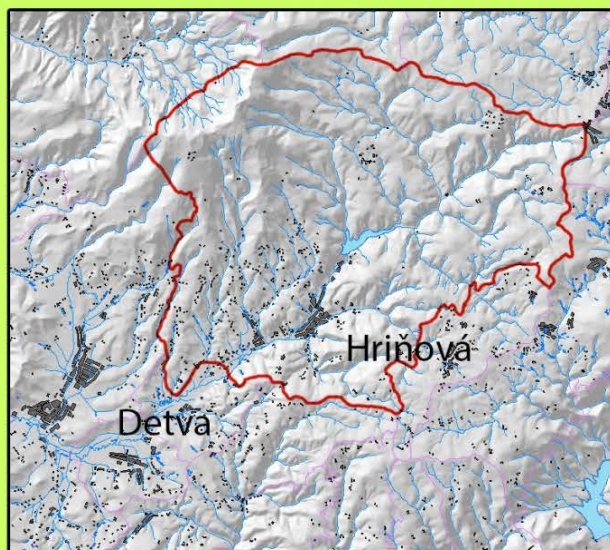
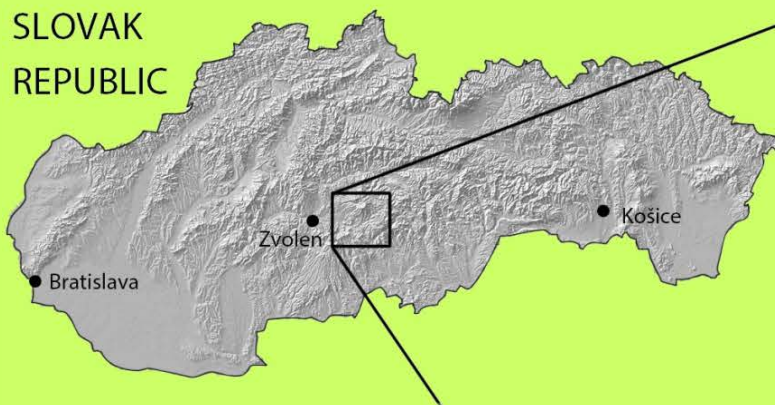


Traditional agricultural practices, land cover diversity and biodiversity in the southern Podpoľanie region

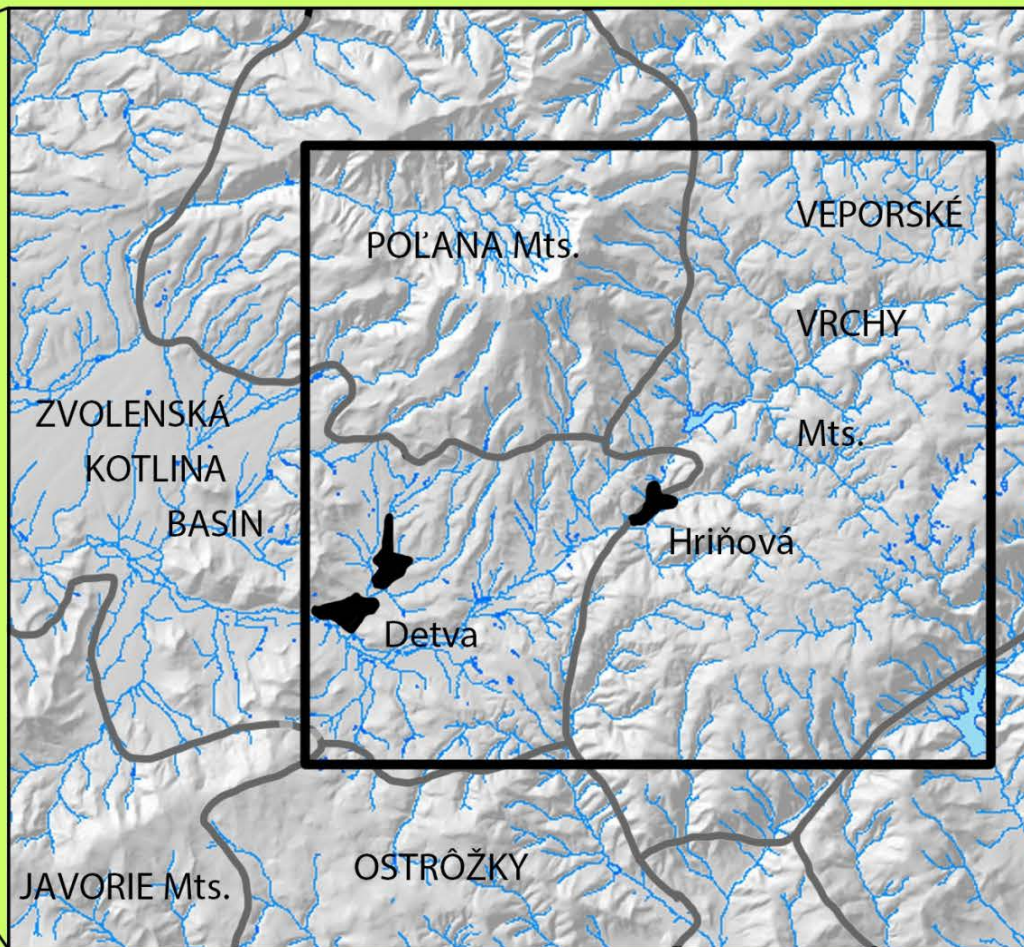


**Martina Slámová, Peter Jančura, Vladimíra Fabriciusová, Boris Beláček
Katarína Zrníková, Zlatica Prídavková, Iveta Bohálová**

Studied area in geomorphological units of Slovakia

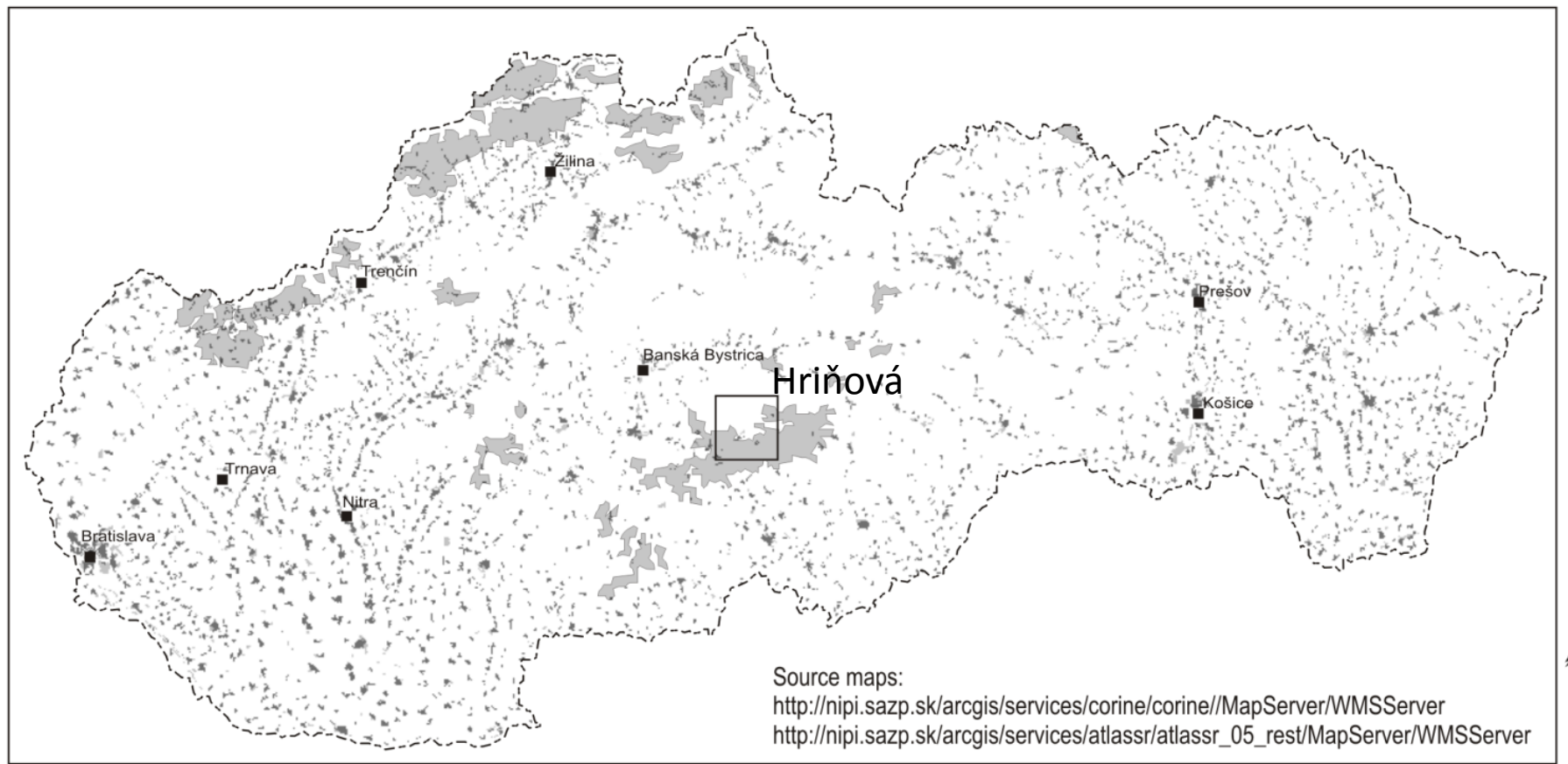


STUDIED AREA



GEOMORPHOLOGICAL UNITS

Traditional rural landscapes in Slovakia




Legend

Traditional rural landscapes in Slovakia
(Miklos eds., 2006)

 Traditional settlements (selected layer)

Layers of the project CLC 2006 (EEA, 2006)

 Artificial surfaces

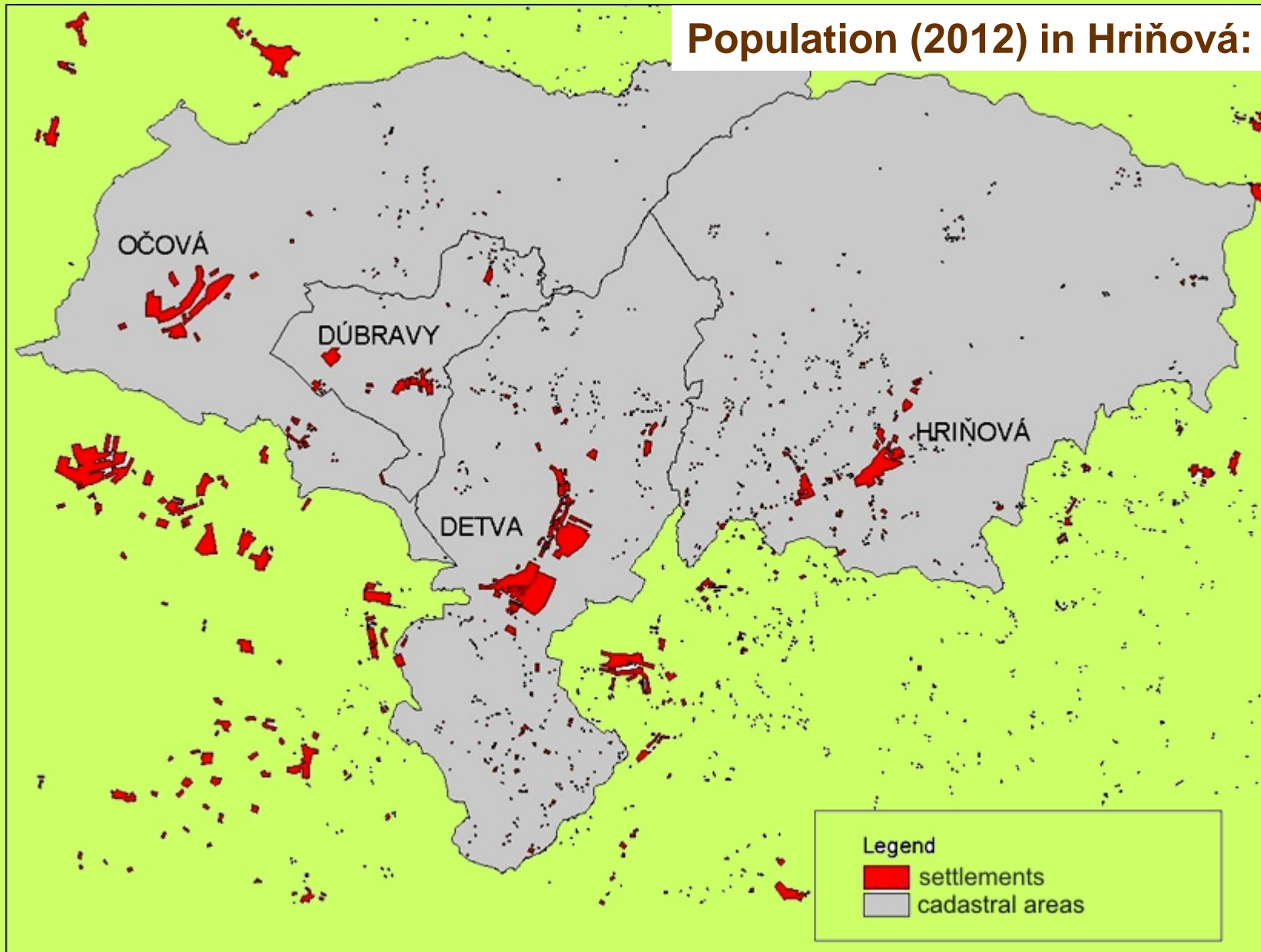
 The state border of Slovakia

Slovakia 49 036 km²

Traditional rural landscapes 2369 km² - 4.8%

The specific form of settlements „lazy“

Population (2012) in Hriňová: 7711

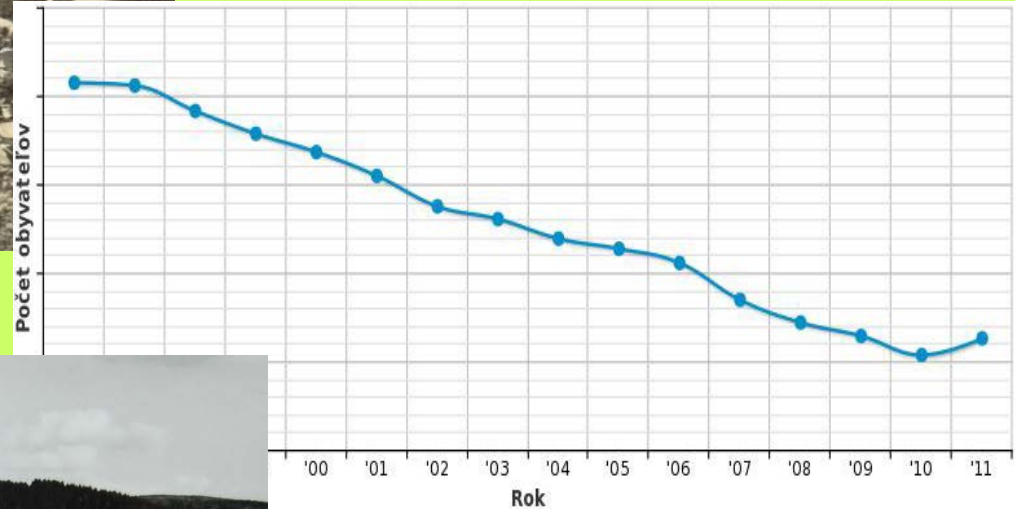


Historical genesis of settlements and rural landscape



http://www.hrinova.sk/big_foto_all.php?id=873312

- 17th century: agriculture



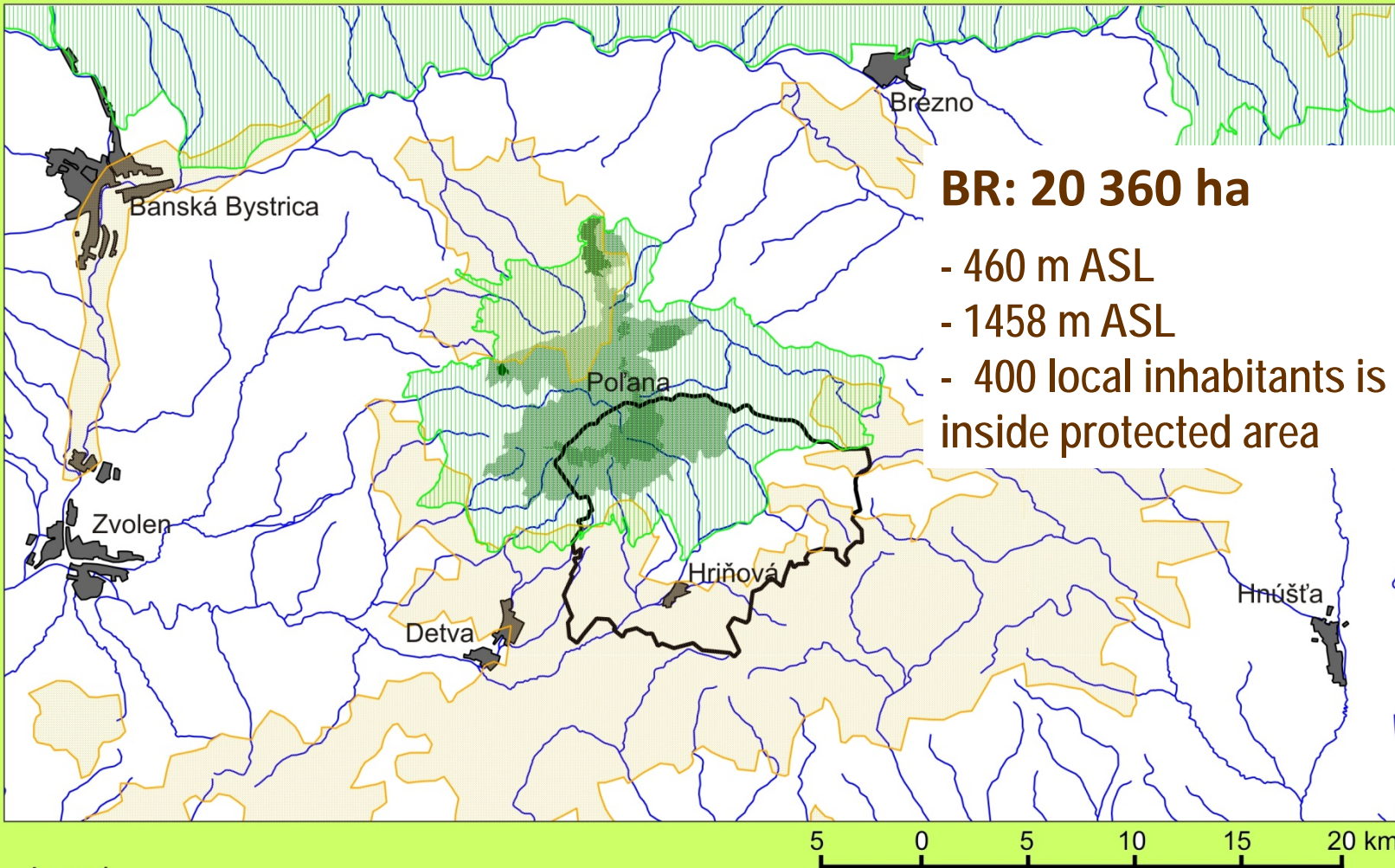
http://www.hrinova.sk/big_foto_all.php?id=2102373

**- 19th /20th :
wood processing and
glass industry**

**20th century: heavy
industry**



BR Poľana and traditional rural landscapes



BR: 20 360 ha

- 460 m ASL

- 1458 m ASL

- 400 local inhabitants is living
inside protected area

Legend

- Traditional cultural landscape with traditional settlements
- Settlements
- The Hriňová cadastral area
- Rivers

- Landscape Protected Area Poľana and transient zone of the Biospheric Reservation Poľana
- Buffer zone of the Biospheric Reservation Poľana
- Core zone of the Biospheric Reservation Poľana

Source map:
http://nipi.sazp.sk/arcgis/services/atlassr/atlassr_05_rest/MapServer/WMServer
http://www.uke.sav.sk/images/stories/MaB_Polana.jpg



Biospheric Reservation Poľana

New Action Plan since 2013

Sevilla Strategy,
Madrid Action Plan

Recommendations by MAB-IIC, Paris 2013
Division of Ecological and Earth Sciences

PRONATUR

*"Nature to People –
People to Nature"*

in frame of the

**Swiss-Slovak Cooperation
Programme**

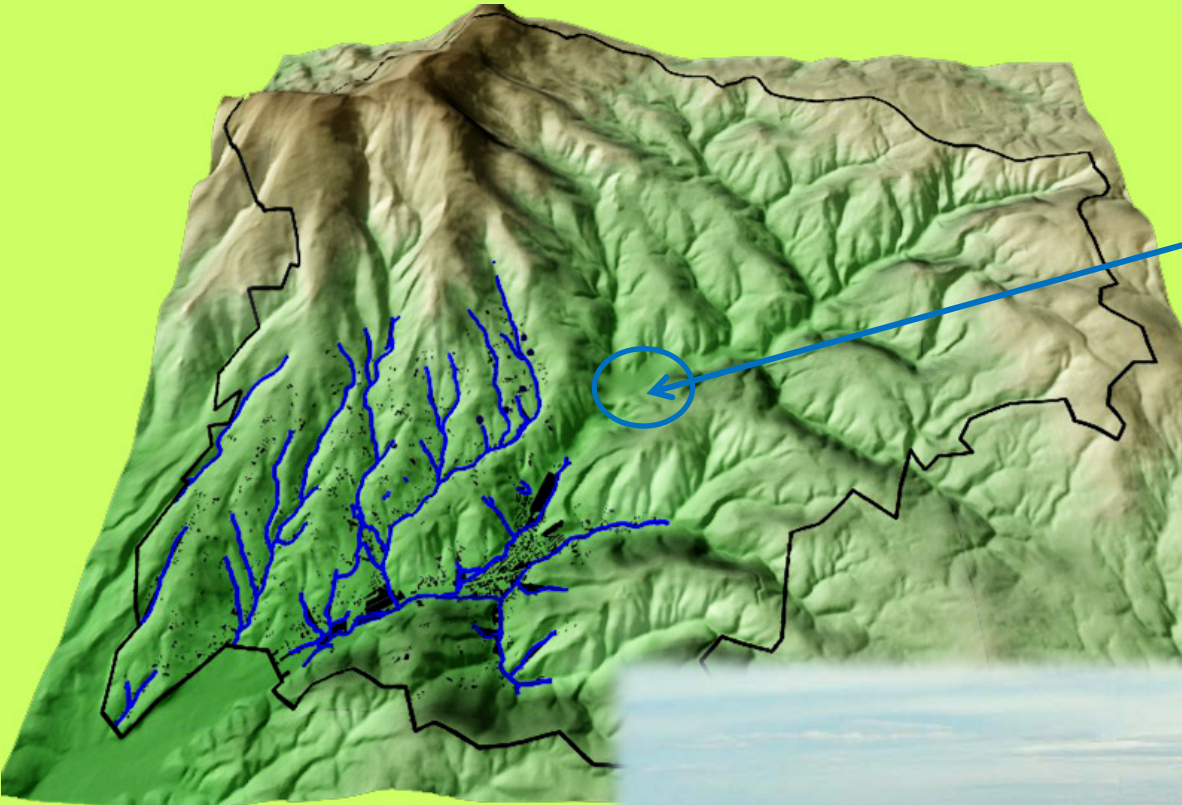


- 3 APR 2013

- *increase cooperation with the tourism sector to better capture/benefit from this activity;*
- *improve the capacity to plan and coordinate research with participatory approach particularly socio-economic;*
- *improve the management towards more integrative approach;*
- *to enhance support for the biosphere reserve to enable better participation in the Network at the national and international levels;*
- *to improve local participation and economic development within and around the biosphere reserve, supported by socio-economic research.*

BR Entlebuch, University of Bern

Landscape character of the Podpoľanie region



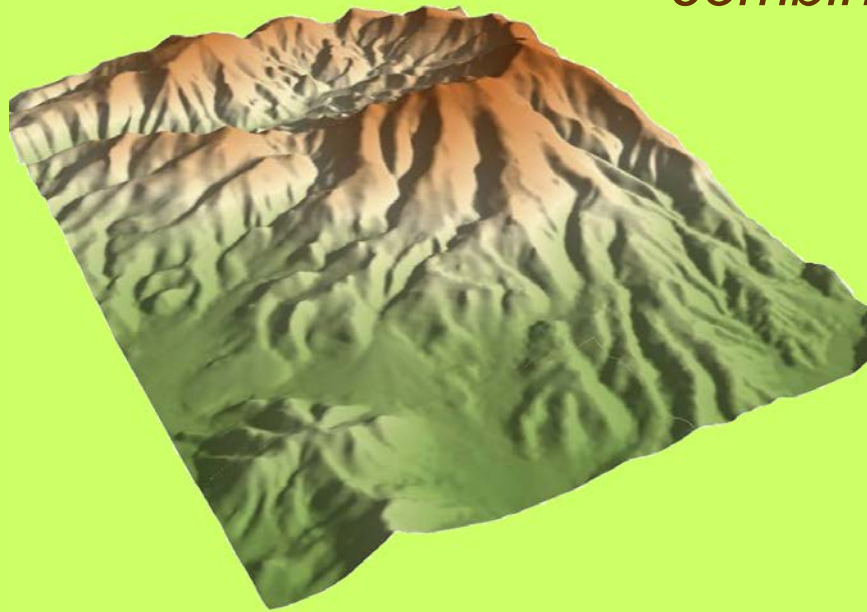
Hriňová dam

**specific feature
caldera of the Poľana Mt.**



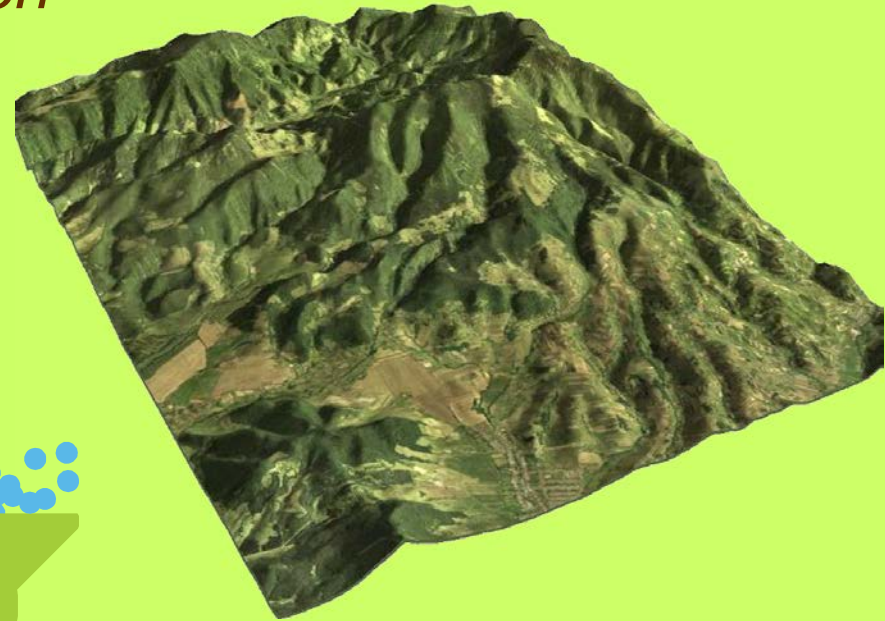
How to read of landscape's features basic binary model

relief



combination

land cover



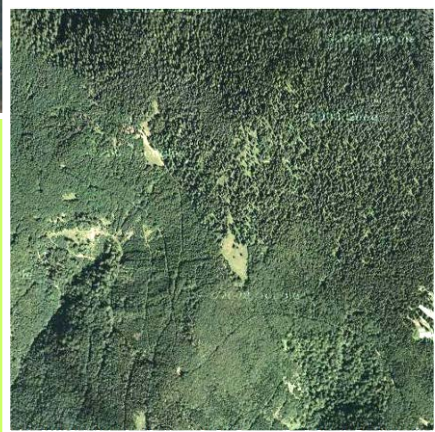
scale - detail

scale - detail

scale - detail

scale - detail

Groups of signs – combination - landscape types





Features of landscape character – imagination of associations



Poľana
caldera of volcano

church

settlement
Detva

scattered settlements
Detvianske
lazy

signs evoke **associations**



Method



VESTNÍK

ISSN 1335-1567

MINISTERSTVA ŽIVOTNÉHO PROSTREDIA SR

Ročník XVIII 2010 Čiastka 1b Cena €2,16

OBSAH

1. Metodika identifikácie a hodnotenia charakteristického vzhľadu krajiny.....2
2. Metodika hodnotenia vizuálnych vplyvov veterných elektrární a veterných parkov na krajinu.....52
3. Metodický pokyn na výpočet podielu elektrozariadení na trhu.....72

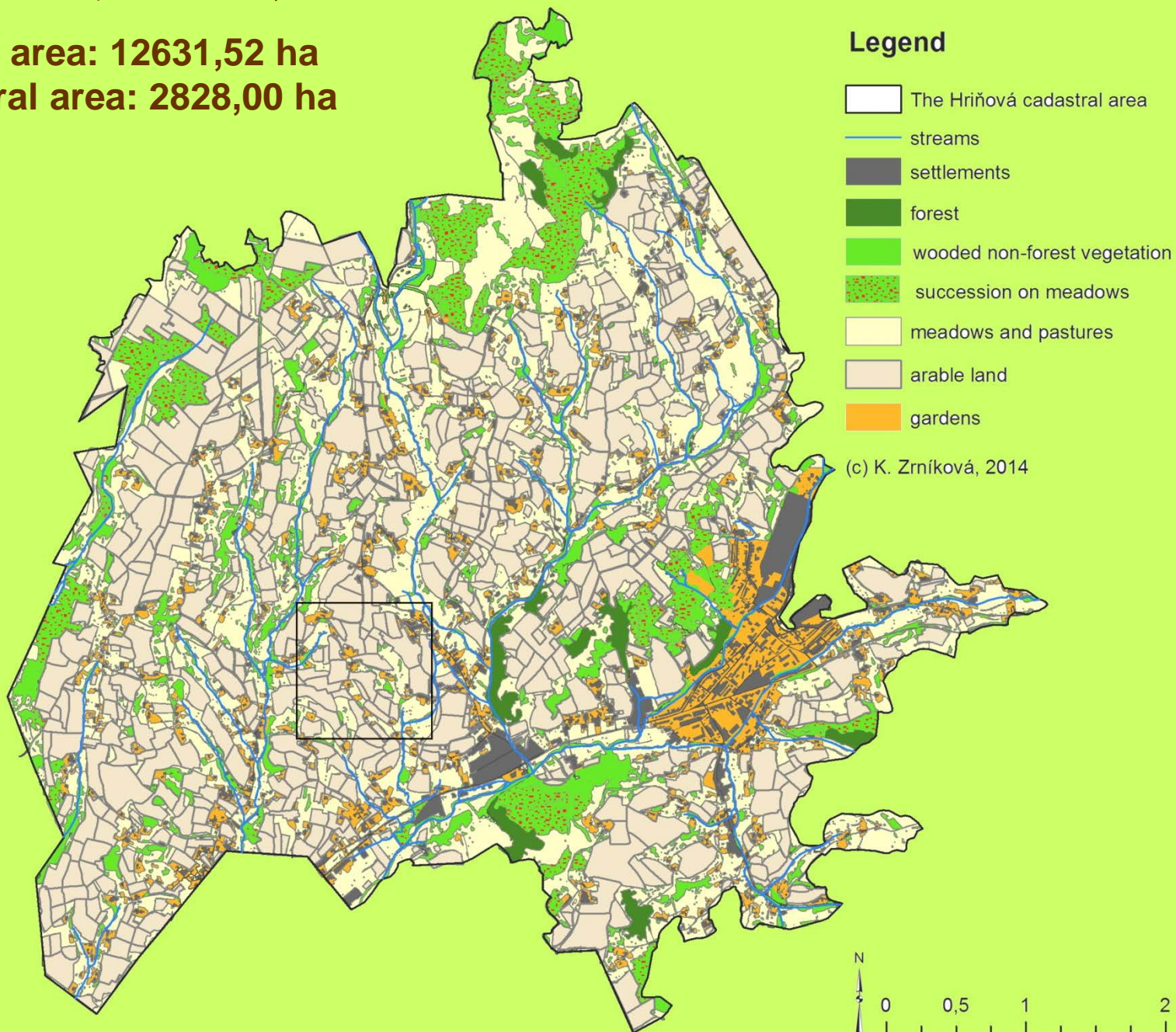
1. Method of characteristic landscape's appearance identification and assessment.

2. Method of influence assessment of wind-power stations and wind-power parks on visual landscape.

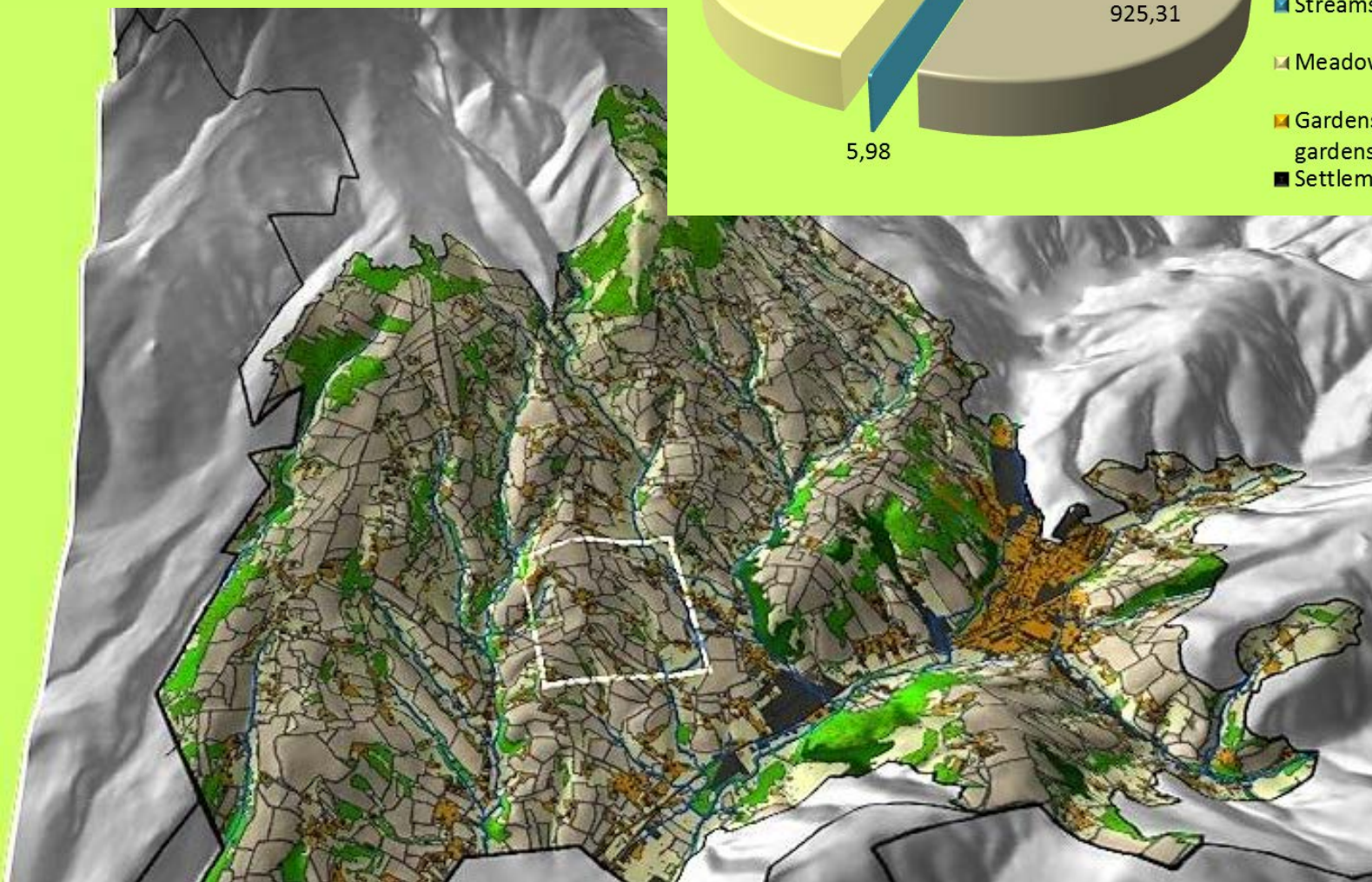
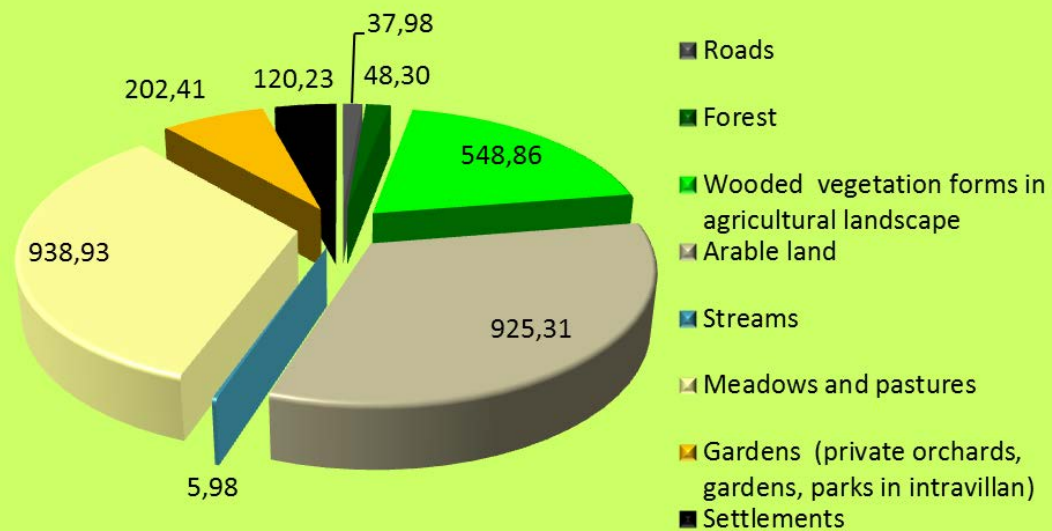
Land cover, Hriňová, 2010

Cadastral area: 12631,52 ha

Agricultural area: 2828,00 ha

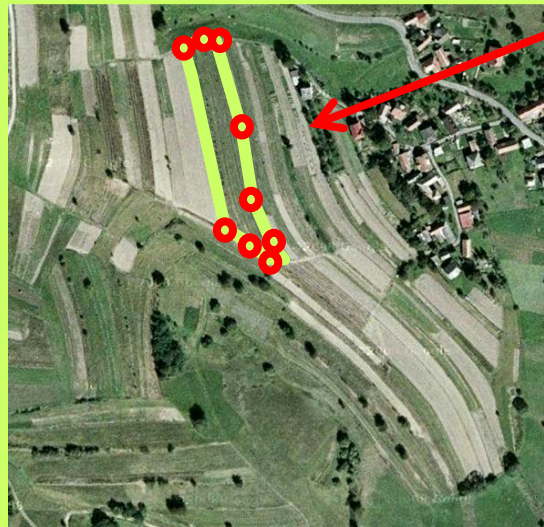
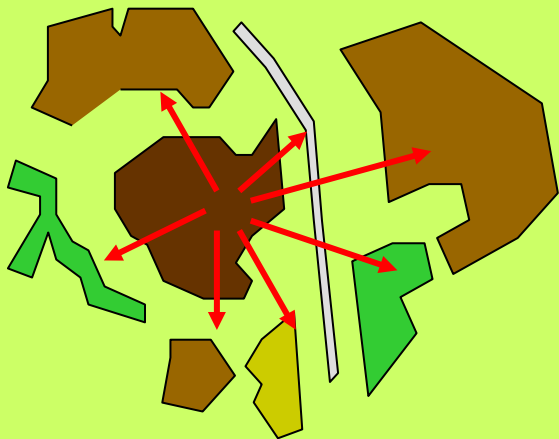


Land cover, Hriňová, 2010



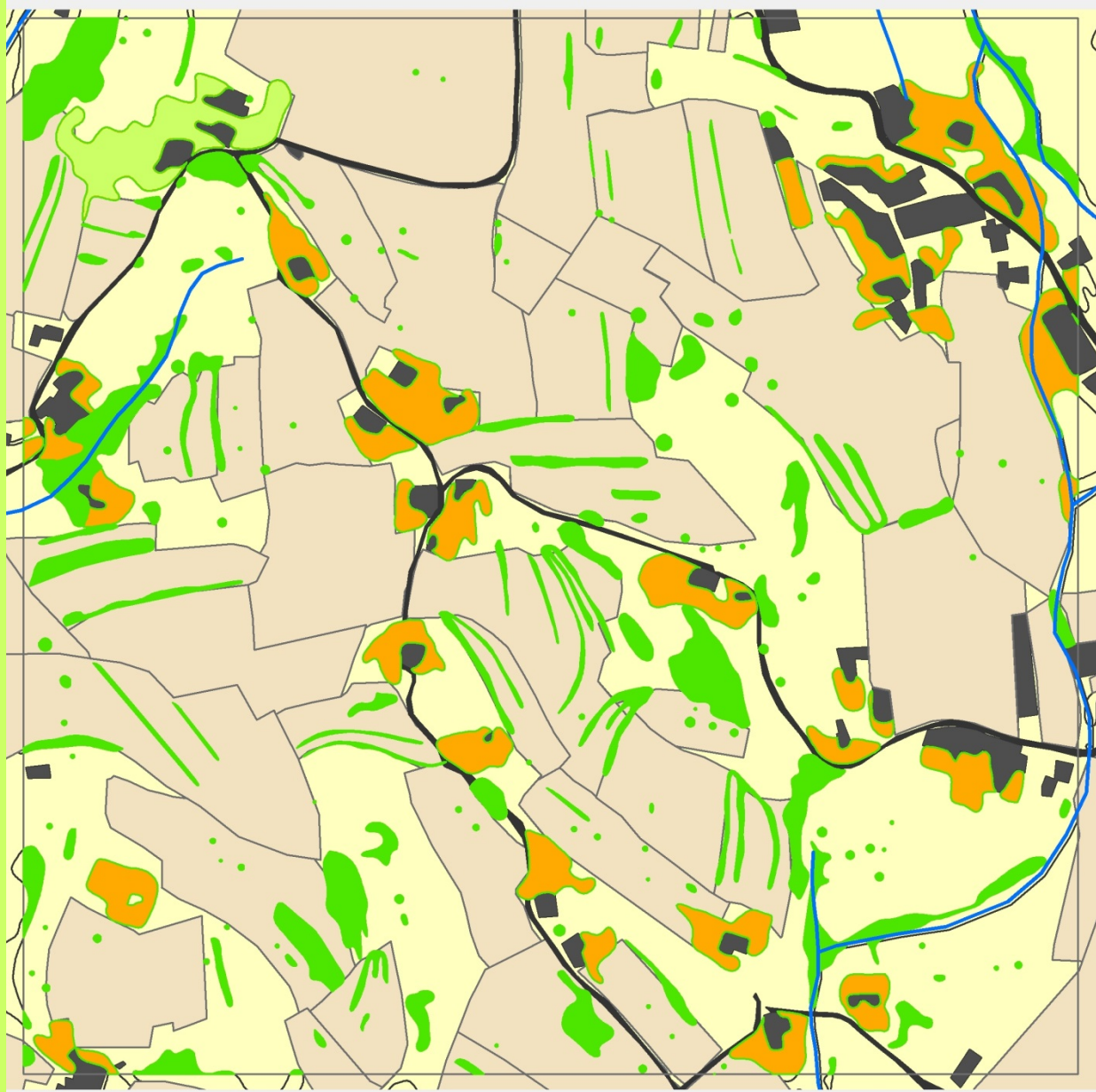
Landscape metrics

Land cover indexes/ classes	CA Coverage area [ha]	NP Number of patches	TE Total edge [m]	ED Edge density [m/ha]	MPE Average amount of edge per patch [m]	MPS Mean patch size [ha]	MPAR ratio of patch perimeter to area [m/ha]
Forest	48.30	49.00	27350.25	9.67	558.17	0.99	68652.37
Wooded vegetation forms in agricultural landscape	548.86	6194.00	911731.85	322.39	147.20	0.09	35781.97
Gardens (private orchards, gardens, parks in intravillan)	202.41	2827.00	380885.93	134.68	134.73	0.07	52944.32
Arable land	925.31	1149.00 But not real parcels !	611401.77	216.20	532.12	0.81	54453.18
Settlements	120.23	1672.00	180509.33	63.83	107.96	0.07	30985.57



ArcGIS 10,
Patch Analyst Statistic

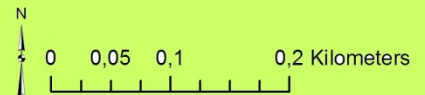
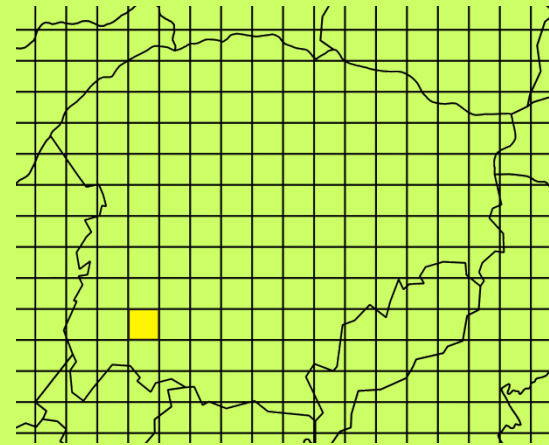
Land cover - representative square



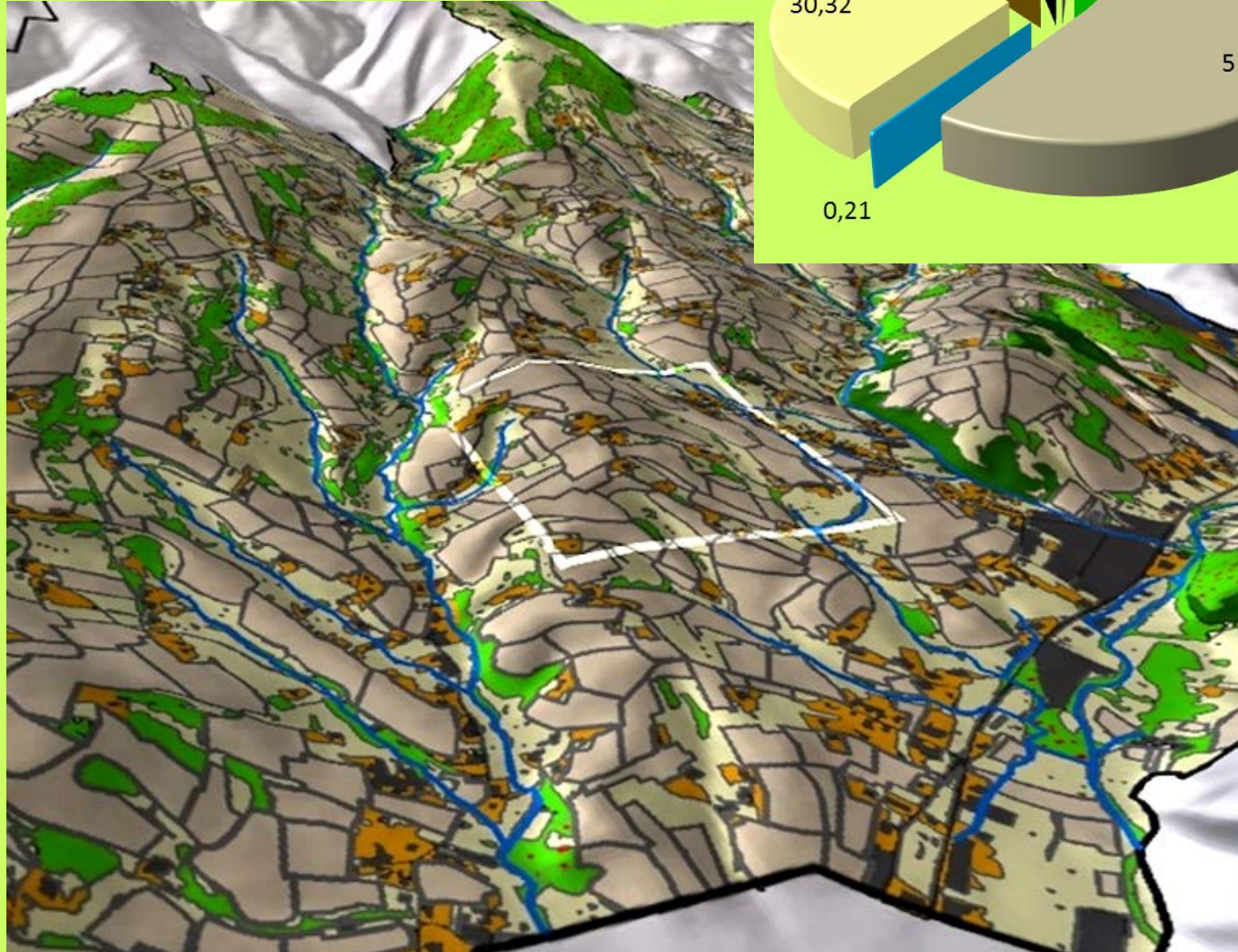
Legend

-  The Hřiňová cadastral area
-  streams
-  settlements and roads
-  forest
-  wooded non-forest vegetation
-  meadows and pastures
-  arable land
-  gardens

(c) K. Zrníková, 2014



Land cover diversity of the representative square



- Roads
- Wooded non-forest vegetation and succession on meadows
- Arable land
- Streams
- Meadows and pastures

Landscape metrics – representative square – 100 ha

Land cover indexes/ classes	CA Coverage area [ha]	NP Number of patches	MPS Mean patch size [ha]	TE Total edge [m]	ED Edge density [m/ha]	MPE Average amount of edge per patch [m]	MPAR ratio of patch perimeter to area [m/ha]
Wooded vegetation forms in agricultural landscape	6.83	271.0	0.03	23511.11	235.07	86.76	30295.35
Gardens (private orchards, gardens, parks in intravillan)	7.10	122.0	0.06	15798.72	157.96	129.50	33957.43
Arable land	51.49	78.0 But not real parcels!	0.66	33636.70	336.31	431.24	26712.96
Settlements	3.10	63.0	0,05	5700,96	57.0	90.49	5700,96

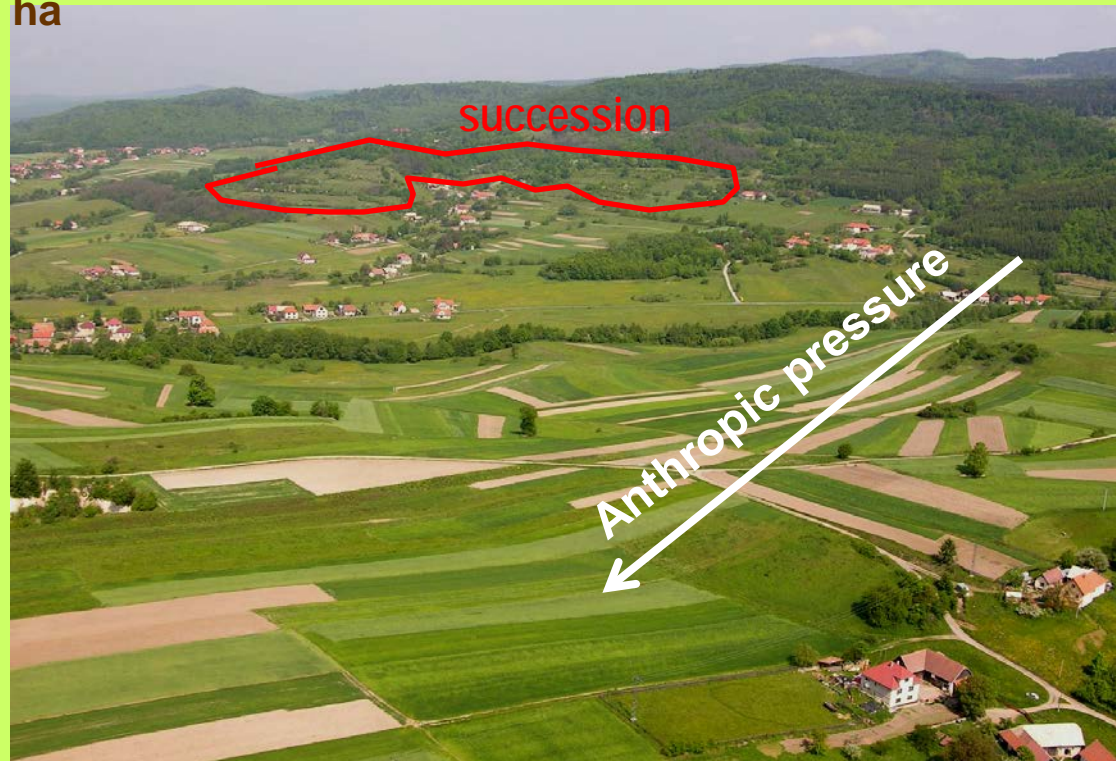
Land cover classes: agricultural landscape / representative square	Correlation of all indexes	Correlation of selected indexes
Wooded vegetation forms in agricultural landscape	0.556648477	0.999958
Gardens	0.417506354	
Arable land	0.798842672	0.791433
Settlements	0.765792388	

$$Correl(X, Y) = \frac{\sum (x - \bar{x})(y - \bar{y})}{\sqrt{\sum (x - \bar{x})^2 \sum (y - \bar{y})^2}}$$

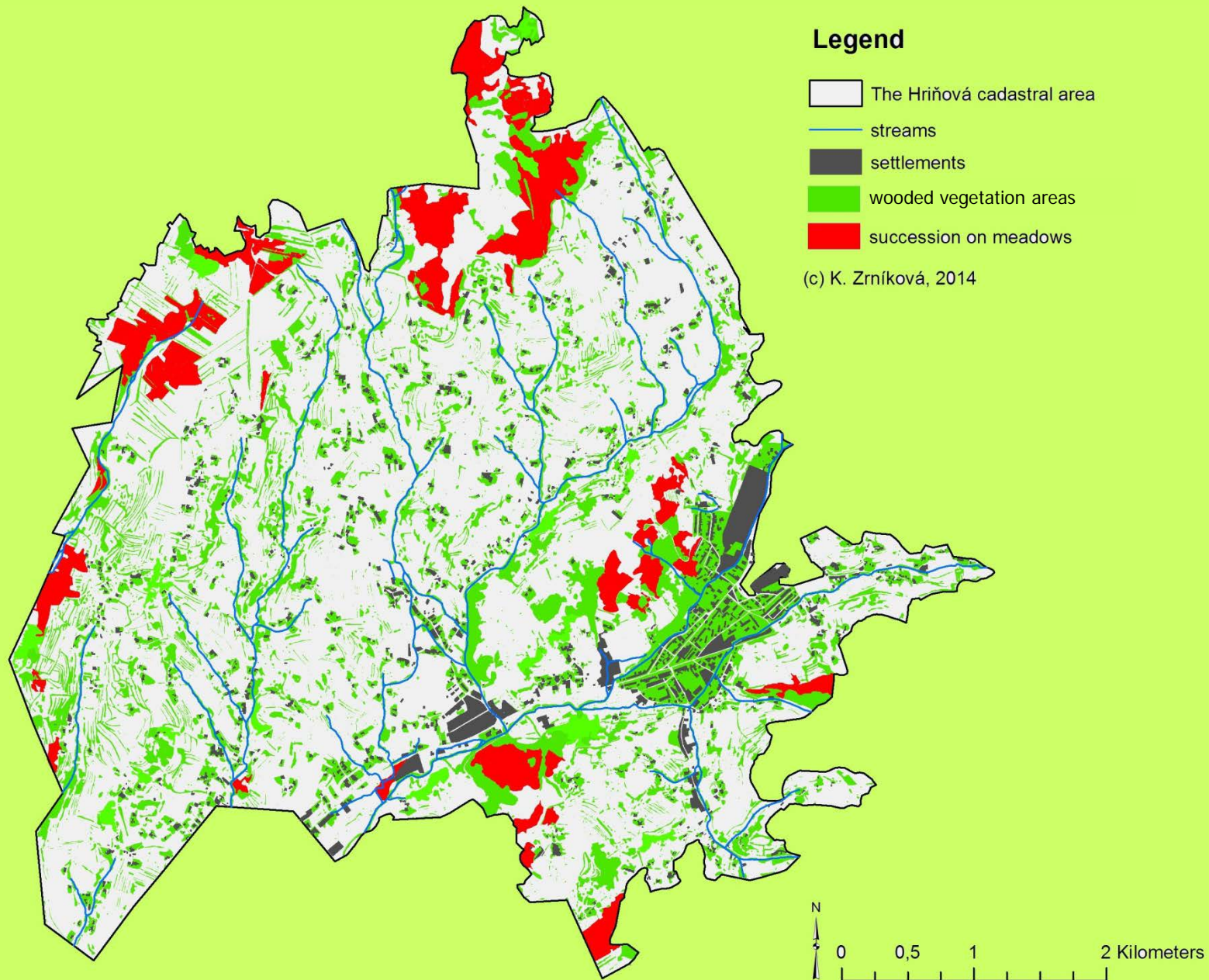
Anthropic pressure in the agricultural landscape

- Agricultural landscape: 2828.00 ha

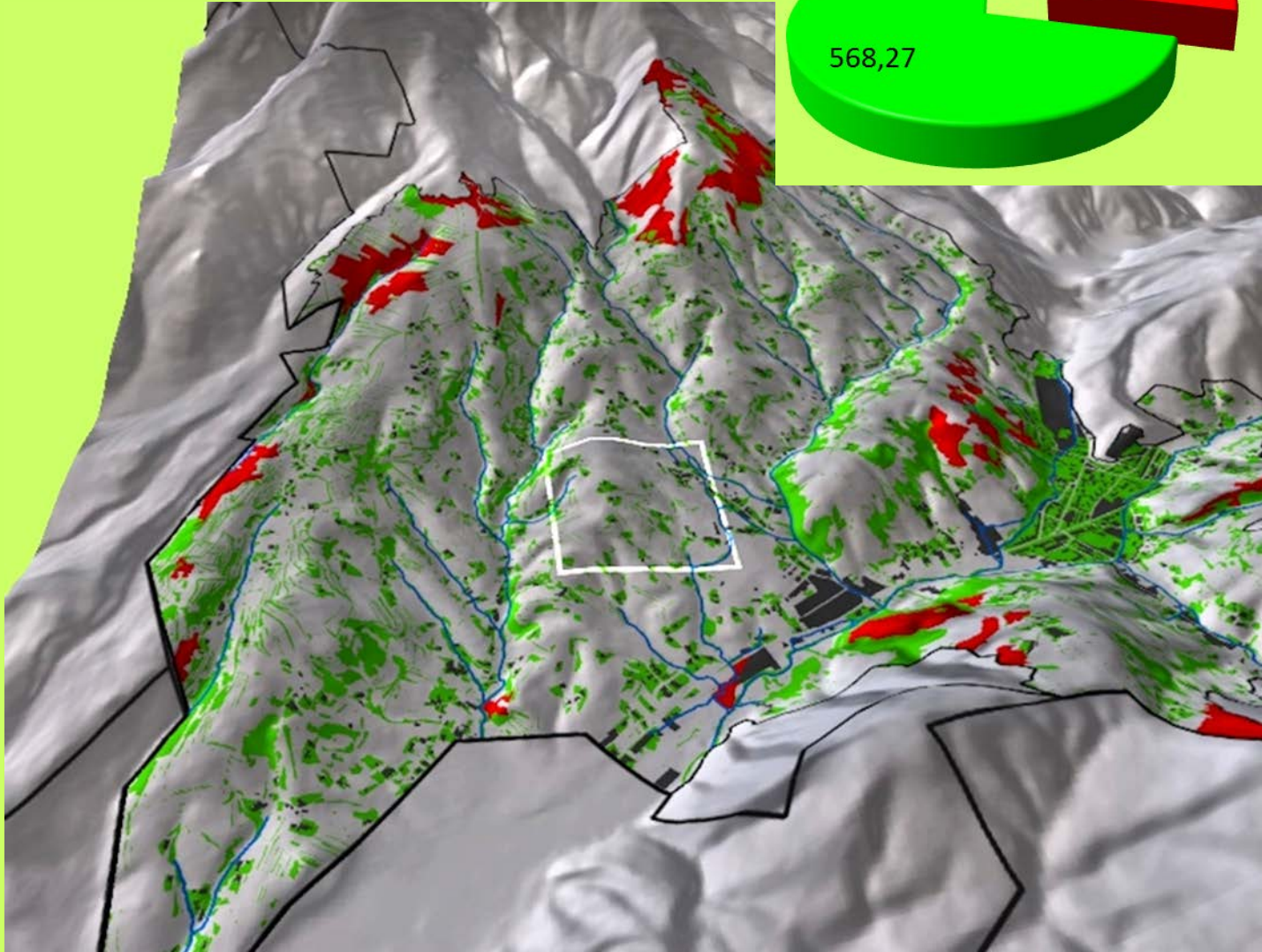
 - Forests: 48.30 ha
 - Wooded vegetation forms in agricultural landscape: 548.86 ha
 - Gardens (orchards, gardens, parks in intravillan): 202.40 ha
 - Meadows and pastures: 938.93 ha
 - Streams: 5.98 ha
 - Roads: 37.98 ha
- 799,54 ha
-231.28 ha
succession



Wooded vegetation areas



Wooded vegetation areas



- Succession on the meadows and pastures
- Wooded non-forest vegetation areas

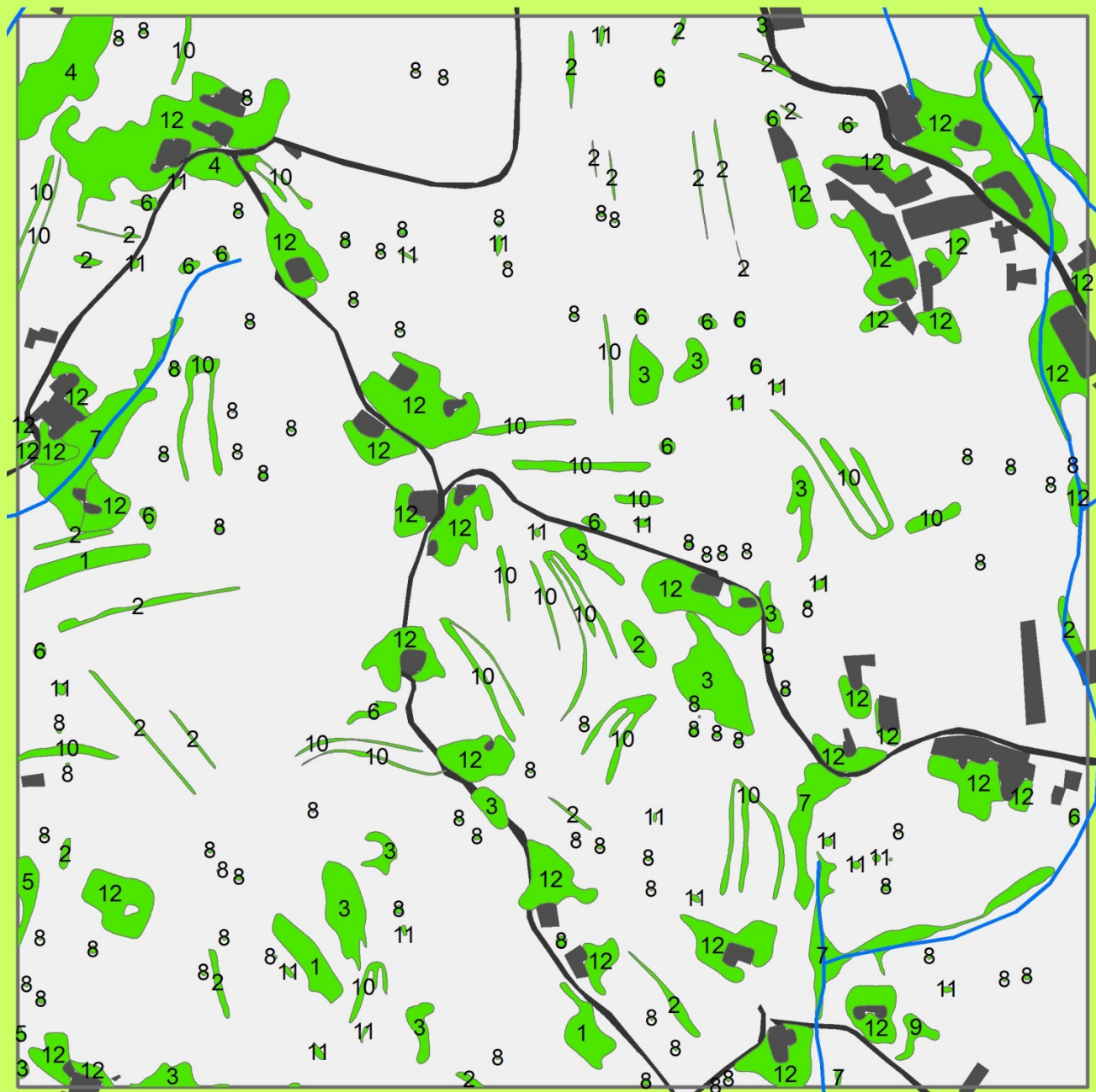
Wooded vegetation areas in the agricultural landscape

Hriňová, 2010

- Agricultural landscape area: 2828,00 ha
- Wooded vegetation areas: 799,54 ha
- Succession on the meadows and pastures: 28,9%



Representative square - wooded vegetation areas



Legend

— streams

■ settlements and roads

Type of wooded non-forest vegetation

1-diffused all over the area

2-lines

3-areal-compact

4-areal-lines

5-predominantly lines

6-smal patches (100-500 m2)

7-riparian vegetation

8-solitaire

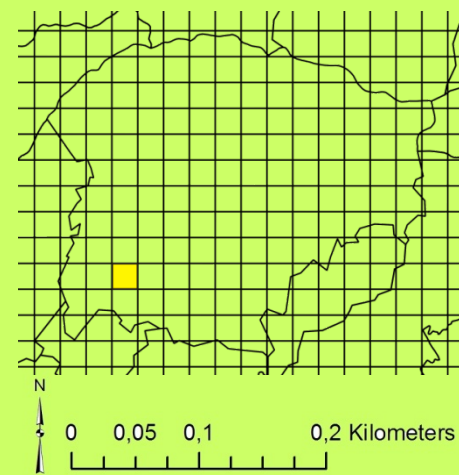
9-sparsely diffused

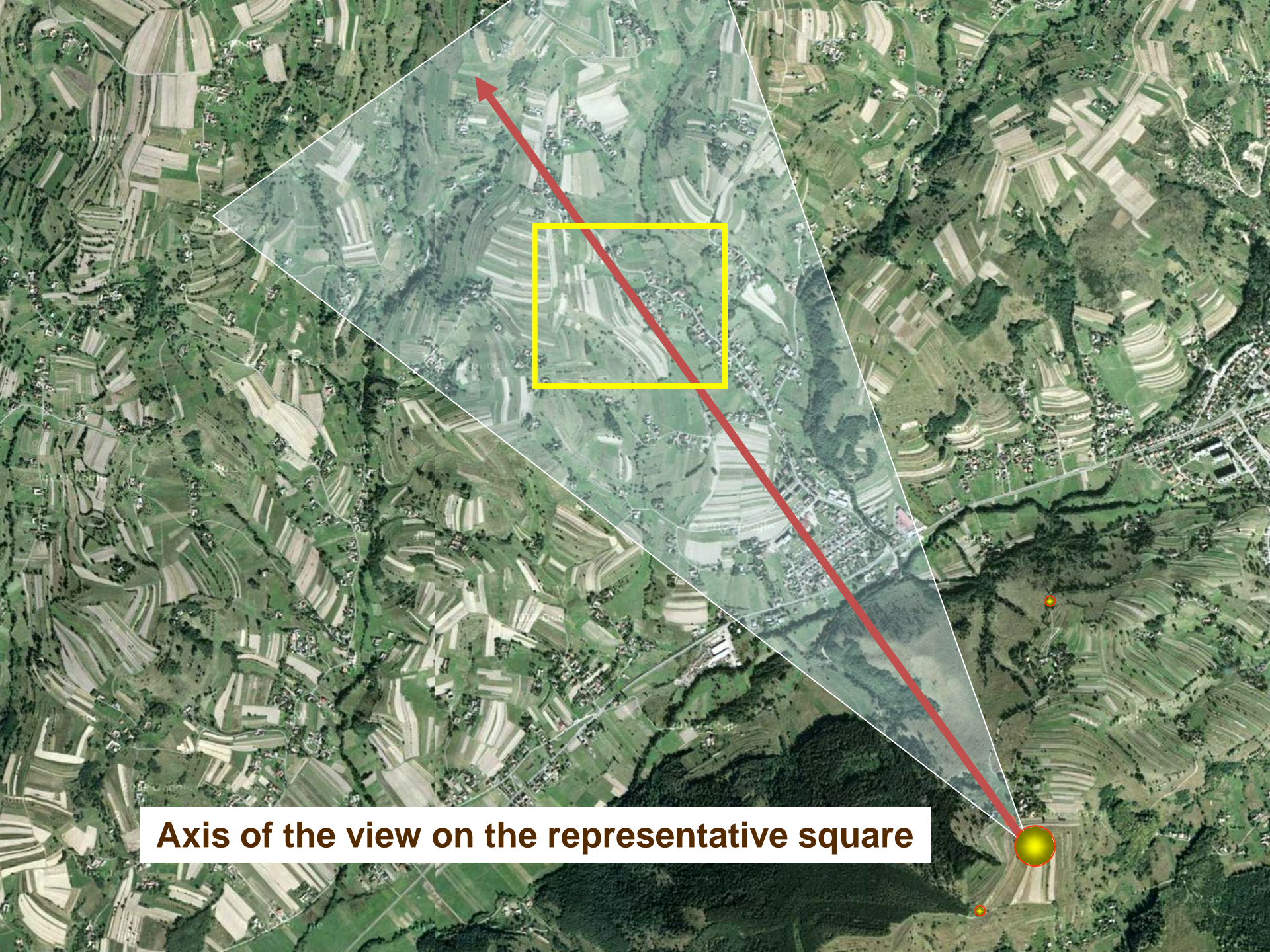
10-fan-shaped

11-small patches (50-100 m2)

12-gardens

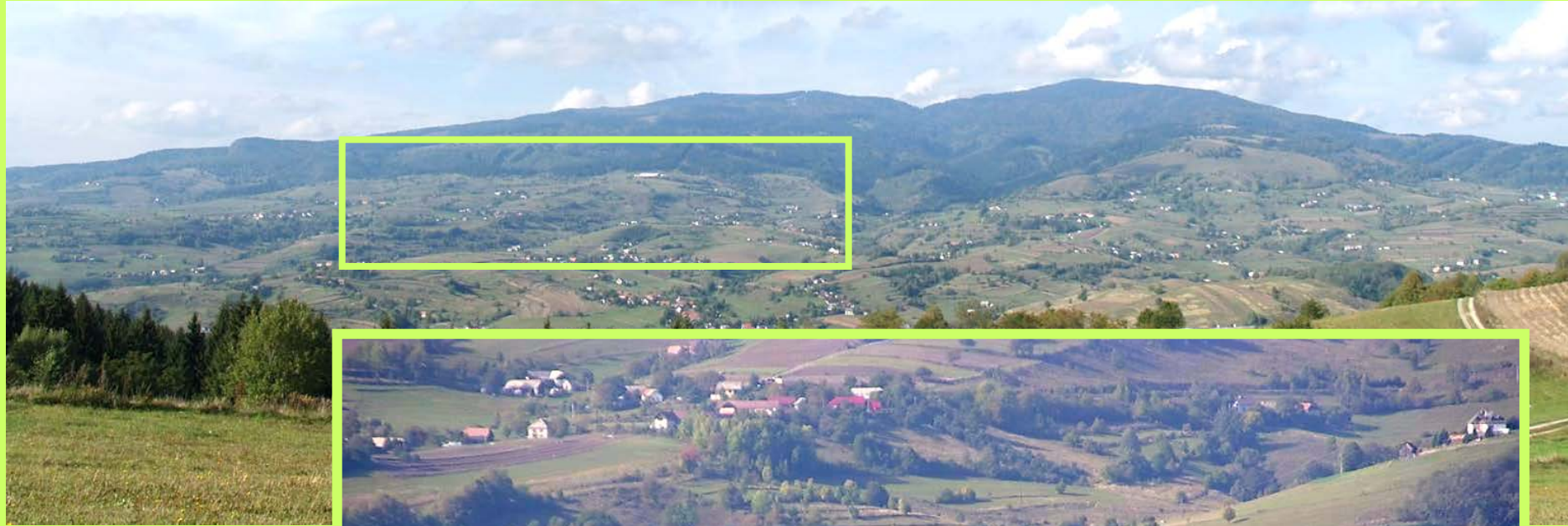
(c) K. Zrníková, 2014



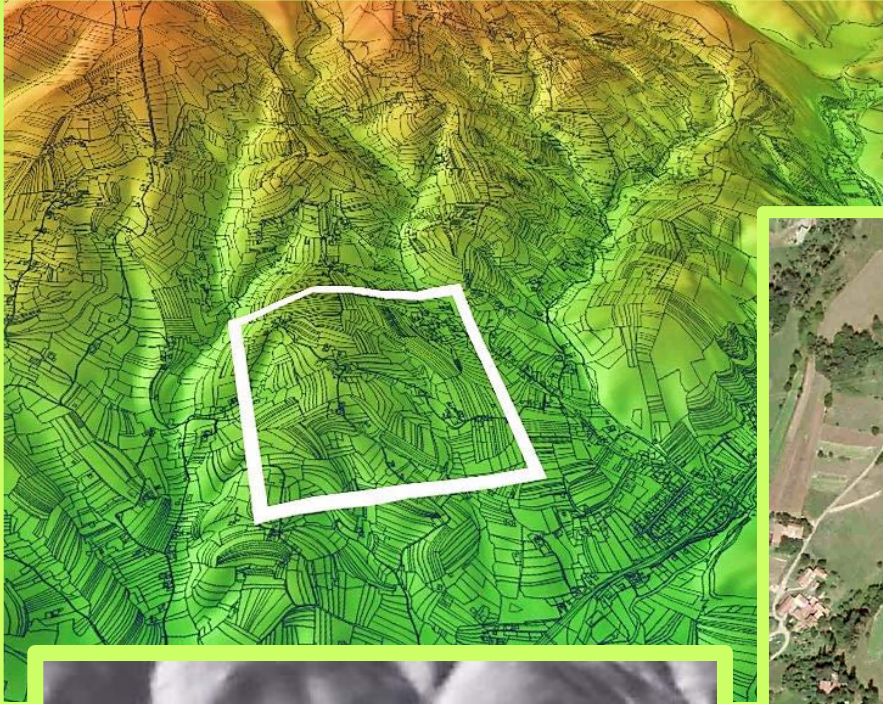


Axis of the view on the representative square

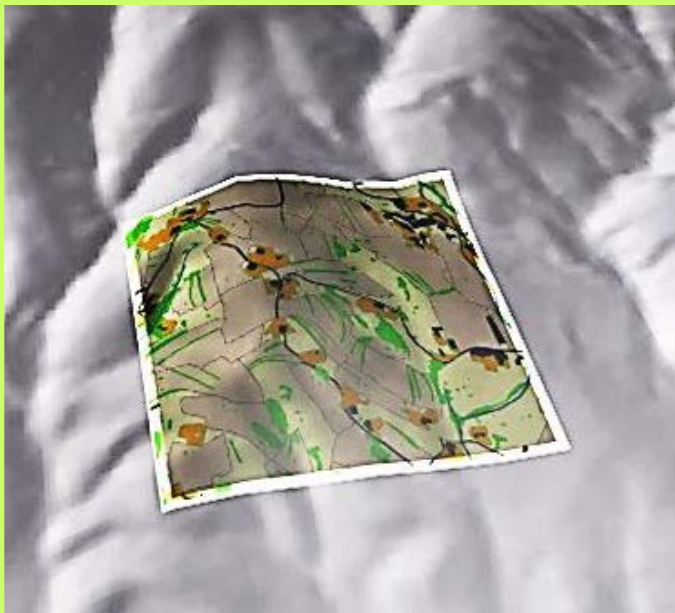
Visual landscape and features of landscape character



Visual appearance of landscape diveristy

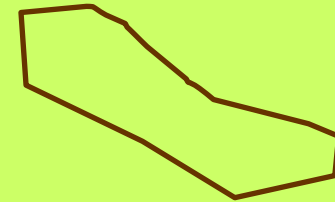
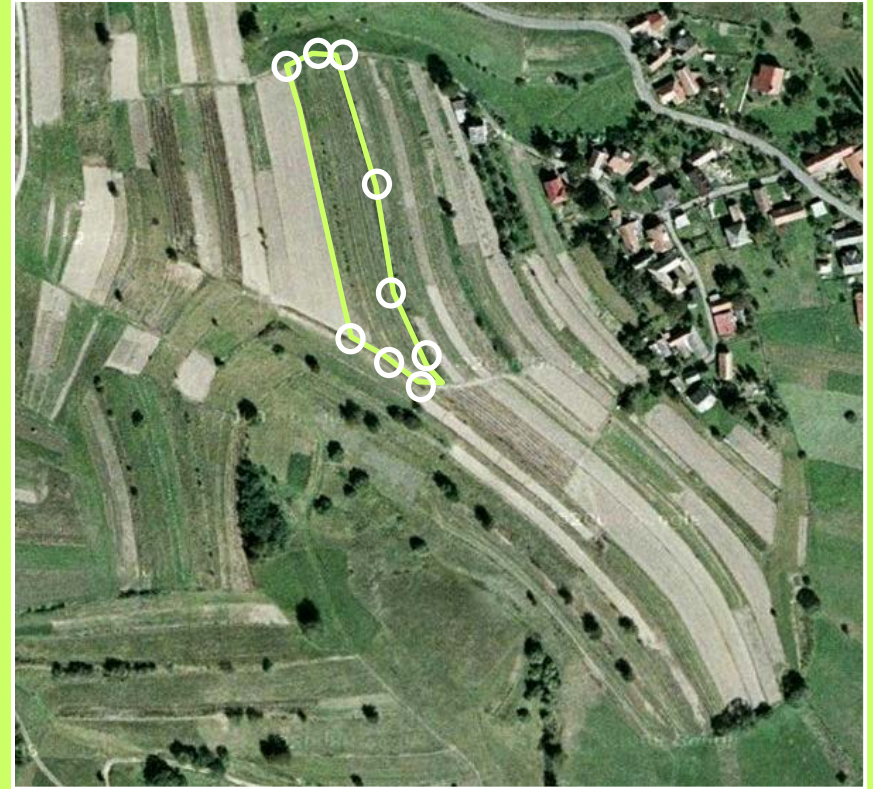


representative square



Visual characteristics of landscape pattern

Skew and horizontal projections

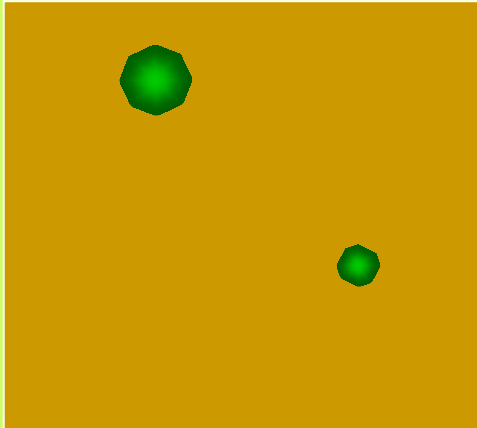


Basic geometric forms

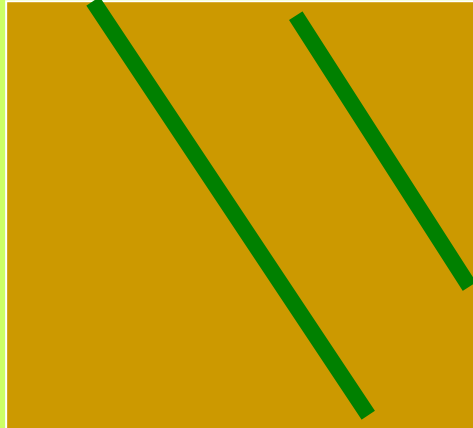
Abstraction of the reality

proximity to elementary geometric forms

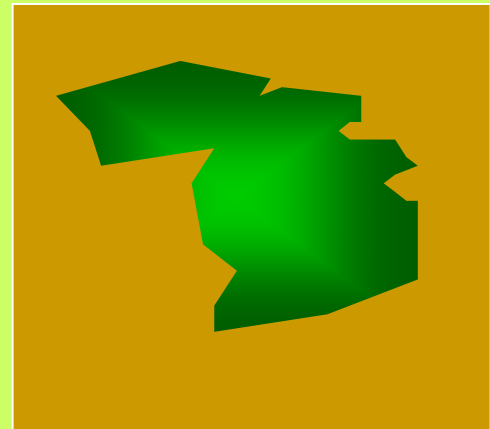
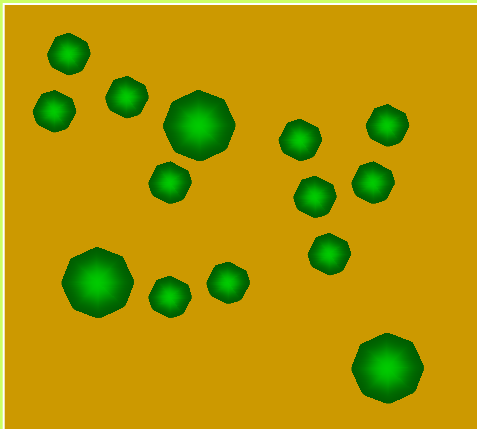
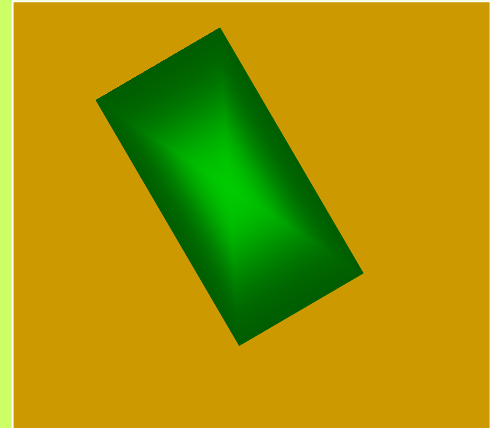
points



lines

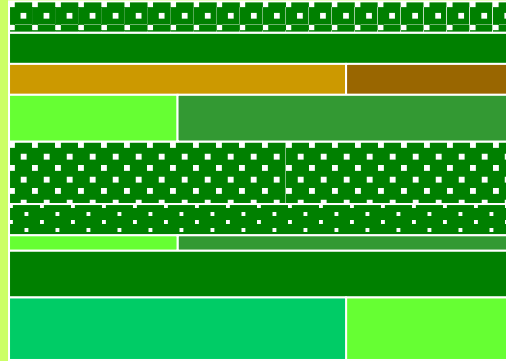


polygons

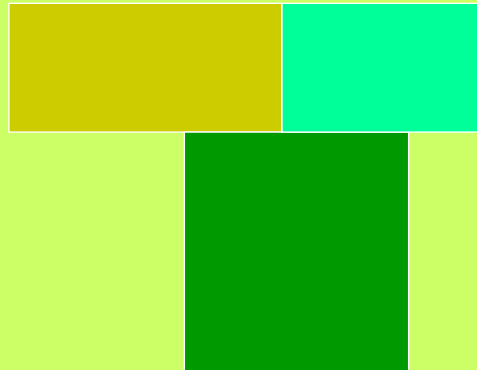


Landscape pattern - types of traditional plots

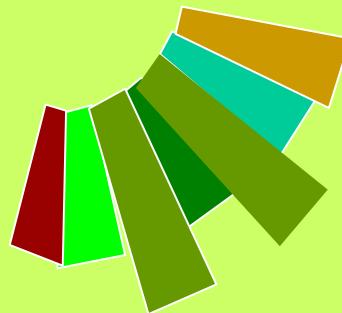
- Lines



- Plates

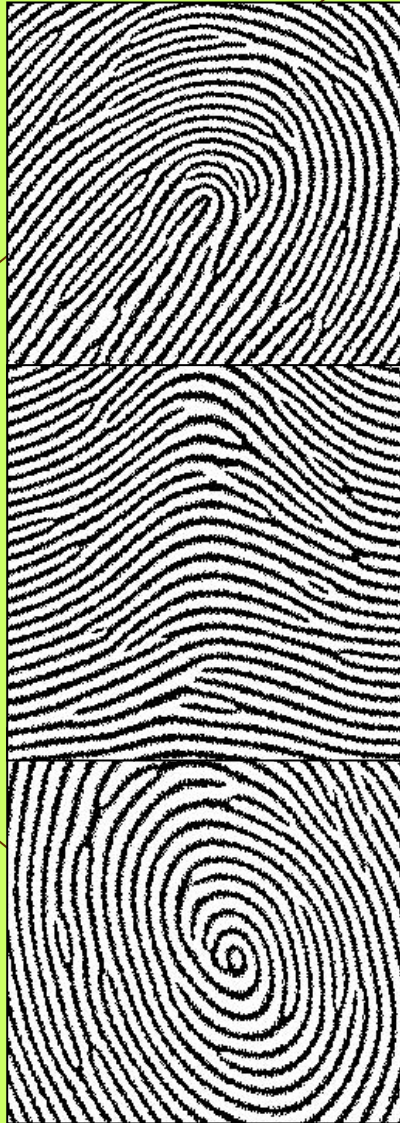


- Fan-shaped plots



Historical structures in agricultural landscape - unique features

„Dactyloskopy“
of landscape



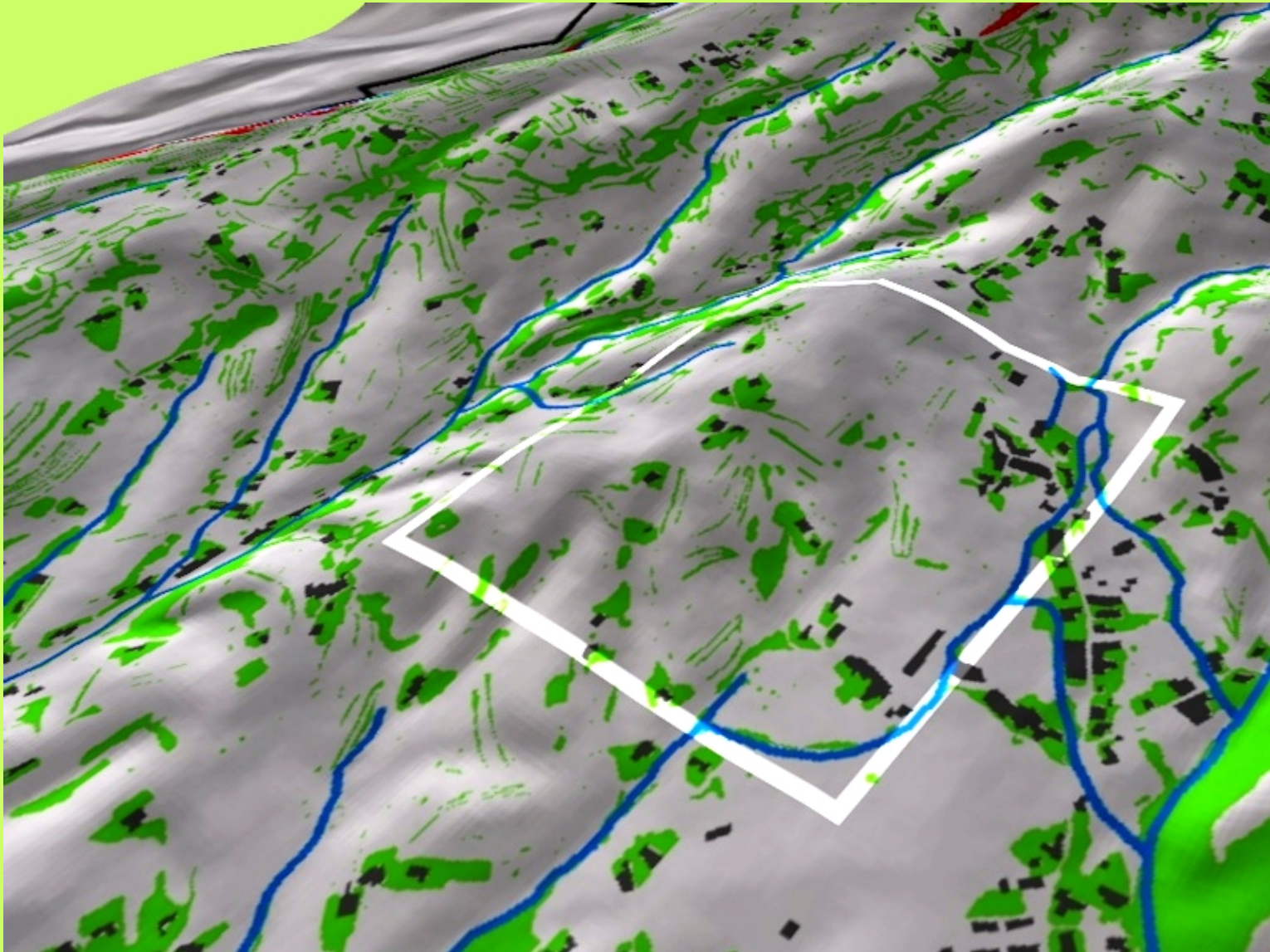
„Orthocode“
of landscape



Woody vegetation forms - support diversity and heterogeneity



Combination of wooded vegetation areas and relief

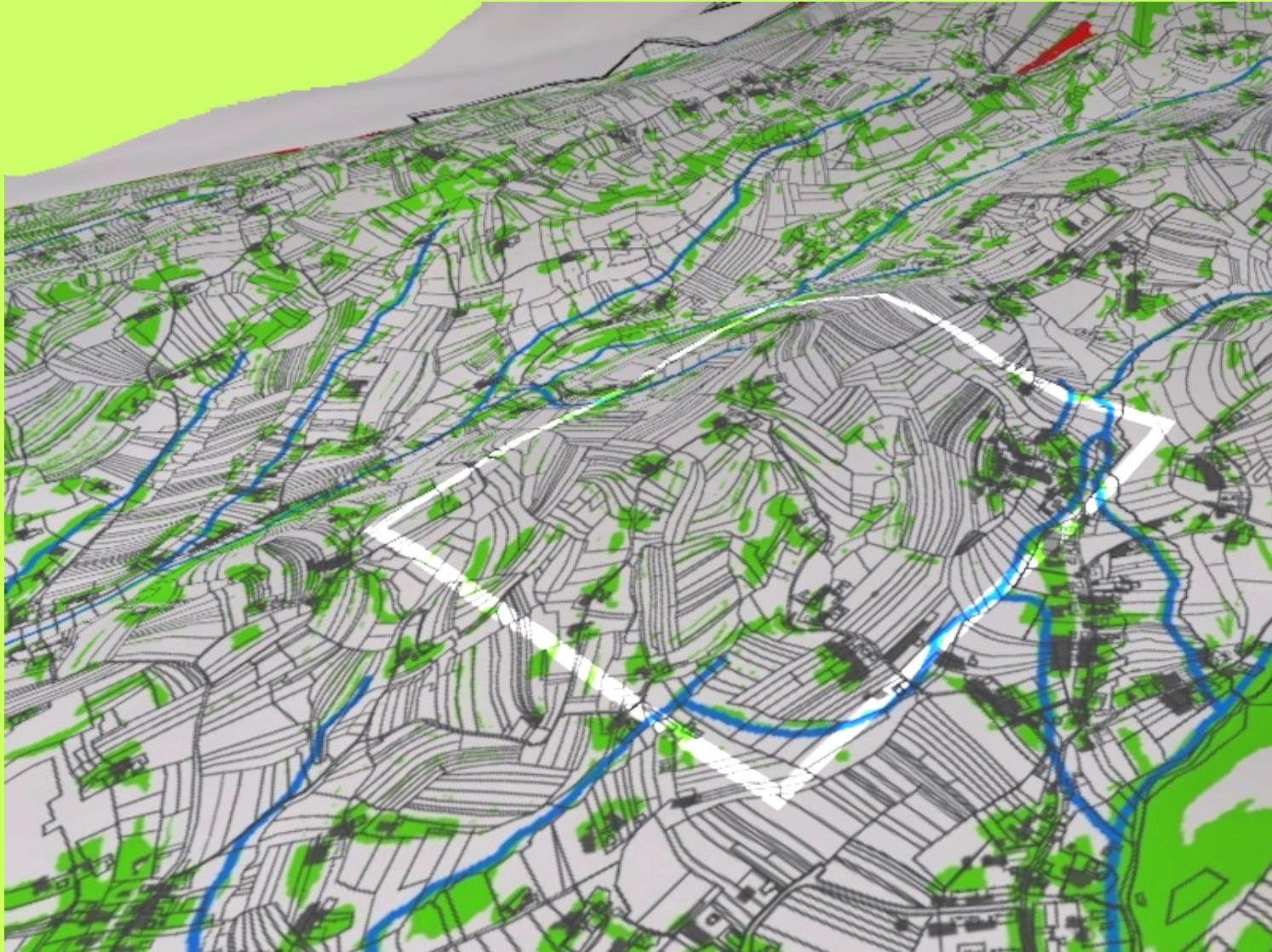


Ploughland

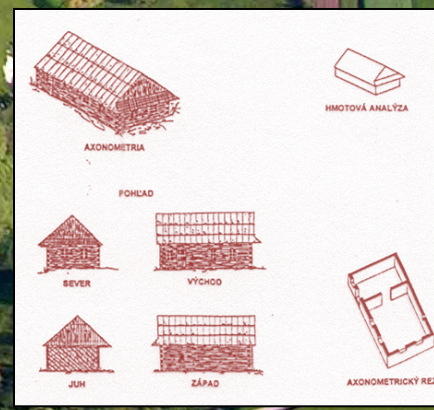
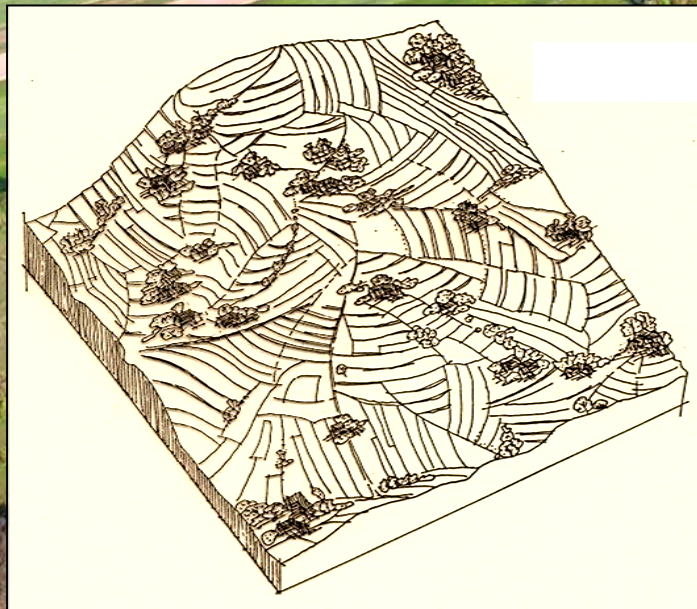
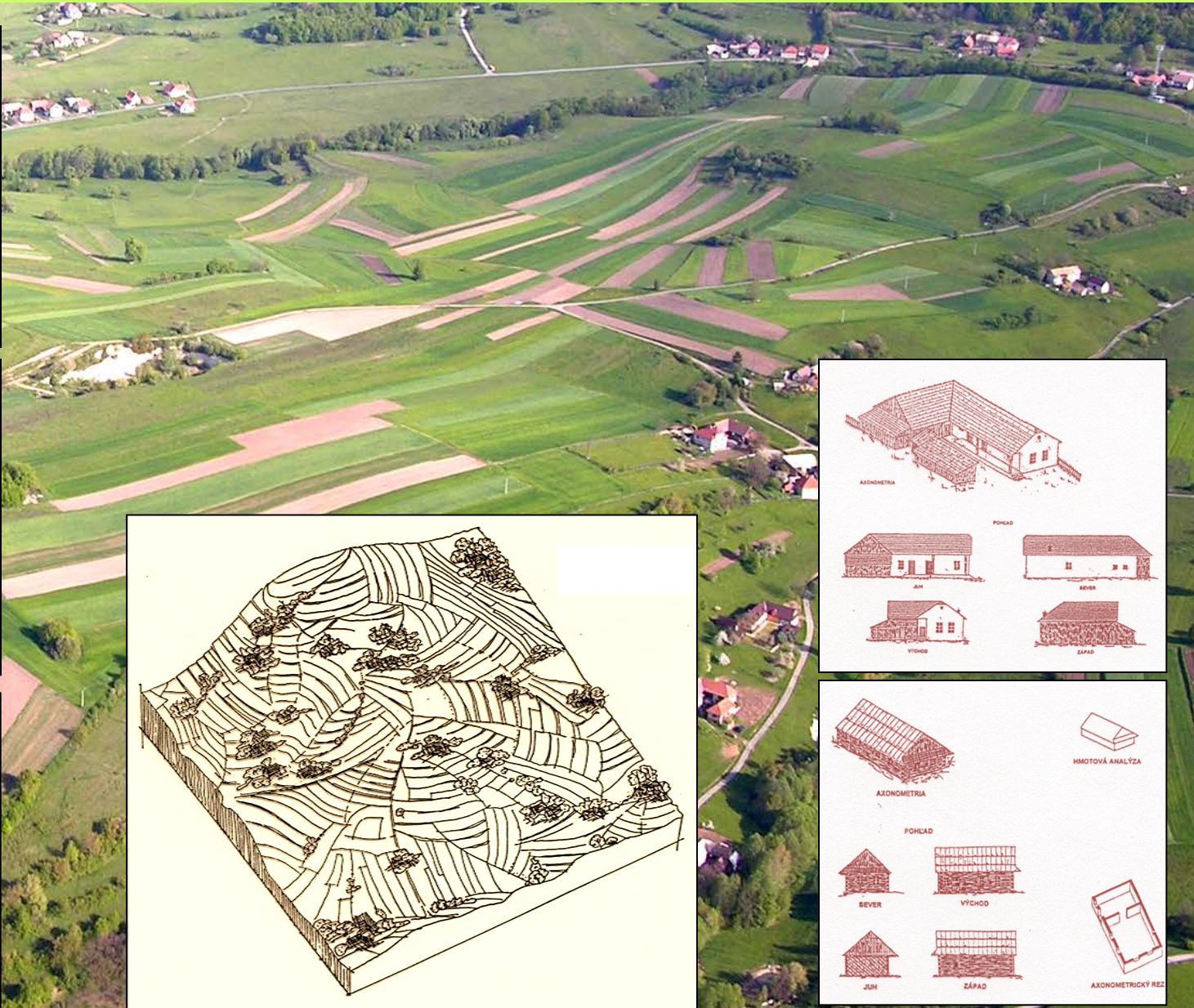
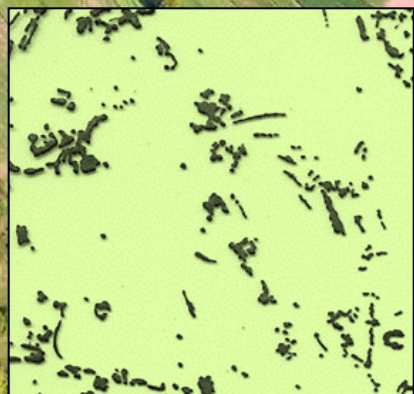
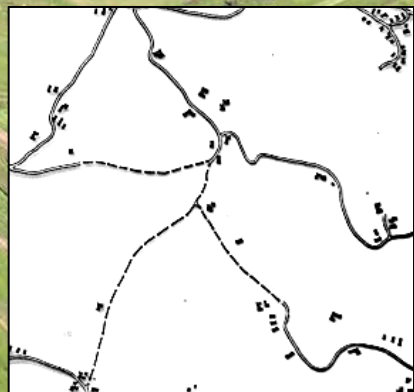
- besides diversity represent landscape identity



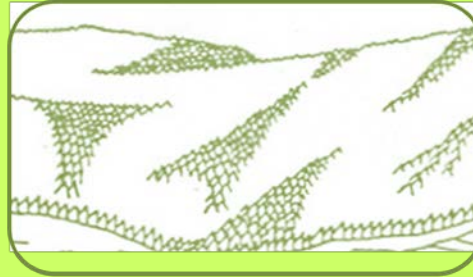
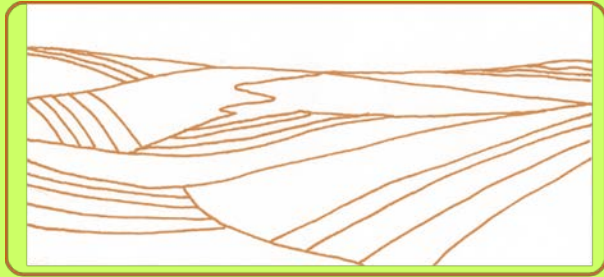
Combination of wooded vegetation areas, relief and parcels



Traditional practices in agriculture value of landscape



Landscape character



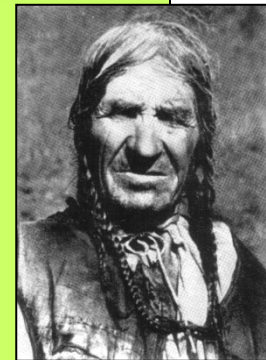
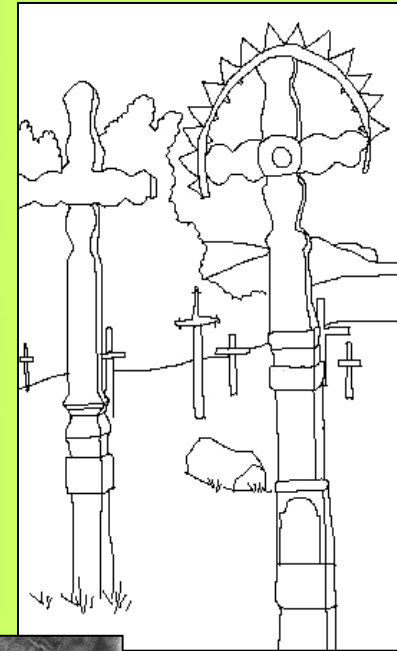
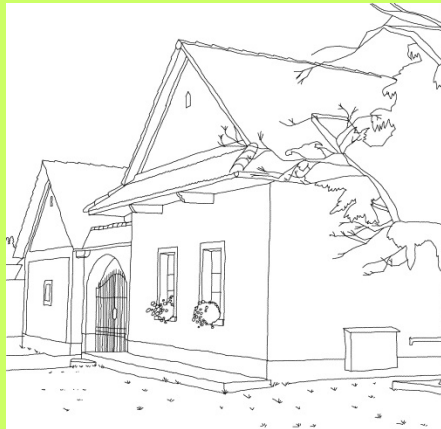
**features which improve
quality of visual
landscape**





Imagination of associations ...attractive for tourists

Land use and relatives to the folk architecture



Landscape diversity in detail – catchworks

Unknown for tourists ?
Problem for local inhabitants ?

Catchworks as a unique system of water distribution in the basin



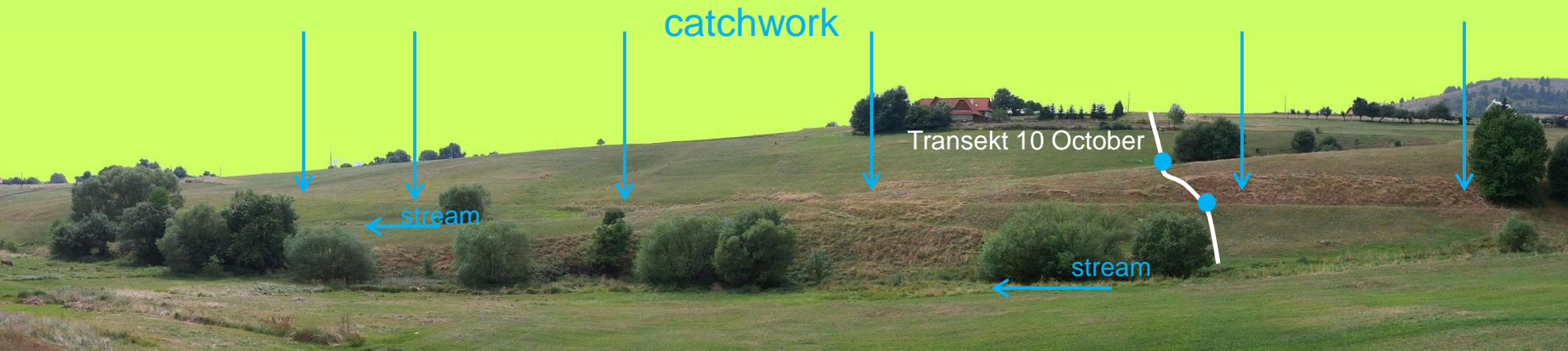
stream

catchwork

catchwork

Identification in the field

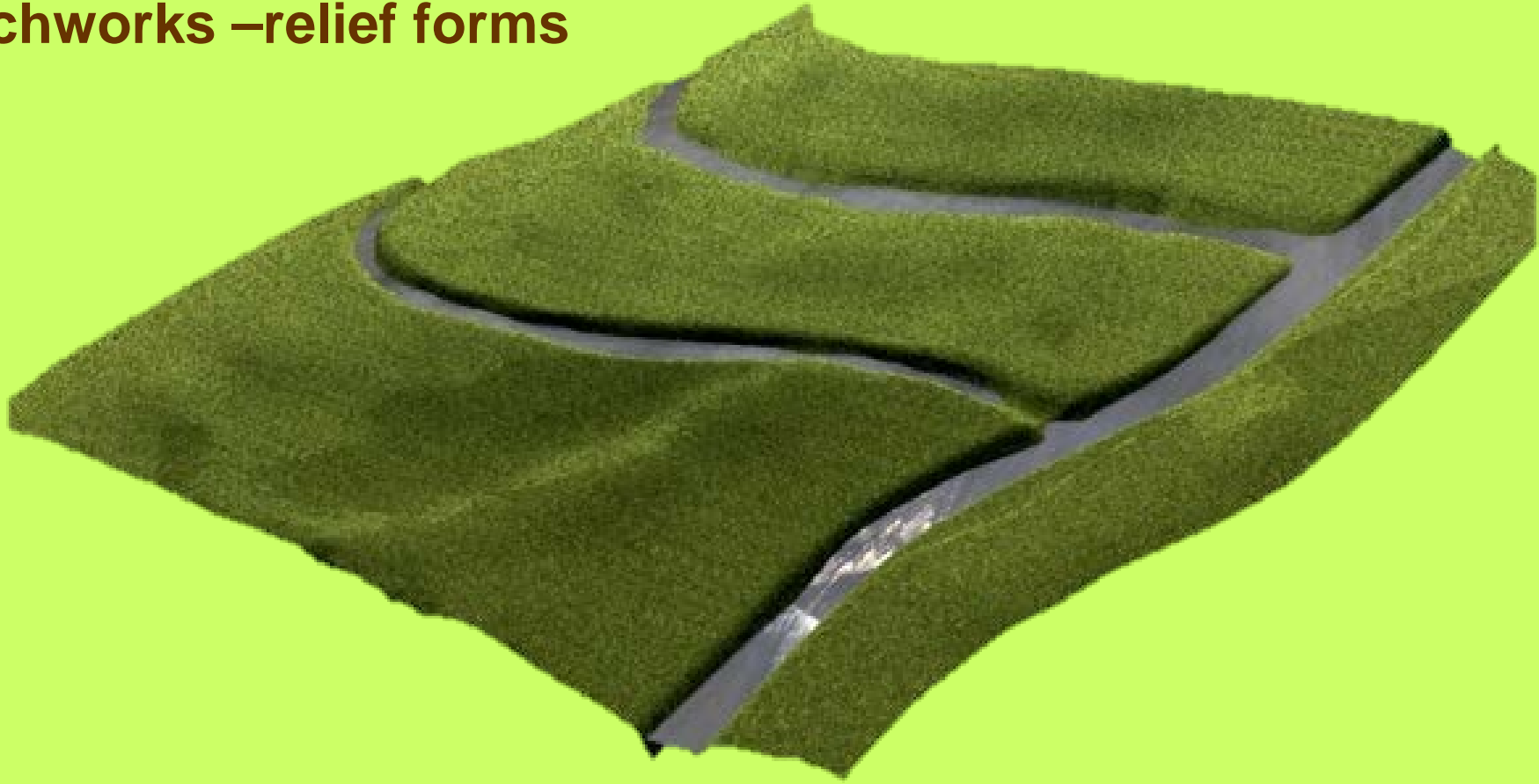
- terrain anomalies

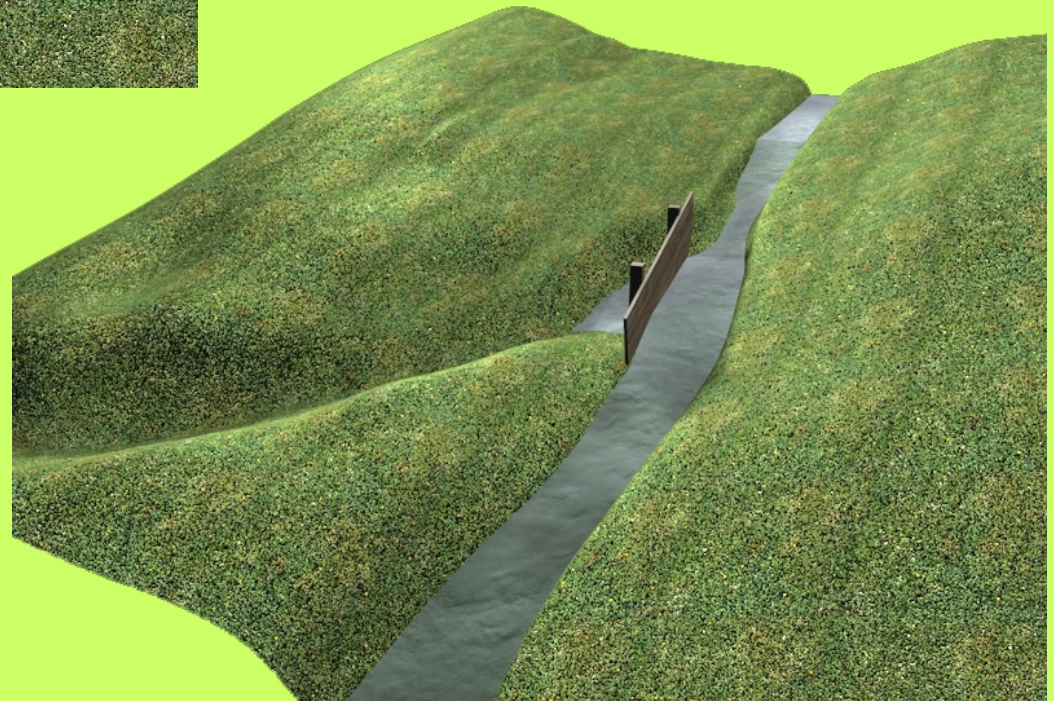
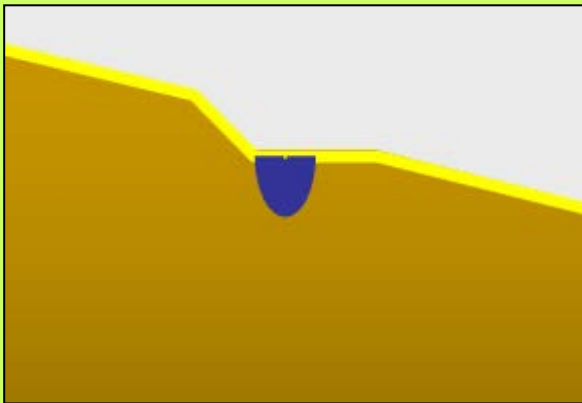


- vegetation cover

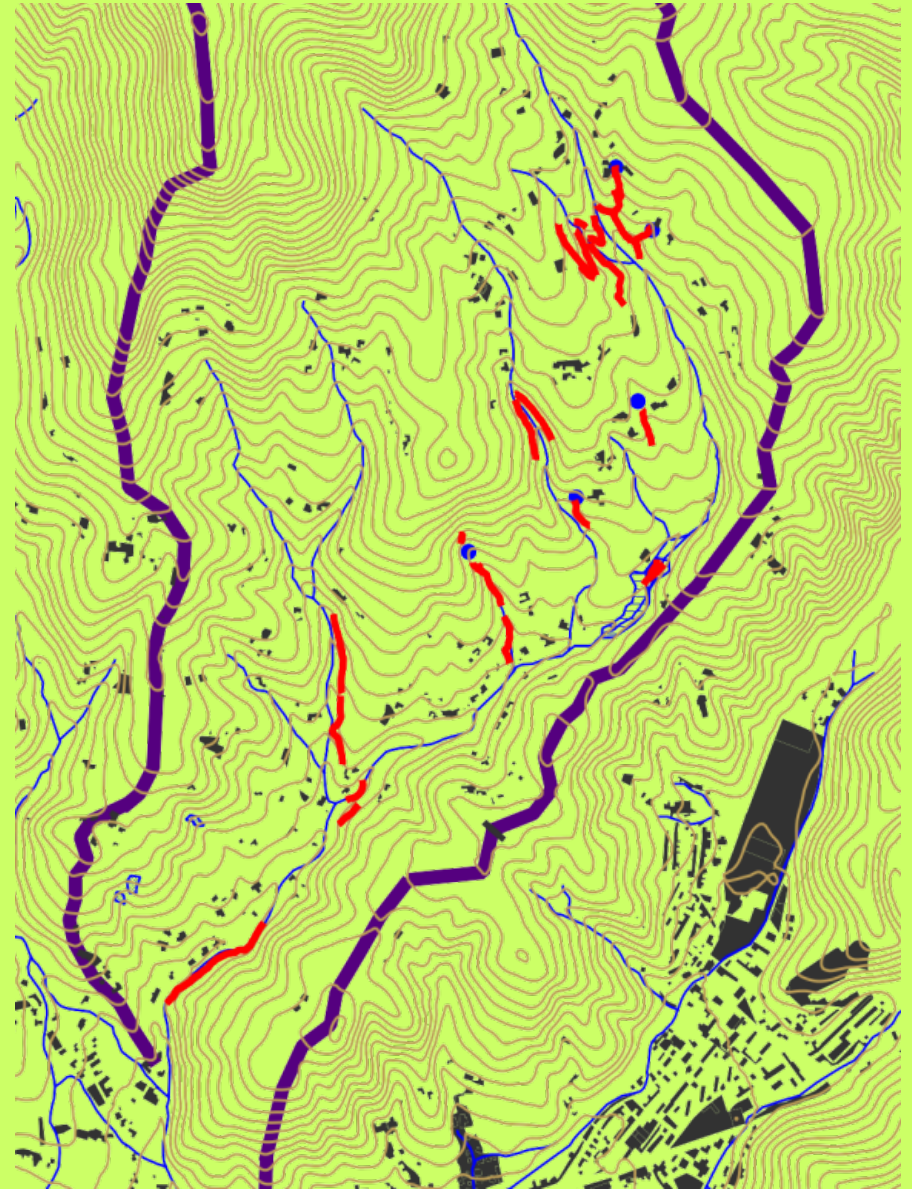
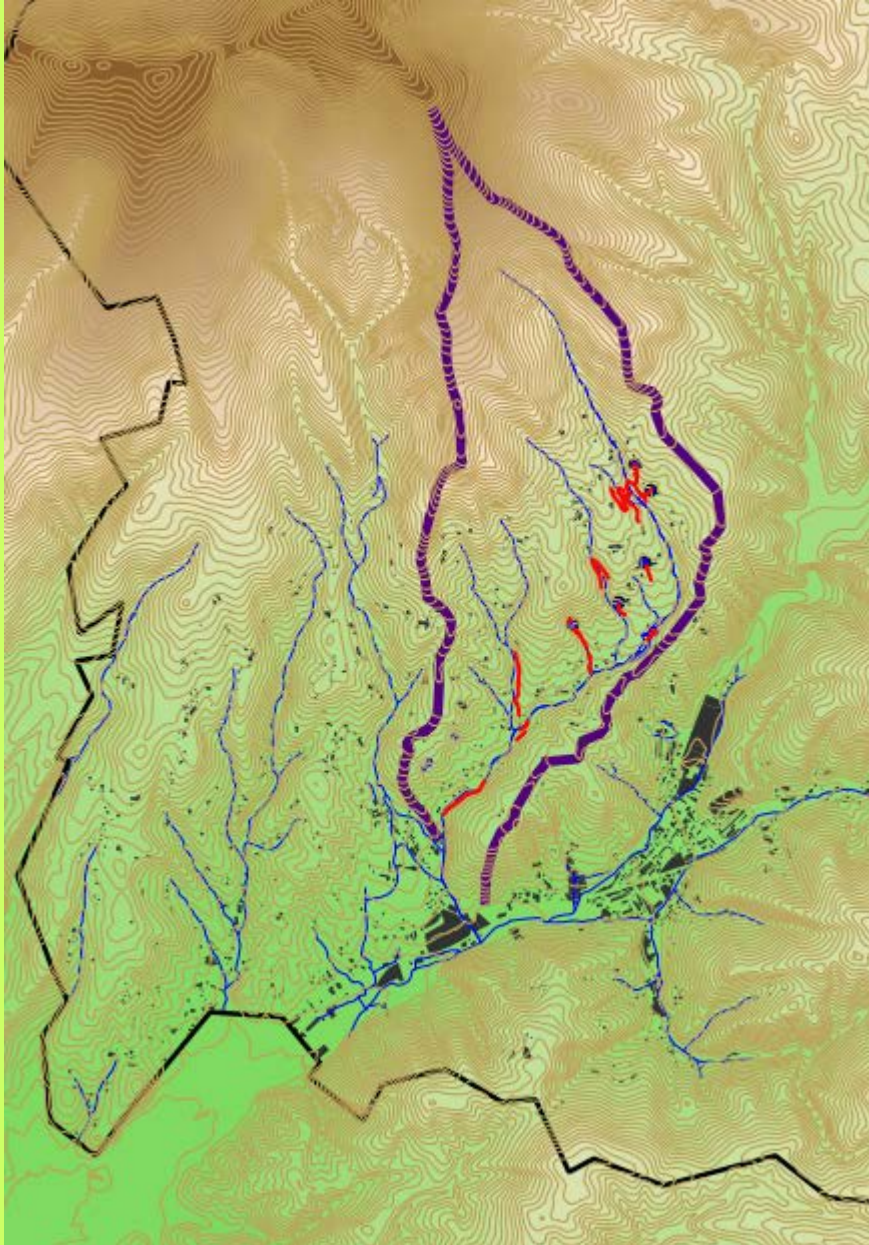


Catchworks –relief forms





Catchwoks in the Riečka basin

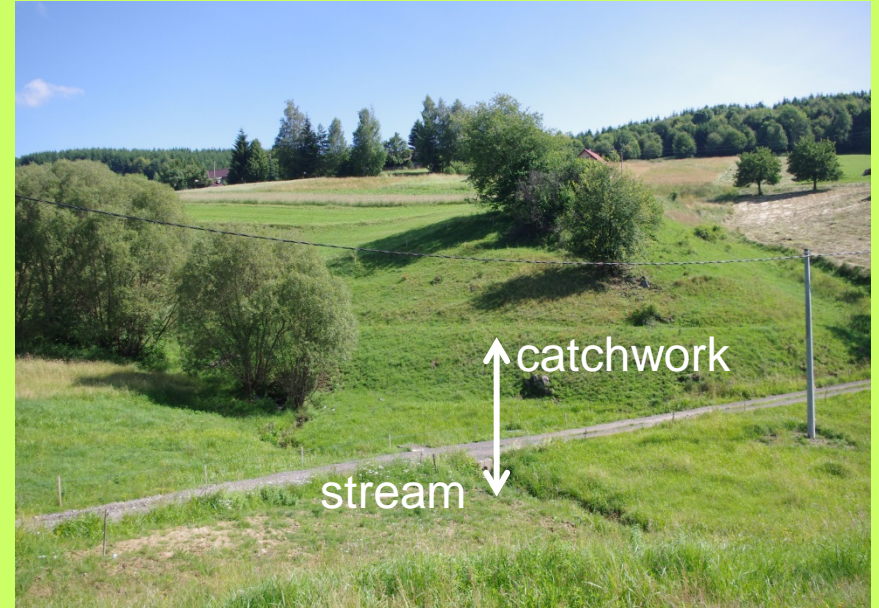
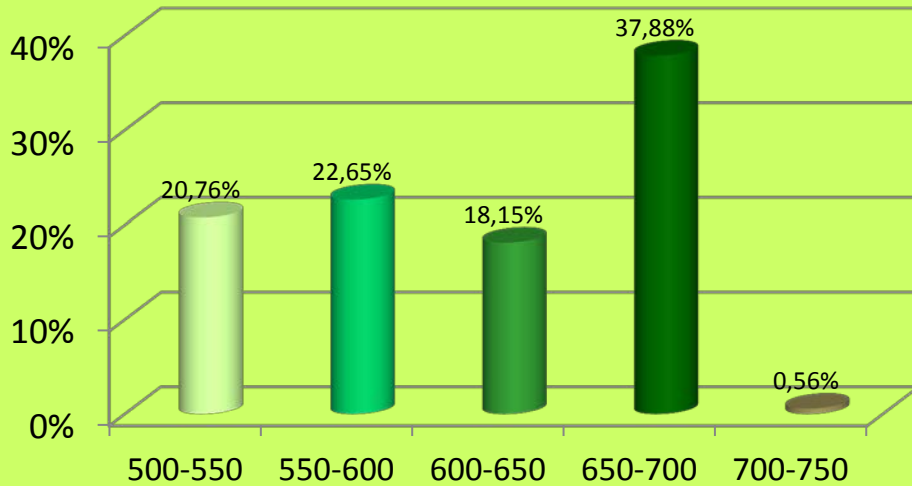


www.dictionary.com

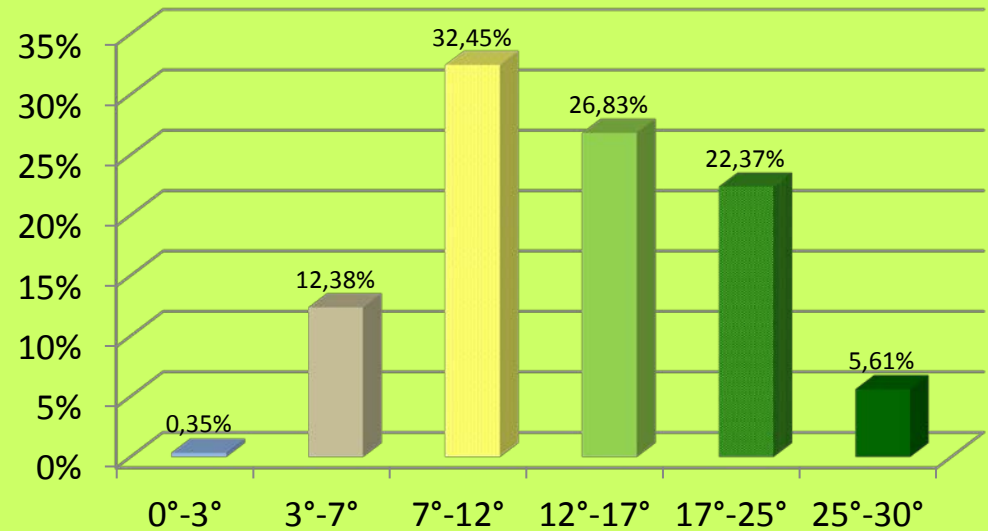
Catchwork - A work or artificial water-course for throwing water on lands that lie on the slopes of hills; a catchdrain.

Catchwoks – basic geographic parameters

Altitude [m ASL]



Slope [°]



Catchwork parts

Begining : spring / stream

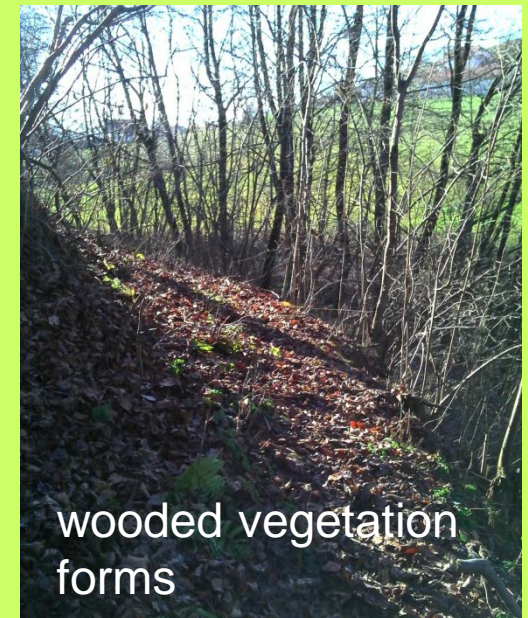
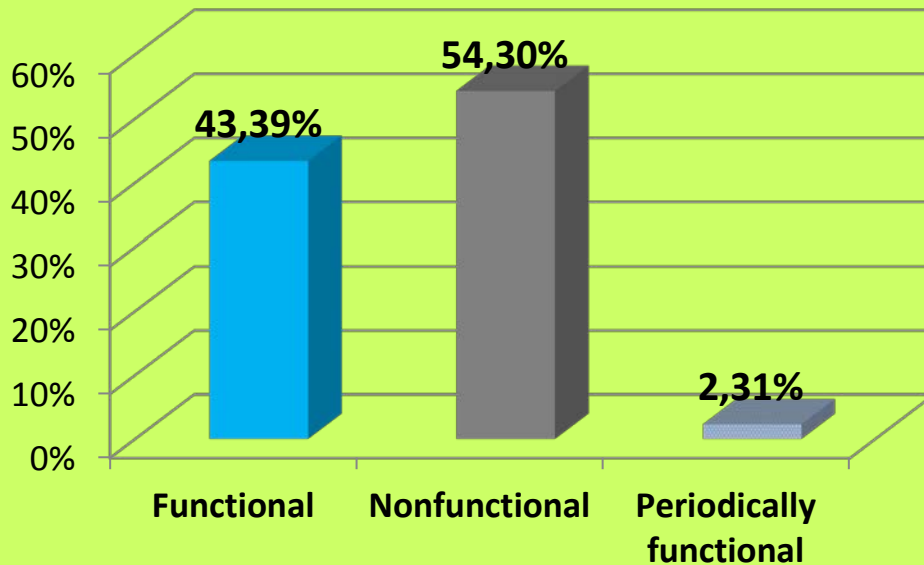


Central line : channel



End: hay meadow

Land use and functionality of catchwoks

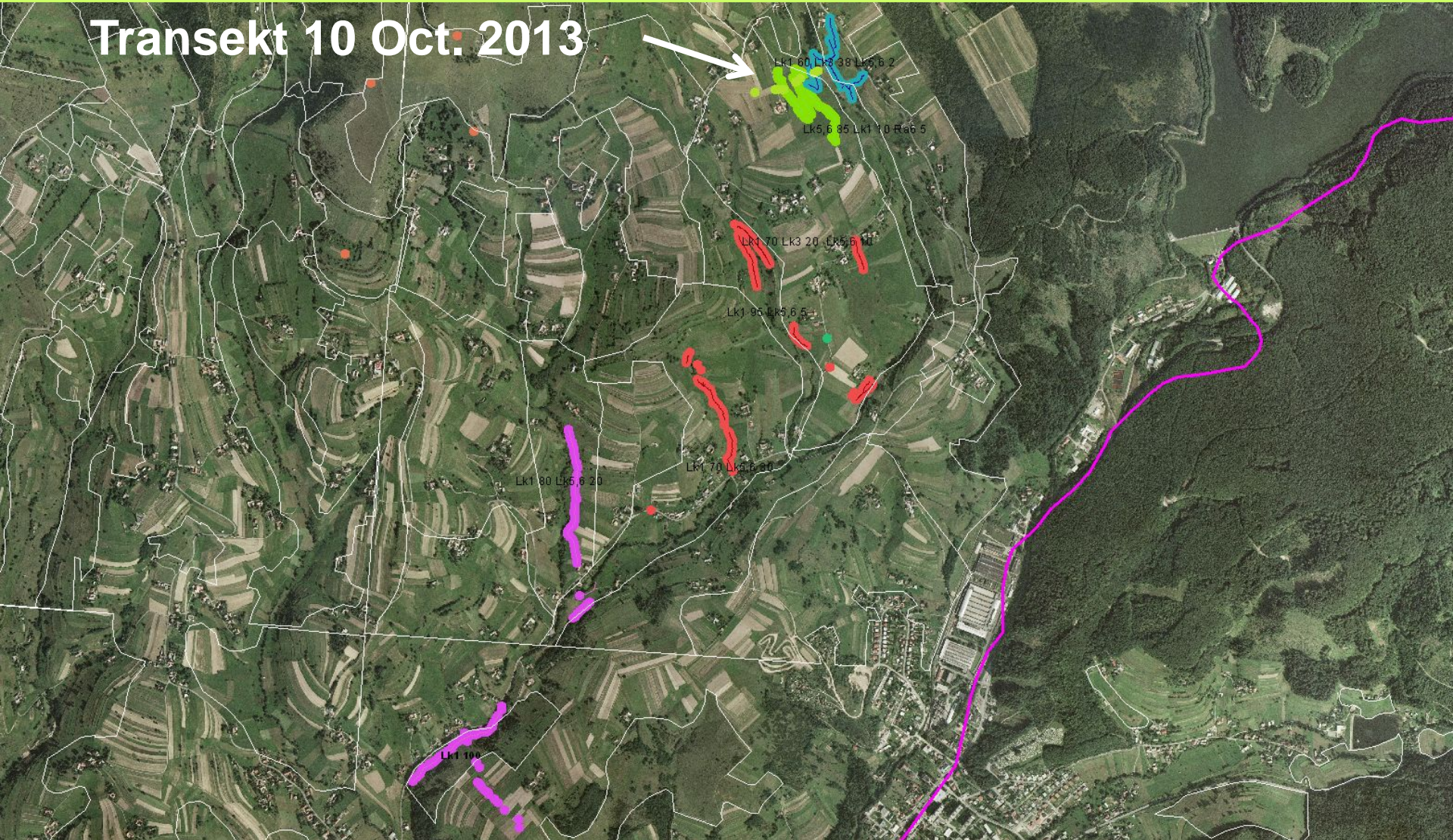


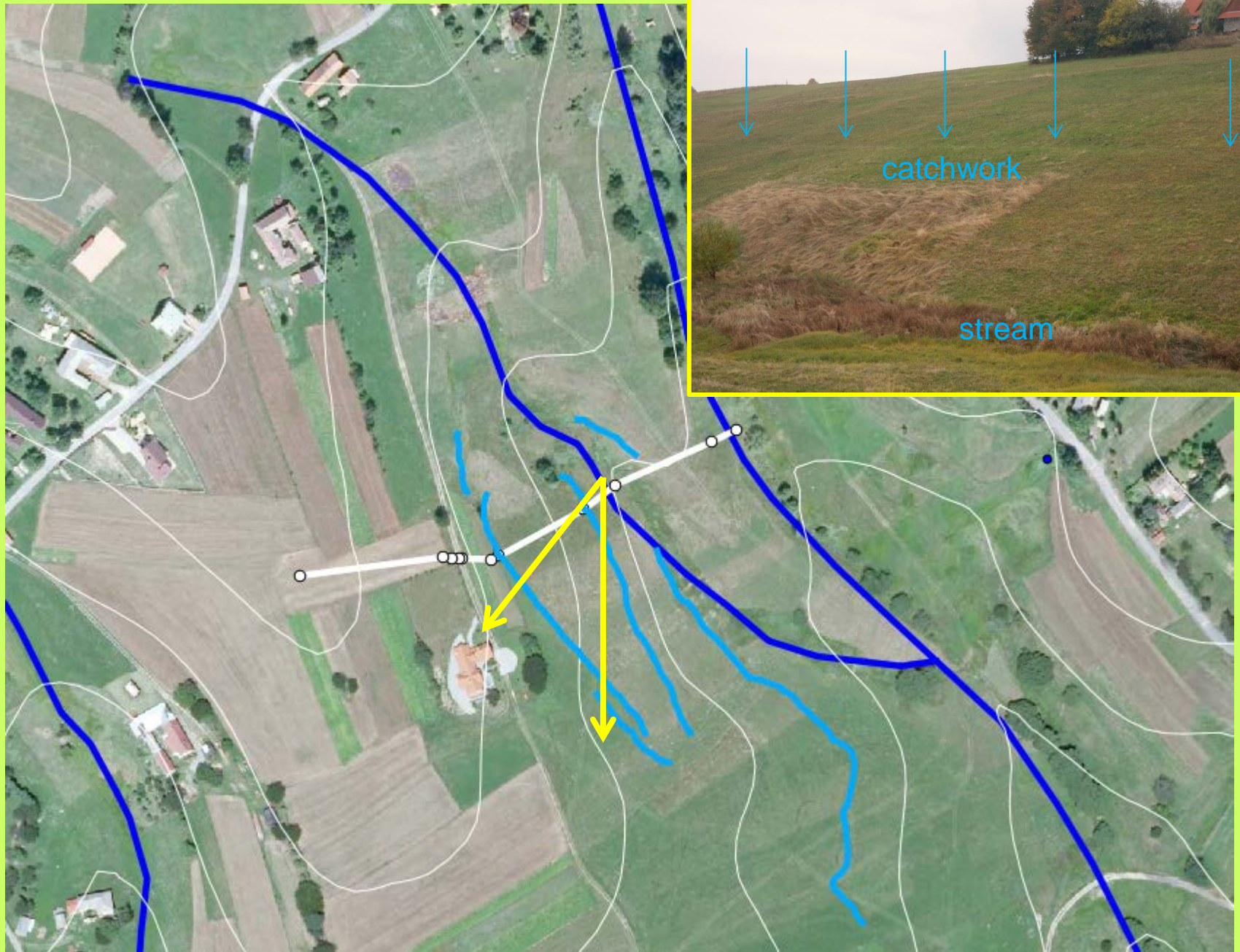
Biodiveristy and biotopes



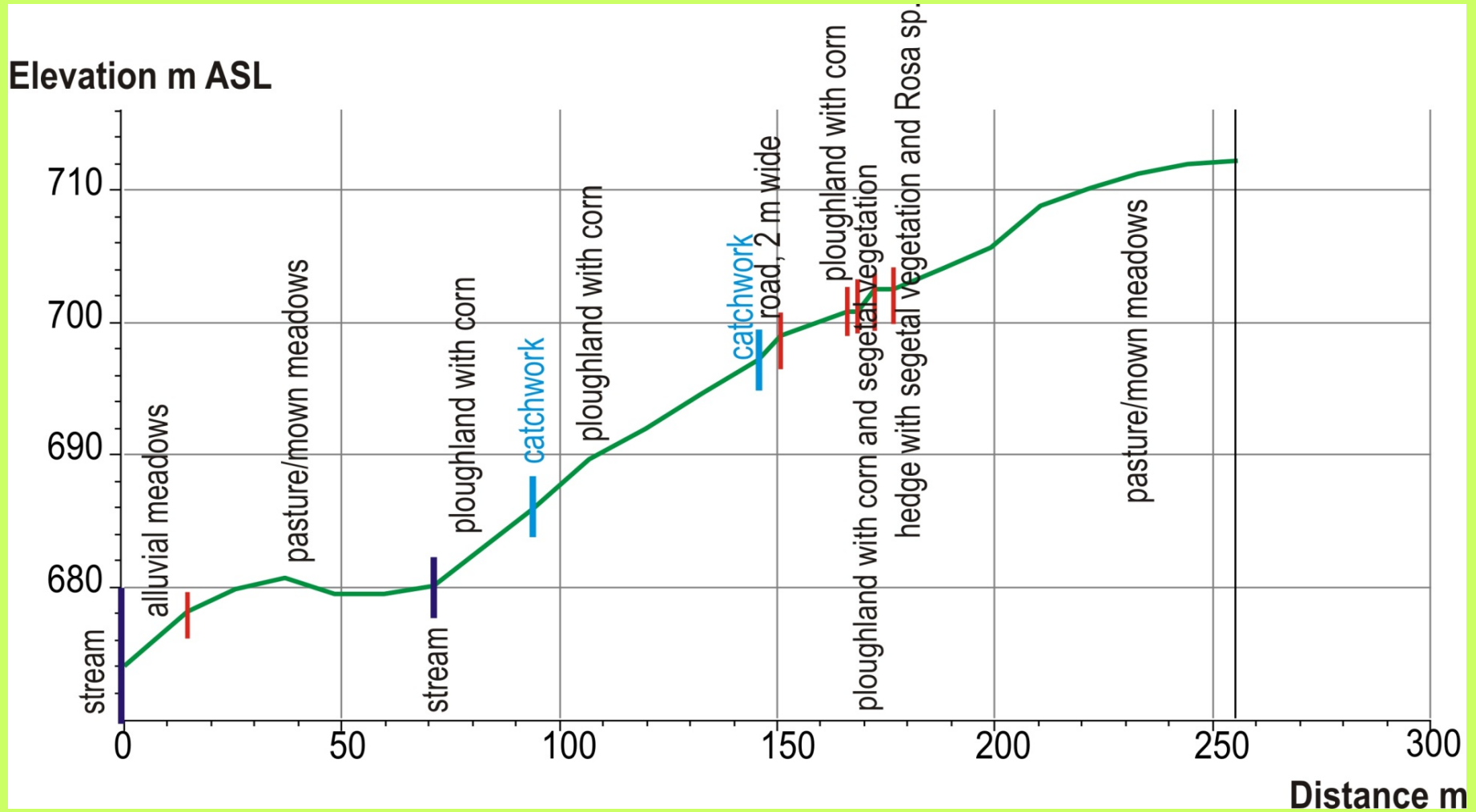
Catchwoks – distribution of biotopes

Transekt 10 Oct. 2013





Vertical transect - 10 October 2013



Total length: 255 m

Elevation: min. 673 – max. 712 m ASL; 39 m

Number of patches: 13

Catchwoks - biodiversity

Hydrophilic vegetation - wet sites

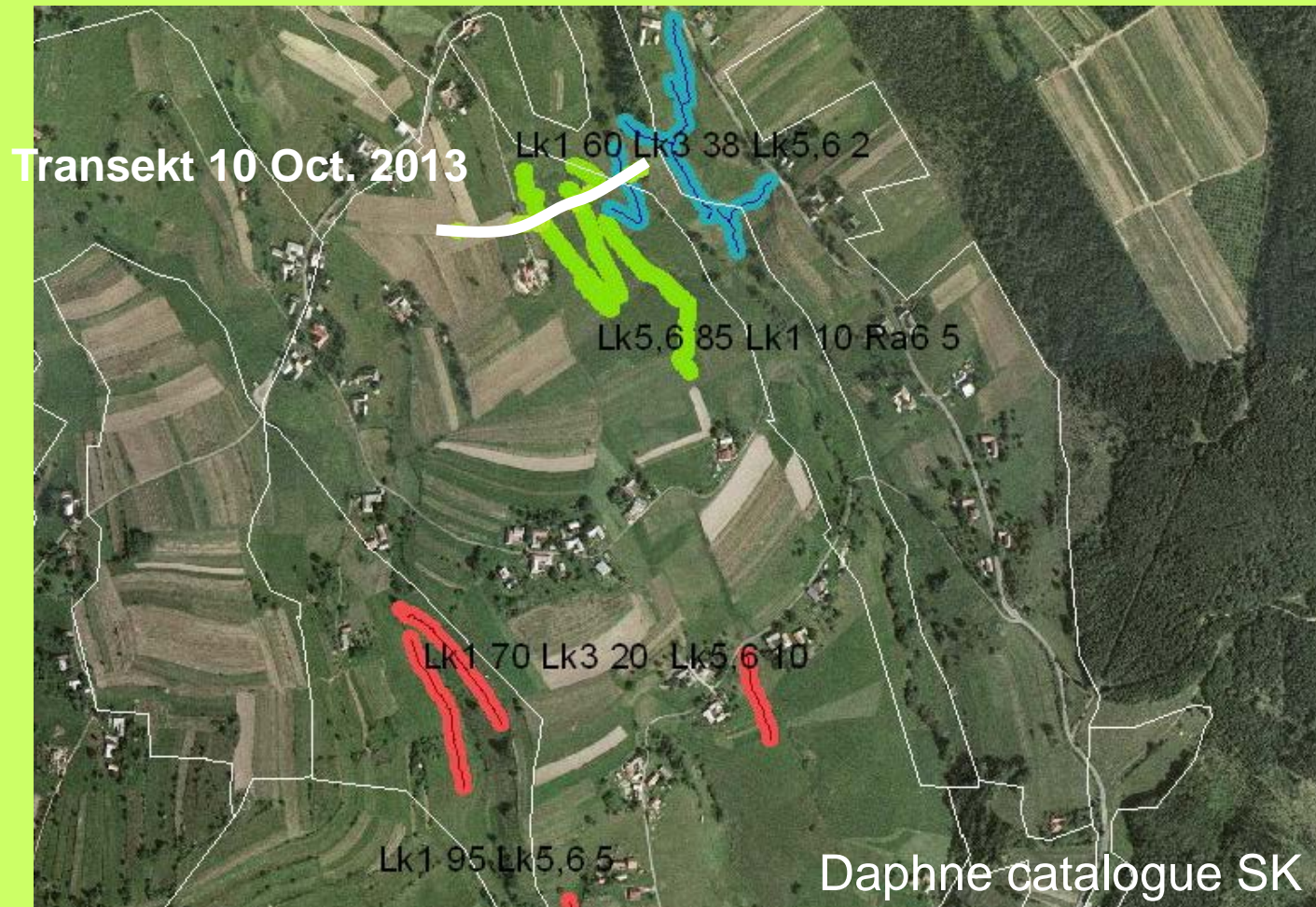


Mesophilic vegetation - semi-dry sites



Catchwoks – evaluation of biotopes



- **European significance:** Lk1 (lowland and mountain hay meadows), Lk5 (wet meadows with high herbaceous assoc., Ra3 (transitional bogs)
- **National significance:** Lk3 (mesophil pastures and grazed meadows), Lk6 (mountain and submountain waterlogged meadows)





Documents & meetings

- **The framework agreement on cooperation between PLA – BR Poľana Administration and State Forest Enterprise of the SR**
- **Meeting with the farmers - traditional management of pastures / grasslands in BR Poľana**

 **ŠTÁTNA OCHRANA PRÍRODY SLOVENSKEJ REPUBLIKY**
REGIONÁLNE CENTRUM OCHRANY PRÍRODY VO ZVOLENE
SPRÁVA CHRÁNENEJ KRAJINNEJ OBLASTI
POLĀNA 

Ul. J. M. Hurbana 20, 960 01 Zvolen

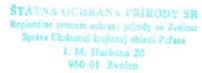
Záznam zo stretnutia k projektu „Rozvoj ochrany prírody a chránených území v slovenských Karpatoch“, konaného dňa 06. 08. 2010 v sídle Lesov SR, š.p., Odštepného závodu Čierny Balog.


Prítomní za Štátnu ochranu prírody SR, Správu CHKO Poľana:

Ing. Vladimíra Fabriciusová, riaditeľka
Ing. Ivan Rybár, lesník

Prítomní za Lesy SR, š.p., OZ Čierny Balog:


Ing. Miroslav Pepich, riaditeľ
Ing. Stanislav Kmec, pestovanie a ochrana lesa
Ing. Peter Kudrna, pestovanie





Dňa 06. 08. 2010 sa stretli zástupcovia Správy CHKO Poľana a OZ Čierny Balog za účelom oboznámenia, prerokovania a určenia postupov ďalšej spolupráce pri príprave a realizácii časti projektu „Rozvoj ochrany prírody a chránených území v slovenských Karpatoch“ v rámci Švajčiarskeho finančného mechanizmu.

1. Prerokovanie inštalácie informačných panelov o NPR Dobročský prales.
Zástupcovia OZ Čierny Balog informovali o situácii s propagáciou NPR Dobročský prales, nakoľko nekoordinovaná a neprimerane odôvodnená propagácia chráneného územia s najvyšším stupňom ochrany, kde je prísny zákaz vstupu návštevníkov, spôsobuje problémy zamestnancom OZ Čierny Balog. Upozornili na fakt, že návštevníci, ktorí nie sú vopred upozornení, že do pralesa nemôžu vstúpiť, svoju nespokojnosť vyjadrujú zamestnancom OZ, pretože súčasné panely nasmerujú návštevníkov na Lesnú správu Dobroč, alebo priamo na sídlo OZ v Čiernom Balogu. Po spoločných pripomienkach bola navrhnutá lokalizácia informačných panelov do oblasti Tlstý Javor - Gerauka, kde je možné vytvoriť náučný chodník smerujúci cez ochranné pásmo NPR Dobročský prales po hranicu vlastného chráneného územia s možnosťou nahliadnutia do interiéru pralesa.



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Medialization and communal initiatives

UNESCO natural and cultural heritage ?

Specific forms of traditional farming on permanent grasslands in "Hriňovsko"

Pravda.sk Správy Magazíny Varecha Avízo BIRDZ Blog Flog Pivnička Zľavy ePravda

Správy.Pravda.sk Televízny program Program kín Program divadiel Koncerty Festivity

Správy Domáce Prezidentské voľby 2014 2% dane Svet Ekonomika Regióny Čierna

Hriňovské lazy sa môžu stať bonusom Podpoľania

#pozemky #Hriňová #lazy #Biosférická rezervácia Poľana

Dagmar Teišťáková, Pravda | 03.04.2014 15:00

Michal Zošiak žije na hriňovských lazoch viac ako päťdesiat rokov. Chová dobytok, ovce i prasiatka. Aj keď je tu život tvrdší a roboty neúrekom, za panelákový svet by ho nevymenil. "Najviac nás tu drží príroda a to, že je to náš domov. Sme privyknutí k tejto pôde, aj k našim starým zvykom, ktoré sme zdedili po rodičoch a starých rodičoch. U nás je to také, ako má na lazoch byť," hovorí. V jeho šľapajach sa rozbieha aj syn.



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Biosférická rezervácia Poľana by sa mohla rozšíriť o prechodnú zónu, ktorá by zahmla časť Hriňovej s lazickými usadlosťami.



Workshops, conferences, open days



Conference organised at the occasion of BR Poľana 20th anniversary



An excursion with the conference participants, stakeholders and representatives of scientific institutions



BR Poľana Open Day 2010



Educational activities



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Thank you for attention