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# CITY NATURE

Entwicklung von Methoden und Kommunikationsmitteln zum Erhalt und zur Stabilisierung der biologischen Vielfalt und der Ökosystemdienstleistungen in Wien und in Bratislava

Vývoj ekosystémových nástrojov a služieb pre ochranu a obnovu biodiverzity v Bratislave a Viedni



Das Projekt City Nature wird im Rahmen des INTERREG V-A SK-AT-Kooperationsprogramms durchgeführt, das vom Europäischen Fonds für regionale Entwicklung (EFRE) kofinanziert wird. Projekt je realizovaný v rámci Programu spolupráce INTERREG V-A SK-AT, spolufinancovaný z Európskeho fondu regionálneho rozvoja.





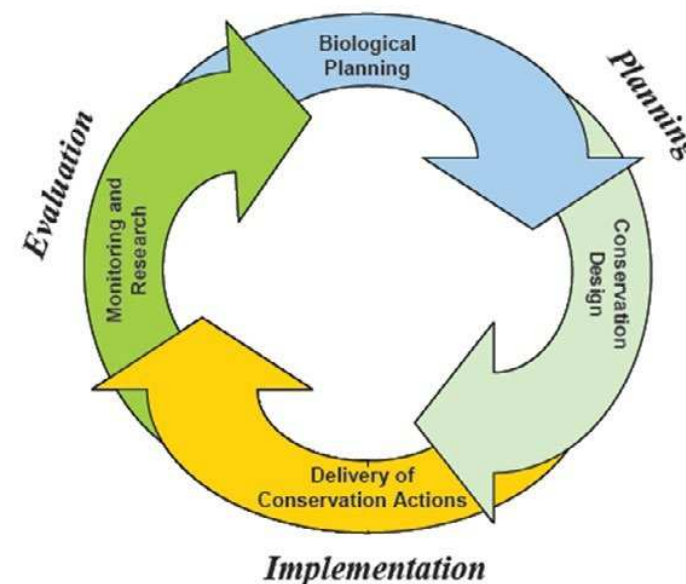
# State of Concept on the integration of grassland biodiversity in the city environment – based on pilot grasslands in Bratislava

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## Integration of grassland biodiversity in the city environment - proposed steps

1. To get information on distribution, habitat types and quality of grasslands in the city – inventory, evaluation and interpretation of data on grasslands
2. Elaboration of management plan for grasslands in the city – management/restoration measures linked to each grassland area
3. Management plan discussed, adapted and agreed with the main stakeholders – municipalities, local communities and experts
4. Implementation of management plan – securing of resources and capacities
5. Monitoring of implementation – public and experts



## Habitat Inventory of pilot grasslands in Bratislava

1. Definition of mapping objects - field map
2. Choosing correct method for data gathering – methodology used for national grassland mapping and monitoring HNV grasslands



## Habitat types



Mesophilous grasslands

## Habitat types



Dry acidophilous grasslands

## Habitat types



Wet grasslands



# Management planing

Basic content of a management plan

BACKGROUND

SITE DESCRIPTION

EVALUATION AND OBJECTIVES

IMPLEMENTATION – MANAGEMENT STRATEGIES

MONITORING

BIBLIOGRAPHY AND RESOURCES



18.02.2019 Title of the event





## Restoration of pilot grassland sites – how to get seeds?

1. Manual collection of target species seeds – requires extensive man power
2. Purchase of seed mixtures – expensive 190 Euros per 1 kg can be applied on 100 m<sup>2</sup> <http://www.kvetnatelouky.cz/Regionalni-smesi/Arrhenatherion-smes-pro-mezofilni-louky.html>
3. Harvesting seeds from target meadows by brush harvester (Bílé Karpaty) – you need equipment
4. Application “green hay” from a grassland donor site containing a high proportion of matured plant seeds – requires good planing and monitoring of phenology



## Restoration of pilot grassland sites – how to prepare recipient site?

In order to facilitate germination of target seeds is necessary to prepare ground

To spread seeds into degraded meadows without chance to get them to soil surface is not effective

Cutting and harrowing of recipient area

Ultimate method is turfs removal –  
cost 60-80 Euros per 100 m<sup>2</sup>

[http://www.ryanturf.com/  
products/ryan-sod-cutters/](http://www.ryanturf.com/products/ryan-sod-cutters/)



## Restoration of pilot grassland sites – how to restore meadows by green hay?

1. Assess the recipient site
2. Identify a suitable donor site
3. Prepare the recipient site
4. Cut biomass on donor site before seeds drop
5. Transport green hay immediately
6. Disperse the green hay evenly over the recipient site
7. Use a roller to trample the seed
8. Monitor the recipient site



## Restoration of pilot grassland sites – removal of shrubs and trees

Action aims at restoring grasslands in such condition that conventional mowing with a tractor is possible for harvesting biomass.

Restoration techniques will include:

1. Cutting and removal of trees and shrubs;
2. Removal of stumps of trees and shrubs;
3. Milling the roots of trees and shrubs;
4. Primary mowing of the cleared grasslands.



## Management of pilot grassland sites in Bratislava

### Mowing methods:

- mesophytic and wet grasslands can be mowed no more than 2 times a year;
- dry grasslands can be mowed no more than once per year;
- grasslands must be mowed in the direction from the centre to the borders of the grassland;
- xerophytic grasslands can only be managed by using light mechanization.

Discing, plowing, draining and mulching of grassland is prohibited.

Exclude totally using fertilizers and liquid manure

## Management of pilot grassland sites in Bratislava

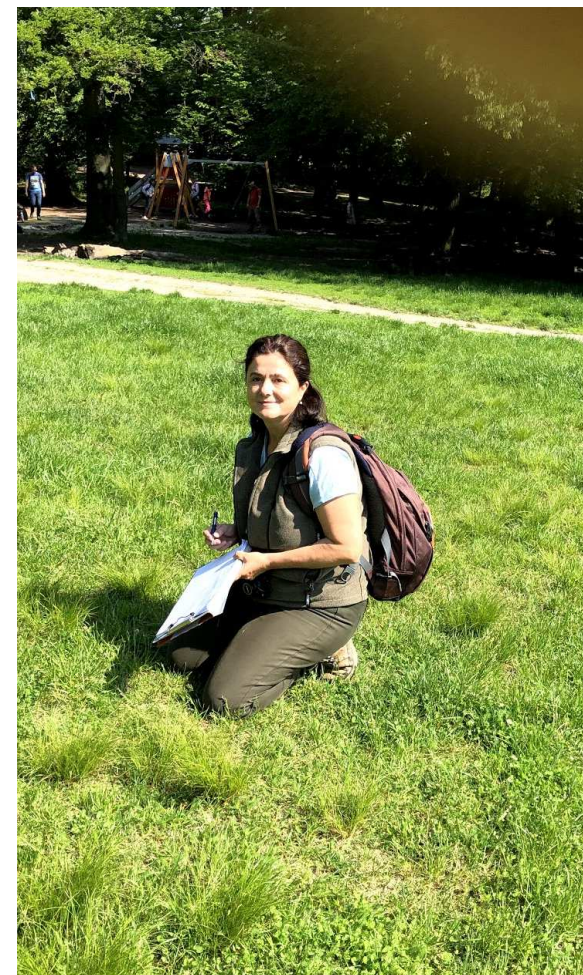
### Zoological recommendations:

- mowing twice a year: June and September
- site should be mowed gradually with 1-2 weeks gap to secure butterflies



# Monitoring

- Monitoring provides useful information on the trajectory of habitat development
- Monitoring allows us to detect problems early and adjust management measures to improve habitat status
- Monitoring the habitats on the land can be as simple as taking photos from established points,
- Or evaluating plant species composition





# Thank you for your attention

