

Biodiversity in EFAs in the pilot municipalities

General statistics for the pilot regions

No	indicator	Kostinbrod	Sepremvri
1	Municipality area (ha)	25479.50	34959.34
2	Number of settlements	14	14
3	Arable land eligible for subsidies (2016) [ha]	9433.91	11215.18
4	Permanent grasslands (official data, 2016) [ha]	4597.88	538.19
5	Grassland polygons mapped in the current project [ha]	2739.23	1696.15

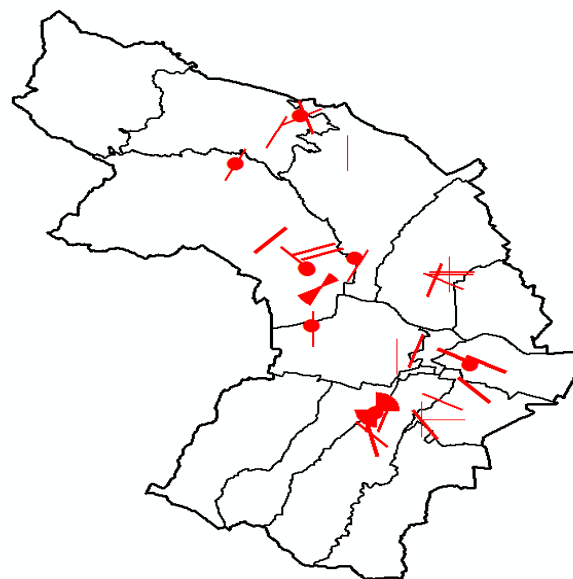
General statistics for the pilot regions

indicator	Kostinbrod	Sepremvri
Number of sampled sites	21	39
Landscape features sampled:		
Hedgerows	6	8
Single trees	2	6
Tree lines	2	2
Tree groups	1	2
Field margins	10	16
Banks	-	5
Maximum number of registered species per feature	44	68

Locations of the field survey



Kostinbrod

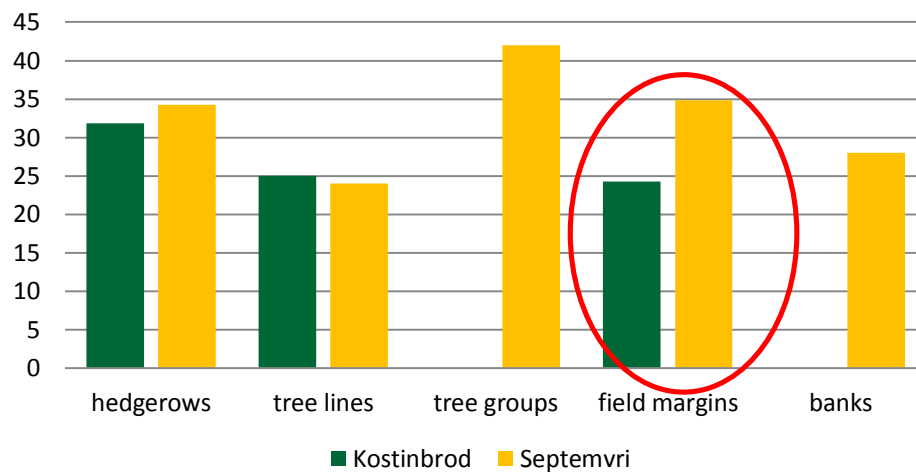


Septemvri

Results



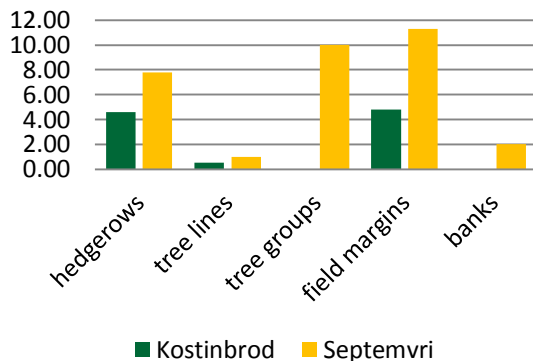
plant species diversity (average)



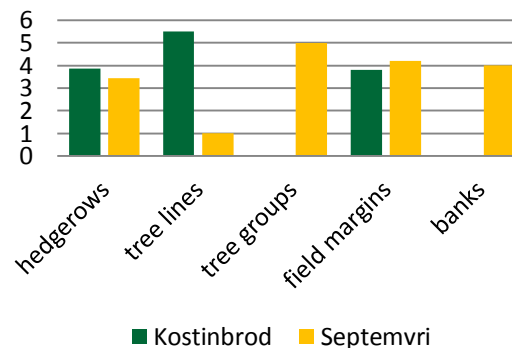
High diversity!
In municipality with intensive agriculture is higher!!
Why? May be the plants find proper place there?

Results

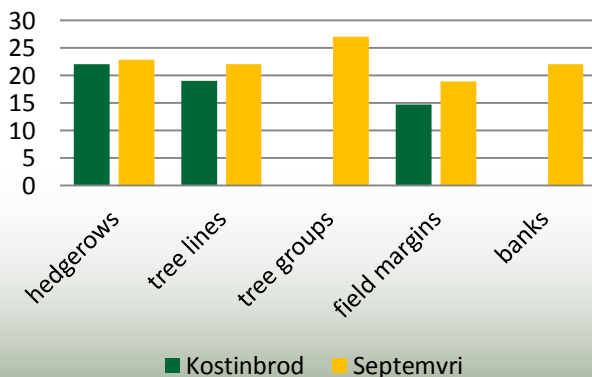
annuals



biennials



perennials

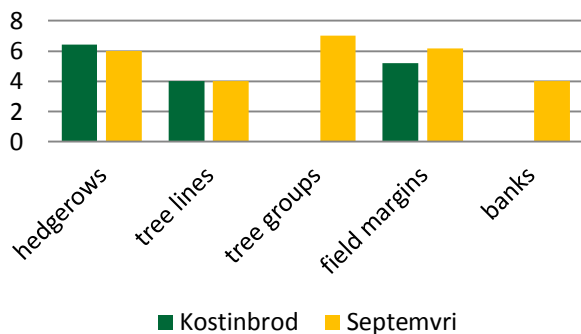


The prevalence of perennials prove long term existence of these landscape features

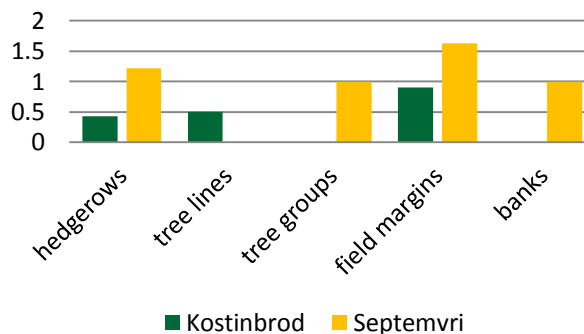
They preserve the potential for grasslands ecosystem services provision

Results

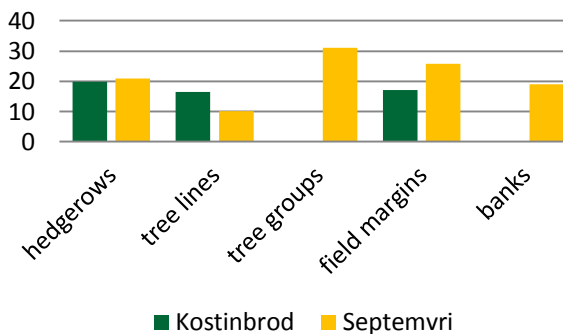
graminoids



legumes



forbs



Functional diversity

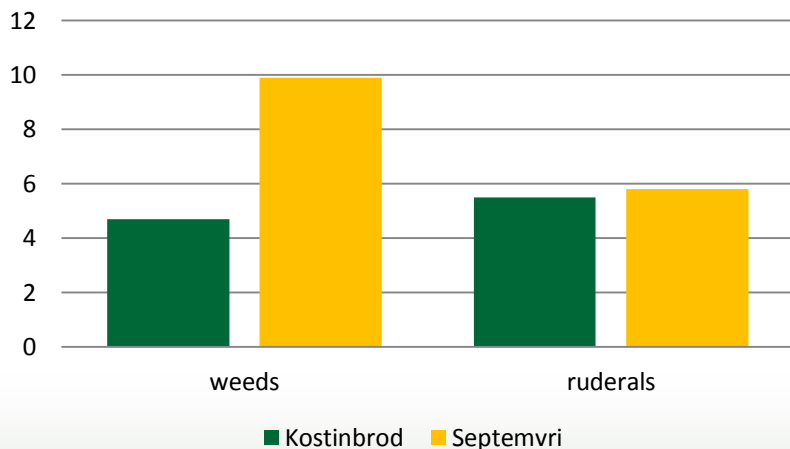
Ecosystem stability

Intensive agriculture does not affect functional structure of LF

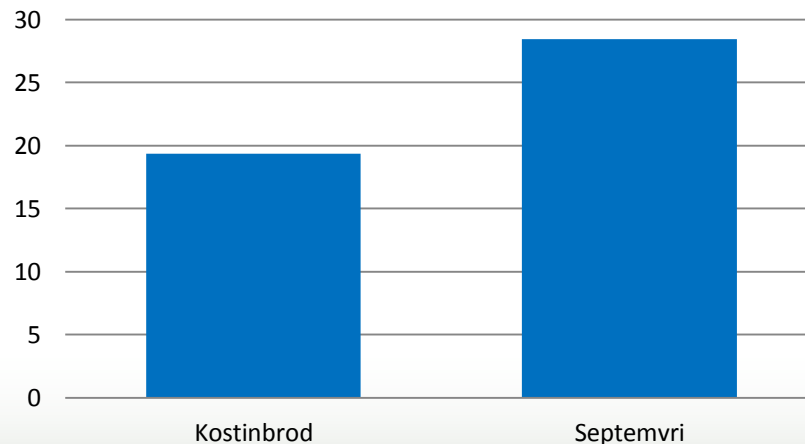
Results

If we focus on the botanical quality of Field margins:

Average species number in field margins



Share of weeds in field margins (%)



Results

Top 20 registered species

Cynodon dactylon

Dactylis glomerata

Elymus repens

Plantago lanceolata

Rubus caesius

Convolvulus arvensis

Conyza canadensis

Cichorium intybus

Xanthium strumarium

Chondrilla juncea

Setaria viridis

Sambucus ebulus

Artemisia vulgaris

Cirsium arvense

Euphorbia cyparissias

Chenopodium sp.

Galium album

Polygonum aviculare

Berteroa incana

Diversity of mammals in EFAs

Name	fallow land	buffer strips	field margins	nitrogen-fixing crops
Talpa europaea	x,p	x,p,m	x,p,m	x,p,m
Crocidura leucodon	x,p	x,p,m	x,p,m	x,p,m
C. suaveolens	x,p	x,p,m	x,p,m	x,p,m
Suncus etruscus		x,p,m	x,p,m	
Rhinolophus ferrumequinum	x	x,m	x,m	x
R. hipposideros	x	x,m	x,m	x
Myotis myotis	x	x,m	x,m	x
M. blythii	x	x,m	x,m	x
M. capaccinii		x,m		
Nyctalus noctula	x	x	x	x
N. leisleri		x,m	x,m	
Pipistrellus pipistrellus	x	x,m	x,m	x
P. nathusii		x,m	x,m	
P. kuhlii		x,m	x,m	
Hypsugo savii	x	x,m	x,m	
Eptesicus serotinus		x	x	
Lepus europaeus	x,m,p	x,m,p	x,m,p	x
Spermophilus citellus	m	x,m,p	x,m,p	
Nannospalax leucodon	x,m	x,m,p	x,m,p	
Mus spicilegus	x,m,p	x,m,p	x,m,p	x
Micromys minutus	x	x,m,p	x,m	
Sicista subtilis	x	x,m	x,m,p	x,m
Cricetus cricetus	x,m,p	x,m,p	x,m,p	x
Mesocricetus newtoni	x,m,p	x,m,p	x,m,p	x
Canis aureus	x,m	x,m,p	x,m,p	
Canis lupus	x	x,m	x,m	
Vulpes vulpes	x	x,m,p	x,m,p	x,m
Vormela peregusna		x,m,p	x,m,p	
Mustela putorius		x,m,p	x,m,p	
M. eversmanni		x,m,p	x,m,p	
Meles meles		x,m,p	x,m,p	
Capreolus capreolus	x	x,m	x,m	x



x-feeding; m-migration; p-reproduction

Conclusion

Pilot study provides promising evidence that landscape features

- persist for long time
- preserve biodiversity
- provide corridors for species migration
- diversify the landscape, etc.



but

- a better understanding from farmers is needed



- it is necessary to improve sectoral organization at national level (knowledge, mapping, control)

<http://grasslands-ecoservices-bg.eu>