

Abstract

The impact of afforestation carried out in 2004–2013 on the ownership structure, forest cover, and production potential of forests in Poland

The thesis aimed to analyze changes in forest cover and ownership structure of forests in Poland, in spatial and quantitative terms, and to determine and analyze factors determining these changes. The research also assessed the economic significance of these changes, by calculating the expected increase in large timber and the volume of carbon accumulated in it. The analyses primarily used statistical data of the Central Statistical Office of Poland and data on afforestation taken from studies conducted with support of public funds under the Rural Development Program 2004–2013, supplemented by detailed data related to the circumstances in which the changes in forestation occurred.

In the course of the research, a gradual increase in the forest cover of the country has been observed. These changes, however, were uneven and uncorrelated with afforestation needs, expressed as the index of afforestation needs for communes. The changing socio-economic reality during the period studied diversified the scale and dynamics of afforestation in various regions of the country, because the process is strictly related to the socio-economic situation of inhabitants of rural areas and the level of rural development. The increase in forest cover in 2004–2013 occurred mainly in the central and eastern parts of the country and was mainly due to the afforestation of private lands, which accounted for 80.5% of the increase in the forest cover of all ownership types.

The estimated (up to 2050) production of large timber was 36.1 million m³ for all forms of ownership and 27.3 million m³ for private forests. These results indicate that the increase in forest cover during this period may significantly reduce wood deficit, at the same time increasing the economic, social, and environmental importance of private forests and, indirectly, increasing the level of forest management in private forests. Forest management of agricultural land was found to still be one of the most important ways of increasing forest cover in Poland. Afforestation results in an increase in the share of private forests in forest cover of Poland, creating conditions for an efficient and more rational management of land resources at the individual farm level. The growing importance of private forests may contribute to the successive development of rural areas through the vocational activation of their inhabitants and the diversification of their income thanks to forest ownership.

Quantitative and spatial diversity of changes in forest cover, factors affecting the afforestation process, and an area of land for afforestation too small on the national level indicate the need to direct this process to regions with the highest afforestation needs. This would help make land use rational, accordant with the National Program for Expanding of Forest Cover, and optimal in relation to both the needs and possibilities of individual regions of the country.

Key words: increasing forest cover, private forests, Rural Development Program, afforestation preferences.