

Geodatabase of Vascular Plants of the Tatra National Park

Transfer project in the framework of the Klaus Toepfer Fellowship Programme

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Executive Summary

The Tatras are the only alpine-type mountain range in Poland. Due to their unique fauna and flora as well as their high level of biodiversity they are protected by a National Park. However, the data concerning biodiversity, e. g. important plant species, is scattered between different departments within the NP and other conservation organisations. This situation sometimes causes difficulties in efficient and effective management of the TNP.

The goal of this project is to raise the effectiveness of conservation management of the TNP, by establishment of a unified plant geodatabase, which will be a part of the TNP GIS system and used jointly by all departments. The geodatabase of vascular plants will become a decision-making support for different management units of the NP. It will be an informatics tool linking descriptive data about the plants (e. g. systematics, conservation status) with the detailed distribution of species on maps within the TNP GIS system.

It is worth emphasizing that reaching the overall goal was strictly dependent on external financing, which was not assured within the lifespan of the TP. Therefore two workplans (Plan A – with external funding, and Plan B – without funding) were prepared. Finally, due to failure of finding the funds, the author decided to implement the Plan B. This project assumed to focus on those parts of the geodatabase which are possible to realise without extra funding. As a consequence, reaching the overall goal was postponed to the future.

The project included both query and gathering of existing data within the institution and outside the institution, as well as field work (mapping of species distribution).

As a result of the project, TNP received a descriptive checklist (database) of all vascular plants of the TNP. This component consists of 1,146 taxa and stores unified data regarding species systematics, conservation and NATURA 2000 status, IUCN threat category, endemism and relic status, occurrence, population size, and last observation. Furthermore, this database contains all of the descriptions of localities known from the literature of all of the Red Book and NATURA 2000 species in the TNP (848 localities of 162 species).

In addition, we have gathered in our current geoportal 1,122 precise localities (geographical coordinates) of plants. This includes 350 localities of the most precious of the TNP species, which equals 45% of the total number of localities known from the literature.

All that data led us to determine plant hotspots, shortages in our current state of knowledge, and prioritize plant mapping and research for upcoming seasons. Furthermore we were able to list all of our floristic discoveries that should soon replenish Red Books.

The geodatabase project was carried out during the KTF Programme (2015 - 2017) with collaboration of internal (within the TNP) and external (Polish and German) partners and mentors. It is worth to underline that without support of mentioned people, this project would not have achieved its goals. Work on TP let me strengthen my conservation knowledge, practice and organisational skills. Outputs of the project will contribute to effectiveness and efficiency of work of my organisation.