

# Unlocking the agroecological potential of Lucanian farming and food practices

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Our ongoing research involves the study, through a spatial, social and ethnographic approach, of selected local food production practices, which promote diverse alternatives to dominant food chains. It qualitatively assesses how these practices modify the physical territory and social relations, also analysing how the actors' behaviours and choices are induced by cultural factors. It aims to document and analyse these practices and identifies what enables or hampers transformations towards full agroecological and sustainable food systems in Basilicata. In return this analysis can enrich the intersection between agroecology and agroecology urbanism, towards an agroecology territorialism. This paper briefly outlines the reflections that led us to want to extend the visions of an agroecology urbanism to rural, inner and mountain areas. Being the research at an early stage, we focus on the methodology for mapping the agri-food practices and we close with some openings and ongoing research questions emerging from initial activities (exploratory interviews, visits and context analysis).

Keywords: agroecology, agroecology urbanism, territorialism, farm practices

## Introduction

The sustainability of today's food systems, due to an increasingly well-documented series of interconnected negative impacts, is increasingly called into question. Industrial agriculture is one of the key drivers of the current crisis, but as Gliessman (2015, 1) says "it is also an arena of potential solutions". Agroecology emerges as an alternative paradigm to the corporate agri-food regime, to radically transform the structures that govern it - from food production systems to the socio-political and cultural systems through which humans conceive food and organise the way they eat in order to build a sustainable food system without increasing social or territorial inequality (Gliessman, 2015; de Molina, 2020). The evolution of agroecology and its application increasingly reveals its transdisciplinary nature by combining a science that emphasises the co-creation of knowledge; a set of practices that focus on the development of operational models using natural systems and processes; and a social movement that supports rural communities, food sovereignty, social justice and the preservation of local knowledge and culture (Wezel et al., 2020).

By bringing together political agroecology and urban food planning, Tornaghi and Dehaene (2021) argue for an alternative form of urbanisation and urban planning, non-extractive and regenerative, called "agroecology urbanism" which deeply embrace equitable sustainable food production. A radical reconfiguration through which a post-capitalist imaginary can emerge, capable of transforming the spatial relations, economic values, and planning processes of capitalist urbanisms (Dehaene and Tornaghi, 2021). Based on these assumptions, we have embarked on a research project that starts by mapping and reflecting on a series of agri-food production practices in various settlement areas in Basilicata, which promote alternative forms of food production, processing, and distribution, operating mainly outside the logic of large-scale distribution. These practices are based on organic agriculture, traditional cultivars, social ethics, environmental sustainability, and animal welfare representing either old practices resisting transformations (i.e. transhumance), traditional farming with a contemporary twist or new endeavours, generally by young farmers. Although the peasant production model (van der Ploeg, 2008) has not been completely overtaken by capitalist agriculture, the agricultural landscape of lowlands has been nevertheless transformed by intensive production.

This research, still in its early stages, is at the intersection of different paths, experiences (including practical and activist ones) and projects including the Matera Food Atlas. We decided to collaborate in documenting and systematically analysing the agri-food practices each of us is exploring. Additionally, we aim to examine the intersection of food planning and agroecological urbanism in a regional context classified as rural. The programmatic intent is to move beyond the city-countryside dichotomy and envision an agroecological re-

territorialization that views the settlement system as a cohesive whole. Contemporary rurality calls for complexity and settlements (understood as the set of physical artefacts, territorial endowments and human and inter-species relations that develop in a given place to allow human habitation) in Basilicata cannot be strictly divided into rural or urban. Involving farmers, with the valorisation of their empirical knowledge and social networks, can allow for a generative encounter of practices and knowledge, concretising the idea of a renewed relationship, both social and spatial, between city and countryside, between 'those who grow food' and those who 'consume food'.

We ask ourselves: What strategies are implemented by these practices to contribute to agroecology? What kinds of social and spatial relationships, networks, and identities emerge? What factors facilitate/hinder the adoption of an agroecological approach in Basilicata? What insights can we gain to guide agroecology urbanism and territorialism? [fig.1] Title\_Arial 10 pt. Please notice that we're using "AESOP2024\_caption" character style. Provide a caption, and short description if needed. Source: if the image is a personal drawing, use "elaborated by the author". If you used some data, add ", from" and write data sources you used.

## Overview of the Basilicata region

Basilicata (also called Lucania), is a region in the South of Italy, it covers about 10,000 km<sup>2</sup> and is predominantly mountainous (46.8%) and hilly (45.2%), with modest flat areas (8%) in the river valleys and south-eastern coastal plain. The population density is about 55 in/km<sup>2</sup> and the region is predominantly rural. Its morphology makes it a land with an infrastructure deficit but with a great endowment of natural and environmental resources; a land with a dramatic demographic decrease and a weak urban framework made up of 80% mountain centres with fewer than 5,000 inhabitants and only two urban poles, Matera and Potenza.

The regional economy shows a marked specialisation in the agricultural sector which absorbs 10.1% of the workforce, compared to a national average of 3.6 per cent (2023). The contemporary structure of Lucania's agricultural landscape sees a prevalence of arable crops, followed by agrarian woody crops and permanent grassland. A significant fact is that organic farming accounts for about 22% of the Utilised Agricultural Area (2022). In recent years, the sector has been growing, especially thanks to the recognition of 19 PDO and PGI products and the emergence of forms of food and wine tourism.

The Lucanian agrarian landscape, formerly characterised by small peasant properties with promiscuous and diversified crops grafted between large feudal properties, underwent a radical transformation from the 19th century onwards, culminating in 1950 with the launch of the Agrarian Reform. It changed the land order in favour of small and medium-sized properties and restructured the territory by creating infrastructures, networks and different types of new rural settlements, with the aim of improving peasant living conditions and promoting regional economic development. This new territorial model placed Basilicata at the centre of numerous sociological, anthropological and urban studies, because it was a symbol of the peasant world with which modernity was unable to deal.

The analysis of statistical data reveals a fragile economic and agro-production system when compared to the national and European context. However, explorations of the territory reveal the existence of a complex heritage of knowledge and practices, which over the centuries have been perfected in relation to changes in the living environment.

Concerning agroecological experiences in Basilicata, three initiatives are of interest. The AgroforSyLL (Ciaccia et al., 2021), implemented in the Metapontino area - an interactive laboratory based on the introduction of diversified agroforestry systems, which involves organic farmers, research centres and other actors in an action-research process. The Agro-ecological District of Murge and Bradano, between Apulia and Basilicata - a recently established network of farms, organisations, and citizens that aims to define a new agro-ecological territorial management model, based on sustainability and participation. The Community of Food and Biodiversity of the Pollino Lagonegrese, the first of its kind in Italy, which aims to protect and enhance agri-food biodiversity, traditional local culture and the rural landscape and to halt depopulation trends.

## Towards an agroecology territorialism

Agroecology urbanism advances an imaginary for a world that is not organised according to the urban-rural dichotomy, that is not the formal translation of the political economy of capitalist urbanisation, and that leads to decolonising the field of urbanism (Dehaene and Tornaghi 2021). These assumptions oblige us to extend these reflections to rural territories. The urban-rural divide has dominated for a long time and reflects the inability to conceive the two dimensions as part of the same issue. A crack in perspective arrived in the second half of the last century, with the decline of the factory-city model, which triggered processes of economic and spatial transformations that also involved the rural dimension. The advance of capitalism incorporates and transforms local production systems in a systemic logic that proceeds along two trajectories: re-agrarianisation and de-agrarianisation (Uleri et al., 2023).

The former mainly affects the fertile plains (in Basilicata the Metapontino area), introducing new production techniques, practices and technologies, sweeping away traditional agrarian systems and biodiversity. The aim was to stimulate the economy of scale, specialisation, and integration with the system of processing and large-scale agro-industrial distribution. It sees an increased flow of human and economic resources to agriculture, vertically controlled and unevenly accessed and distributed (ibid.). The latter mainly affects mountainous and inner areas, and is characterised by an outflow of resources towards non-agricultural activities and non-rural areas. This is the case of the abandonment of pastures, mountain agriculture, and small villages in the face of the growth of lowland industrial poles or the conversion of peri-urban agricultural land to support urban expansion. In the case of Basilicata, these dynamics translate into a progressive contraction of villages in favour of the two main cities.

These processes of marginalisation are only relatively dependent on absolute physical or territorial disadvantages, but rather on the effects of a development model centred on plains, growth, resource exploitation, industrialisation, specialisation, standardisation of the production process, and centralisation of functions and powers. Escobar (2002) recognises a fundamental role for planning, and more specifically town planning and the science of urbanism in bringing the Fordist order to fruition. Both the liberal-capitalist and anti-capitalist traditions have interpreted development in positive terms, questioning rather how to plan the economic and social growth of a given territory or community. Even in the reformist version of democratic urbanism, which has historically assumed the goal of rebalancing between the productive factors of capital and the reproductive factors of labour force by redistributing profit through services on the territory, the 'territory of the inhabitants' does not appear (Magnaghi, 2017). This planning model impacts on the material and immaterial deterritorialisation of places, and the expropriation of people from the possibility of controlling processes and resources fundamental to their lives, such as the allocation of food. As Escobar (2002, 146) argues that "the practice of planning inevitably requires the normalisation and standardisation of reality, which in turn entails injustice and the erasure of difference and diversity". In its most widespread manifestations, it has denied the integration of different functionalities, led to the separation of production and consumption, and obscured the possibility of alternative trajectories of emancipation.

The developed territories are thus contrasted with the underdeveloped ones, identified with the Global South, Southern Italy, rural areas, inner areas, and mountains not associated with winter tourism, which become the object of planning to bridge the gap. In Italy, this process of marginalisation, rediscovery and new development is well exemplified by both inner and mountain areas. These two 'categories' are not only two realities that do not coincide geographically, but are two concepts that come from different schools of thought (Dematteis, 2014). When referring to mountain areas, we exclude the Alps gentrified by winter sports, and the mountain-city. Hills and mountains have been the protagonists for centuries of a plural and variegated territorial evolution. While in pre-industrial times a relative self-sufficiency of these areas was accompanied by a certain dependence of the city on them (for mining, agro-forestry and energy resources), this relationship was later reversed. With the enlargement of markets (for materials, energy, labour), cities become increasingly independent from their hinterlands,

while the latter increase their dependence on cities, especially in terms of services, investments and employment (Dematteis, 2014).

In recent times, rural space, as well as inner and mountain areas, started to be perceived differently, beyond their capacity to satisfy the cities' demand for primary consumption, and become places for the production of sophisticated goods. They are praised for their specific resources (preserved more than in other contexts), their capacity to produce diversity, to offer agri-food assets, settlement structures, water quality, energy, biodiversity, culture and positive externalities. While looking with renewed interest at these areas, both the dominant economy and planning do so primarily in function of the city: as a place of entertainment and economic opportunity (celebrating the 'vocation' of tourism and local products); as an uncontaminated place and reserve of resources to be preserved for the consumption of an impoverished urban territory (exalting its ecosystem services); as a counterbalance to the urban and the loss of a rural tradition (glorifying abandoned villages, making them museums or places of entertainment), struggling instead to recognise a political and cultural value to the human presence on highlands (Varotto, 2020). Recently, Another need has emerged, that of energy, which involves both agricultural production and rural areas: from biomass directed to the production of biofuels or biogas, to the presence of wind turbines and ground-based photovoltaics. Beyond the economic benefits, these structures influence the land use and modify agrarian settings which in turn can generate forms of socio-environmental injustice with respect to the agricultural world and rural contexts (Scotti, 2024).

Nevertheless, in this panorama, emerge approaches that recognise the need to recover the heritage of traditional agronomic techniques, the peasant wisdom and local cultural legacies. The multifunctional approach of the primary sector becomes the new frontier of rural development, referring to the intention to broaden the range of goods and services offered, including non-agricultural activities, in order to vary income sources. The Italian strategy of farm diversification (especially with agritourism) seems not only to have anticipated the new European Green Deal strategy, but by integrating agricultural practices with ethical and social aspects through the involvement of farmers and local communities, it seems to act as a precursor to agroecology (Gargano et al., 2021). The district approach for planning local agri-food systems is also emerging, responding to the need for place-based development policies, based on establishing strong cooperative relationships among geographically close areas, involving different actors in order to retain and expand local added values.

For our reflection, appears useful to explore the 'ecoterritorialist' approach, which contrasts hierarchical centre-periphery relationships by proposing bioregional models capable of respecting and regenerating the ecological ecosystem and hydro-geo-morphological balances of settlements; physically, functionally and symbolically reconnecting urban spaces to the surrounding environmental systems and agro-forestry territories; defining a new idea of solidarity-based and non-hierarchical urbanity, promoting local communities and forms of self-government of production based on the care and reproduction of territorial heritages (Magnaghi and Marzocca, 2023). The complexity of the concept of the (urban) bioregion, as proposed by the territorialist school in relation to food systems that is still in evolution, appears more inclusive than the reductive ways in which it has been considered by City-Region Food System theorists, and by the many processes of building local and urban food policies (Dansero and Dematteis, 2023). What emerges from the intersection of food planning and ecoterritorialism is the identification of the agri-food basin scale (foodshed) as the most appropriate, defined not so much by administrative boundaries as by bioregional ones. New concepts are thus emerging, such as that of agro-ecological territorial systems based on new principles. The farms and the farmers become the territorial garrisons of the principles of care and regeneration of patrimonial resources and the privileged sphere of profound ecological innovation (Bocchi, 2023) in tune with van der Ploeg's (2008) rural development approach.

### **Research design for mapping/documenting farming practices**

The perspective of farmers and farming communities, who choose to include or reject new standards of practice within their farming system, plays a crucial role in achieving the goals of

agroecological transition (de Molina et al., 2020; Barnes, Thompson and Toma, 2022) This is why we choose to give farmers a central role and use the interview and participant observation as point of departure. Starting from the principles of agroecology (Gliessman, 2015; FAO; HLPE, 2019), we have developed an analytical framework to explore agricultural practices, understood as one of the main manifestations of agroecology (Wezel et al., 2020), which “aims to analyse the full picture of an agricultural system, with all its complexity and interactions, and to do so in a way that does not alienate the farmer's own knowledge system” (Peeters, 2021). In order to carry out this type of analysis, it is important to recognise the heterogeneity of practices and the groups of farmers who implement them, and to ask how personal choices and attitudes, as well as current institutional factors, direct the adoption or non-adoption of ecological practices (Barnes et al., 2022). Simplifying, we can say that farming practices depend on the interaction between internal and external factors.

In order to identify the agroecological potential, the internal factors within the farm itself (see Figure 1) - such as the farmer's choices and inclinations, background, and identity, are first investigated. Considering the farm as the result of the coexistence and interaction of multiple components, its Production and metabolic system, Economic structure and marketing behaviour, Space and territory, Cultural aspects, identity and lifestyle and Socio-political aspects are analysed as constituent parts of the farm itself.

Each of these components represents a set of various topics that may concern, for example, management, production, places and the actors that collaborate in the life of a company. For this, subgroups have been identified, each of them referring to a specific topic, into which the component is broken down. For example, the component of Socio-political aspects manifests itself through the topics of Cooperation & networking, Goods and activities outside market relations and working habits & conditions. Agroecology has a holistic approach for agricultural improvement in the sense of both food quality, territories, and the lives of people and animals. Not only crops practices, but also livestock plays a crucial role in food systems. This is reflected in the livestock' component, also for investigating transhumant breeding practices, which play an important role in Basilicata.

Each topic, in turn, groups a series of criteria that represent the concrete expression of the theoretical principles of agroecology and can be used as a yardstick to evaluate the strategies implemented by the farm analysed. For example, in the component of the Economic structure and marketing behaviour, regarding the topic of Economic activities and revenue, one of the criteria is the High level of diversification of products and activities, coinciding with the agro-ecological principle of ‘diversity’ or ‘economic diversification’ (HLPE, 2019). Based on this breakdown and reorganisation of the principles, it was possible to identify issues to be observed and submitted to farmers. The farm analysis is flanked by a deep context analysis, at different scales (macro, meso and micro), as it plays a fundamental role in determining the choices and the way farmers behave. The context is articulated in 4 topics: Territory and human settlements, socio-economic, historical and political, cultural and knowledge, and then further articulated into criteria.

The spatial dimension is a central field of investigation in our analysis for the way it produces and modifies territories and communities. This close link with spatial design is confirmed by the example of permaculture in which the space component is particularly prominent and can be examined to articulate the close connection between agroecology and territorialism.

Therefore, the Space & Territory component is included in the research framework with the aim of examining aspects relating to the relationship between landscape form, land use and present architecture. The criteria deriving from these topics will make it possible to evaluate how the configuration of the landscape itself influences agriculture and, vice versa; how land use characterises the landscape; how practices allow the preservation, modification or even cancellation of local landscape features; the position and reciprocal relationship between the farmer's house and agricultural structures; the choice of site-responsive architectural solutions, the use of local materials and construction techniques, as well as the use of ecological architecture solutions.

The selection of farming practices was based on the identification of organic or ecological practices in Basilicata as they resonate with agroecology. Subsequently it was decided to make

a selection by taking into consideration: i) the landscape of belonging, with specific geomorphologic and pedoclimatic characteristics, in order to analyse the variability of practices in relation to environmental and settlements characteristics; ii) the type of production, giving preference to farms with diversified production structures specialised in local crops (official plants, traditional cultivars, etc.), and farms that practise sustainable livestock breeding; iii) the type of farm/livestock management, including family farming, cooperative structures, young farmers and women farmers, who often introduce innovative and sustainable practices; iv) membership in alternative food networks, networks that promote responsible and sustainable consumption or that valorise local production and biodiversity (Food and Agroecological Districts and Communities) and in democratic and participatory innovation spaces (Living Labs).

In short, our selection of agricultural and livestock farming practices, guided by geographical, productive and social diversity, aims to build a mosaic of experiences that helps us understand the complexity and adaptability of agroecological production.

COMPONENTS	TOPICS	CRITERIA
PRODUCTION AND METABOLIC SYSTEM	Agrifroduction - predominantly crops	Systemic and regenerative approach adopted; Use of local/selfproduces seeds & plants; Organic pest control practices; Use of regenerative cultivation techniques; Cropping diversity; Cultivation of ancient, forgotten and local seeds; Conservative harvesting techniques; Seed harvesting and plant breeding; Integrated livestock farming system
	Agrifroduction - predominantly livestock	Variety of animal species and breeds; Reduction in the use of concentrated feed; Animal welfare / good animal-person relations / collaborative ethology; Variety of animal species and breeds; Local and rustic breeds; Maximum use of grazing resources - foraging chain; No use of concentrated feed and maximum use of proteins from fodder; Integrated pasture management (grazing plan, rotational grazing); Integrated parasite, feeding and territorial management; Homeopathy and phytotherapy instead of conventional drugs; Animal welfare / good animal-person relations / collaborative ethology; Recovery of marginal areas and prairies
	Natural resources conservation and waste management	Use of conservative soil work; On-farm composting methods and soil fertility practices; High level of adoption of agroforestry; Rainwater recovery; Water use optimisation practices; Use of renewable energy; Low waste production; Circular use of bio-based materials
ECONOMIC STRUCTURE AND MARKETING BEHAVIOUR	Economic activities and revenue	High level of diversification of products and activities; Short processing chain; Proportion of self-processed products; Minimisation of variable costs; Subsidies and incentives; Percentage of off-farm income; Proportion of direct sales; Marketing chain
	Advertising & certification	Product valorisation practices; Contact with customers; Product certifications
SPACE AND TERRITORY	Landscape	Landscape form and land use; Agricultural ecosystem with diversified elements; Conservation of local landscape characters
	Site & buildings	Household location and proximity to farm; Ecological and context related architecture (housing and farm)
CULTURAL ASPECTS, IDENTITY & LIFESTYLE	Food and diet	Diet; % self produced food; Sources of purchased food; Wild harvest; Traditional recipes and methods
	Artisan practices	Retention of traditional tool; Other self products; Crafted products
	Ethic principles	Environmental; Consumption
	Experience	Level and field of education; Training courses
	Satisfaction and quality of life	Low stress working environment; Sufficient time for knowledge and new skills; Sufficient time for family friends; Satisfaction with economic benefits from farming activities; Other benefits compared to other businesses
SOCIO-POLITICAL ASPECTS	Cooperation & networking	Agricultural associations and consortium memberships; Involvement with food sovereignty, land or environmental movements; Involvement with local no profit associations activities (cultural or social); Organisation of no profit social-cultural and educational activities in the farm; Relationships with other farming communities; Relationships with the city/urban world
	Working habits & conditions	Family labour share; Female/Male labour share; Off-farm income; Inclusion of vulnerable workers; Human and safe working environment; Fair wage, job stability and social protection
	Goods and activities outside market relations	Involvement of family members and friends in specific activities; Exchange of goods outside markets

Figure 1: Analytical framework (farms internal components)

## Openings

The research, at its beginning, intends to open a perspective of investigation on an inner rural reality that has been looked in for too long with the risk of the rhetoric of peasant nobility or path dependence, indicating the constraint of a past socio-economic model that prevents and prejudices any subsequent and future choices. If on the one hand "history matters", and that we must look carefully at historical factors, on the other it is not certain that this path will perpetuate fatalistically without the possibility of changing course (Donolo, 2011). The critical study through the lenses of agro ecology of agricultural processes, farmers and the food production system could introduce destabilising factors of a hard-to-die stigma to think that the future depends only on us.

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