Cross-sectional analysis of ecological values

of ecosystem services

Case Study no. 3

12.2022

Services provided by main types of ecosystems in Poland

- an applied approach

The study is part of a series of case studies on the ecological values of ecosystem services, carried out as part of the project "Services provided by main types of ecosystems in Poland-an applied approach".

In the earlier stages of the project, two case studies were prepared: (1) covering the area of the city of Poznań and (2) covering the area of the Greater Poland National Park. The study presented below covers an area of a similar scale to the two previous case studies. Still, the areas described differ in the priorities and challenges related to the natural environment and ecosystem services.

In this report, we show the potential of providing ecosystem services using selected indicators and identify main synergies and trade-offs. Finally, we provide some conclusions that stakeholders can apply.

In the Mosina commune, 24 areas (research areas) with a radius of 500 m were randomly selected. In the 2022 season, an inventory of ornithofauna, insects from the carabid family, bees and amphibians was carried out there. So the so-called multitaxon approach was applied -data was collected for various groups of animals according to the methodology appropriate for monitoring a given group, and an inventory of each group was made on the same plots. Diversity and functional diversity indices were calculated based on species abundance data. The impact of landscape metrics on species-related indicators was assessed using generalized linear models and a random forest algorithm. Geographic information was handled and stored in QGIS 3.16.