



INVESTMENTS IN EDUCATION DEVELOPMENT

Possible applications of remote sensing in agri-environmental practice

Martin Střelec, DAPHNE CZ – Institute of Applied Ecology
HYDAP kick-off meeting, Brno, 15.11.2012

DAPHNE CZ – Institute of Applied Ecology

DAPHNE
(Slovakia)

We want to spread our activities and knowledge into CZ!

Nature conservanc

We need skilled and reliable partner to cooperate on new issues!

Ecologist

We want to do something practical and useful



INVESTMENTS



Our topics

- ▶ Environmentally friendly farming
- ▶ Natura 2000
- ▶ Freshwater protection
- ▶ Applied biodiversity research



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Farm environment advisory



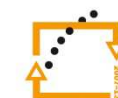
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Problems addressed - example

- ▶ Field experiment – mowing x fertilizing regimes
- ▶ Rotating hedge management
- ▶ Wetland restoration
- ▶ Species composition enrichment on grasslands
- ▶ Wetland (wet spots) management
- ▶ Education for public and employees



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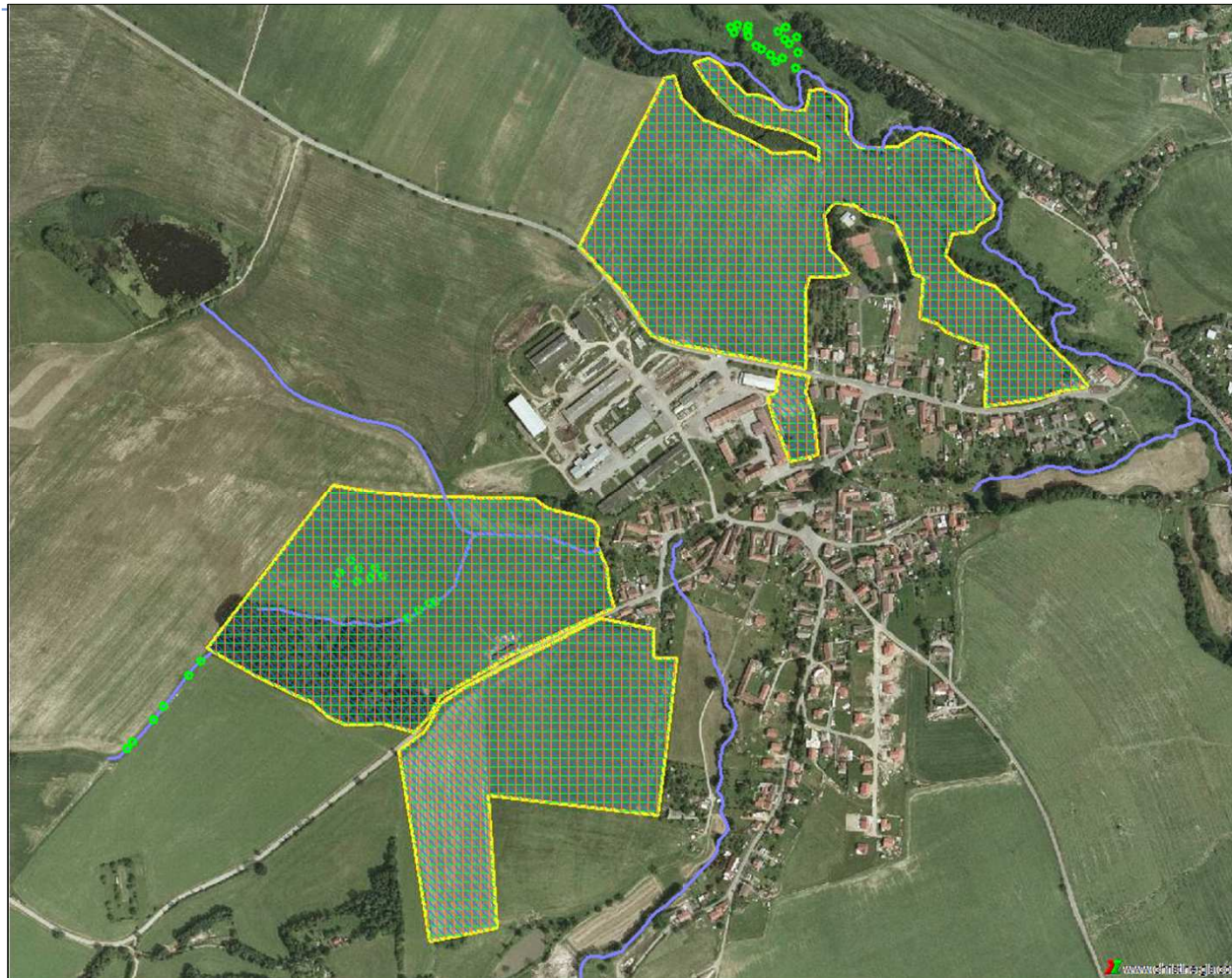


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Farm environment plan – a complex approach



plants

animals

land-use &
management

trees
streams
...

Policy making

- ▶ Proposing new agri-environmental schemes
- ▶ Developing farm environment planning methodology as a tool for assigning agri-environmental subsidies
- ▶ Influencing environmental aspects in Common Agricultural Policy



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Proposing water-regime enhancement in Křemže

Návrhy opatření pro snížení eroze a odtoku v katastrálním území Chlum

Pracovní návrh pro potřeby ZD Podklet'an



vypracoval: **DAPHNE ČR – Institut aplikované ekologie**
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Mgr. Martin Střelec, Mgr. Petra Konvalinková



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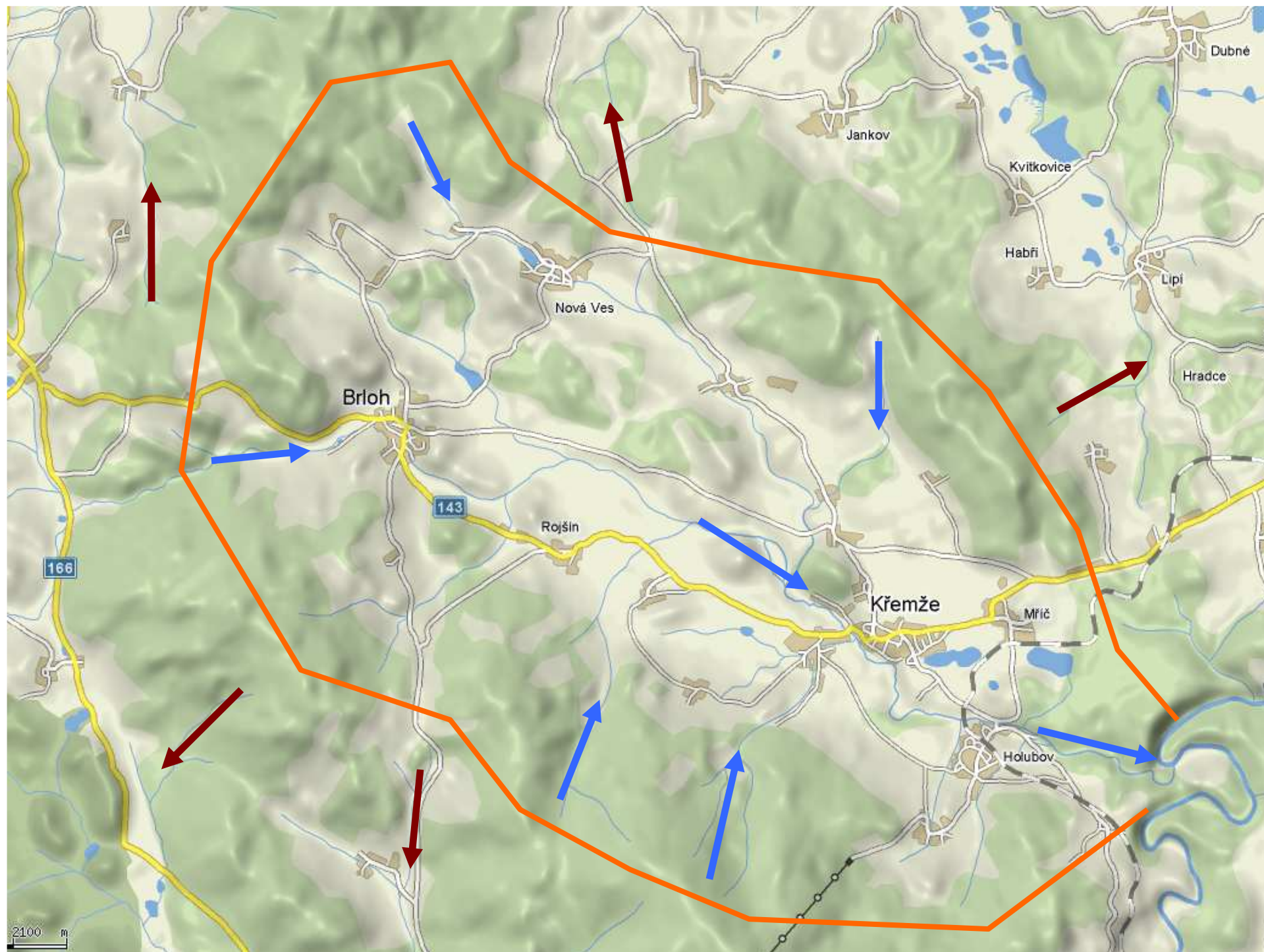


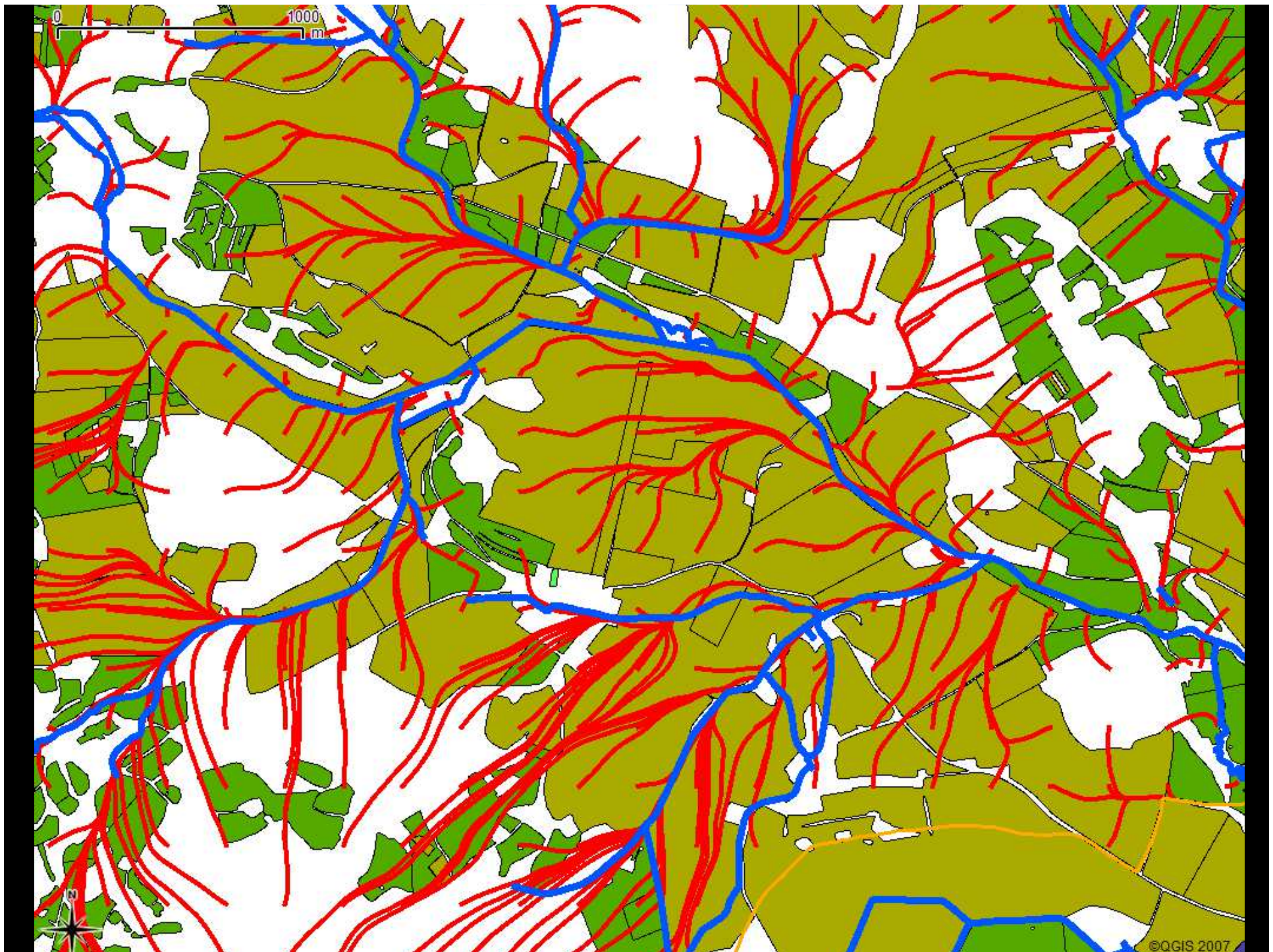
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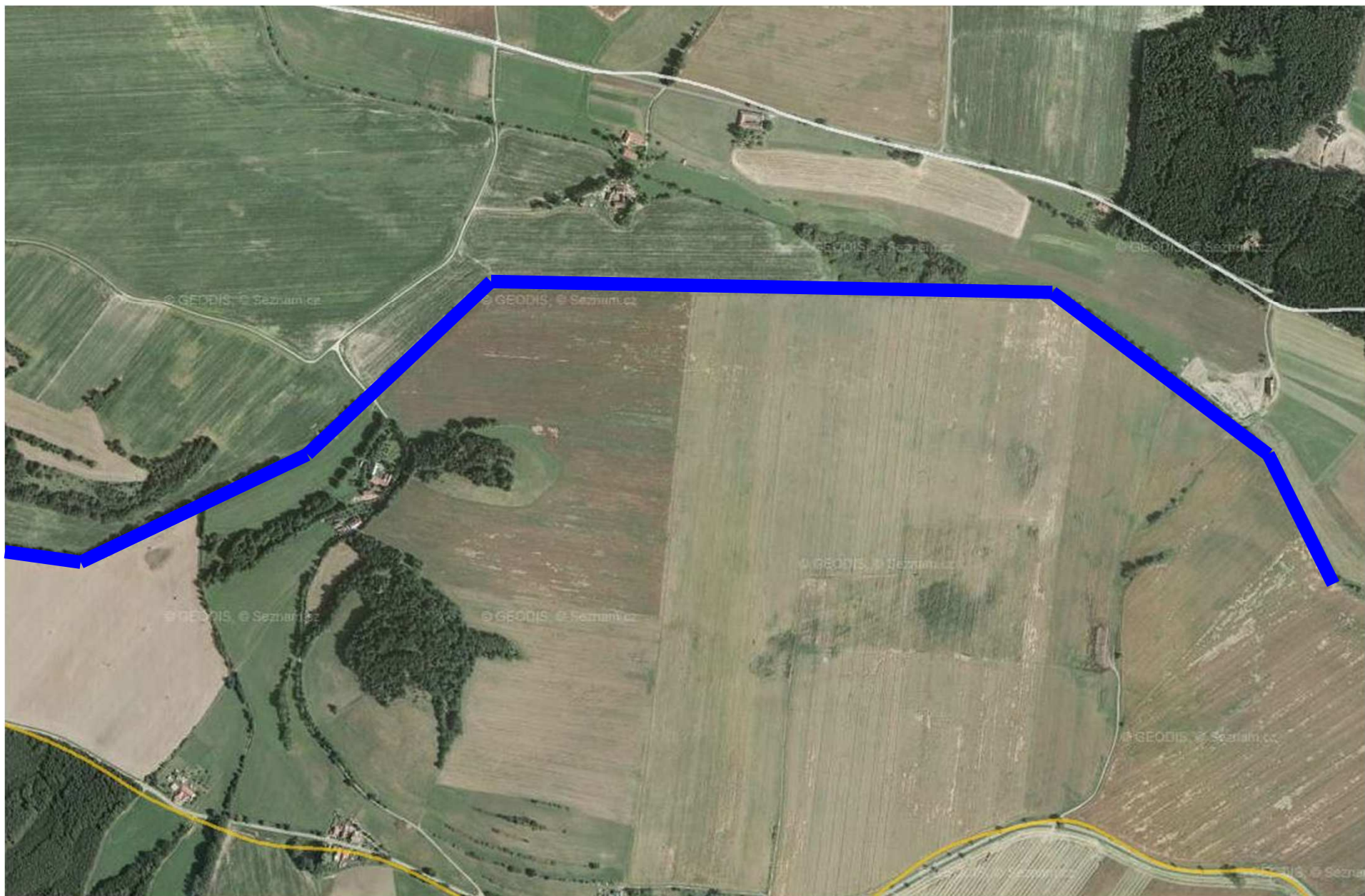
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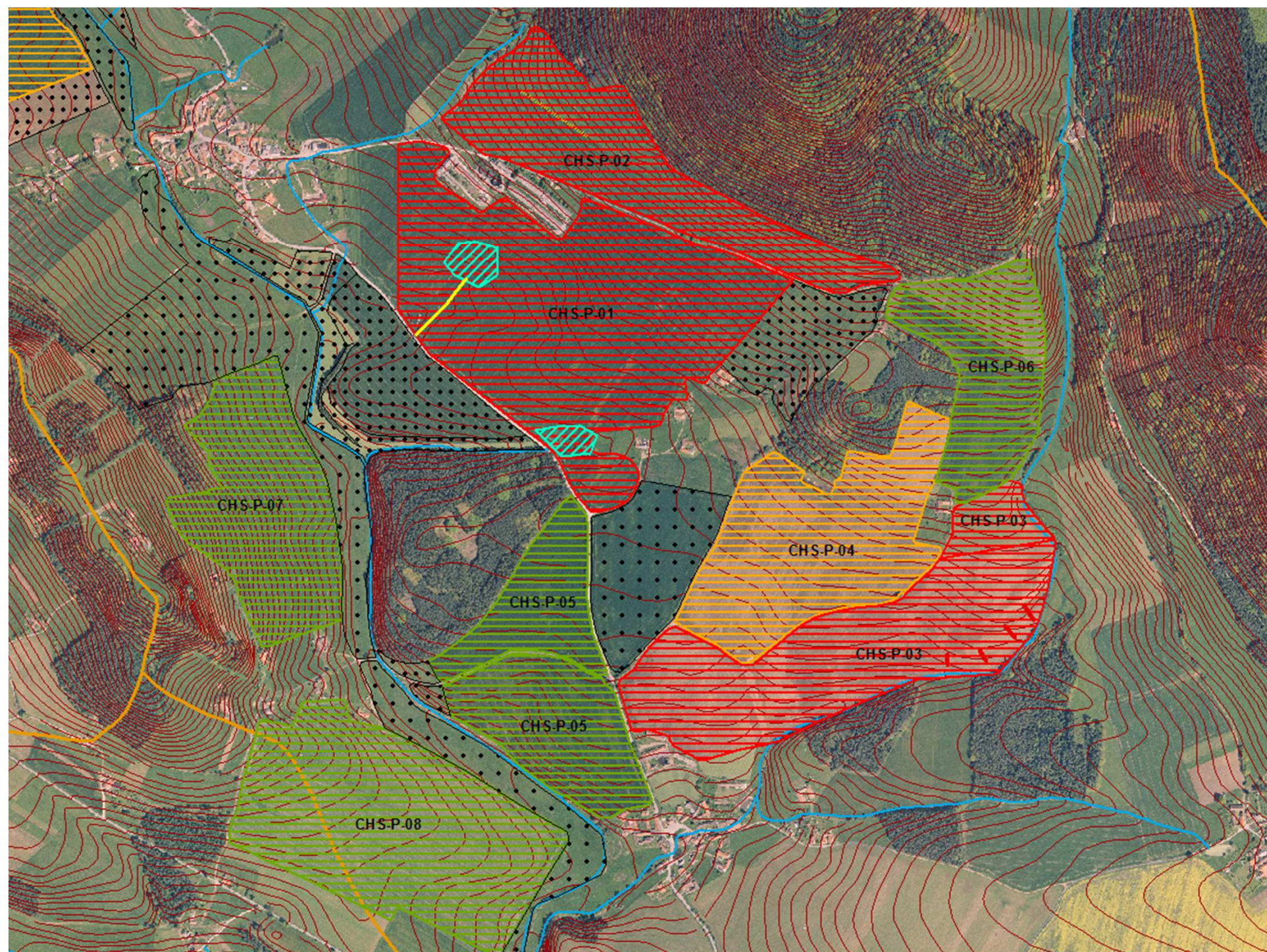
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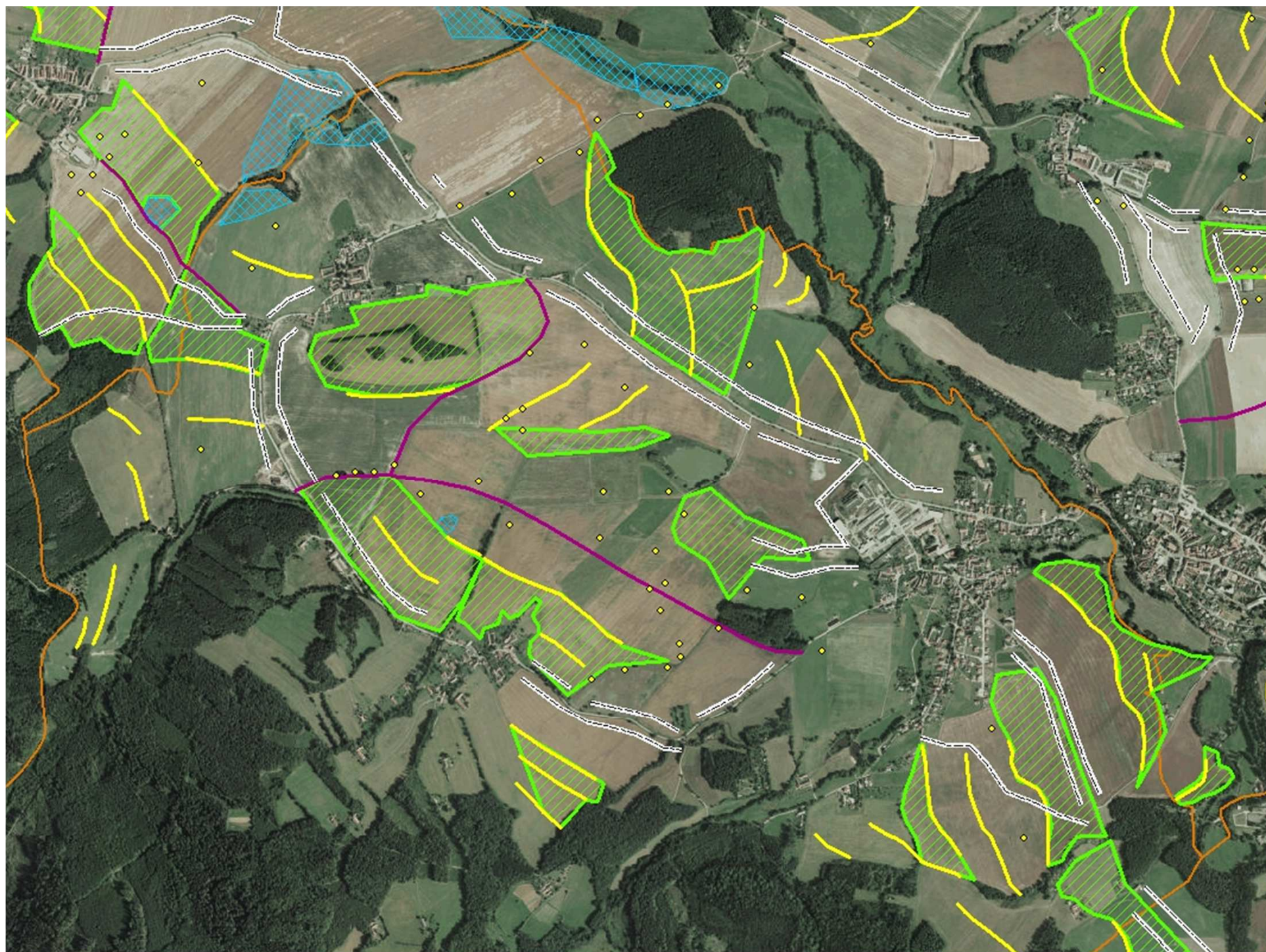


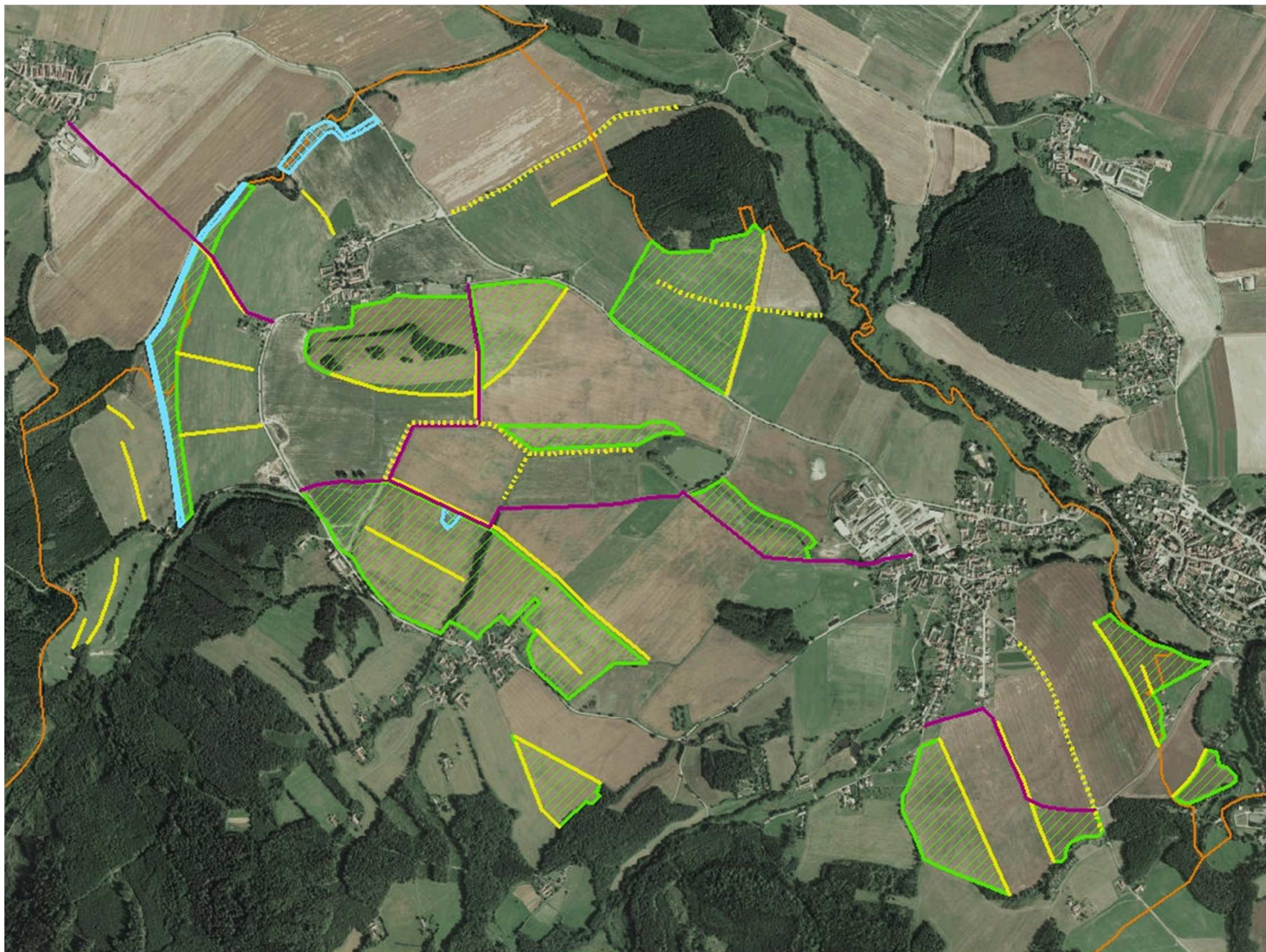












Using RS for farm-env advisory & planning

- ▶ Supporting data for field surveys, e.g.
 - ▶ Water regime
 - ▶ Wetland management
 - ▶ Forage quality



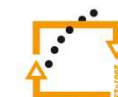
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Environmental aspects of CAP

► Original CAP



Direct payments



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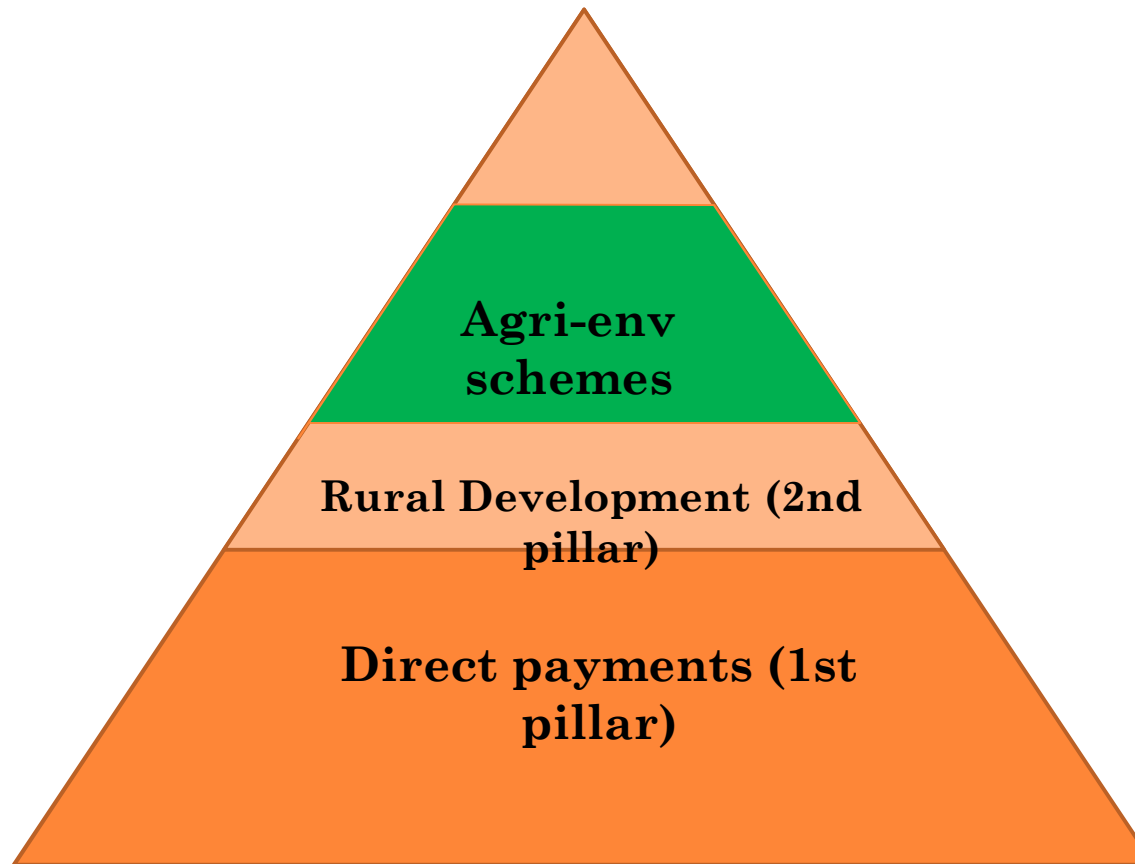


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Environmental aspects of CAP

- ▶ Since ca. 2000



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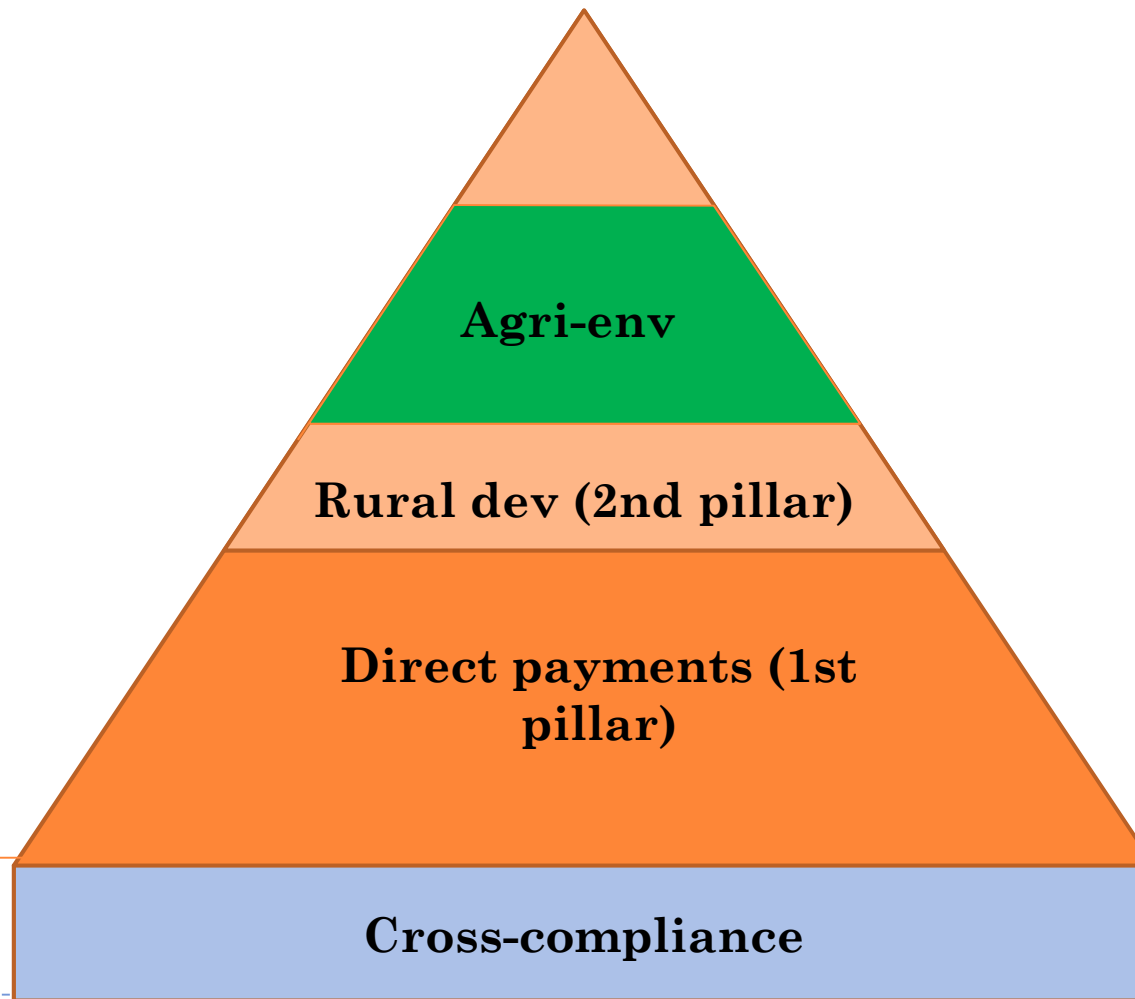


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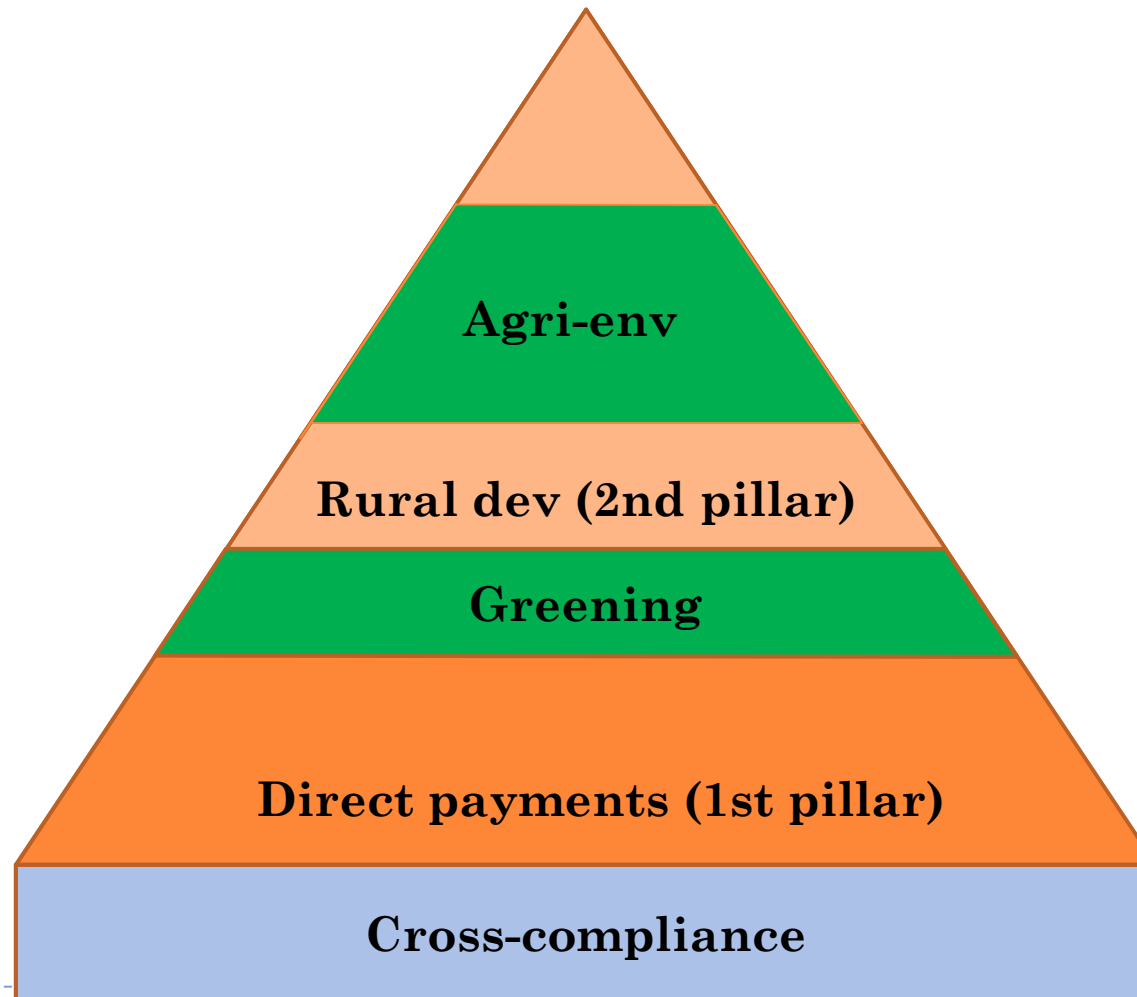
Environmental aspects of CAP

- ▶ Since 2007



Environmental aspects of CAP

- ▶ Since 2014



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Levels of involvement in policy

- ▶ Data support for scheme design
- ▶ Monitoring of performance
- ▶ Evaluation of outcomes



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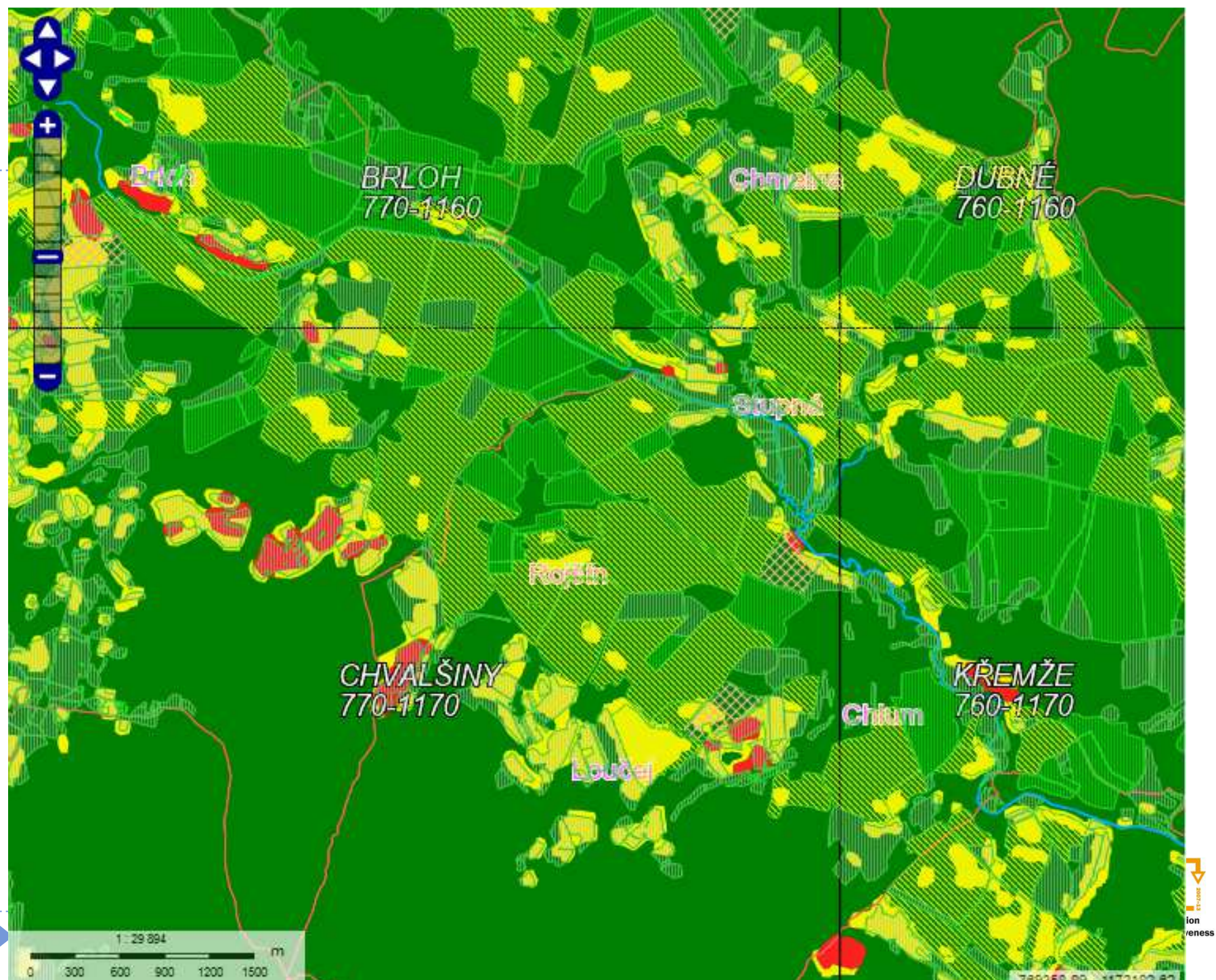
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Informační panel

Export dat

Vyhledávání

PB/DPB KP Obec KÚ Okres Čtve

Čtverec:

Zkrácený kód:

Vyhledat

Krajinný prvek

Základní

Podrobně

Čtverec: 750-1160

Zkrácený kód: KP8503

Účinnost od: 20.03.2010

Účinnost do:

Uživatel: Jihočeská univerzita v Českých Bud...

Výměra [ha]: 0.1004

Druh KP: Skupina dřevin

Typ KP: KP leží uvnitř PB/DPB.

Územní příslu... AZV České Budějovice

Cross-compliance – landscape elements

- ▶ Single trees
- ▶ Groups of trees
- ▶ Tree lines
- ▶ Terraces
- ▶ Valley lines with grass (on arable land)
- ▶ Wetlands???



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Pillar 1 greening

- ▶ 30% of direct payments for each farm eligible under 3 conditions
 - ▶ Crop diversity
 - ▶ Permanent grassland maintenance
 - ▶ Ecological Focus Areas



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Condition 1 – crop diversity

- ▶ Minimum 3 crops per farm
- ▶ One crop maximum 70% of farmed area
- ▶ Each crop minimum 5% of farmed area
- ▶ NO ROTATION necessary



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Condition 3 – Ecological Focus Areas

- ▶ 7% of farmed area (except permanent grassland) must be maintained as Ecological Focus Area, e.g.
 - ▶ Hedges
 - ▶ Trees
 - ▶ Wetlands
 - ▶ Landscape elements
 - ▶ ...



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Catchm

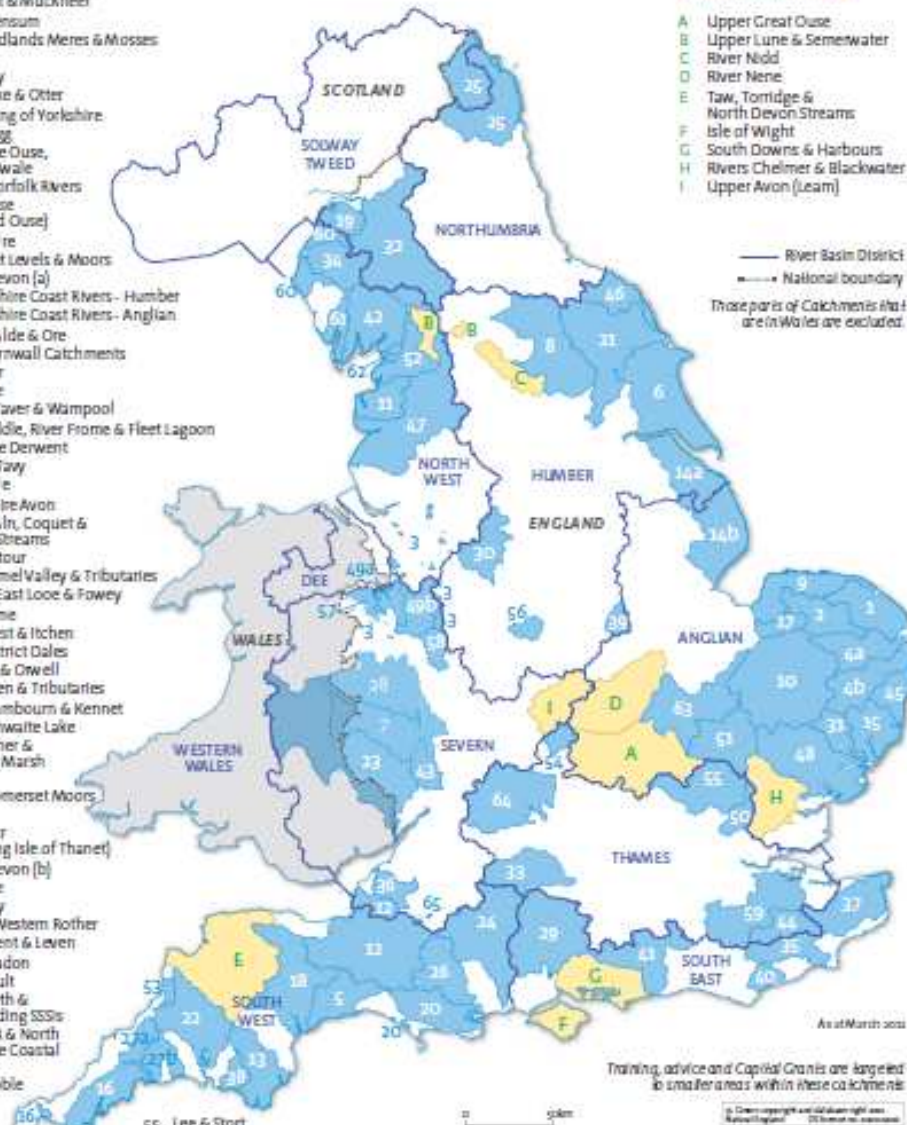
Catchment Sensitive Farming (CSF) catchments

Priority Catchments

- 1 Bure, Ant & Muckfleet
- 2 River Wensum
- 3 West Midlands Meres & Mosses
- 4a Yare
- 4b Waveney
- 5 Rivers Axe & Otter
- 6 East Riding of Yorkshire
- 7 River Ugg
- 8 Yorkshire Ouse, Nidd & Swale
- 9 North Norfolk Rivers
- 10 Little Ouse (Thetford Ouse)
- 11 River Wyre
- 12 Somerset Levels & Moors
- 13 South Devon (a)
- 14a Lincolnshire Coast Rivers - Humber
- 14b Lincolnshire Coast Rivers - Anglian
- 15 Deben, Alde & Ore
- 16 West Cornwall Catchments
- 17 River Nar
- 18 River Exe
- 19 Rivers Waver & Wampool
- 20 River Piddle, River Frome & Fleet Lagoon
- 21 Yorkshire Derwent
- 22 Tamar - Tavy
- 23 River Wye
- 24 Hampshire Avon
- 25 Tweed, Ayr, Coquet & Coastal Streams
- 26 Dorset Stour
- 27a River Camel Valley & Tributaries
- 27b Seaton, East Looe & Fowey
- 28 River Teme
- 29 Rivers Test & Itchen
- 30 Peak District Dales
- 31 Clipping & Orwell
- 32 River Eden & Tributaries
- 33 Rivers Lambourn & Kennet
- 34 Bassenthwaite Lake
- 35 East Rother & Walland Marsh
- 36 North Somerset Moors
- 37 The Stour (including Isle of Thanet)
- 38 South Devon (b)
- 39 River Eye
- 40 Pevensey
- 41 Arun & Western Rother
- 42 Rivers Kent & Leven
- 43 River Leadon
- 44 River Beult
- 45 River Blyth & surrounding SSIs
- 46 River Esk & North Yorkshire Coastal Streams
- 47 River Ribble
- 48 Rivers Stour & Colne
- 49a River Roden
- 49b River Tern
- 50 Upper Roding
- 51 Cam & Granta
- 52 Lower Lune
- 53 Rivers Strat & Neet
- 54 Upper Cherwell
- 55 Lee & Stort
- 56 River Mease
- 57 River Perry
- 58 River Worfe
- 59 Rivers Medway & Eden
- 60 West Cumbrian Catchments
- 61 River Duddon
- 62 River Keir
- 63 Lower Great Ouse
- 64 Cotswolds
- 65 Egford Borehole

Catchment Partnerships

- A Upper Great Ouse
- B Upper Lune & Semerwater
- C River Nidd
- D River Nene
- E Taw, Torridge & North Devon Streams
- F Isle of Wight
- G South Downs & Harbours
- H Rivers Chelmer & Blackwater
- I Upper Avon (Leam)



Training, advice and Capital Grants are targeted to smaller areas within these catchments



**A clear solution
for farmers**
CATCHMENT SENSITIVE FARMING



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ITS IN EDUCATION DEVELOPMENT

BUT – what must not be forgotten

- ▶ Right balance – cost&effort invested to scientific analysis vs. practical implementation
- ▶ Recurrence of the process
- ▶ Time continuity of analysis & implementation
- ▶ Simplification of the results, drawing clear borders



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Thank you!

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