

## SUMMARY

Despite significant international efforts in recent decades, the process of loss, fragmentation, and degradation of ecosystems continues worldwide and in Europe. The widespread decline in biodiversity results from habitat destruction, pollution, invasive species, climate change, and the overexploitation of natural resources. At the same time, one-third of protected areas in the world are under solid anthropogenic pressures. In response to the growing threats, the international community takes systematic actions to prevent the decline of biodiversity. The global target to protect by 2020 17% of the land area and 10% of the sea area has not been met. At the same time, the overall health of biodiversity and ecosystems has deteriorated. The current activities in the field of biodiversity protection are determined by the provisions of the 2030 Agenda for Sustainable Development. In Europe, the Biodiversity Strategy to 2030 calls for the protection of at least 30% of marine and land areas, of which 10% should be in the form of strict protection.

Despite changing nature and conservation paradigms, protected areas such as national parks remain key elements for maintaining species diversity and habitat integrity. Currently, there is an ongoing discussion about the optimal number, area, and form of protected areas that would ensure the effective maintenance of ecological processes on Earth and the stable development of human communities. Meanwhile, the process of development of protected areas, especially concerning land areas, has significantly slowed down in recent years. National parks are now seen, like other protected areas, as serving not only nature conservation purposes but as providing social, economic, and cultural benefits. Today, they are increasingly seen not as isolated islands but as socio-ecological systems within the "people with nature" paradigm, which emphasizes the importance of human culture and institutions co-creating interactions between societies and the environment. Therefore, contemporary planning of protected areas creates the need for effective communication of social and economic functions of national parks to local communities and those located further away.

One of the proposals for presenting a vision of the synergy of nature conservation with social and economic development and a research approach for studying various types of stakeholders related to nature conservation issues is the concept of ecosystem services (ES). The primary goal of the ES concept is to reveal to a wider audience the real value of goods and services derived from nature. Such streams of benefits can be identified, measured, and included in the economic calculation and then incorporated into environmental decision-making processes. Over the years, the concept of ES has been one of the main axes of the debate on the future of nature conservation. At that time, it was subject to heated scientific discussion and significant modifications. As a scientifically grounded but still relatively innovative tool in practice, the concept of ES is gaining more and more attention and expectations among policymakers at various levels, as well as those ecologists who hope that by emphasizing the social and economic aspects of nature, biodiversity will be better protected. In most European Union countries, the practical application of the concept of ES is still at an early stage of development, and the effectiveness of related policies, programs, and activities in the public sphere at various levels remains poorly understood. To date, little is known about the potential role of the ES concept in shaping elements of national nature protection systems, including their key elements, such as national parks.

The Polish nature protection system is based on area and species protection. The highest form of area protection there is a national park. The basic goals of national parks include carrying out conservation activities, making their area accessible to visitors, and conducting nature education. A national park can also play the role of an actor in local development, which functions in a network of economic connections with other entities. In Poland, since 2001, there has not been created or significantly enlarged a single national park, mainly due to the restrictive environmental protection law giving local governments the possibility of vetoing the creation of new national parks.

The remaining causes of the impasse in the creation of national parks are, among others, concerns on the part of local government units about the negative economic consequences of establishing a national park, as well as negative social attitudes towards parks on the part of residents. The negative conditions for the creation of national parks also include the activity of interest groups such as foresters preserving the status quo obtained after socio-economic changes in Poland after 1989. Problems with the creation and enlargement of national parks raise the question of the actual role they can currently play in the nature protection system, among other legal forms of area protection.

The area of the planned Turnicki National Park (TuNP) remains the last large and little transformed forest complex in the Polish foothills. It contains numerous patches of old tree stands with a historical continuity dating back to the end of the 18th century. The area is one of the most strongly postulated and well-established in scientific knowledge, needed for urgent protection at the highest level. Its natural values place it on a par with many existing national parks. The history of multiple efforts to create TuNP proves how difficult can be the process of creating a national park in Poland. Since the 1990s, the territory of the planned TuNP has been an arena of intense conflict between the supporters of the park and various local stakeholders who are against it. At the same time, the planned TuNP is a valuable case study for a wider debate on the problems with creating national parks, including the strong ties between the local economy and the timber harvesting and processing sector and the fact that it has never been the subject of research from the perspective of perceived ES. Therefore, there is a gap in the current knowledge about the socio-economic determinants of nature conservation in this area. Accordingly, the case of the planned TuNP serves as an excellent experimental object to investigate whether the application of the ES concept can contribute to the planning and management of national parks.

**The main research objective of the doctoral dissertation was to gain a deeper insight into the perception of the benefits of nature and the preferences of managing natural resources in various stakeholder groups, as well as the views of residents regarding the relationship between humans and nature, its role in nature conservation and attitudes towards protected areas using the concept of ecosystem services.** Detailed research questions related to the cognitive objectives in the field of 1) the contribution of the ES concept to decision-making processes regarding the planning and management of protected areas, 2) factors shaping the attitudes of residents towards protected areas and their relationship with nature, 3) identification of priority ES and related threats perceived as the most important among the inhabitants of various communes, local leaders and experts. These goals were achieved through two studies: 1) participatory mapping of ecosystem services (respondents - specialists, local leaders), and 2) quantitative questionnaire research (respondents - residents). The studies constituted the independent part of the research project whose originator and initiator was the author of this doctoral dissertation. The author of the work was also the substantive coordinator of the project, the main designer and conductor of field research, the leading editor of the final publication (monograph), and its main author. This doctoral dissertation is based on selected chapters of the monographic publication indicated in the introduction. The publication is an appendix to the doctoral dissertation.

The perspective of the protected area as a socio-ecological system adopted in this doctoral thesis, together with the use of terminology and methodological workshop of the ES concept, turned out to be an effective research approach allowing for the realization of the research objectives of the dissertation. **Concerning the first objective of the study**, the results obtained by the author indicate the need to develop an appropriate language and common definitions for the studied ES in communication with various groups of stakeholders in the discussion on topics related to nature protection. The author of the dissertation also points to the issue of building trust in the institutions of the national park, which is of particular importance in the light of the specific conditions of the perception of nature protection in the post-socialist countries of Central and Eastern Europe. For the

respondents, the forest and its components are the main sources of benefits from nature. They also constitute the focal point of the discussion about nature and its protection. At the same time, they are sources of threats, pointing to future possible fields of conflict around ES in this area. **Concerning the second objective of the study**, the results indicate three basic components describing the local discourse on nature protection, which correspond to the results of research on the conflict in the Białowieża Forest: 1) undertaking activities in nature protection based on the expertise and experience of foresters, 2) materialistic approach to nature, 3) skepticism towards interference with nature. The author of the dissertation identified negative (age, length of residence in the area of the study) and positive (education, average monthly net income of a resident) factors influencing the attitude towards national parks. The institution of the national park is generally poorly supported among the inhabitants of the surveyed communes, and there is a difference between the general support for the parks and the support for the planned TuNP. At the same time, these two variables are strongly correlated, which indicates the need to improve the overall image of the parks to increase acceptance for TuPN. **Concerning the third objective of the study**, the obtained results indicate that the material ES (drinking water, firewood) are decisive for the quality of life of local communities in the municipalities of the planned park, which is in line with the results of other studies for enlarged and planned national parks with large forest cover. In addition, the results point to the central role of forest-related ES, with timber and its derivatives recognized as crucial to the local economy. Nevertheless, respondents in each of the municipalities perceive many different benefits of the forest. Meanwhile, the role of cultural ES in the future debate about parks may be no less important than the typically material ES. The juxtaposition of the results of both studies also shows the differences in the display of various ES aspects by respondents from individual studied groups. The most important indications of the future directions of the debate on the creation of TuPN concern addressing the pressing problems of residents with reaping the basic benefits of existential nature.

This doctoral dissertation contributes to the scientific debate on the perception of benefits from nature, the preferences of managing natural resources in various stakeholder groups, their role in protection, and attitudes towards protected areas. The obtained results complement the current scientific discussion in the field of conservation social science with regard to protected areas and the application of the ES concept in nature conservation. At the same time, the research results confirm the usefulness and limitations of the ES concept in the study of complex socio-ecological systems, such as the area of the planned national park. The results of the doctoral dissertation can be employed to develop new solutions to improve the process of the creation of national parks in Poland and abroad. Further recommendations from this type of research may be of particular importance in the light of the ongoing discussion on the draft of a new, dedicated act on national parks, which may fundamentally change their functioning within the nature protection system in Poland.