



Public goods in the Czech Republic: a case study on mixed farming

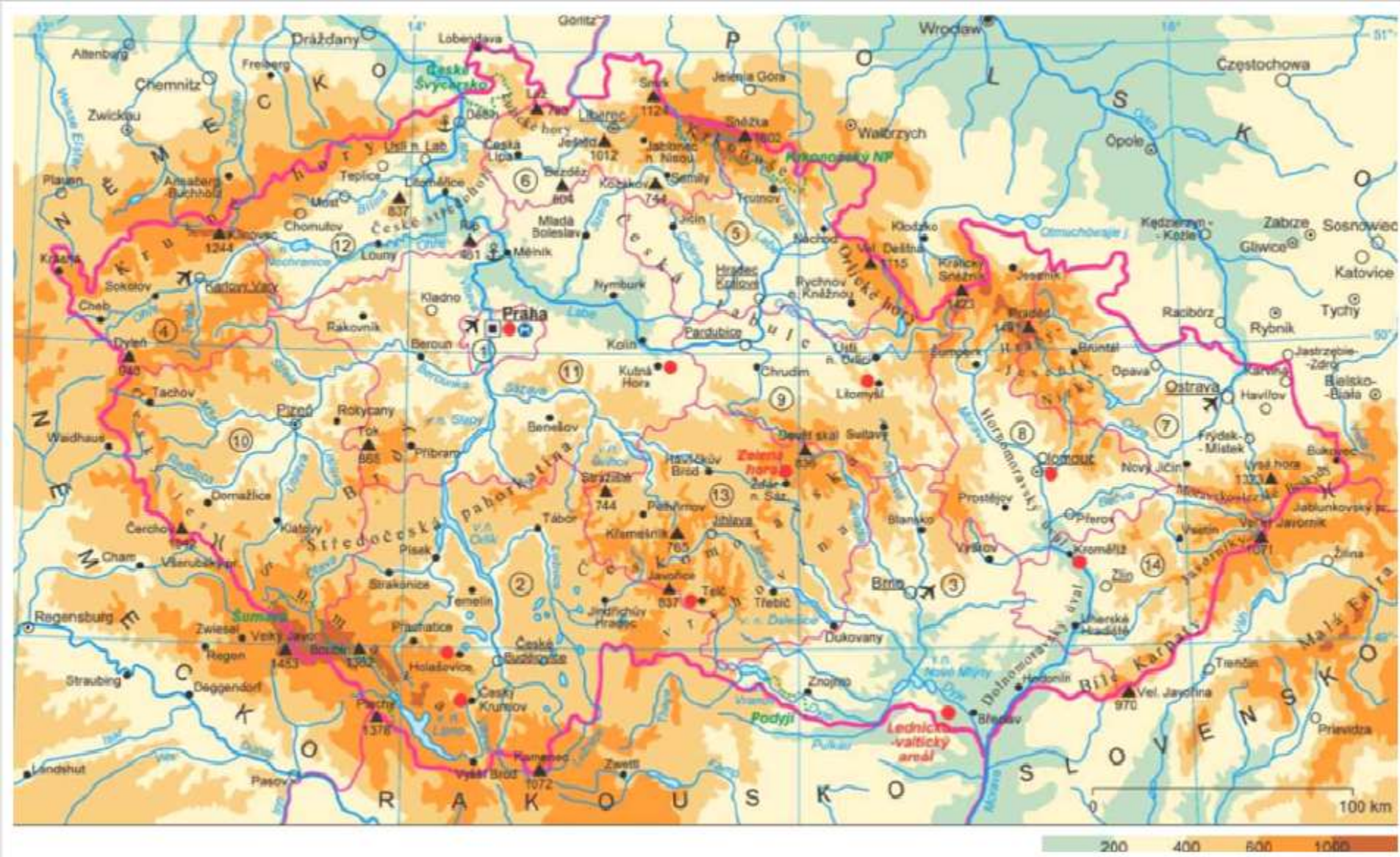
Public Goods and Public Intervention in Agriculture
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The national context and the case study area

- Large mixed farms (72% of land in farms >500 ha), fields and machinery, low animal density (lack of management)
- Arable intensive (medium inputs), 50% in productive areas, ↓ field boundaries, extensive grasslands
- Case study area: less grassland, both intensive-specialized and mixed farms. Most characteristics are the same.



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Connecting Rural Europe



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Public goods on agricultural land in the Czech Republic - trends

- Biodiversity: decline without farming, provision beyond good practice, relatively stable (birds)
- Climate and air (C sequestration, emissions of GHGs)
- Water quality (improvement, under-provision)
- Soil functionality (improvement, under-provision)
- Landscape (landscape features lost in the past, appearance, openness, stable/improvement).

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Public goods in the Czech Republic - provision Biodiversity on mixed productive farms I

- General: decline without farming, Agri-environmental measure (AEM) provision, slow decline of birds
- Species richness (provided/under-provided):
 - Habitats: lost in past (drainage, intensive farming), now maintained extensively – provided (AEM-pastures/meadows)
 - Loss of food in winter: winter crops on large fields and rapid harvesting/ploughing – partially provided (by AEM)
 - Fallow not used, too unified habitats (frequent, partially provided)
 - Valuable habitats management, late cut, no nutrients, low density of animals, cut from centre (under AEM, Natura 2000 payments)



Public goods in the Czech Republic

Biodiversity on mixed productive farms II

- Habitats threatened by no management : not an issue on arable land, (provided on grass by AEM).
- Decline due to fertilisers/pesticides use: arable rather intensive; provided on grassland and permanent crops by organic/integrated farming (AEM)

Public goods on agricultural land in the Czech Republic - level of provision I

- Climate – air: usual emissions reduced due to extensive production (methane, less fertilizers), AEM and afforestation support (sequestration)
- Landscape (landscape features lost, maintained – *Cross Compliance*): CZ population valued at 134,800 EUR the landscape management provided by farmers (2009).
- Animal welfare: the normal practice ensures key animal requirements.

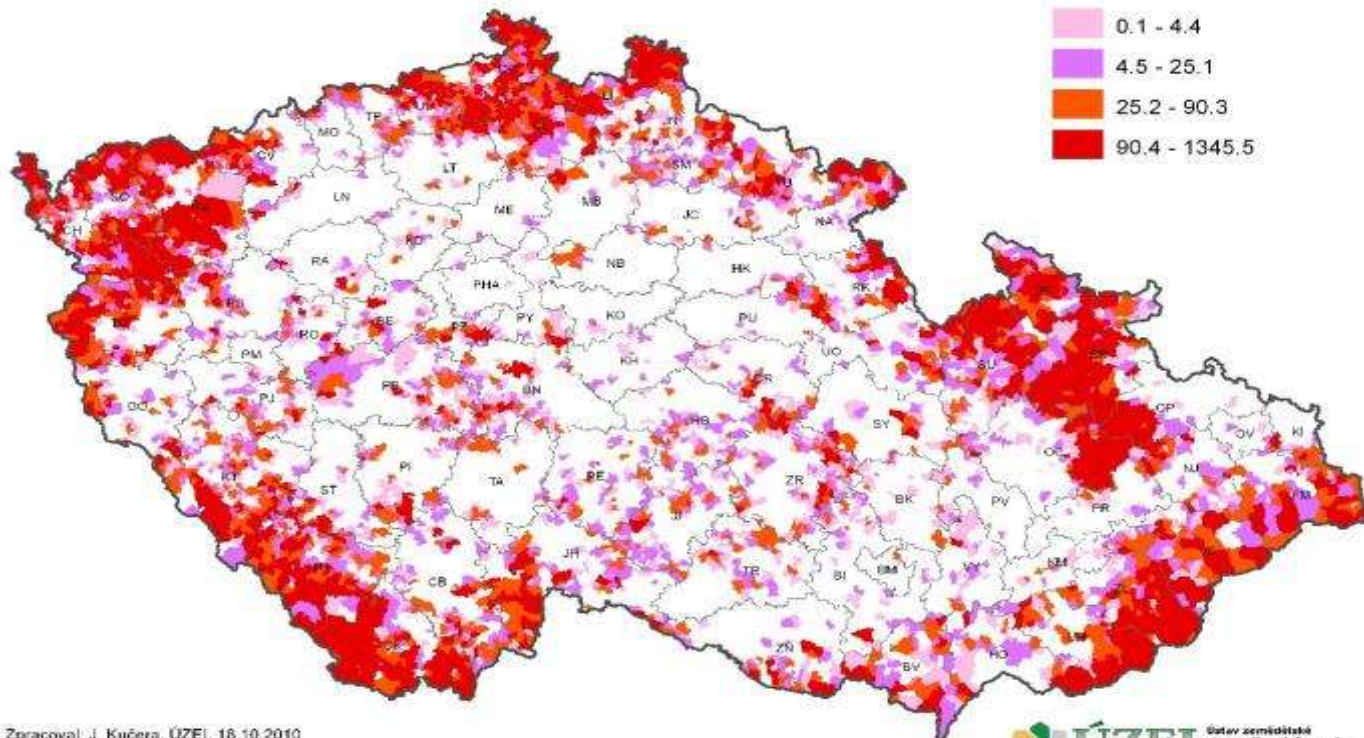
Public goods on agricultural land in the Czech Republic - level of provision II

- Soil – water erosion: only partly prevented (conversion of arable land to grassland, cover crops – AEM, afforestation, *Cross-Compliance*)
- Water: on grass – provided (low inputs), on arable – nutrients/pesticides (not high); soil erosion, storage facilities: improved, (conversion of arable land, cover crops - AEM).

Geographical distribution of supported public goods provision: **AEM – organic farming**

Výměry titulů AEO PRV (EAFRD)
v jednotlivých katastrálních územích ČR 2009

A1: Ekologické zemědělství [ha]



Zpracoval: J. Kučera, ÚZEI, 18.10.2010
Zdroj: LPIS 2009, SZIF 2009

ÚZEI Ústav zemědělské
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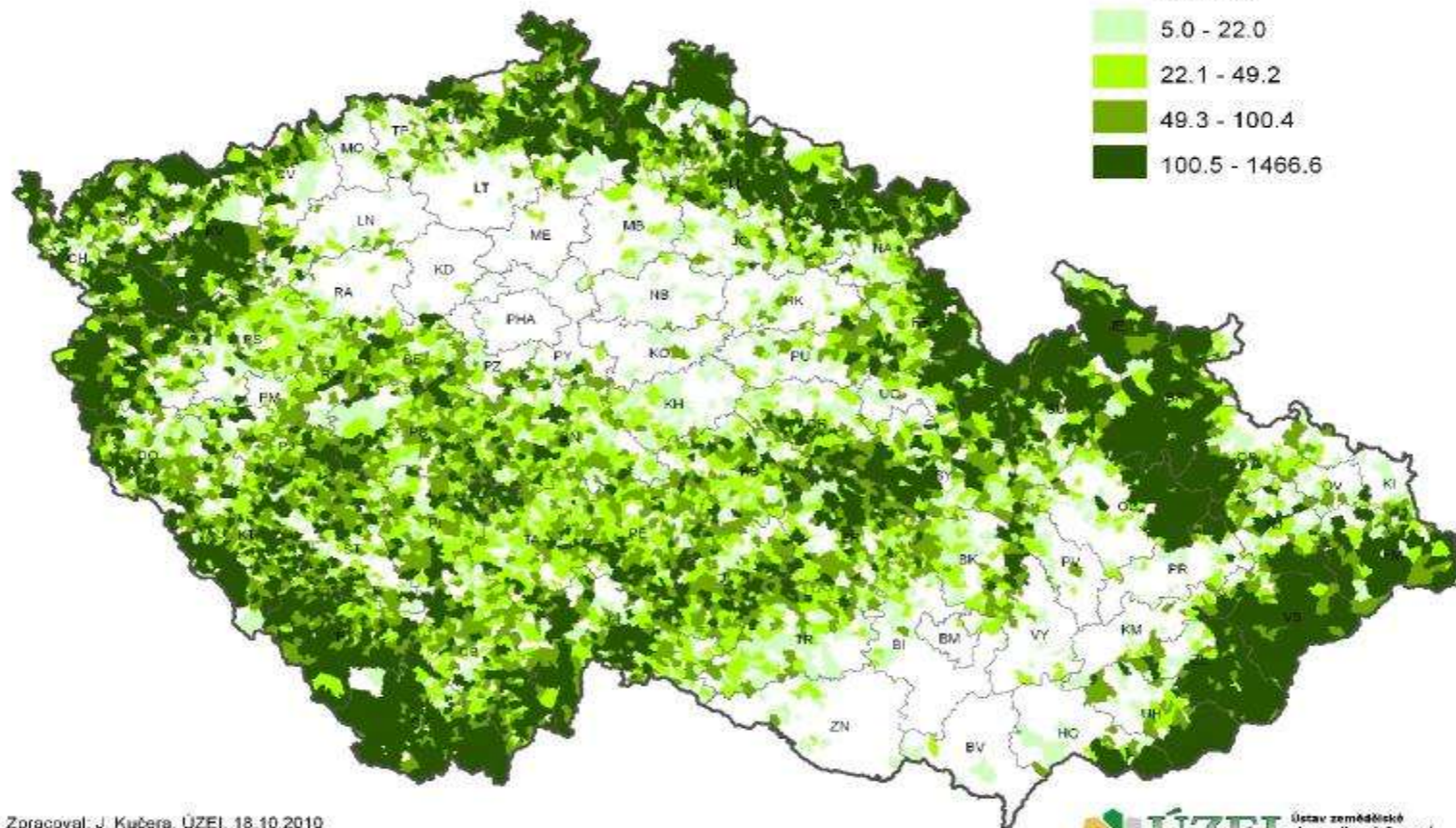
The map shows the geographical distribution of the uptake of the agri-environmental measure. Please note that the figures presented are preliminary and further work is currently being carried out to refine the collection of the data. Therefore this version should not be used for referencing.



Grassland management (AEM)

Výměry titulů AEO PRV (EAFRD)
v jednotlivých katastrálních územích ČR 2009

B: Ošetřování travních porostů [ha]



Zpracoval: J. Kučera, ÚZEI, 18.10.2010

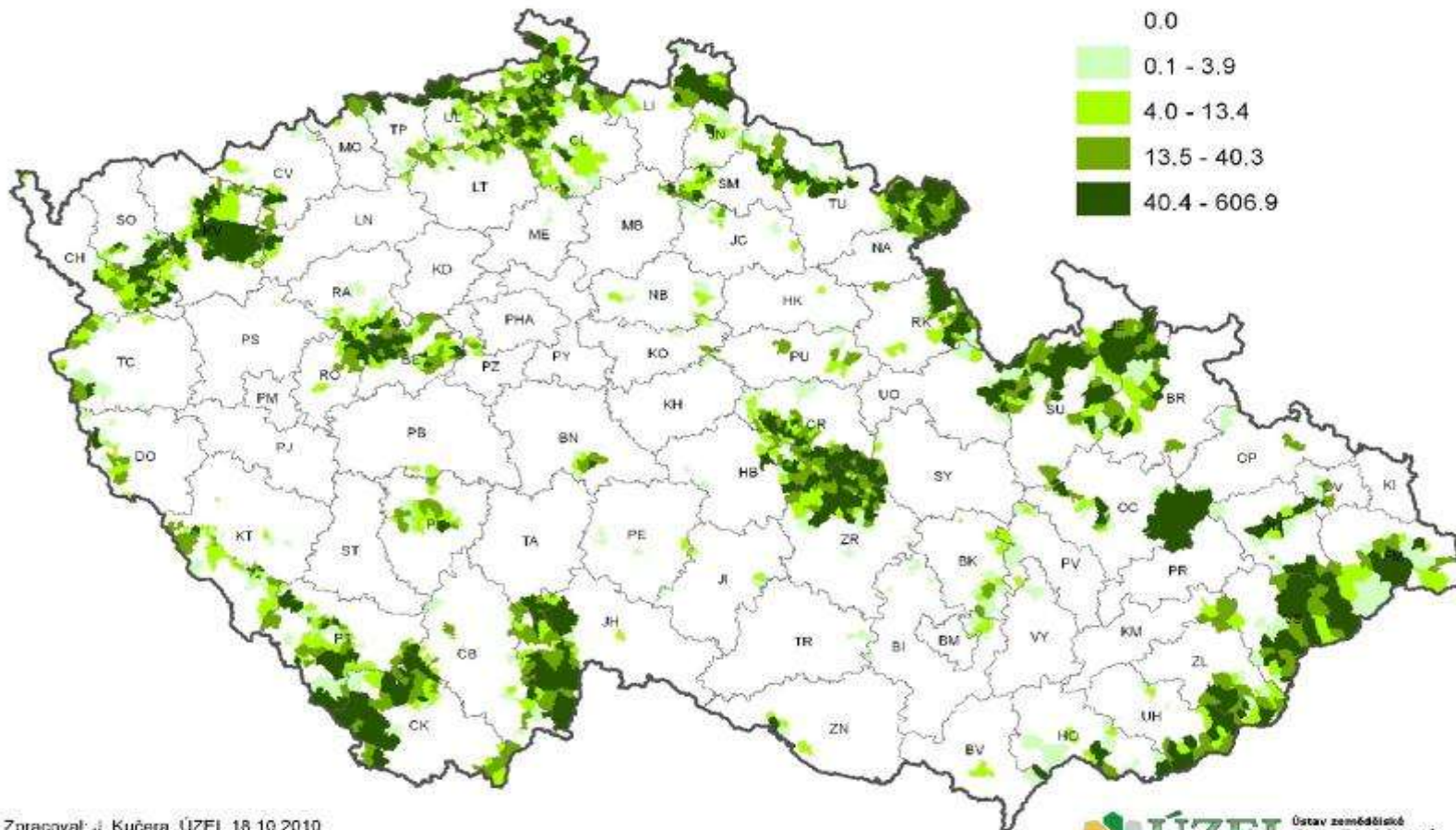
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The map shows the geographical distribution of the uptake of the agri-environmental measure. Please note that the figures presented are preliminary and further work is currently being carried out to refine the collection of the data. Therefore this version should not be used for referencing.

Mezophile and wet meadows (AEM)

Výměry titulů AEO PRV (EAFRD)
v jednotlivých katastrálních územích ČR 2009

B: Ošetřování travních porostů [ha]
B2: Mezofilní a vlhkomilné louky [ha]



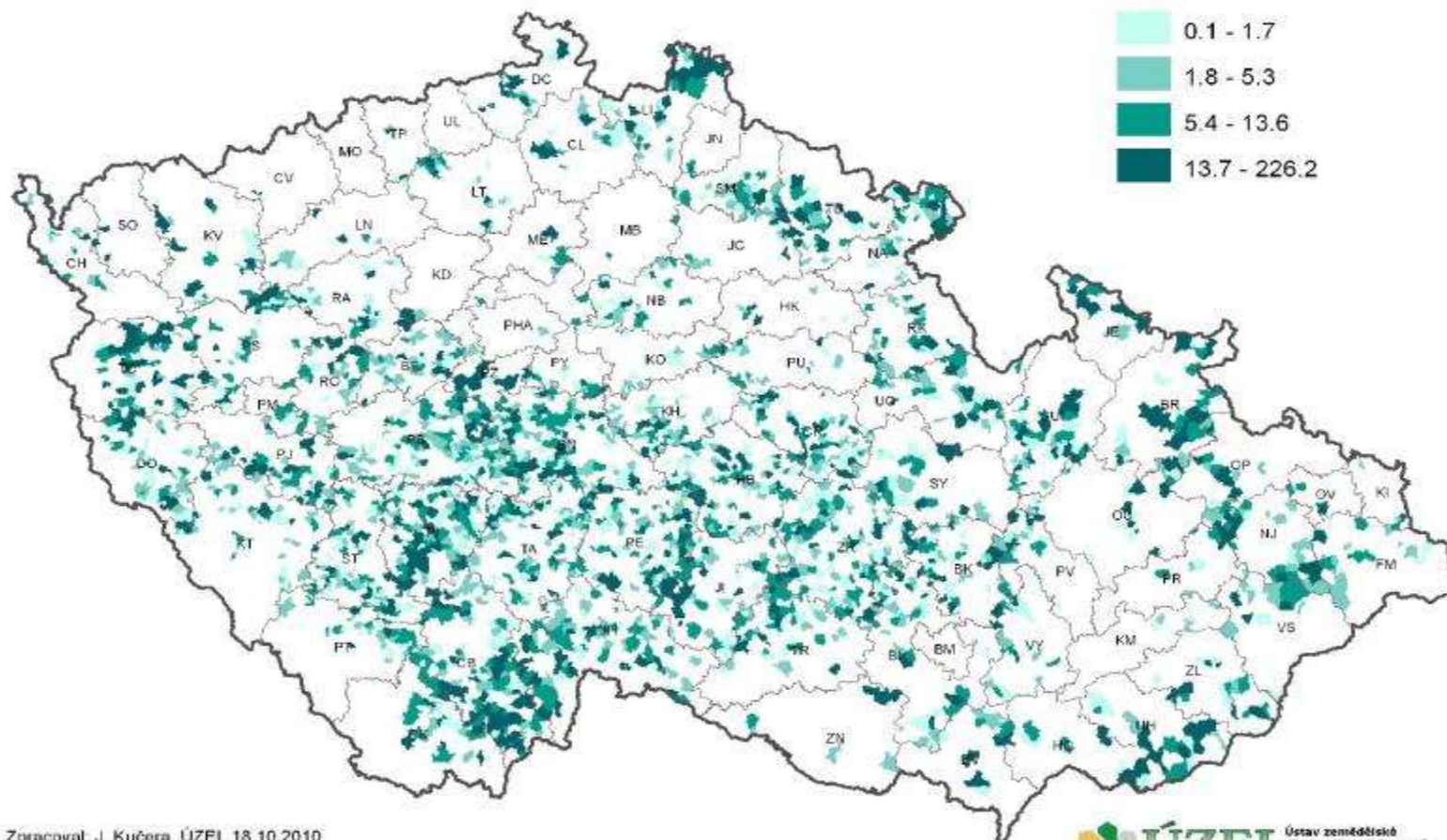
Zpracoval: J. Kučera, ÚZEI, 18.10.2010

Zdroj: LPIS 2009, SZIF 2009

Conversion of arable land to grassland

Výměry titulů AEO PRV (EAFRD)
v jednotlivých katastrálních územích ČR 2009

C1: Zatrávňování orné půdy [ha]



Zpracoval: J. Kučera, ÚZEI, 18.10.2010

Zdroj: LPIS 2009, SZIF 2009



Fodder strips (AEM)

Výměry titulů AEO PRV (EAFRD)
v jednotlivých katastrálních územích ČR 2009

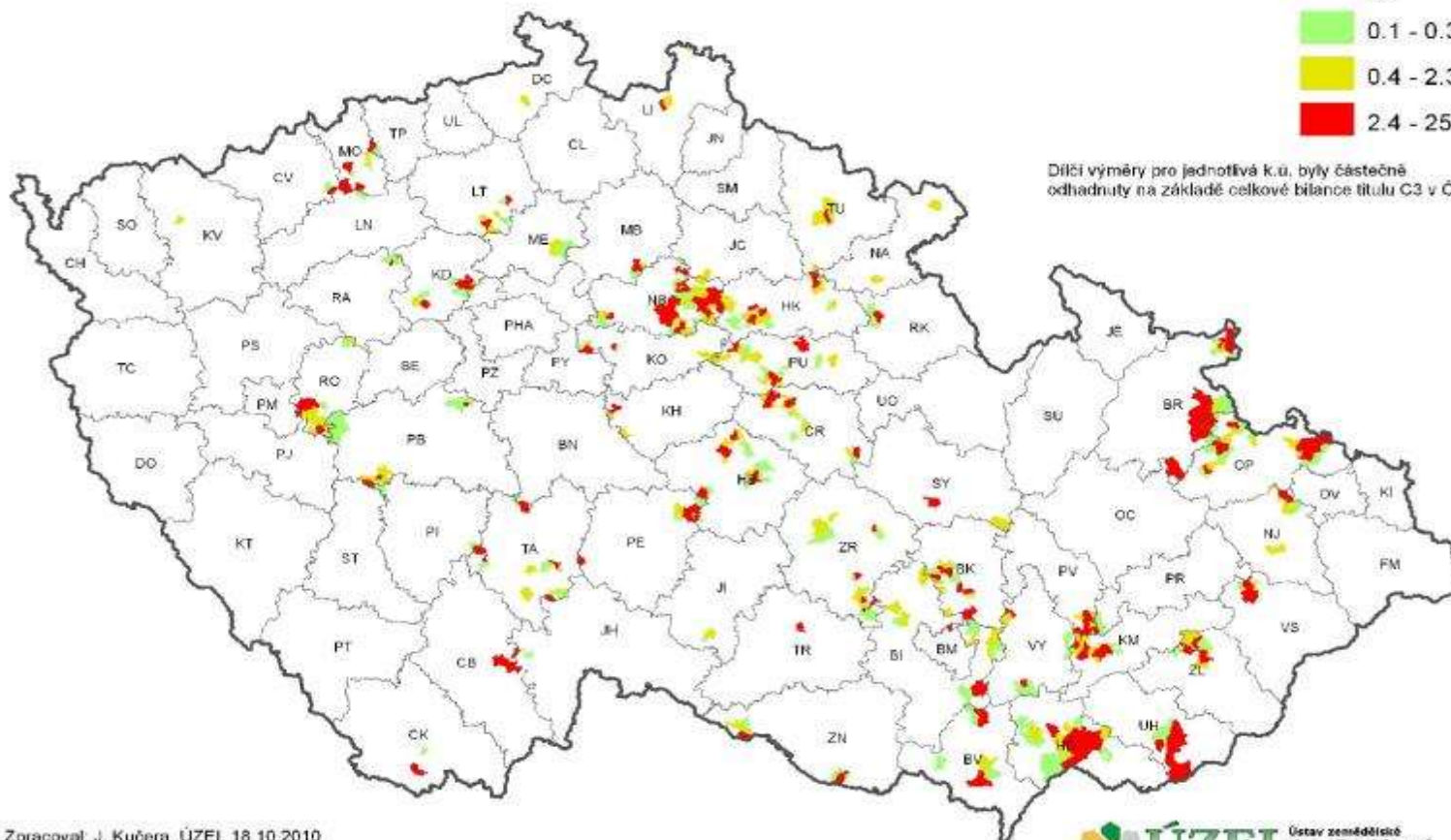
C3: Biopásy

0.0

0.1 - 0.3

0.4 - 2.3

2.4 - 25.7



Zpracoval: J. Kučera, ÚZEI, 18.10.2010

Zdroj: LPIS 2009, SZIF 2009

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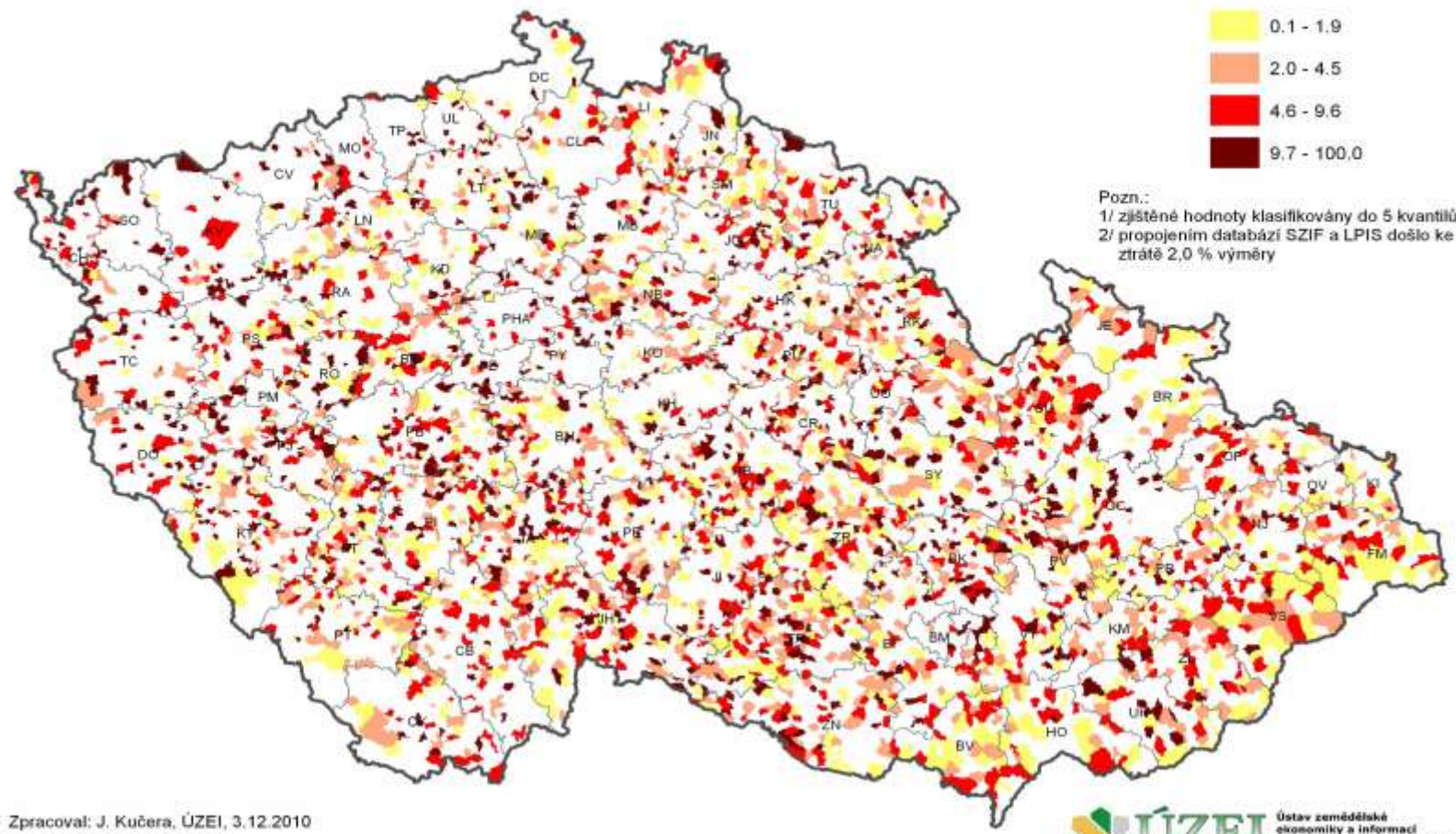
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Cover crops – (AEM)

Procentuální podíl titulů AEO PRV (EAFRD) na celkové výměře půdních bloků LPIS v jednotlivých katastrálních územích ČR 2009

C2: Meziplodiny [%]



Pozn.:
 1/ zjištěné hodnoty klasifikovány do 5 kvantilů
 2/ propojením databázi SZIF a LPIS došlo ke ztrátě 2,0 % výměry

Zpracoval: J. Kučera, ÚZEI, 3.12.2010
 Zdroj: LPIS 2009, SZIF 2009



The map shows the geographical distribution of the uptake of the agri-environmental measure. Please note that the figures presented are preliminary and further work is currently being carried out to refine the collection of the data. Therefore this version should not be used for referencing.

To conclude:

- Under-provision of PG on arable land is more likely than on grassland.
- Farmers with intensive farm are not open to apply for AEM.
- Still some schemes are rather successful: conversion of arable land to grassland, cover crops, fodder strips, organic farming.
- It is possible to provide PG on mixed/arable farms.

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To conclude - Policies

- Agri-environmental measure: needs improved targeting and communication to farmers, advice to farmers, scientific ground for management.
- Afforestation: limited area, locally important.
- Natura 2000 areas: small area and uptake.
- Land reclamation process: slow, supporting erosion prevention measures.

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