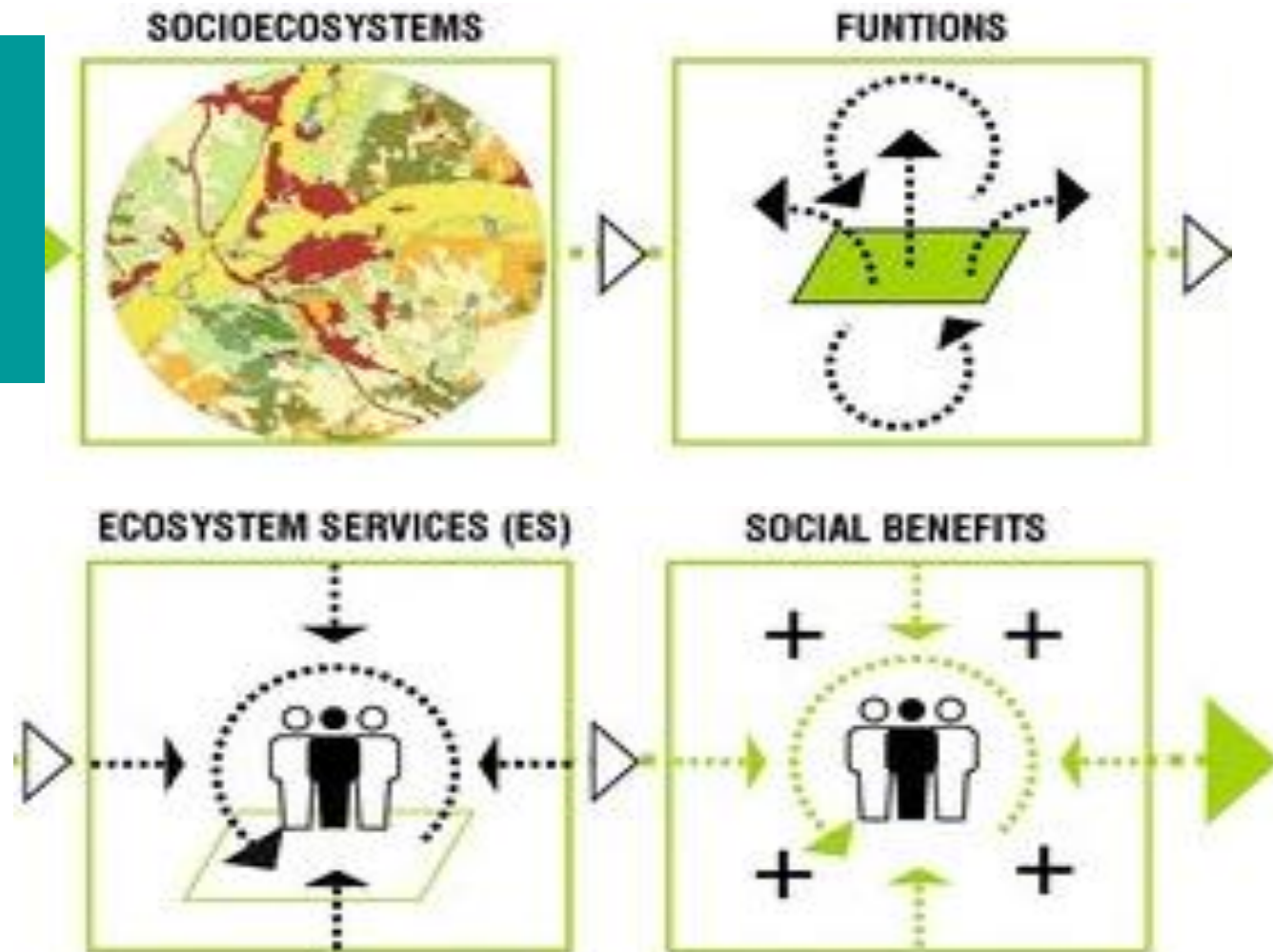




**SPATIAL DIMENSION OF
SUSTAINABLE FARMING SYSTEMS:
AGROECOLOGICAL PLANNING IN
TIMES OF UNCERTAINTY**

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Simon Rojo, M., Moratalla, A.Z., Alonso, N.M. et al. Pathways towards the integration of periurban agrarian ecosystems into the spatial planning system.

PERIURBAN AREAS

PERIURBAN FARMING TYPOLOGY

PLANNING FOR AGROECOLOGY

Stakeholders
perception/interaction
with agroecosystems

		PROV		REGULAT.				CULT.		BIO
		Reg	Sec	Clim	Ag	Sue	C02	Pat	Rec	
REGIONAL LEVEL	Technician 01	+	+	•	+	+	+	•	•	+
	Technician 02	+	+	•	•	+	•	•	+	+
	Technician 03	+	+	•	•	•	•	•	•	•
	Technician 04	+	•	+	+	•	•	+	+	•
INSTITUTIONAL LOCAL LEVEL	Politician 01	+	+	•	+	+	+	+	+	+
	Technician 04	+	+	•	+	•	+	+	•	•
	Technician 05	•	•	•	•	•	•	•	+	•
	Technician 06	•	•	+	•	•	+	+	+	+
	Technician 07	+	+	•	•	•	•	+	+	•
	Politician 02	•	•	•	•	•	•	+	+	•
	Magager	+	•	•	•	•	•	+	•	•
AGRARIAN SECTOR & CIVIL SOCIETY	Group 01	+	•	+	+	•	+	+	•	•
	Group 02	+	+	•	+	+	+	+	+	•
	Farmer 01	+	•	•	+	+	+	•	•	•
	Farmer 02	+	+	•	+	+	+	•	+	+
	Farmer 03	+	+	•	+	+	+	•	•	+
	Farmer 04	+	+	•	+	+	+	•	•	•



What ES affect their daily management of the territory?

What is the

PERIURBAN AREAS

PERIURBAN FARMING TYPOLOGY

PLANNING FOR AGROECOLOGY

PROV

REGULAT.

CULT.

**Madrid
Metropolitan area
4.8 million hab.**

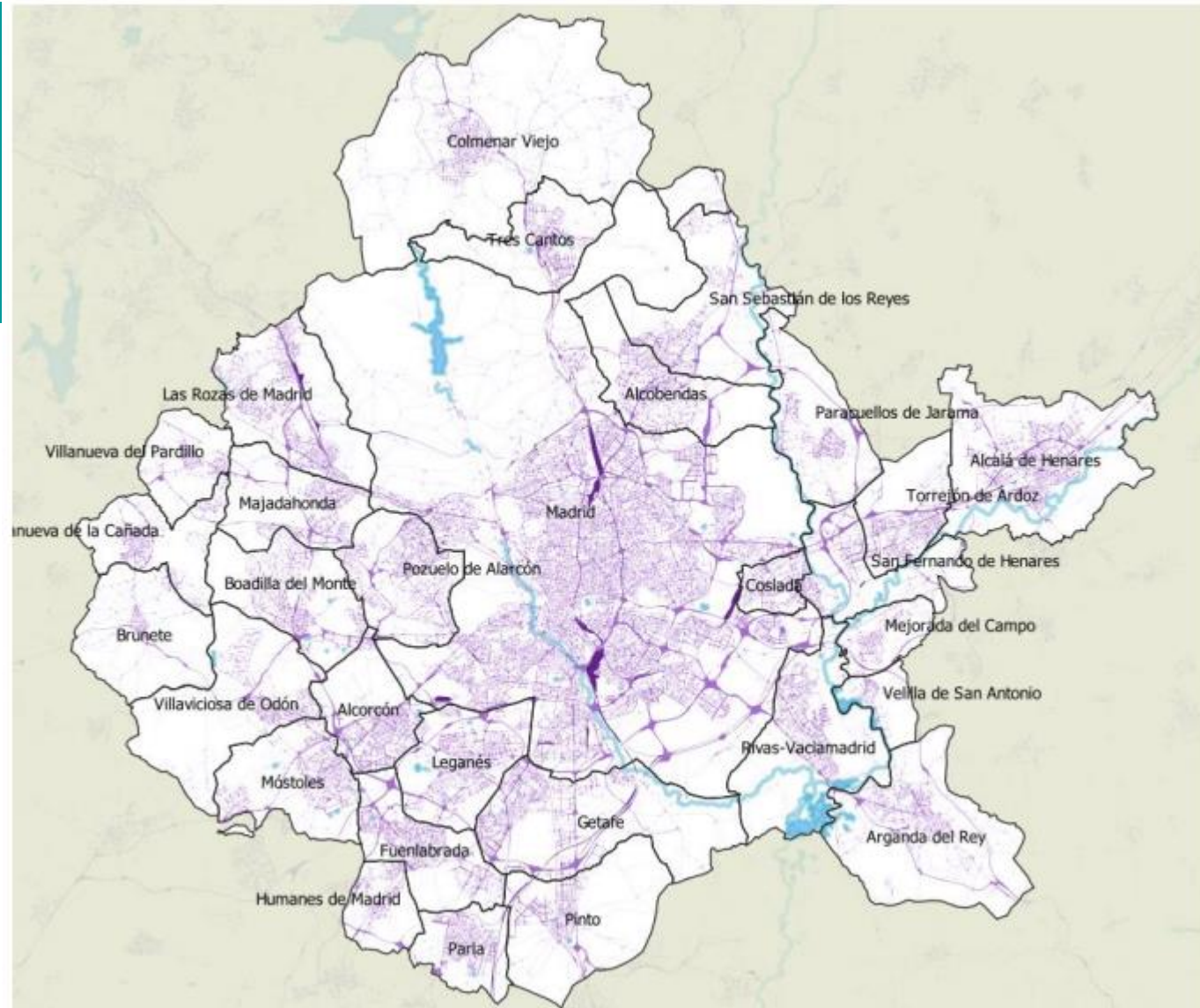
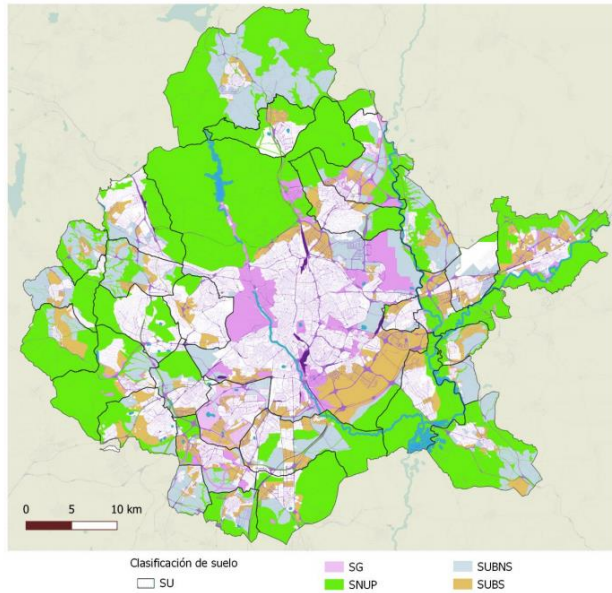


Figura 1. Área metropolitana de Madrid. Zona objeto del estudio

Periurban agriculture

Urban pressure, fragmentation, degradation



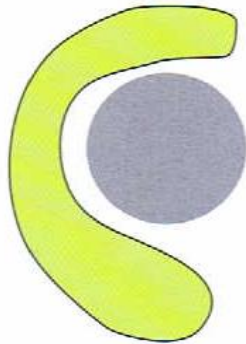
Madrid metropolitan área:
23.000 + 43.000 has
assigned for urban developmen



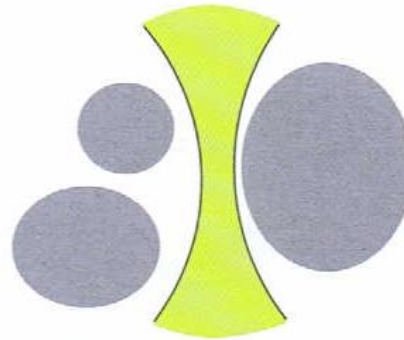
PERIURBAN AREAS

PERIURBAN FARMING TYPOLOGY

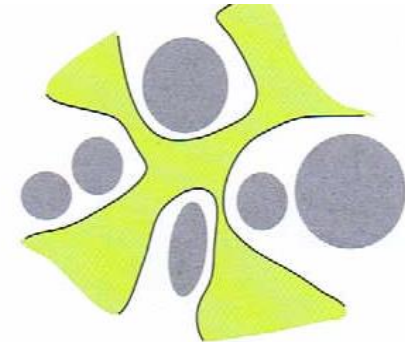
PLANNING FOR AGROECOLOGY


UA as part of a Green Belt:

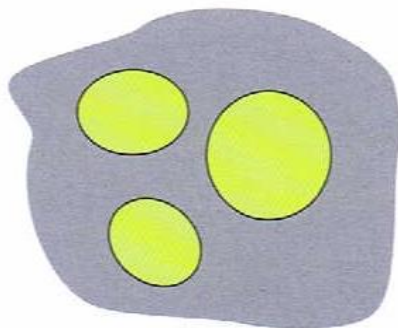
- Belvedere Park, Cologne
- Ceinture Verte, Toulouse
- Anillo Verde, Vitoria-Gasteiz
- Berliner Barnim


UA as a Green Corridor:

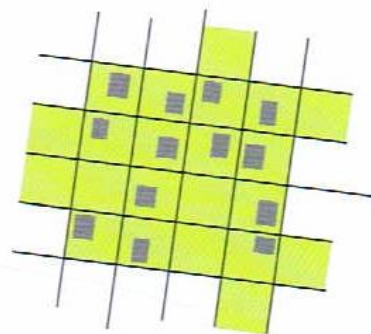
- le parc fertile, Geneva
- Espai rural de Gallecs
- Pferdelandpark, Aachen


UA as a Green Network:

- Green C, Bonn
- Landschaftspark Mechtenberg, Ruhr


UA as a Green Patch:

- Parc des Lilas, (near) Paris
- Landschaftspark Duisburg-Nord
- Landschaftspark Herzberge, Berlin


UA as a Green Matrix:

- Family Gardens, Nitra Zobor

Tipology

Farming Level: biological agrarian production is at the core of a business activity.

Urban Farming intentionally adapted and taking advantage of proximity to the city

Non Urban Oriented Farming business as usual

Lambhagi, Reykjavik, Local Food Farm



Area size: 4,1 hectares
Urban Agriculture type: Local food farm
Timeline: from 1979 until today
Weblink: <http://lambhagi.is/>
Author: Salvör Jonsdóttir

Organic Farm Radl



Area size: 170 hectares
Urban Agriculture type: Local food farm
Timeline: from 01.1985
Weblink: www.erdbeerwelt.at
Weblink: <http://www.biohof-radl.at>
Info PDF: [Business model Canva](#)
Author: Helene Weissinger

Tipology

Gardening Level



Farming Level



Tipology

Farming Level: On-site experiences



Leisure
Farms



Social
Farms



Educational
Farms



Therapeutical
Farms

Flows



Local Food+
Farms



Experimental
Farms



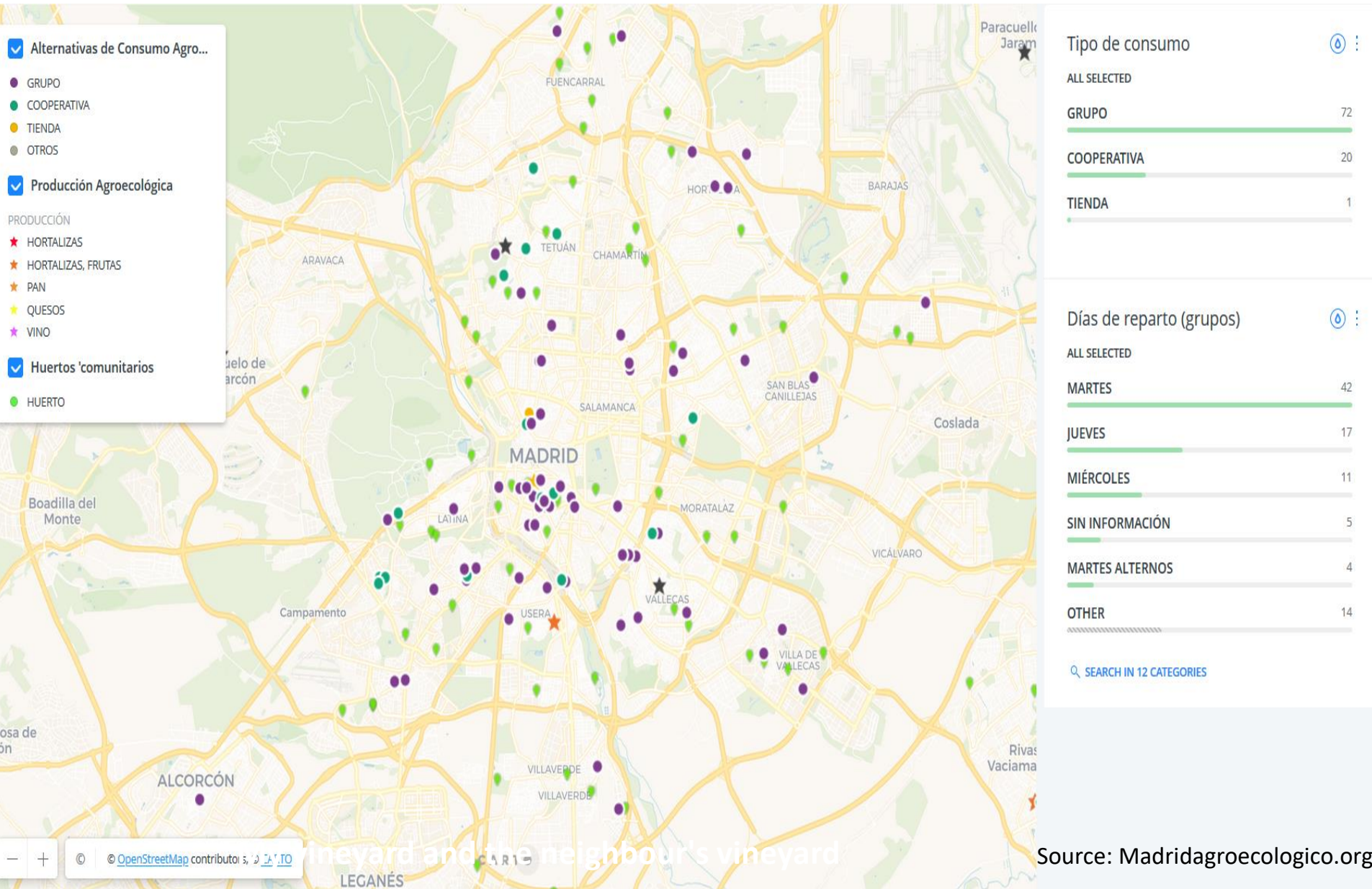
Environmental
Farms



Agroecology applies ecological principles to study, design and manage agroecosystems that are both productive and natural resource conserving, and that are also culturally sensitive, socially just and economically viable (Altieri 1995)

My vineyard and the neighbour's vineyard

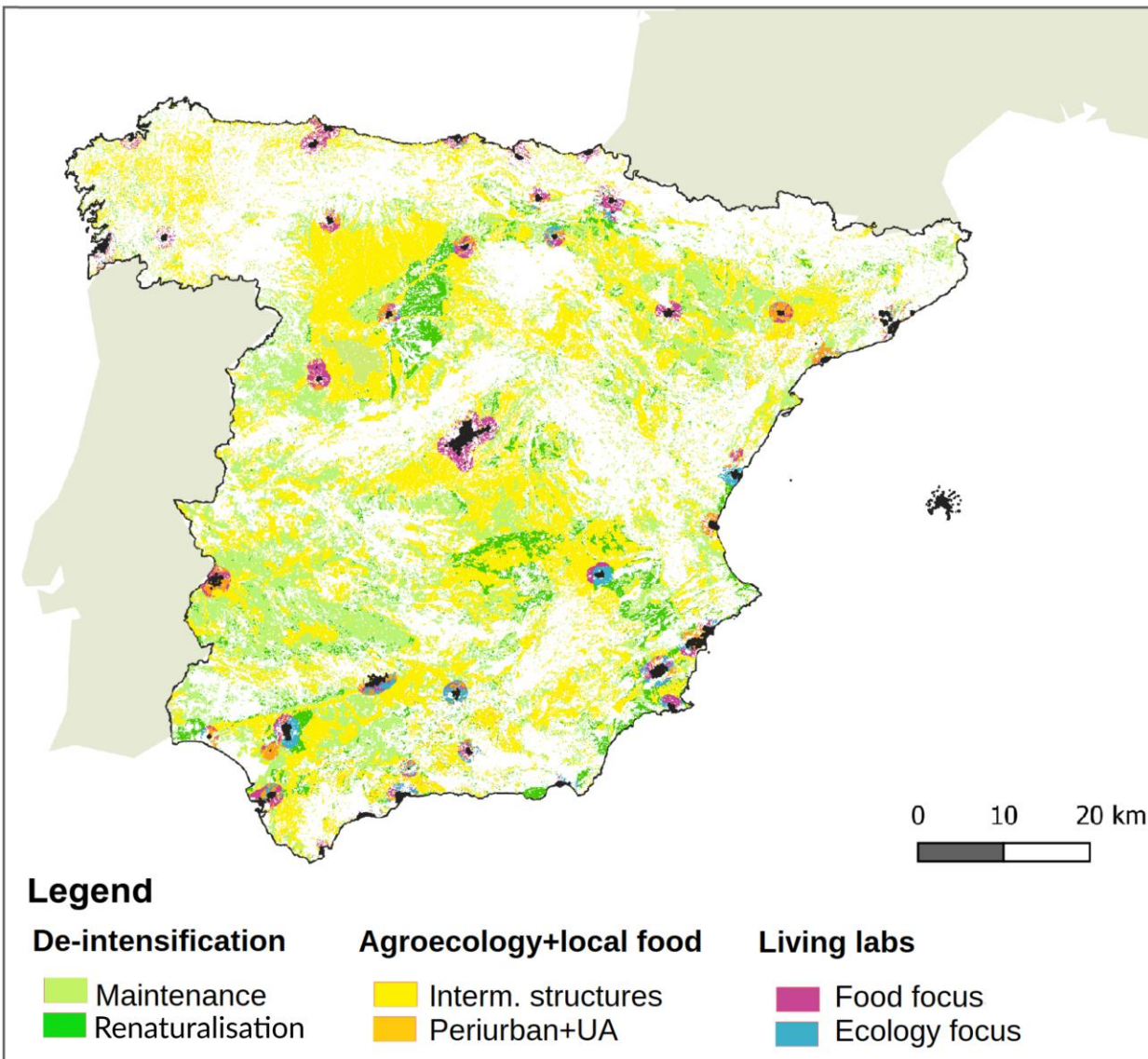
AFNs and agroecological projects in Madrid. The need for spatial planning and public policies.



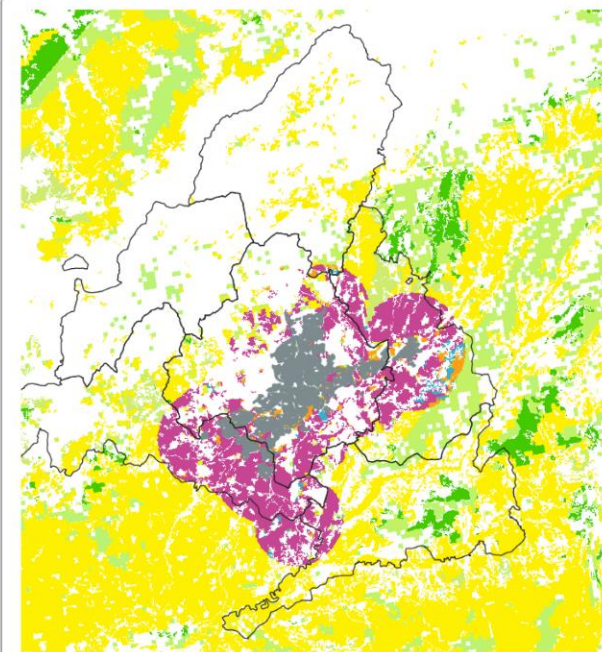
PERIURBAN AREAS

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PLANNING FOR AGROECOLOGY



Ecosystem services in regional planning for an agroecological transition in the food chain. (in process).



De-intensification It is applied to rural environments with medium-sized cities and a high presence of agricultural spaces in ecologically vulnerable areas

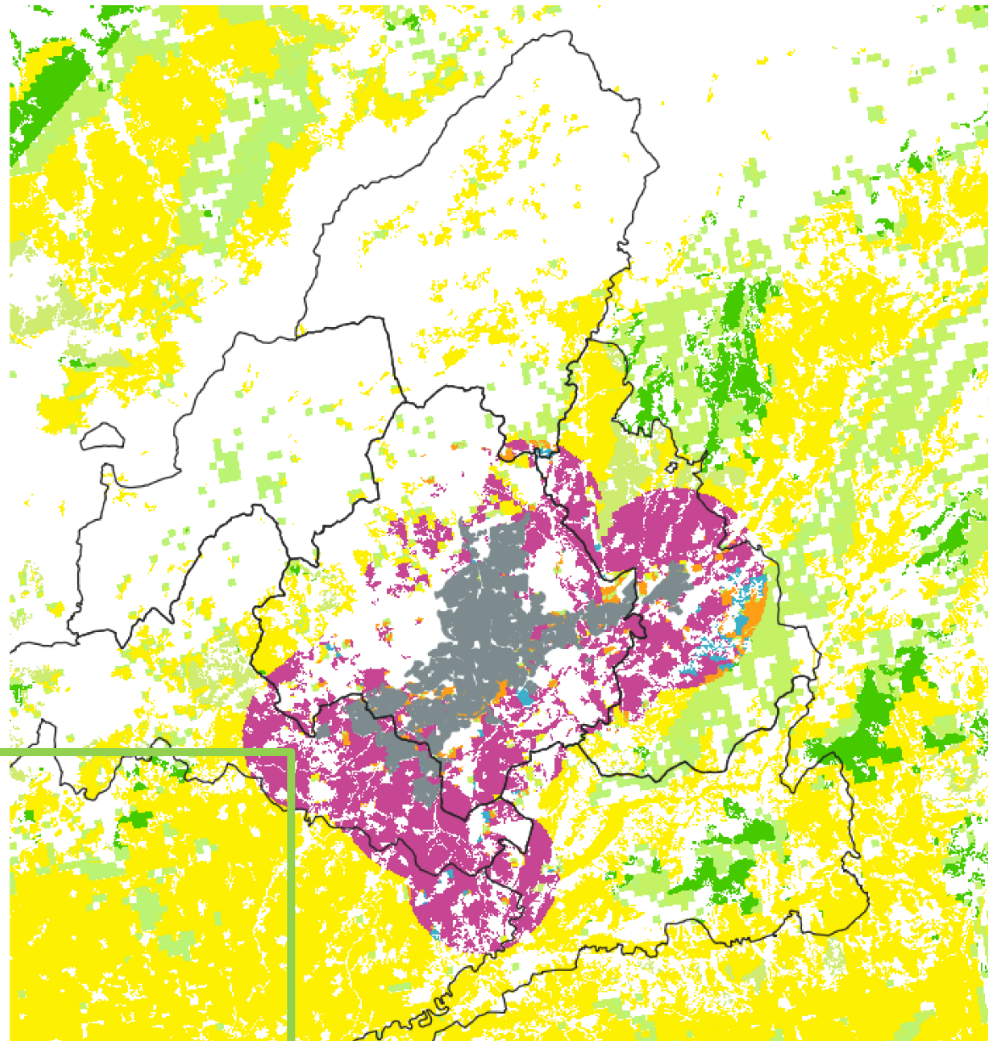
Agroecological reinforcement and recovery of intermediate infrastructures for food production, in traditional areas of food supply

Agroecological living labs in periurban areas easily accessible by soft modes of transport. These preserved natural areas

PERIURBAN AREAS

PERIURBAN FARMING TYPOLOGY

PLANNING FOR AGROECOLOGY



Environmental
Farms

Legend

De-intensification

- Maintenance
- Renaturalisation

Agroecology+local food

- Interm. structures
- Periurban+UA

Living labs

- Food focus
- Ecology focus



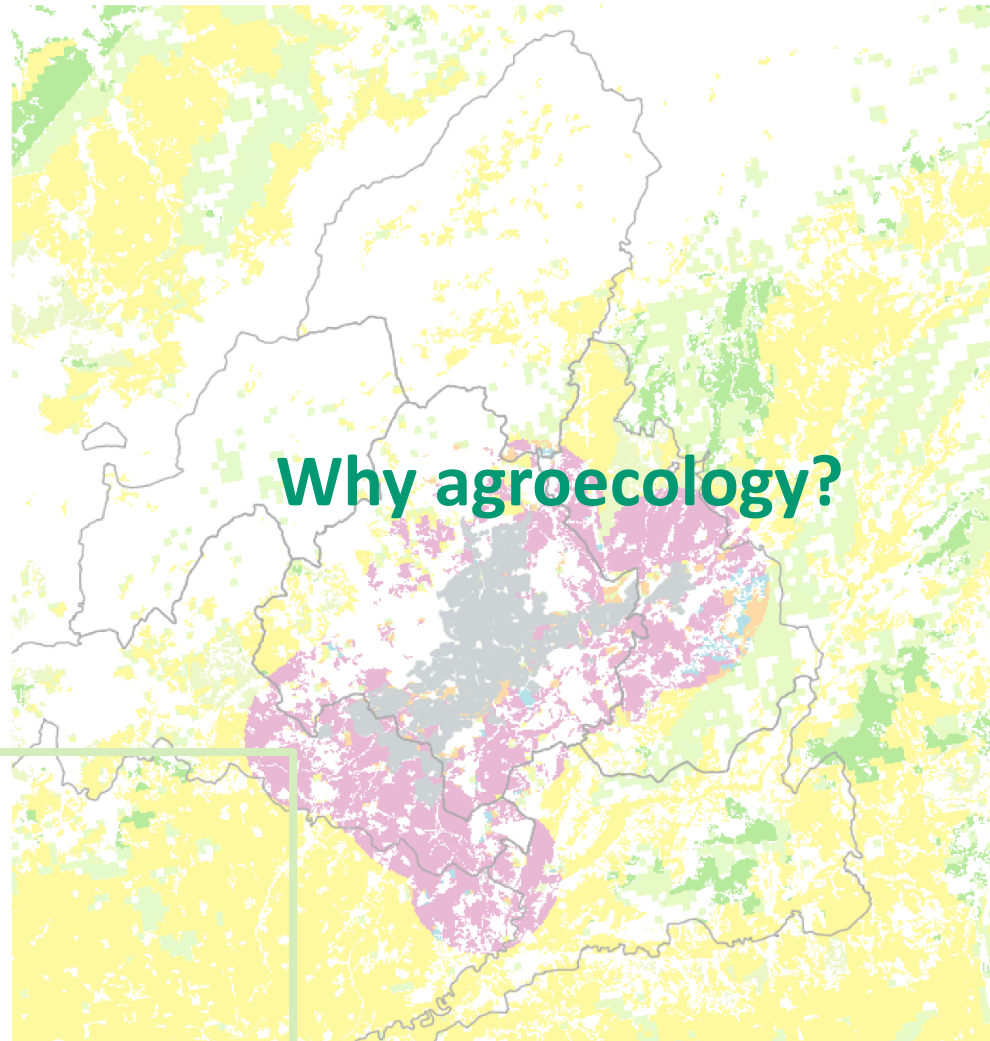
Social
Farms



Local Food+
Farms



Experimental
Farms



Why agroecology?



Environmental
Farms

Legend

De-intensification

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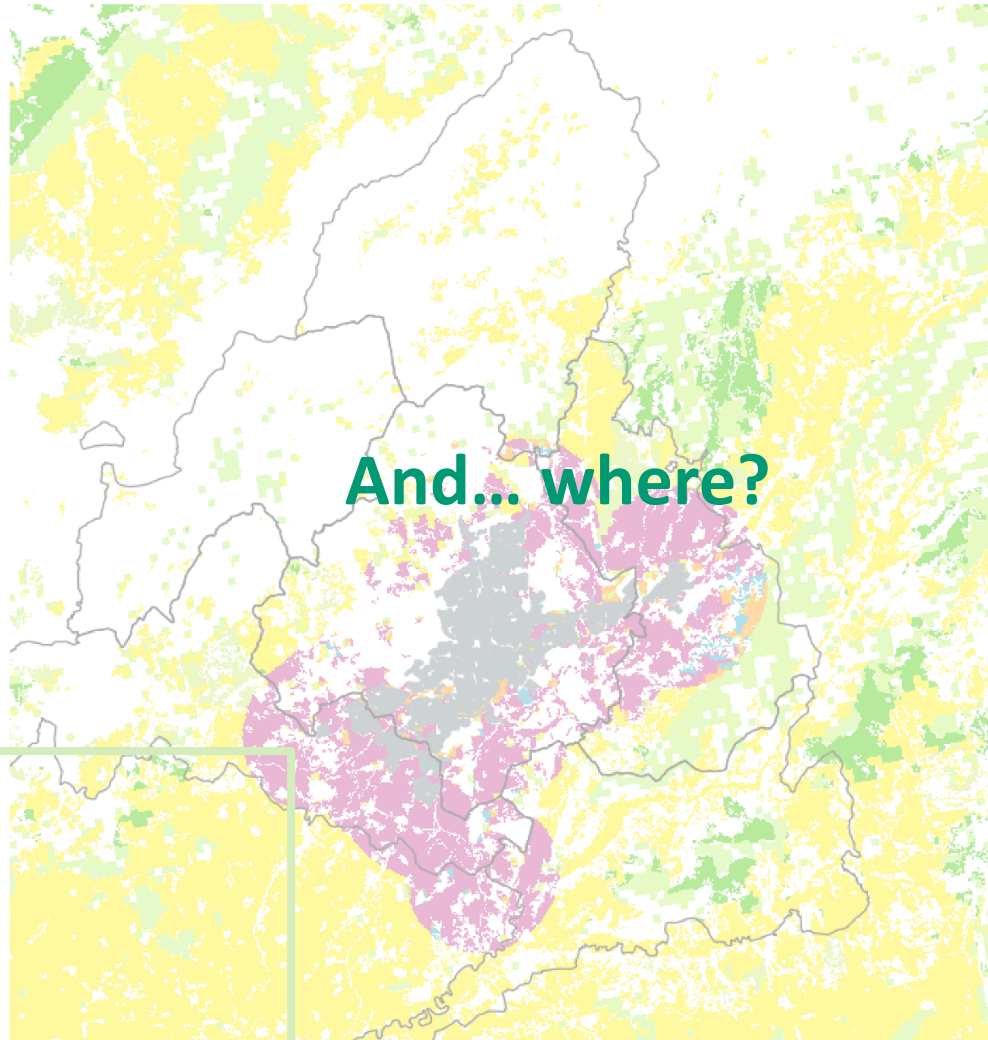
Social
Farms



Local Food+
Farms



Experimental
Farms



Environmental
Farms

Legend

De-intensification

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Social
Farms



Local Food+
Farms

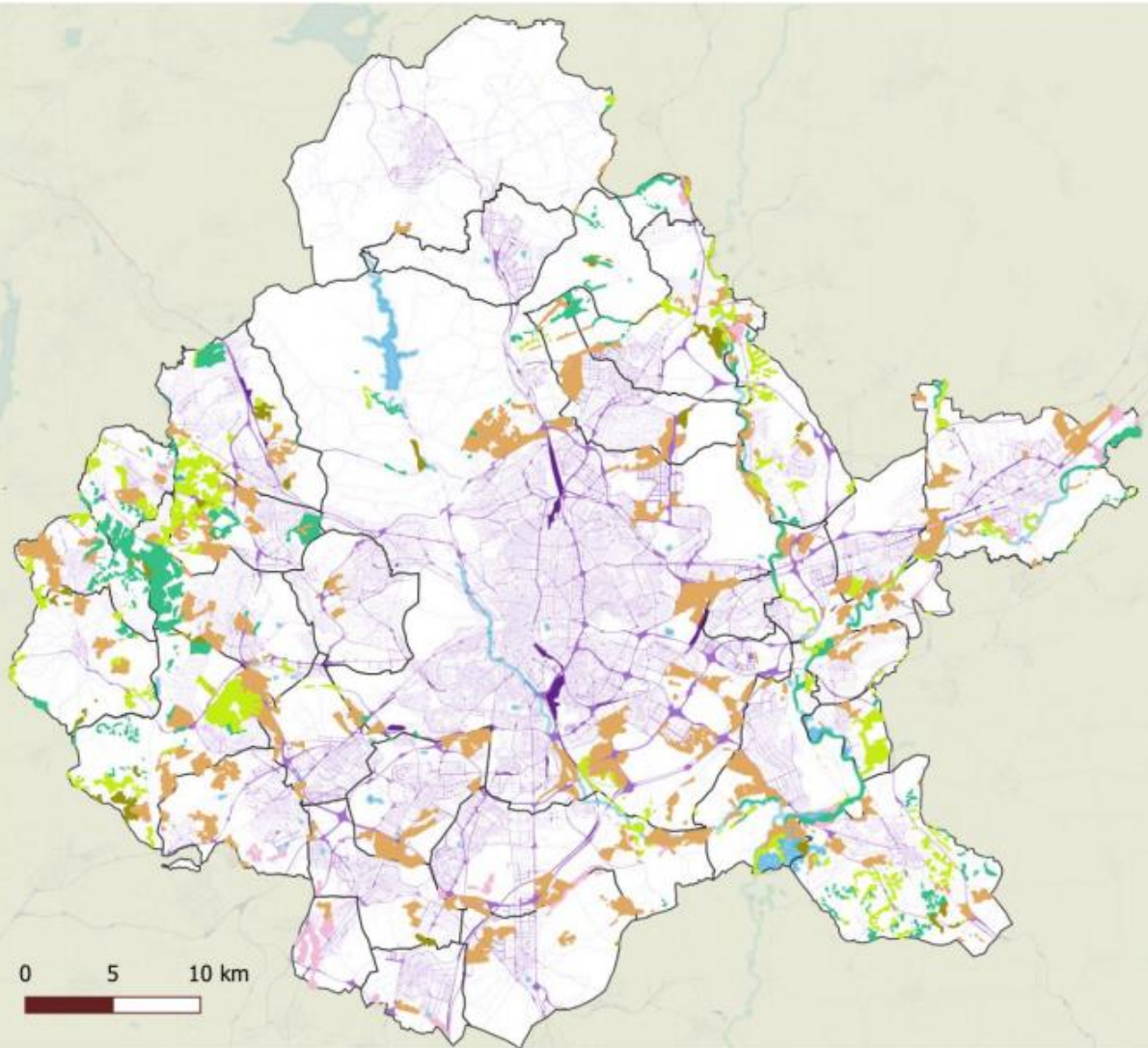


Experimental
Farms

	Zonas agrícolas									Zonas forestales			
	211	212	221	222	223	231	242	243	244	31	321	322,323	33
Tierras agrícolas													
211													
212				No									
Cultivos permanentes													
221				No									No
222				No				No					No
223													No
Prados y praderas													
231	No	No		No					No				
Zonas agrícolas heterogéneas													
242				No									
243				No									
244		No		No									

Agricultural land.
Abandonnement 2000 - 2020

Tabla 2. Procesos de intensificación y abandono según cambios de usos de suelo, categorías de CLC



Agricultural land.
Abandonnement 2000 - 2020

Source: Simon Rojo et al. 2020 Estudio suelos agrarios abandonados en la Comunidad de Madrid y propuestas de recuperación

Figura 3. Plano de dinámicas de abandono 2000-2018, según usos del suelo en 2018



Agricultural land.
Abandonnement 2000 - 2020

Source: Simon Rojo et al. 2020 Estudio suelos agrarios abandonados en la Comunidad de Madrid y propuestas de recuperación

5. Recuperación funcional de las áreas agrarias en regresión

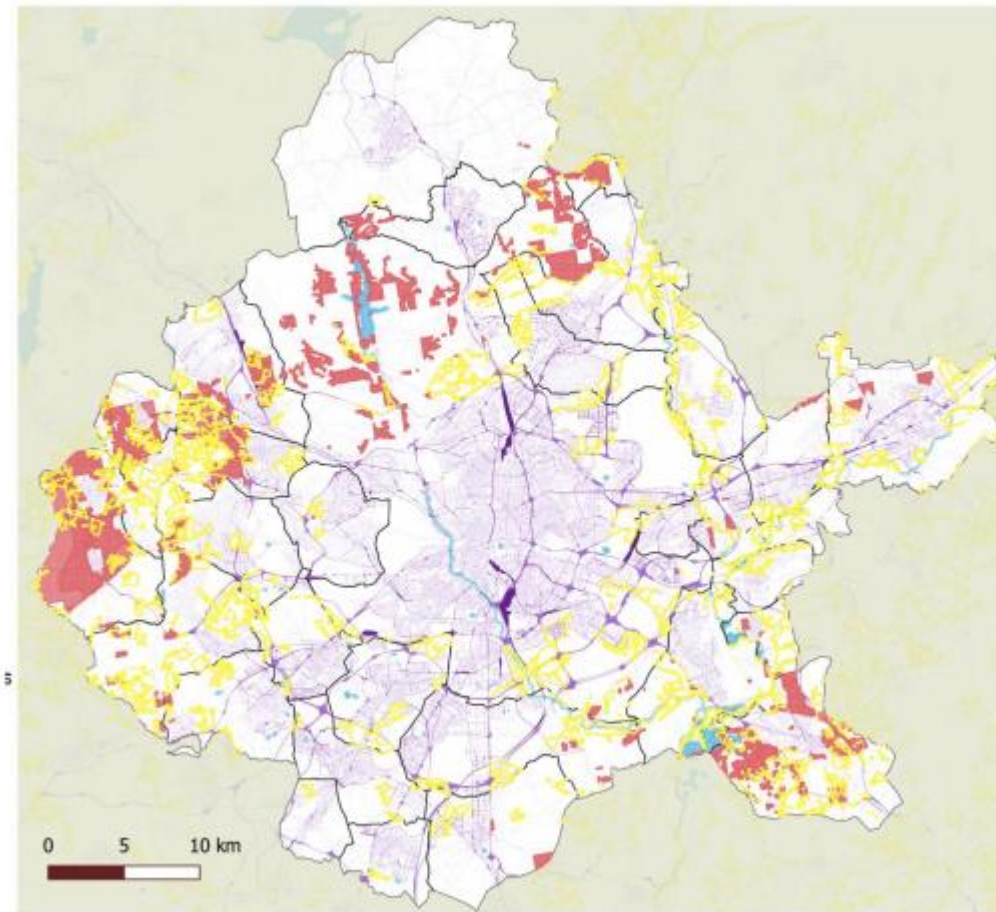
Espacios de impulso agrario vinculado a sistemas alimentarios locales

Figura 6. Suelos abandonados en zonas estrategia impulso sistemas locales



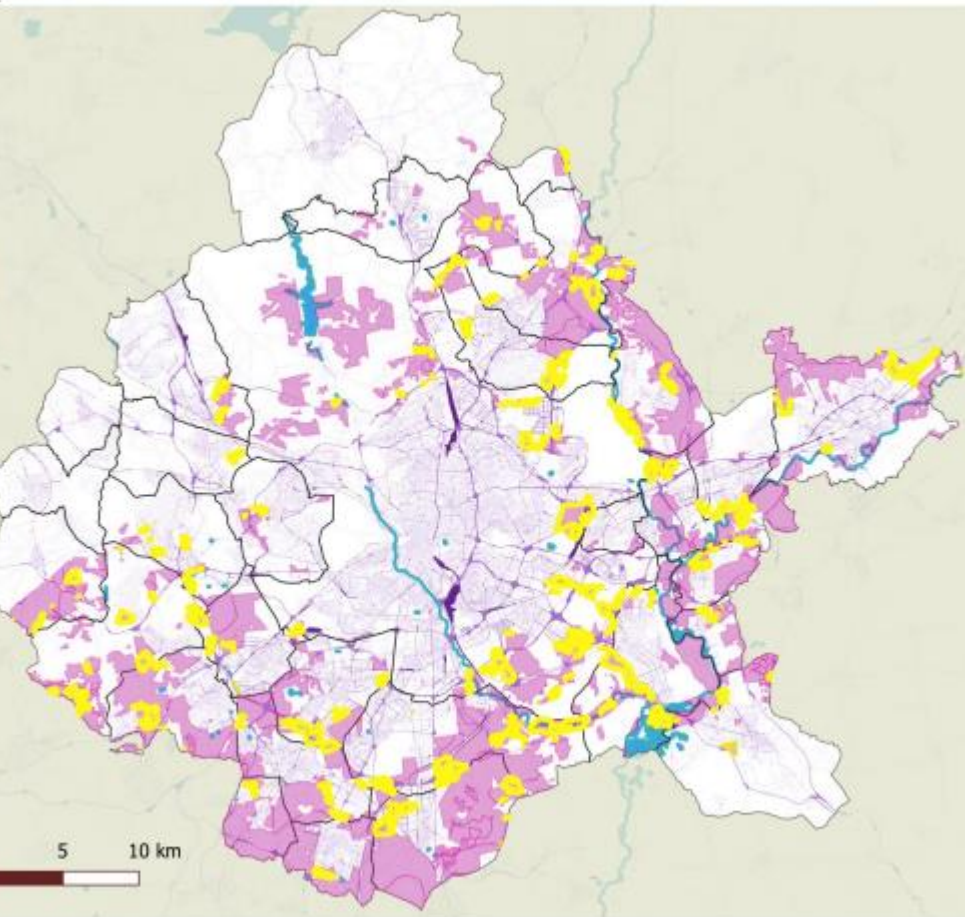
acios agroecológicos de cultura, experimentación y capacitación

Figura 5. Suelos abandonados en zonas estrategia Food Living Labs



Experimental
Farms

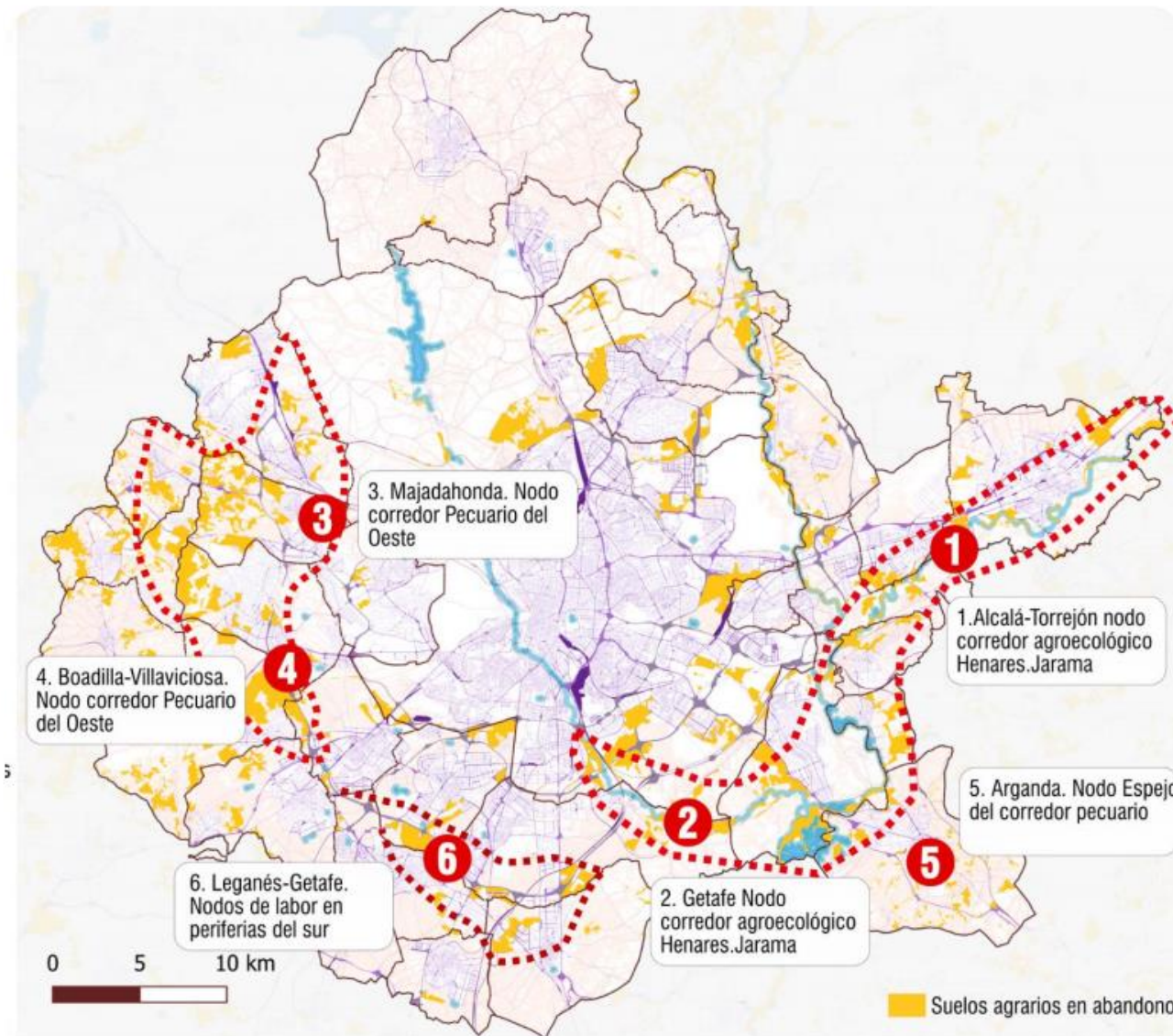


Social
Farms



Educational
Farms





Local Food+
Farms



Social
Farms



Environmental
Farms