



Large-scale restoration mitigate land degradation and support the establishment of green infrastructure

Béla Tóthmérész (1), Jonathan Mitchley (2), Ivana Jongepierová (3), Annett Baasch (4), Karel Fajmon (5), Anita Kirmer (4), Karel Prach (6), Klára Řehounková (7), Sabine Tischew (4), Grace Twiston-Davies (2), Thierry Dutoit (8), Elise Buisson (8), Renaud Jeunatre (9), Orsolya Valkó (1), Balázs Deák (1), and Péter Török (1)

(1) MTA TKI, Budapest, Hungary (tothmerb@gmail.com), (2) University of Reading, (3) Administration of the White Carpathians Protected Landscape Area, (4) Anhalt University of Applied Sciences, Department of Nature Conservation and Landscape Planning, (5) Czech Union for Nature Conservation, Local Chapter "Bílé Karpaty", (6) Faculty of Science, University of South Bohemia, (7) Institute of Botany, Academy of Sciences of the Czech Republic, (8) Institut Méditerranéen de Biodiversité et Écologie (IMBE), (9) Irstea Domaine Universitaire

Sustaining the human well-being and the quality of life, it is essential to develop and support green infrastructure (strategically planned network of natural and semi-natural areas with other environmental features designed and managed to deliver a wide range of ecosystem services). For developing and sustaining green infrastructure the conservation and restoration of biodiversity in natural and traditionally managed habitats is essential. Species-rich landscapes in Europe have been maintained over centuries by various kinds of low-intensity use. Recently, they suffered by losses in extent and diversity due to land degradation by intensification or abandonment. Conservation of landscape-scale biodiversity requires the maintenance of species-rich habitats and the restoration of lost grasslands. We are focusing on landscape-level restoration studies including multiple sites in wide geographical scale (including Czech Republic, France, Germany, Hungary, and UK). In a European-wide perspective we aimed at to address four specific questions: (i) What were the aims and objectives of landscape-scale restoration? (ii) What results have been achieved? (iii) What are the costs of large-scale restoration? (iv) What policy tools are available for the restoration of landscape-scale biodiversity? We conclude that landscape-level restoration offers exciting new opportunities to reconnect long-disrupted ecological processes and to restore landscape connectivity. Generally, these measures enable to enhance the biodiversity at the landscape scale. The development of policy tools to achieve restoration at the landscape scale are essential for the achievement of the ambitious targets of the Convention on Biological Diversity and the European Biodiversity Strategy for ecosystem restoration.