



Conservation of *Narcissus poeticus* in mountain hay meadows of Jesenice

Scientific Conference - Enhancing biodiversity & interconnectivity by
ecological restoration

05.12.2025

Metod Rogelj





In the Western Karavanke mountains there are meadows with numerous **daffodils** (*Narcissus poeticus subsp. radiiflorus*).

In Slovenia daffodil is **not an endangered species**, but it is nevertheless **protected by the law** and at the same time very **attractive** to people.



Due to **high biodiversity**, daffodil meadows are also of great importance for **nature conservation**.

52 habitat types were mapped in various combinations.



Many **protected plant species**, such as

common arnica (*Arnica montana*),

Zois violet (*Viola zoysii*),

Zois bellflower (*Campanula zoysii*),

Clusi's gentian (*Gentiana clusii*),

primrose (*Primula auricula*),

Carniolan lily (*Lilium carniolicum*),

common butterwort (*Pinguicula vulgaris*)

alpine butterwort (*Pinguicula alpina*),

and

numerous orchids (*Orchidaceae*).

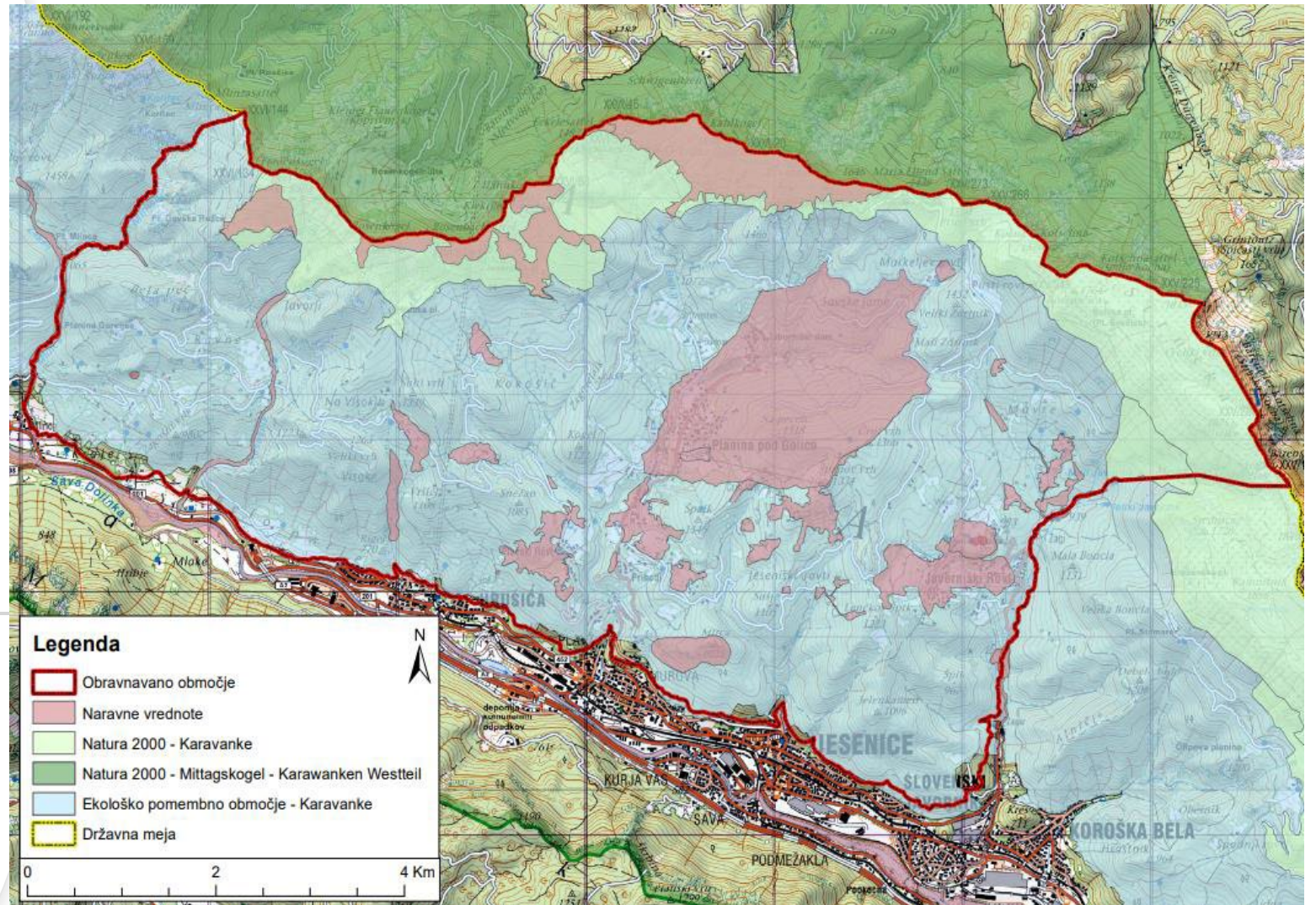


76 species of butterflies (10 of them protected) were listed



Nature conservation status: Natura 2000 and other protected areas based on national legislation

The Natura 2000 network also reach across the border to Austria



Appropriate agricultural management of the meadows is crucial to preserve daffodils whose abundance have been **declining** for decades.

We observe two perspectives:

as agricultural activity **modernizes and adapts to modern trends and techniques**, many daffodil meadows are subject to the pressures of these changes.

On the other hand, agriculture is difficult due to steep slopes, high altitude, poor accessibility and a **general decrease in interest in farming** by young people, causing extensively cultivated mountain meadows to become **overgrown**.



Save the Daffodils Program

The local Development Agency and the Municipality of Jesenice created a multi-year program in 2016 called "**Preserve Daffodils**", which set out:

- measures for the appropriate agricultural treatment of meadows with daffodils and
- provides financial compensation for landowners who comply with these measures.



OHRANIMO NARCISE

PROGRAM



Razvojnna agencija Zgornje Gorenjske

Jesenice, 2. november 2016

Klemen Klinar, Nina Kobal in Urška Luks

Verzija 1.1



The program is based on the **voluntary participation** of owners.

The owners can include any area of land, where they will ensure **appropriate agricultural cultivation**.

The program determines **the dates** when mowing can begin and **other agricultural practices** that benefit daffodils (e.g. fertilization only with organic fertilizers). Over time, it was discovered that the key factor in these meadows was **late mowing**, because it enables daffodil to fill the bulb with nutrients for early spring growth and flowering.

The Development Agency carries out at least one **supervisory inspection** on all areas involved per year.

Owners and areas



Foto: K.Klinar

	Št. lastnikov	Površina (ha)
Obdelovalna sezona 2017	24	31,33
Obdelovalna sezona 2018	30	36,37
Obdelovalna sezona 2019	31	38,67
Obdelovalna sezona 2020	31	39,09
Obdelovalna sezona 2021	33	39,66
Obdelovalna sezona 2022	35	40,68
Obdelovalna sezona 2023	34	39,83
Obdelovalna sezona 2024	36	40,52
Obdelovalna sezona 2025	38	42,63

Monitoring of the number of blooming daffodils has been established at **ten poligones** of 12.6sqm, starting in 2000.

The number of flowers is counted at these poligones every year during the flowering period (in may)



Foto: K.Klinar



Monitoring

The poligones were selected taking into account the following criteries:

- area with subsidy,
- area with no subsidy,
- agricultural intervention allready carried out (e.g. land leveling),
- omission of mowing.

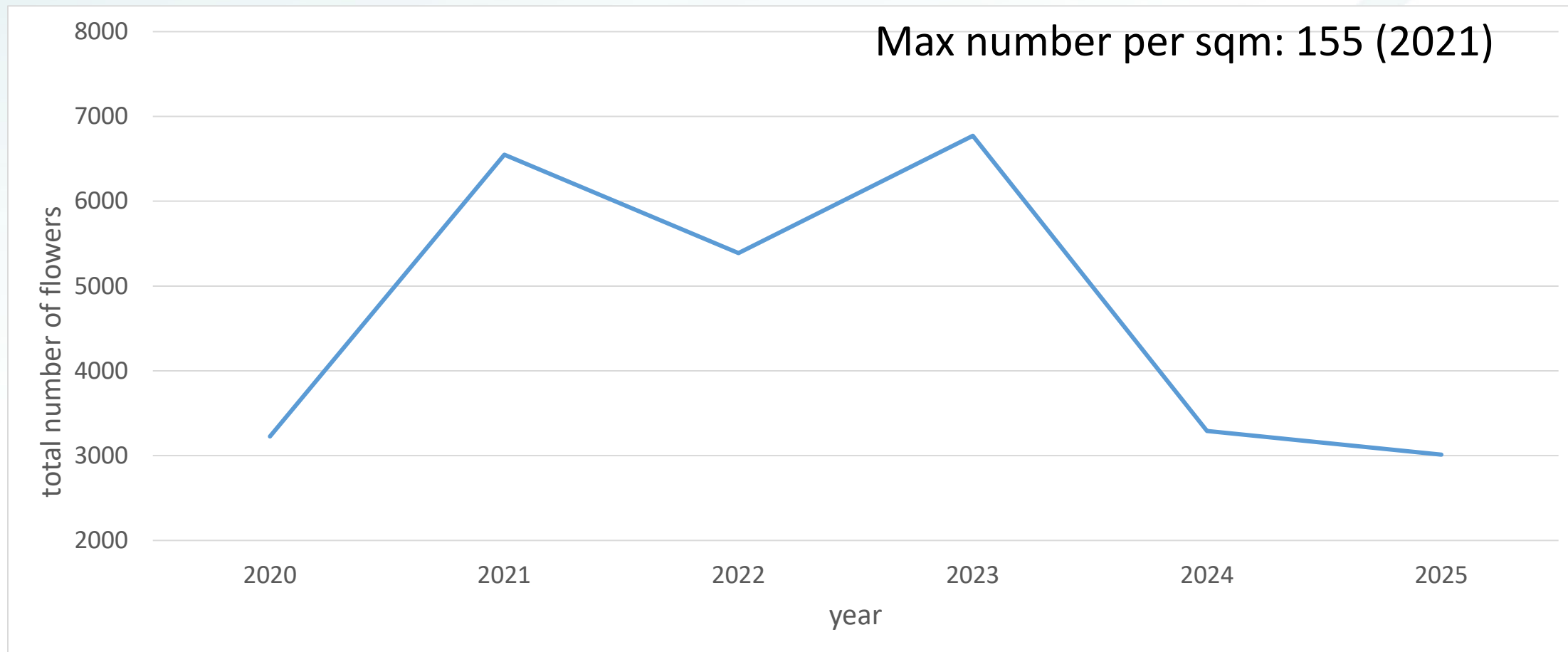
Within the entire monitoring period, climatological indicators such as **temperature and precipitation** are also monitored.



Foto: K.Klinar

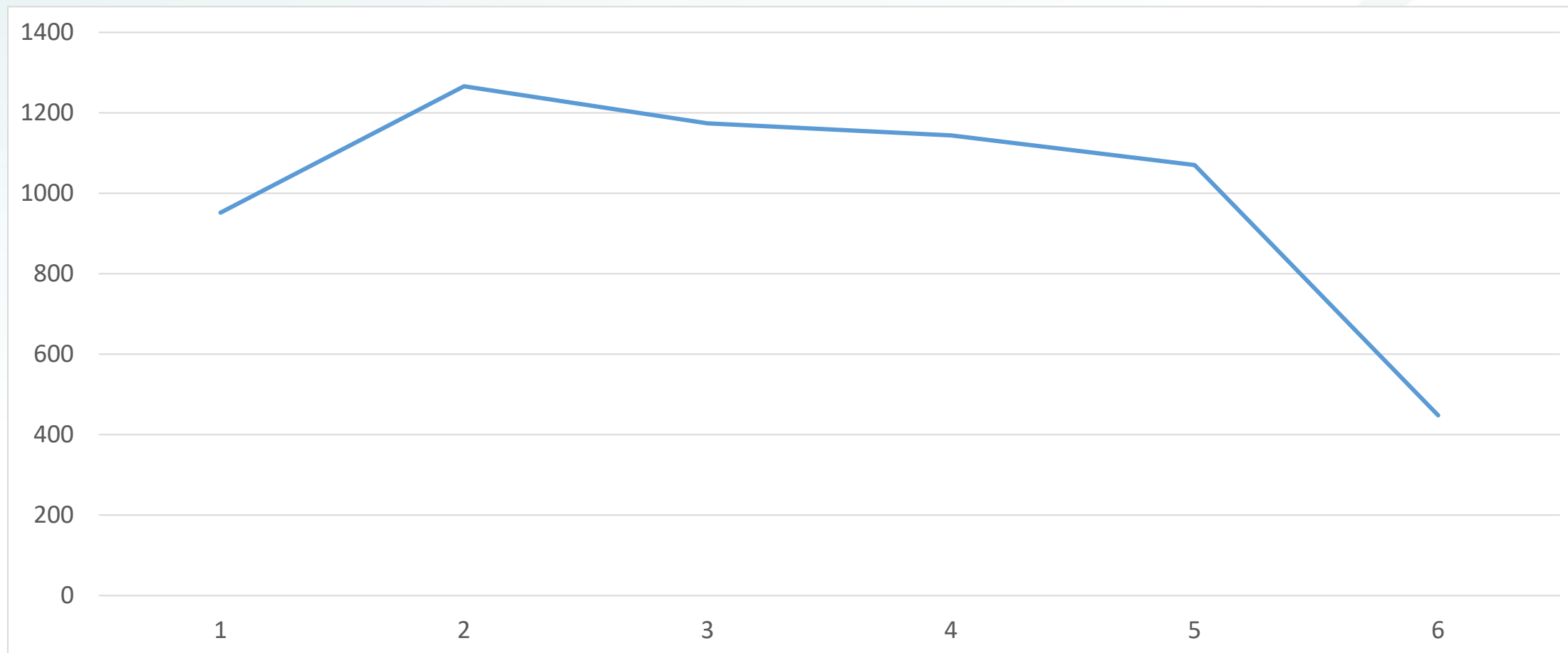


Total number of flowers

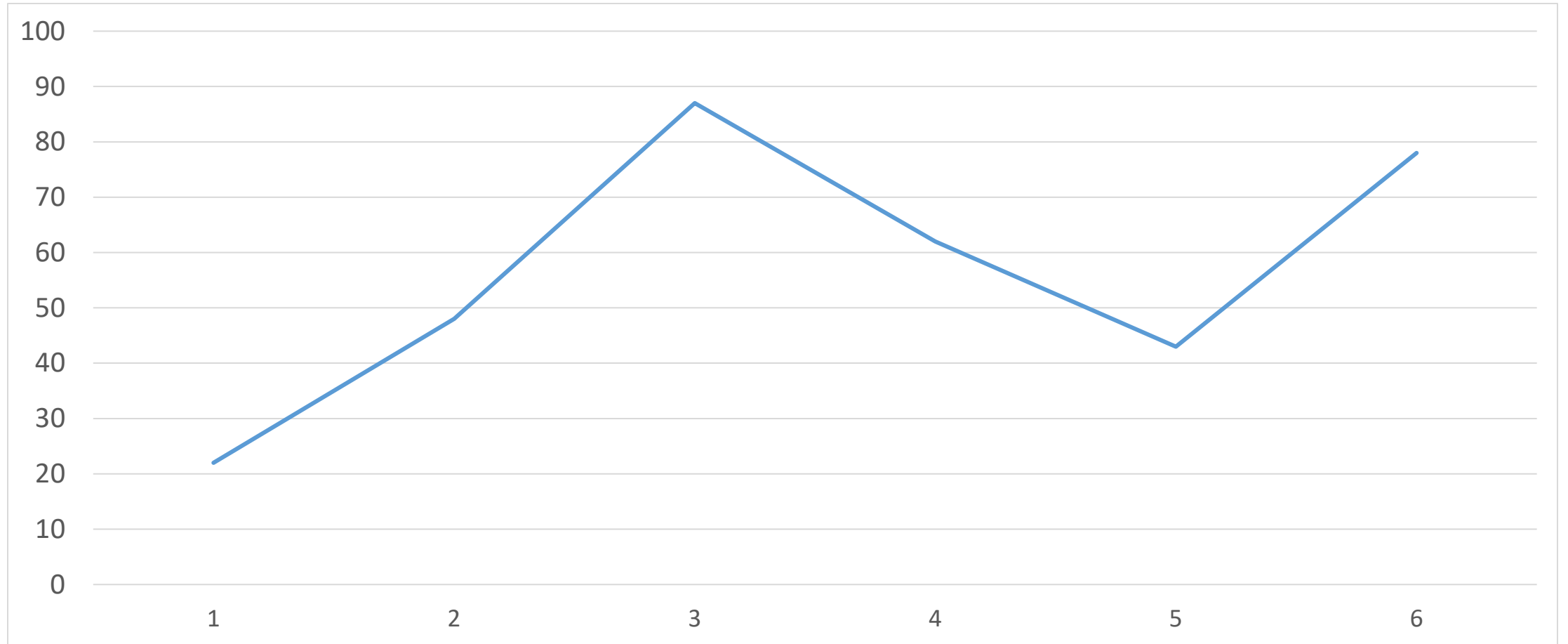




Abandonment of mowing 2013

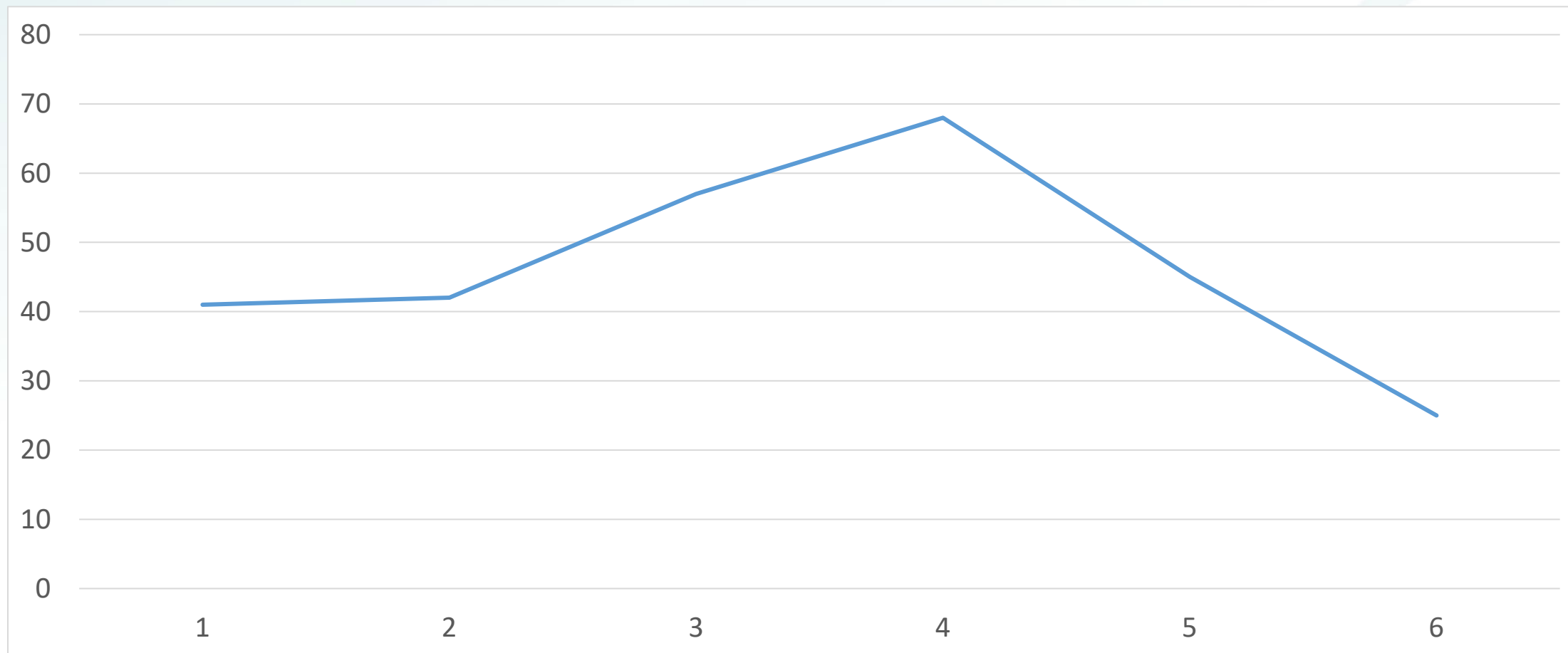


Subsidy after land leveling (melioration) in 2019





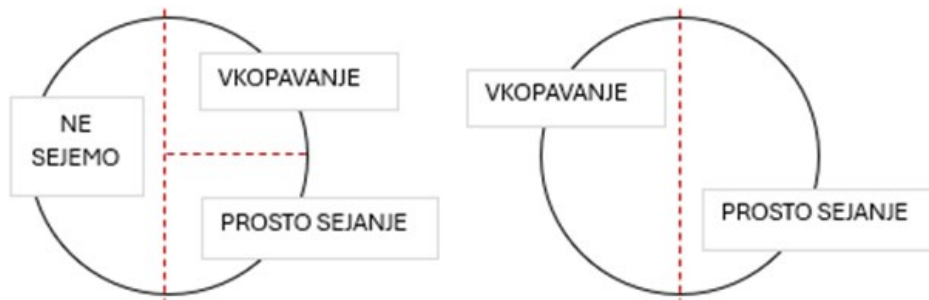
No subsidy





From 2024 one of the goals of the ReCo project was also to propagate the daffodils using **seeds** (on testing plots and in „artificial“ conditions) With the aim of a faster „return“ of daffodils.

Two sowing methods: seeds **covered** with humus and **not covered** with humus





6 : 64

free seeds : covered seeds (april 2025)



Germination on the field was very successful
(may 2025)





First findings (with low statistical probability)

- **High variability of the number** of flowers per year due to weather conditions: problem are high temperatures in early spring time and frosts that follows (2024, 2025).
- **Good recovery** after land melioration with proper management following.
- Great influence of **light** conditions.
- Significantly better germination of seeds **covered with humus**.



Further activities

The **ReCo project Regional Restoration plan (D.3.2.2)** was prepared in 2024.

Main focuses of the program are:

- **Agriculture:** *Save the daffodil* program continues and is being upgraded, maintaining agriculture activities,...
- **Nature conservation:** monitoring, renaturation, raising awareness,...
- **Tourism and local community:** reduction of tourism impact, preventing overtourism, financing,...

All the focuses are more precisely elaborated in the Program

Ohranjanje planinske paše			Ukrep K3
Cilj	žive in vzdrževane planine s trajnostnim upravljanjem pašnikov	Pomembnost	Izvedljivost
Aktivnosti	K31: uvajanje sodobnih pašnih tehnologij za lažji nadzor na pašno živino (npr. GPS ovratnice)	★ ★ ★ ★ ☆	🌸 🌸 🌸 🌸 🌸
K32: izobraževanje pastirjev o delu na planinah (tako s kmetijskega kot tudi z naravovarstvenega vidika)	★ ★ ★ ☆ ☆	🌸 🌸 🌸 🌸 🌸	
K33: skrb za zadostno vodooskrbo na planinah	★ ★ ★ ★ ★	🌸 🌸 🌸 🌸 🌸	
K34: ohranjanje pašnih površin in preprečevanje zaraščanja ali preobremenjevanja pašnikov	★ ★ ★ ☆ ☆	🌸 🌸 🌸 🌸 🌸	
K35: vzdrževanje planinske infrastrukture za sodobnim časom primerno delo kmetov in pastirjev	★ ★ ★ ★ ★	🌸 🌸 🌸 🌸 🌸	
K36: razvoj dodatnih dejavnosti na planinah in kmetijah (npr. ponudba izdelkov, oskrba obiskovalcev, razvoj doživljanja planin - v povezavi s turizmom, zdravilstvom)	★ ★ ★ ★ ☆	🌸 🌸 🌸 🌸 🌸	
Sodelujoči	agrarne skupnosti, Kmetijsko-gozdarski zavod Kranj, kmeti, Razvojna agencija Zgornje Gorenjske, Občina Jesenice		



Preserving daffodils is „a long-distance run“
in fact –
with some obstacles „a long distance steeplechase.

However, the positive response from the local and wider public gives us enough energy and encouragement, therefore we will continue to „run“ for a long time.



Thank you for your attention!

