

The influence of the spatial development on the ecological network management at a local, regional, national and international scale

The primary objective of the project is the GIS-based conservation assessment of the ecological network in the context of spatial development in the Wielkopolska region in the period 2000-2020, and the near future 2020-2050, at the local, regional, national and international scale.

The research hypothesis assumes that spatial planning affects the state of fragmentation and isolation of the ecological network from local, regional, national to international scale and determines the integrity of its spatial structure.

In the beginning, an analysis of LULC changes in the spatial structure of the ecological network will be carried out and landscape metrics will be calculated to show the degree of integrity, fragmentation and isolation of the components (nodal areas and ecological corridors) on a local, regional, national and international scale. It is of high importance, because to date, there have been no such research on the spatial structure of the ecological network, covering several time intervals and based on such a high level of detail and accuracy of data (The Topographical Objects Database and orthophotomaps). Furthermore, no such activities have been conducted in the whole Poland, or even in Central Europe. This proves the innovative nature of the research.

An important aspect of the study will also be a characteristics of planning and strategic studies in terms of spatial development of ecological network areas and their buffer zones at a local, regional, national and international scale, as well as development of a model for changes in the spatial structure of the ecological network in various spatial development scenarios.

Undoubtedly, the obtained results will make a major contribution to the development of landscape ecology and spatial development in the context of effective management of ecological network. The project is to support the system of spatial decision making, including activities within the ecological network on a local, regional, national and international scale.