Research report

Botanical monitoring (Action D3) in the framework of „Conservation of dry grasslands in Central Hungary" Life+ Nature (LIFE NAT/HU/001028)

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We surveyed the vegetation of the sites restored between the autumn of 2014 and early spring of 2017, to evaluate the restoration success. We performed the monitoring of restoration actions in the following Natura 2000 sites:

'Alsó-Tápió és patakvölgyek' Natura 2000 site (Tápiósági földvár),
'Gödöllői-dombság peremhegyei' Natura 2000 site (Fóti Somlyó),
'Érd-tétényi plató' Natura 2000 site (Tétényi-fennsík).

Botanical surveys were conducted in late May and early June 2017. Detailed results of the surveys can be found in Appendices 1-3.

- In 'Alsó-Tápió és patakvölgyek' Natura 2000 site we monitored the third-year vegetation composition of a former arable field restored by hay transfer in the autumn of 2014. We found a fast and promising grassland recovery. We found that 42 target species established in the third year. The mean cover of target species was as high as 61%. The protected species, *Centaurea sadleriana* increased its second-year cover from 1,5% to 5.6% for 2017. The protected *Ajuga laxmannii* could establish in the restored grassland. The cover of the target grasses (*Arrhenatherum elatius*, *Festuca rupicola* and *F. pratensis*) increased from 2016 to 2017. The cover of weeds decreased to 33%, but they were mostly annual species which can be suppressed easily. The cover of invasive species was low, but it is crucial to regularly control the encroachment of *Asclepias syriaca* even in the early phase.
- In 'Gödöllői-dombság peremhegyei' Natura 2000 site we sampled the vegetation in the plots designated in 2014. (i) We sampled the vegetation of a mesophilous old-field invaded by *Solidago gigantea.* Due to the applied management actions, the cover of *Solidago gigantea* decreased to 30%, but was still high. The encroachment of shrubs pose and increasing threat for the site. Despite of the threatening factors, several target

species of sandy grasslands were present in the old-field. In forthcoming years, higher management intensity, more focused grazing and mechanical shrub removal would be important. (ii) We sampled the vegetation of an abandoned road and roadside with spontaneous grassland recovery. The abandonment of the road was favourable for spontaneous grassland recovery. We found an increased total vegetation cover, increased cover of perennial graminoids and decreased cover of disturbance-tolerant species. However, the complete recovery of natural grasslands requires more time.

- In ‘Érd-tétényi plató’ Natura 2000 site we sampled (i) the vegetation of a road abandoned in 2014 and (ii) also the vegetation composition of sites where shrubs were cut in the early spring of 2016 and 2017. We found that the abandonment of the road facilitated spontaneous grassland recovery, and the vegetation was dominated by target species. However, the complete recovery of natural grasslands requires more time. (ii) In five sites, shrubs were removed in 2016, in two sites shrub removal was done in 2017. We found a moderate resprouting of shrubs in the sites, thus, current conditions seem favourable for the recovery of grasslands. For the long-term restoration success, regular control of re-sprouting shrubs will be crucial.