this goal there have been used the results of scientific studies, both domestic and foreign. Noteworthy, less attention has been paid to the small area privately owned forest. The aims and priorities of forest management change together with the progressing civilization development. The modern assumptions are listed in the document „National Policy on Forests” (1997), dealing with forest of differentiated ownership. Among the most important document's conclusions the following should be discussed in the context of the present paper:

- Forests are the most natural formation in nature and are linked inseparably with the Polish landscape, being an essential factor providing the balance in the natural environment and conditioning the country development. As a result, there is justification for state intervention through the pursuance of a policy for forests that meets the general and common needs of society and is implemented by way of forestry and other interdependent sectors of the economy.

- National Parks and Forest Reserves play a special role in the protection of forest ecosystems, their biocoenosis and the natural processes ongoing within them.

Forests serve very diverse functions, either naturally or as a result of management activities. The functions in question are: ecological, productive (eco-

conomic) and social. Growth in a given function of a forest may limit other functions. Equally many of the functions of forests augment and enhance one another, result from each other. In consequence, forests are the key element in the ecological security of the country, forest policy and management are of strategic rank, like national military, societal and energy security in which forests and forestry also play a role.

Poland's policy for forests pays particular heed to:

- the provisions of the State Environmental Policy enacted by the Parliament in 1991, which are being developed in relation to forests under all forms of ownership,
- the Forestry Principles and Agenda 21 approved by UNCED "Earth Summit" held in Rio de Janeiro in 1992,
- the European Declarations of Forestry Ministers on The Protection of Forests (Strasbourg 1990 and Helsinki 1993), which set out the guidelines for sustainable forest management and ushered in the process of establishing criteria and indicators.

The drawing-up and implementation of state policy on forests is among the duties of the Minister of Environment.

The National Policy in regard to forests is pursued by:

- The Director-General of State Forests,
- Voivodes (heads of Provinces),
- The Director of the National Board for the National Parks and Park Directors,
- The Office of Forest Management and Survey.

The partners in the implementation of national policy on forests are:

- the voivodeship (provincial) administration,
- the local administration and self-government,
- the private owners of forests and associations of them, as well other forest managers.

Other partners participating in the policy on forests are:

- trade unions,
- Departments of Forestry of higher education establishments, the Forest Research Institute and other scientific institutions,
- forestry scientific and technical associations,
- the forestry press and forestry publishers.

Aims and priorities of state policy on forests

The overriding aim of the state forest policy is to designate the complex of actions shaping relations between humankind and forests, with particular focus on preserving the conditions for the indefinite maintenance of forest multifunctionality. Another important goal is to supplement the forest resources and increase the forest cover to 30 % by 2020 and 33 % by the middle

of the 21 century (following the Polish definition of forest cover (c.f. Forest Act Chapter 1, Art. 3 items 1-2) – leading to lower figures as compared with the internationally accepted definition of forest area).

The definition of forest area sensu FAO (TBFRA 2000) was agreed upon during the expert consultation held in Kotka, Finland in 1996 and it reads as follows: Land with tree crown cover (or equivalent stocking level) of more than 10 percent and area of more than 0.5 ha. The trees should be able to reach a minimum height of 5 m at maturity *in situ*. May consist either of closed forest formations where trees of various storeys and undergrowth cover a high proportion of the ground; or of open natural stands and all plantations established for forestry purposes which have yet to reach a crown density of 10 per cent or tree height of 5m are included under forest, as are areas normally forming part of the forest area revert to forest.

Table 1. Presents the dynamics of abandoned agricultural land afforestation in Poland

Year	State forest	Private forest	Total
1989	4.7	3.4	8.1
1990	3.6	2.9	6.5
1991	3.5	3.4	6.9
1992	4.3	4.5	8.8
1993	4.6	2.6	7.2
1994	9.8	3.0	12.8
1995	11.6	3.4	15.0
1996	12.0	5.5	17.5
1997	9.4	8.8	18.2
1998	10.6	6.3	16.9
1999	12.4	6.9	19.3
2000	13.0	10.1	23.1
2001	11.4	11.3	22.7
2002	9.7	10.6	20.3
Total	120.6	82.7	203.3

The data reflect mostly the artificial afforestation; those areas with naturally originated young forest are not included. As a result, the 2001 and 2002 data concerning the size of afforested land, will become larger after the formal change of the land use form. The assessments of the accomplishment of stage I of the Nationwide Program of Country Forest Cover Growth (1995) has shown the assumed levels of new afforestation had not been reached in the non-state owned grounds (Puchniarski 2000). In particular regions the reasons were very complex: starting with the administration delays in the decision-making, and ending with the better performance in some circumstances of the natural (passive) forest restitution (Adamus 2001, Kwiatkowski 2002).

Figures 1 and 2 show the typically afforested site (Figure 1) with soil prepared and mixed Scots pine-oak culture planted, versus the most commonly present example of spontaneous forest succession into abandoned agricultural ground (Figure 2), with a dense



Figure 1. A typical rural landscape: strips of spontaneously afforested ground, fallow land, artificially regenerated abandoned arable land, and grounds still under cultivation



Figure 2. Pioneer woody species, and particularly so: birch, emerge spontaneously in nearly all fallow arable ground

naturally regenerated birch stand, differing in its age and thus: the year of formerly arable ground abandonment. Importantly, regardless its origin, the new forest is subjected to quite different thinning, depending on the owner: the state owned forest is subject to primarily pre-commercial tending while the privately owned one (especially small size) starts early playing the economic role by supplying its owner with small dimension round wood useful for the farming purposes (Figure 3).

In order to enhance and broaden the diversity of functions served by forests, it is essential that the privately owned stands be regenerated and their ecosystems rehabilitated. This will require the establishment of appropriate legal, economic and organizational bases.

The systematically pursued state policy of country's forest cover growth has resulted in a substan-

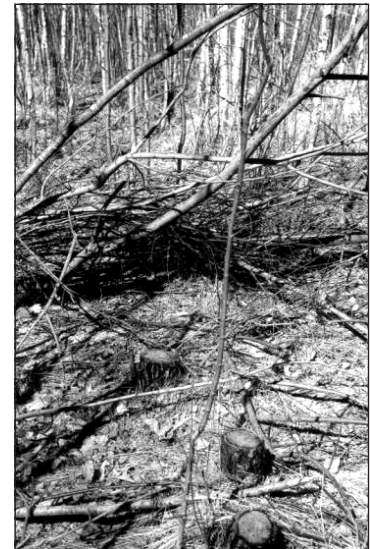


Figure 3. The naturally afforested private grounds bearing the formal status of arable land, are often subject to economically unsound too early utilization

tial change in forest cover during the post war period: from 20.7 % in the year 1946, to 27.6 % in 1981, and 28.5 % in 2002 (cf. Table 1). Similar has been the trend in standing volume dynamics: from 845,000,000 m³ in 1946 to 1,302,000,000 m³ in 1981, and up the 2002 level of 1,760,000,000 m³. Consequently, in the year 2001 the average standing volume of State Forests was 213 m³/ha. Another phenomenon typical of the last few decades has been the progressing senescence of forest stands. The mean age of state forest stands was 44 years in 1946, and it grew up the level of 49 years in 1981 (Rozwałka 1997), and in the year 2002 the average age was equal 58 years (Zajączkowski 2002).

The average age of privately owned forest stands is estimated for 40 years. The official statistical data do not include, however, the most significant changes over of the last 15 years: the collapse of State Agricultural Farms has contributed to the huge area of newly abandoned land, a significant part of which has been afforested via the natural forest succession; such land is still arable in the official statistics. It is estimated that these forests cover more than 170,000 hectares. Similar has been the situation of the fallow small area private grounds that are left abandoned because of the economic reasons. To determine the actual forest cover area in Poland would only be possible using the aerial photographs. Undoubtedly, the ground area covered by young (1-20-year-old) birch, alder and pine stands is significantly larger than the official data would suggest.

The constitutional transformation of the Republic of Poland has led to the establishment of programmes aimed at growth of forest cover. The plans consider both state owned area and private grounds. In future the ownership structure will change: the pro-

portion of privately owned forest is expected to increase.

The National Policy on Forests assumes that till the year 2020 Polish forestry will completely alter from the timber production oriented into the multiple function model with especially enhanced social/environmental function. Another assumption behind the document forecasts is a significantly larger financial support of forest policy objectives accomplishment from special sources. It seems however that the productive (timber) functions should not be neglected for the exclusive benefit of the environmental and social functions. It is important to follow the rule of lasting utilization. Poland is among the five European countries characteristic of the highest total tree volume and the highest stocking: more than 200 m³/ha. The diminishing trend in the annual mean increment should draw the attention of forest managers to the economic functions of forest. The State Forests in Poland obtain about 80% of their total income from selling timber. It is therefore to realize that the level of wood sale is of fundamental importance for the proper functioning of the country's forestry.

Forest Promotional Complexes as a tool for accomplishment of the goals of State Forest Policy

As early as in the year 1994 the first seven "Forest Promotional Complexes" (FPC) have been established. Those were areas united because of the integrated management plans; the idea was to promote the means of running the policy of sustainable development of forestry and thus: the multiple-use forestry in both State Forests and private forest (Pudlis 2003).

The improved version of the Forestry Act from 1997 confirms that FPC are accepted organizational form of forestry: these are functionally unified areas of high environmental, educational and social value. Any such area is a subject to one management – conservation program. FPC may include both forest administered by the State as well as other ownership forests (understanding their owners wish to be included in a FPC) (Forest Act 1997).

A Promotional Forest Complex is a large wooded area, within one or more Forests Districts. FPC-s include either whole Forest Districts or, to a lesser extent, separate sub-Districts. FPC-s are thus functional units, having no separate administration, since they are administrated (under the supervision of Regional Directorates of the State Forests) by the Forest Districts included within them. The idea of FPC-s establishment is to ensure the representation of different nature – forest regions and the associated variability in habitat conditions, stand species composition, valuable natural features, productive possibilities and

leading functions (Kapuściński 1996). Among the 13 existing FPC-s (of the 18 targeted), there are both forest areas of high values of nature, e.g., the Białowieża Primeval Forest, and areas which have been highly modified by man such as the Lubuskie Forests. When establishing FPC, their goals and tasks were so defined as to fulfill both the requirements of forest management and demands of active nature protection as well as to maintain landscape values and enable scientific study. One of the Program's substantial points is the environmental education of society and increasing the role of different local communities representatives via including their people to the social – scientific boards influential in the management process of the FPC-s (Fronczak 1997).

The consequent promotional activity towards creation of the positive attitude of society to forests and forestry, the development of multisided and rational cooperation with organizations involved in nature protection/conservation and environmentalist movements have led to the establishment of didactic-tourist facilities: with the centers of ecological education, nature-forest chambers, didactic trails, and hostels. FPC-s are also areas of high scientific-research importance, where multidisciplinary studies are successfully undertaken thanks the good recognition of their natural resources. The consequently conducted policy of the State Forests has resulted in the establishment of nowadays 13 FPC-s of total area 627,000 hectares which is equivalent of nearly 9% of the entire forest area under administration of the State Forests (Zajączkowski 2002).

In the common perception, FPC are alternative for the heavily exploited National Parks. Moreover, they supply visitors with the possibility of close contact with nature because of their free access for the tourists, unlike NP-s. A good reason for FPC continued existence is the continuously growing number of visitors of the tourist trails and education centers (more than 500,000 visitors in the year 2002). Another successful, promising activity has been the establishment of new FPC-s: linking the State Forests with research institutions like, e.g., the Center for Nature and Forest Education in the SGGW-WAU Forest Experimental Station in Rogów, with its hotel, conference rooms, and also – the museum, dendrological and nursery facilities. Similarly, also other institutions are included in the activity of FPC-s: the Research Center of the Polish Academy of Sciences in Popielno, and the Experimental Forests of the Agricultural University in Poznań. The role of FPC-s is, among others, to work out the most effective methods of nature conservation under the condition of managed land (Pudlis 2003). The most important purpose of FPC-s will be fulfilled when the forests give joy for visitors because of their pictur-

esque view, the variety of forms, their accessibility; besides, FPC-s should ensure occupational and social education to be continuously improved, at the same time when the income from selling wood and other forest products covers all, or at least the majority, of the necessary operational cost; and – the last not least – all administration units (Forest Districts) of State Forests follow in their routine activity the management – conservation methods positively verified in the FPC-s (Szujewski 2003).

The role of education and scientific research in the forest policy

The organized, rational management of forest resources has started on the Poland's territory, similarly as in other Central European countries, at the turn of the 18th/19th centuries. Large has been the impact of the normal forest model implementation on the state of Poland's forest. The present condition of forest is a combined effect of the predominant site conditions, the character of natural range of the main forest-forming tree species: Scots pine, European beech, Norway spruce and Silver fir; as well as the developmental trends in agriculture, industry and forestry. The history of forest management development may easily be followed on the example of the protection of nature in forests: this has been closely connected with the deforestation process and forest management practices. The rudiments of nature protection go back as far as the beginning of the State of Poland (Zielony 1999).

Considering the recent times, during the last few years, a comprehensive program of educational and promotional activity has been developed within the organizational structure of the State Forests. Its purpose has been to familiarize the wide circles of society with the problems of management and protection of forests.

The scientific study carried out in Poland covers a range of topics and the study itself has had its long tradition. Large body of the research deals with the problems of silviculture, protection and ecology of forest. Their output results are gradually introduced to the set of rules of forest management plans making (Instruction 1994). The scientific study in forest is conducted by the staff of branch institutes, universities and Forestry Faculties.

Poland and Polish forestry sector have been facing the new challenges resulting from the near access of our country to the EU. One of them is to fit the national forest programs to the international standards. To achieve this, the initiative of the establishment of so-called regional operational programs of the National Policy on Forests (ROP NPF) has been undertaken. One of the most important goals of ROP NPF has been to

identify the regional problem areas. These programmes are built up by the working groups (the proposals) appointed by the regional director of State Forests and then discussed and verified by the Consultative Board (Biuletyn 2003). Afterwards, the final version of the program is accepted by the minister of Environment and becomes binding document (Program 2003). The ROP NPF give the tool to implement the statements of the National Policy on Forests also in the private forests.

The international context

Another very important part of Poland's FP new trends is the problem of forestry certification. The ever first FSC (Forest Stewardship Council) certificates were granted in 1996. So far the process of the State Forests certification has been practically completed. Nowadays, 16 Regional Directorates of State Forests (of the total 17) managing more than 6 million hectares forest area have been fully certified. The State Forest Enterprise particular units have systematically undergone the certification programs under the assumption that the positive assessment of their forestry practices issued by an independent auditor institution could have been an important element of promoting Polish forestry in the country and abroad.

It is expected that in order to sell woody products to some external markets, either the FSC or PEFC (formerly Pan-European Forest Certification System, currently known as the Promoting Sustainable Forest Management) certificates will be necessary. As each of the two mentioned certifying organizations does not accept the counter-partner's certificates, it became necessary to initiate Poland's own efforts towards elaborating the domestic criteria of the PEFC certification system. Consequently it is expected that soon at least a part of Polish forests will have obtained two separate certificates confirming that they follow the principles of sustainable forestry.

In this paper the recent trends in Polish forest policy are presented. No comparison is provided between Poland and the adjacent countries of the Southern Baltic Sea region. The general assumptions underlying the national forest policies of other European countries are very much the same (Miller, Płotkowski 1994): the most essential criterion being the sustainable forest management, growth in the forest resources and improvement of the environmental conditions. One may attempt at making comparisons of different specific elements of forest policies, using different criteria and indices. To make a reliable assessment is however an extremely difficult task, without conducting in-depth analyses of particular countries' socio-economic, natural and geographical conditions. The

recently observed economical constitutional changes of the countries of this region have been very much influential for the FP short-term trends. In the short run, drastic changes of some indices are to be observed: the recently very significant enlargement of afforested area in the Republic of Belarus (MCPFE Report 2003): 256 thousand hectares a year which results in 3.2% increase in the forest cover index yearly. Another example from the field of forest utilization dynamics is that of Estonia (Karoles 2003) with its annual cut volume in the years 1999 and 2000 equal more than 12 million m³ that is equivalent of approximately 150% of the current annual standing volume increment. This last mentioned figure is especially surprising, considering the annual cut volume of the years 1992 and 1993: slightly above 2 million m³. These fluctuations, and several others might be quoted here, do not predict future trends: in the long run could not be continued of course; all they reflect is the detection of the temporary alterations in the factors decisive for the forestry of particular (usually rather small area) countries still under transition.

Conclusion

1. Changes in Polish forestry as observed within the last two decades: growing standing volume of forest and growing mean age, and environmental considerations were accompanied by the diminishing and recently even negative economic result.

2. Out of the three aspects considered: the environmental, the social, and the economic, the first mentioned is absolutely dominant in the Polish forestry, while the last one is underestimated.

3. Forest Promotional Complexes are the model solution of forest management practice strictly in agreement with forest science and education.

4. The non-state owned forests have been given so far very little attention in the decision making process of the National Policy on Forests. An effective mechanism is needed that will encourage the private forest owners to group in forest owners associations. Regional Operational Programs of National Policy on Forests are an attempt in this direction.

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НОВЫЕ НАПРАВЛЕНИЯ В ЛЕСНОЙ ПОЛИТИКЕ ПОЛЬШИ

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Резюме

В статье представлены важнейшие проблемы, касающиеся лесной политики государства в Польше, начиная с 1997 года, когда был разработан документ „Лесная политика государства”, а также следствия вытекающие из этого документа. Был сделан анализ влияния лесной политики на: общий запас (повысился с $8,45 \cdot 10^5$ в 1946 году до $17,6 \cdot 10^5$ в 2000 году; лесистость (повысилась с 20,7% в 1946 до 28,5% в 2002); вековую структуру насаждений, процесс старения насаждений (возраст насаждений в среднем в 1946 году составлял 44 года, в 2002 достиг уже 58 лет); структуру состава пород и её динамику (влияние между прочим введения национальной программы повышения лесистости); актуальные формы важнейших функций леса, многофункциональное использование лесов, производственные функции леса.

Обсуждается также важная роль научных исследований в управлении лесами, представляются примерные формы охраны лесов в национальных парках и заповедниках. Подчёркивается роль Лесных Переходных Комплексов как образцового решения. Важность научных программ в лесоводстве для политиков и управляющих лесами обсуждается на примере Районных Операционных Программ Лесной Политики Государства.

Ключевые слова: лесная политика, лесные переходные комплексы, Польша, облесение, леса частные, леса государственные