To leave or not to leave the Agro-environmental schemes (AESs)? A longitudinal analysis

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Existing Literature

- Large body of literature on factors affecting AESs uptake in different European Union countries

  - Farm structural factors

  - Farmers characteristics and attitudes toward the environmental protection

  - Farmers attitudes to networking and innovation diffusion patterns
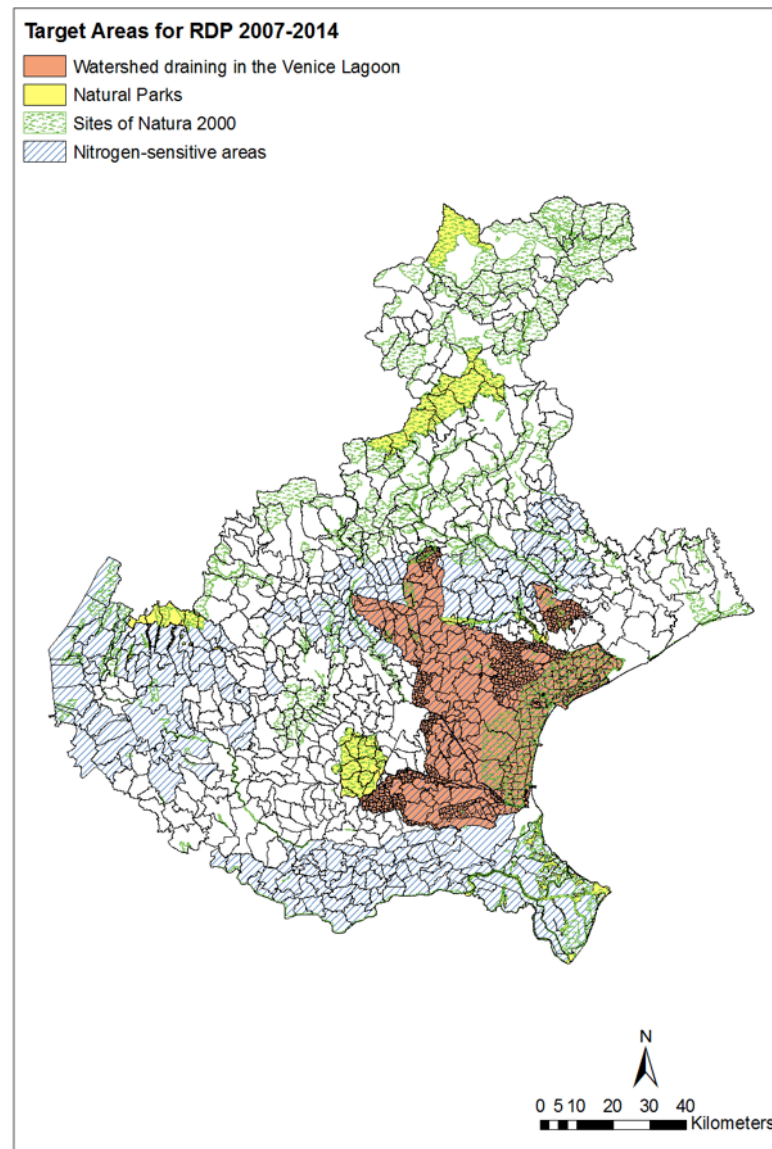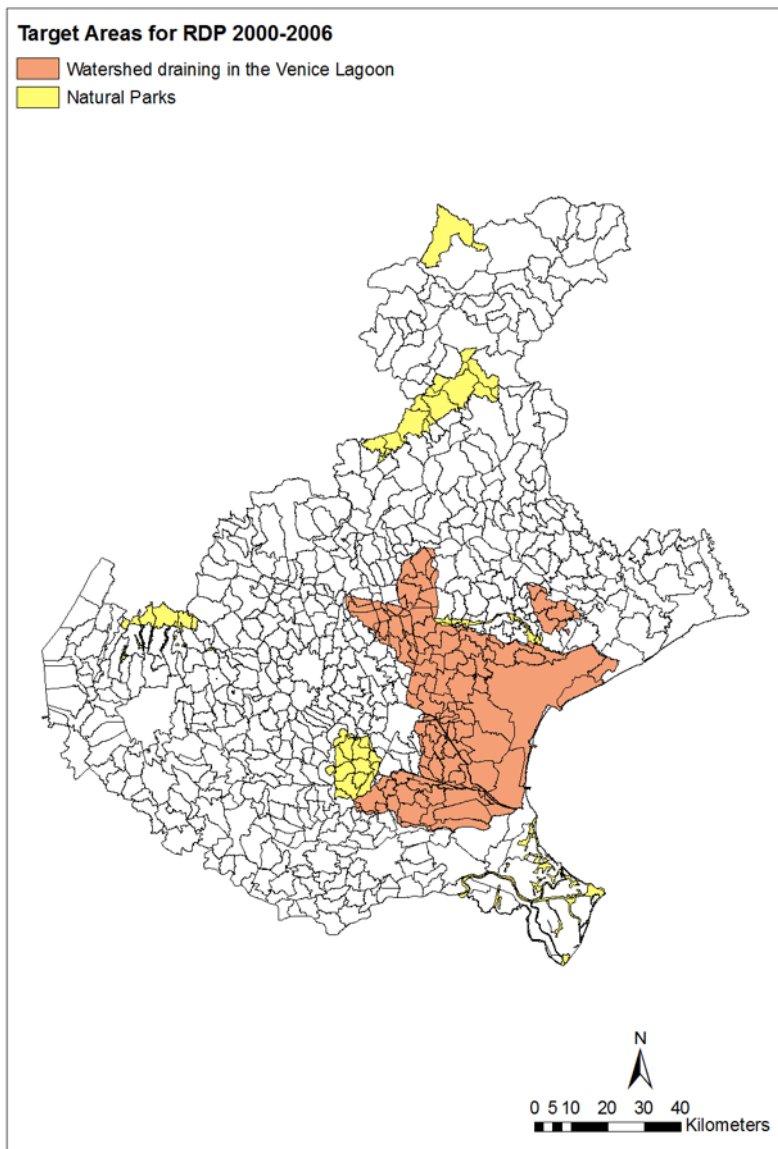
  - Social capital issues

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Our research question

- Which factors affect the decision not to leave the programme signing new contracts, thus assuring permanent environmental benefits to society?

  - Farm and Farmers characteristics and attitudes toward the environmental protection

  - Farmers Networking and innovation diffusion patterns

  - Policy design: targeting and flexibility

- Case study: hedgerows and buffer strips in the Veneto Region (2000-2015) based on individual farms contracts regional databases

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Policy framework

- Voluntary Agro-environmental schemes based on public cost-refund-based payments since 1992 (1994)

- EU regulation + Region based targeted and tailored AESs

- Specific Regional policies on target areas up to 2000

- Above the mandatory baselines AESs included in 7-years rural development programmes since 2000

- Formally 5-years contracts with farmers, but some yearly extensions do exist

- Some farmers leave the programme at the end of the contract, others sign a new one
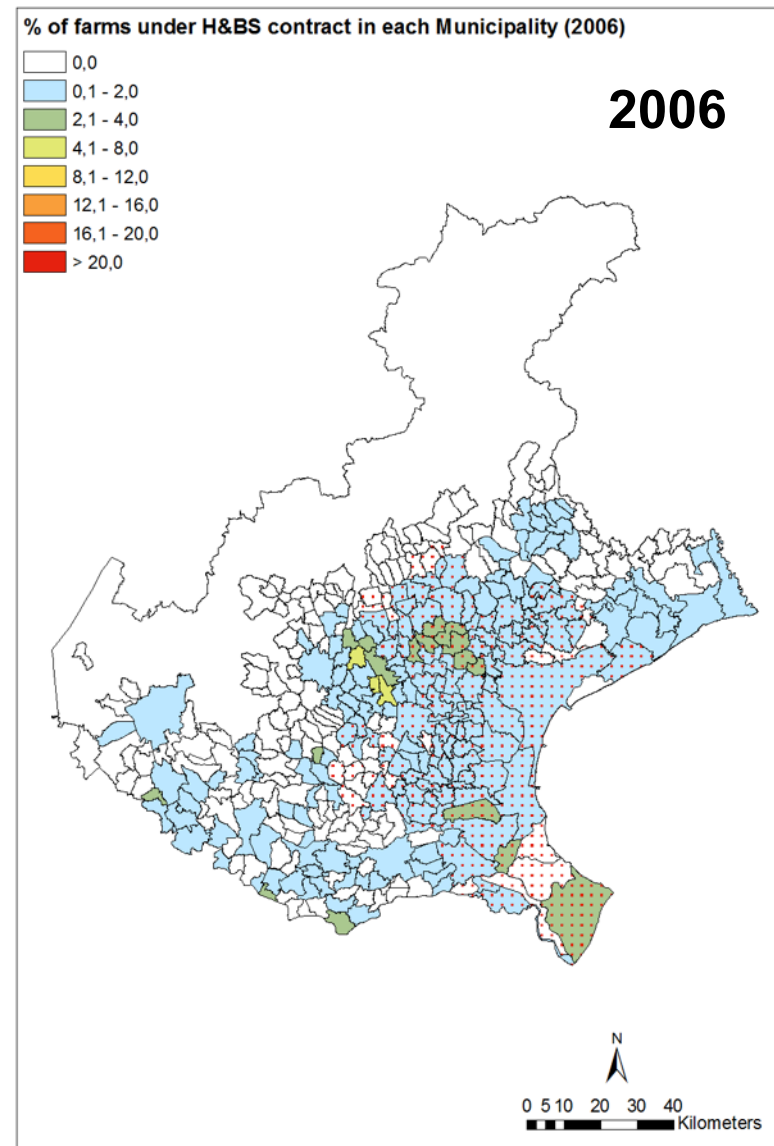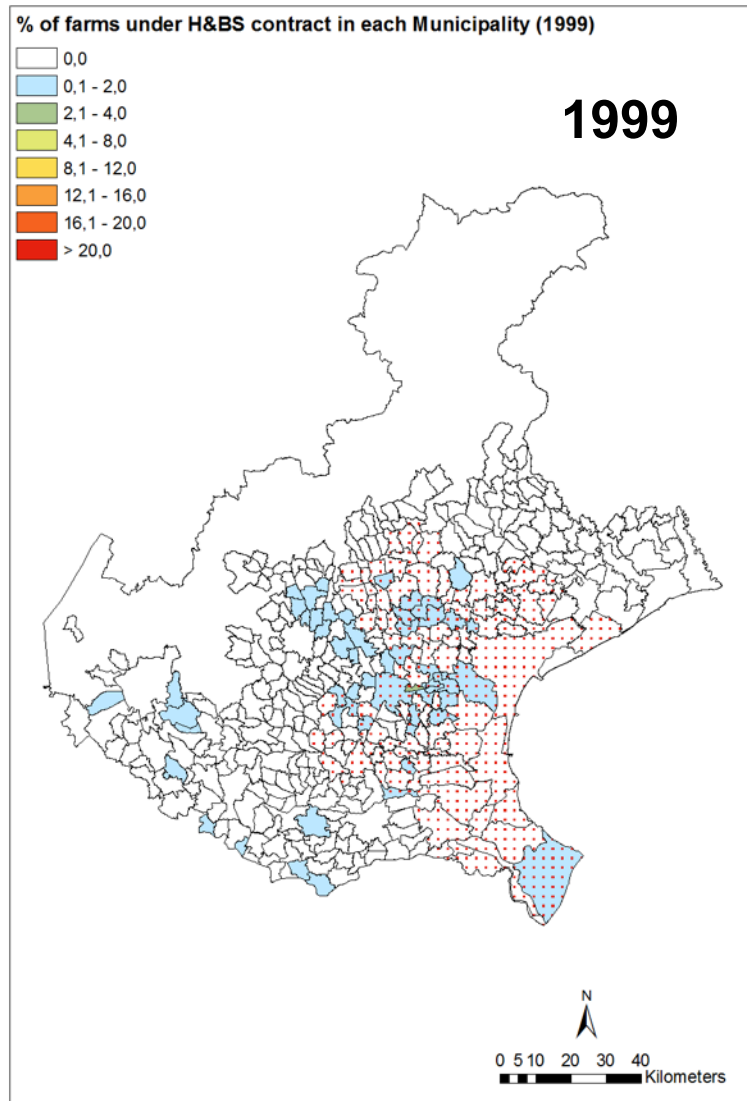
Policy targeting
(mountain areas outside the programme)

Target Areas for RDP 2000-2006
- Watershed draining in the Venice Lagoon
- Natural Parks

Target Areas for RDP 2007-2014
- Watershed draining in the Venice Lagoon
- Natural Parks
- Sites of Natura 2000
- Nitrogen-sensitive areas

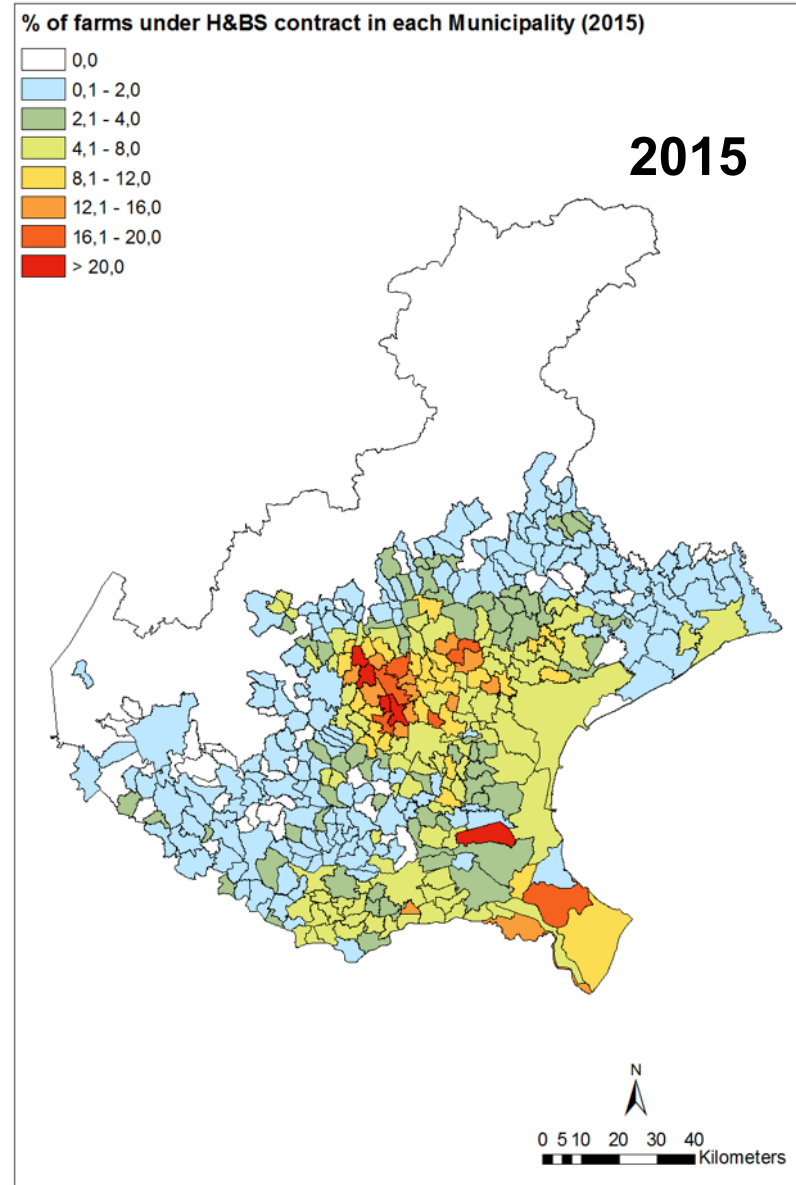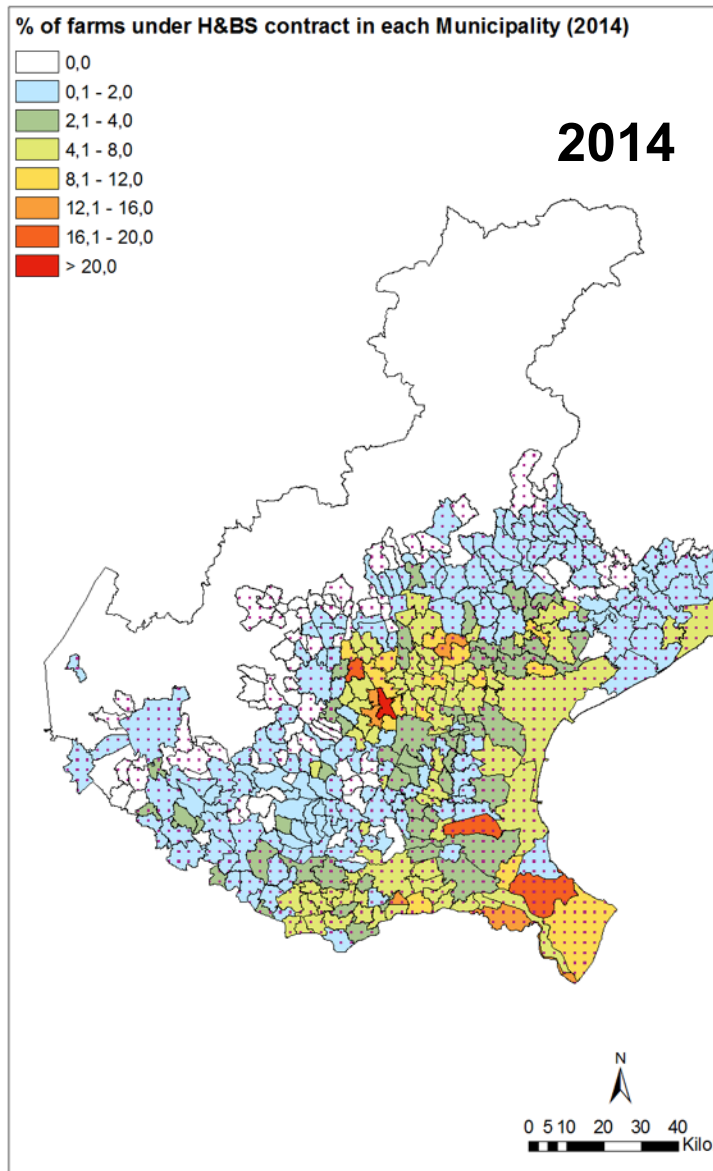0 5 10 20 30 40 Kilometers

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Policy tailoring in the more recent AESs

- Fine-tuning of the cost-based payments

- Increased flexibility in hedgerows and buffer strips design

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The farmers informal networking and the policy effects: the AESs diffusion patterns

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Methodological approach

- Survival analysis based on discrete-time hazard model (Allison, 1982)

$$P_{it} = P(T_i = t \mid T_i \geq t)$$

- Logit model estimated on a longitudinal 'farm-period' dataset excluding the mandatory years under the first contract

$$\ln\left(\frac{P_{it}}{1 - P_{it}}\right) = \alpha(t) + X_i'\boldsymbol{\beta}$$

The estimated model

Variables	β	S.E.	Exp(β)	95% C.I. for EXP(β)	
N_YEARS	1.188***	0.047	3.279	2.992	3.594
RD_PROGRAMME of 1st CONTRACT	1.273***	0.067	3.572	3.133	4.073
LAG_FARM%_MUN BY T_AREAS = 1	0.150***	0.015	1.162	1.129	1.196
H&BS_INCREASE	1.295***	0.118	3.652	2.899	4.601
F_UAA	0.004**	0.001	1.004	1.001	1.007
B_TYPE&SOLE_P_AGE = Other_types	0.162	0.161	1.176	0.858	1.614
B_TYPE&SOLE_P_AGE = ≤ 40 years	0.487***	0.118	1.627	1.291	2.051
B_TYPE&SOLE_P_AGE = 41-65 years	0.358***	0.088	1.430	1.204	1.699
OTHER_AESs	0.653***	0.130	1.921	1.490	2.477
Constant	-7.754***	0.288	0.000		

*** p<0.01; ** p<0.05; * p<0.1

Log L = 4797.52
Cox e Snell pseudo R^2 = 0.236
Nagelkerke pseudo R^2 = 0.464
Percentage of correctly classified cases = 91.1

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Concluding remarks

- Both policy fine-tuning and informal networking seem to play a relevant effect on farmers not leaving the AESs

- Results will be deepened and confirmed by a questionnaire-based sample survey

- Our findings help to:
    - provide a easy-to-implement tool to regional policy makers for:
        - mid-term and ex-post evaluations of AESs
        - fine-tuning the policy and the information strategies to farmers
    - properly identify the survey target areas

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