Work Package 2: Assessment of the network of protected areas in Lithuania in the context of European Green Deal

Activity 2.2. Assessment of the shortcomings of established measures to ensure conservation of target habitats and species in the protected areas

Summary of the report

Assessing the shortcomings of measures applied for the conservation of habitats and species is crucial for improving effectiveness and well-founded expansion of the network of protected areas. However, extensive data are needed for this task. Fortunately, Lithuania has conducted a comprehensive inventory of habitats of community interest, providing a substantial basis for assessment. Data on the distribution and populations of species of community importance have also been significantly updated. Furthermore, the condition of a substantial part of natural habitats was evaluated according to newly developed uniform criteria. In contrast, data on other nationally protected species are very fragmented. Therefore, the assessment mainly focused on habitats and species of community interest.

Due to substantial differences in existing threats and regulations, the assessment was done according to different types of ecosystems, i.e., forests, meadows, mires and bogs, inland surface waters, and coastal sand dunes. The assessment started by analysing key threats identified in the literature for all types of habitats and relevant regulations. This allowed a preliminary identification of threats that can or can't be addressed by the current regulations applied on the national scale (common regulations) or in certain types of protected areas.

Then, available data on the extent and condition of habitats were thoroughly analysed. The total area of habitat type and the area in good condition were used as key indicators. This allowed an assessment of the actual impact of certain regulations on the area and condition of habitat types and extrapolation of data for the whole inventoried habitat sites. The outcome was the calculated area of habitats in good condition that is expected under the current regulatory framework. It could be compared to the conservation goal – the area of habitats in good condition, comprising 90 percent of the favourable reference area of the habitat type in the country (i.e., favourable conservation status). The deficiency of the area of habitat type in good condition was considered an indication of the need for intervention with conservation measures, i.e., an increase in the area of protected areas or other measures, such as enforcement of general country-wide regulations, development of economical instruments, etc.

Additionally, data on species were analysed, and those with decreasing population trends were filtered, and their habitat requirements and possible link with natural habitat types were determined. This allowed identification of key conservation problems and a clear distinction between threats that can effectively be solved by the establishment of protected areas under the current legislative framework and those that can't or can only be marginally affected. It was also possible for some habitat types to calculate the preliminary extent of protected areas needed for the achievement of conservation goals.

The assessment revealed that only several habitat types are dominated by habitats in good condition, with the total area reaching or close to the conservation goal. In general, the best situation is with inland surface water habitats (goals are achieved for 3 habitat types), and the worst situation is with meadow habitats (habitats in good condition make only 10-50 % of the aimed area). Forests, mires, and coastal sand dunes habitats revealed more contrasting results.

The assessment revealed that most forest habitat types would respond very well to an increase in protected and especially in strictly protected areas; however, certain types require special management, i.e., imitation of traditional management or natural processes, such as the impact of fire. These habitats are in the worst condition as they are negatively impacted by passive conservation as well as intensive management. Most forest species that exhibit negative population trends are also, in many cases, related to these habitat types or traditional management. In many cases, these species need a combination of old-growth trees and traditional management of forest meadows, mires, or very forest. This highlights the importance of creating conditions for the development of a diverse landscape rather than extensive strictly protected forest areas. It was also found that EU priority habitats are in a better position due to the requirement to protect 60 % of the reference area.

The assessment also revealed the importance of selecting suitable forest sites for the conservation of habitats. A significant portion of habitats is expected to change from one habitat type to another in case of stricter protection and abandonment of intensive management. This might lead to excessive management costs, a lower percentage of habitats in good condition, or difficulties in achieving conservation objectives of the Natura 2000 sites. Certain forest site types are also significantly more affected by forest management practices than others. This results in very low coverage of certain habitat type varieties and reduces populations of related species. In general, little attention is paid to the need for the representation of different habitat sub-types or varieties in the protected areas. The analysis revealed that protected areas are very unevenly distributed among Lithuanian biogeographical districts and underperform in representing forest site types of these districts. Therefore, the project indicated the need to take these issues into consideration when selecting new sites for conservation.

The area of certain types of habitats in good condition could also be significantly reduced due to drainage or changes in hydrological conditions. Such areas are quite often found in protected areas. Restoration usually is prevented by economic interests that lead to formal ineffective conservation. Strict protection, therefore, is considered the best option when substantial restoration of hydrological conditions needs to be carried out. However, caution should be taken to include all hydrologically related melioration systems, as partial inclusion can prevent complete restoration, which is also found to be a common problem in the protected areas.

Mire and bog habitat types most often suffer from hydrological alterations that were implemented in the last century. Current legal acts prevent any new hydrological changes not only in protected areas but also in numerous sites across the country. Therefore, the main need is restoration, and strictly protected areas provide the best opportunities for such action. Substantial areas were identified in need of such intervention if conservation goals are to be achieved. The main focus should be on big wetland complexes that exhibit the biggest stability in the context of climate change. Several mire habitat types are also dependent on traditional management, and their establishment of protected areas usually does not help in improving conditions. Therefore, not only restrictions but also economical mechanisms have to be employed for the improvement of the situation.

The analysis of the effectiveness of the conservation of meadow habitats and related species revealed that the establishment of protected areas might have a positive local impact but until now had little sense on the national scale. Such a measure helps to reduce the extent of transformation to arable land, but this is equally well achieved by country-wide regulations that are applied to natural meadows that were identified.

Freshwater habitats and related species mostly suffer from pollution. There is no data to confirm that the establishment of a protected area helped with solving this issue. Several species,

however, benefited due to fishing restrictions or reduced disturbance. The majority of coastal dune habitats are already under protection, and the key issue is the prevention of succession and reintroduction of traditional management practices. This is critically important for certain near-extinct habitat types and species. An increase in the protected area is mostly needed for the conservation of wooded dunes.

It could be concluded that there is a big difference among habitat types and species in the need for an increase in the protected area. Other conservation measures should be developed, promoted, and applied in certain cases, as they are more efficient in solving conservation needs. The need for a more even distribution of protected areas and better representation of different ecological conditions was highlighted for certain widespread habitat types. Furthermore, increasing the effectiveness of protected areas should be prioritized. Changes to more strict regulations were identified as the best solutions in certain cases. The assessment successfully provided data-based arguments for further development of proposals for the expansion of the network of protected.