From Groceries to Growth Alternatives: Characterising *Gruppi di Acquisto Solidale* as a Real-Existing Degrowth in Milan, Italy

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Master Thesis

Erasmus Mundus Joint Masters in Environmental Sciences, Policy and Management

University of the Aegean

June 2025

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Massa, Cecilia. 2025. From Groceries to Growth Alternatives: Characterising *Gruppi di Acquisto Solidale* as a Real-Existing Degrowth in Milan, Italy. MSc thesis, Department of Environment, University of the Aegean, Mytilene.

This thesis is submitted in fulfilment of the Master of Science degree awarded as a result of successful completion of the Erasmus Mundus Masters course in Environmental Sciences, Policy and Management (MESPOM) jointly operated by the University of the Aegean, Central European University, Lund University and the University of Manchester.

Author's declaration

I, the undersigned, **Cecilia Massa**, candidate for the MSc degree in Environmental Sciences, Policy and Management, declare herewith that the present thesis titled "From Groceries to Growth Alternatives: Characterising *Gruppi di Acquisto Solidale* as a Real-Existing Degrowth in Milan, Italy" is exclusively my own work, based on my research and only such external information as properly credited in notes and bibliography.
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Mytilene, 1 June 2025

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Abstract

Degrowth calls for a planned and coordinated effort to redesign our economies towards equitable wellbeing and ecological sustainability. Much attention in the movement and academic field has been devoted to analysing the ills of the current global system, and to designing wide-reaching policies to fix them. However, the way social change unfolds is geographically uneven, and to some extent unpredictable. The hope of governing it solely with top-down approaches risks being misguided. Breaking through the growth paradigm hence also requires cultivating grassroot alternatives which can independently adapt and learn in the making. The Solidarity Purchasing Groups (*Gruppi di Acquisto Solidale*, GAS) are value-driven associations of people who support a degrowth-aligned transition of the food landscape in Italy. Members merge part of their food supply by organizing group purchases directly from the producers. The network sustains short and decommodified supply chains, exemplifying non-capitalist economic activity. The thesis research explores the features and activities of GAS in Milan, Italy, through the Real-Existing Degrowth (RED) framework (Varvarousis et al. forthcoming). The framework defines three dimensions in which initiatives can oppose the growth regime: their material fabric, territorial regulation and social imaginary. Findings are based on 15 qualitative interviews with GAS members, their food suppliers, other network stakeholders and local policymakers. The interviews were deductively coded in Nvivo software and complemented by a document analysis of GAS statutes and relevant policies of the city of Milan. GAS are thereafter characterised as an example of nowtopian Real-Existing Degrowth, part of the wider Italian Solidarity Economy network. The network's material fabric emerged as distinctly different from that of growth-oriented food systems, sustained by well-established but flexible and localised (mostly informal) rules, and cultivated through social imaginaries rooted in solidarity and alterity. The network's hybridity and moderation were key to its expansion, but may also represent a barrier for calls to wider and more radical transformations of the food system. The thesis hence offers insights for structured comparison with other ventures through the RED framework. It furthermore encourages scholars to learn from time-tested experiences that were not discouraged by the intricacies and inconsistencies of challenging the growth paradigm in a still widely capitalist world, and to build on these existing practices to accelerate a Degrowth transition in the food system.

Keywords: Real-Existing Degrowth, Degrowth practice, Gruppi di Acquisto Solidale, Solidarity Purchasing Groups, Alternative Food Networks, Sustainability transition

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List of abbreviations:

AFN – Alternative Food Network

AFR - Alternative Forms of Resilience

DES – *Distretti di Economia Solidale* (Solidarity Economy District)

DESR – *Distretto di Economia Solidale Rurale* (Rural Solidarity Economy District)

EU – European Union

GAS – *Gruppo/i di Acquisto Solidale/i* (Solidarity Purchasing Groups)

GDP – Gross Domestic Product

IMF – International Monetary Fund

RED – Real-Existing Degrowth

RIES – *Rete Italiana Economia Solidale* (Italian Network of the Solidarity Economy)

SFSC – Short Food Supply Chains

SPG – Solidarity Purchasing Groups

1. Introduction

1.1 Problem definition

A striking 34% of global GHG emissions can be attributed to food systems (Crippa et al. 2021). The European Green Deal, adopted in 2019 to reach climate-neutrality by 2050, made food a focal issue in the implementation of sustainability across European Union's (EU) member states ('Agriculture and the Green Deal' 2024). The Green Deal and other key EU food policies have however been criticised for blindly pursuing green growth, or a continued economic expansion through increased agricultural production and supposedly greener cultivation techniques (Mastini, Kallis, and Hickel 2021; Vela Almeida et al. 2023). Given the biophysical impossibility of truly decoupling production from its environmental impacts (Parrique et al. 2019), this has resulted in a systemic outsourcing of agricultural production. The reduction of chemical inputs and reforestation projects on EU's soils are mirrored by continued exports of harmful substances and increased deforestation in countries who provide the EU with products such as beef, biofuels, and animal feed, effectively relocating environmental harm (Fuchs, Brown, and Rounsevell 2020).

To make the sustainability transition just and effective on a global scale, these contradictions must be tackled at the local and international scale. One of the most comprehensive proposals for change is that of Degrowth, which advocates for a democratic and redistributive downscaling of the biophysical size of the global economy (D'Alisa 2014). Much scholarly attention in this field has been devoted to analysing the ills of the current economic system, and to designing top-down policies that could fix them. However, emergence and uncertainty are inescapable in social processes, and a policy-driven transition of EU's food systems would be unsettled by many unplanned events (Smith et al. 2021, 2). Different and complementary strategies are hence needed to break through the "green" growth paradigm. Starting from the bottom up, by creating and expanding "spaces where the growth imperative ceases to occupy (or 'colonize') people's bodies and minds" (Vrettos, Hinton, and Pereira 2024; Koch 2020, 10).

Kallis, Varvarousis, and Petridis use the concept of *Real-Existing Degrowth* to define territories which autonomously developed "a strong presence of, and co-existence with pre- or non-capitalist forms of economic and social organizing" (2022, 2). These are fertile ground for

cultivating Degrowth-aligned practices and imaginaries. Scaling up existing Degrowth-aligned alternatives in the food system could accordingly limit the commodification of food caused by capitalist markets (Kallis, Varvarousis, and Petridis 2022, 2; Strenchock 2020).

The objective of this thesis is to characterise one such practice, the network of Solidarity Purchasing Groups or *Gruppi di Acquisto Solidale* (GAS) in Milan, Italy. To do so, it employs the novel Real-Existing Degrowth (RED) framework, which analyses three interrelated dimensions (those of material fabric, territorial regulation, and social imaginaries) to articulate key Degrowth-aligned characteristics of the examined territories. The GAS network represents a suitably extensive and time-tested case study. Since the early 2000s, it informally connects tens of GAS across the city: associations of people who merge their supply of products of widespread consumption, mostly food, by organizing group purchases directly from the producers. GAS aim to shorten supply chains and redistribute value towards primary producers by standing in solidarity with producers and looking beyond cost efficiency (Misleh 2022). Their work arguably supports a Degrowth transition in the Italian food system, albeit members do not label it as such.

To address the research questions, the study employed a qualitative approach. Semi-structured interviews and a focus group were conducted among Milan's GAS members, their producers within the region of Lombardy, other stakeholders such as a logistics provider, and local policymakers. The transcripts were afterwards deductively coded in NVivo software, according to the relevant indicators of the Real-Existing Degrowth (RED) framework (Varvarousis et al. forthcoming). The findings allow for a detailed characterisation of Milan's GAS network as a Real-Existing Degrowth. The network's material fabric emerged as distinctly different from that of growth-oriented food systems, sustained by well-established but flexible and localised (mostly informal) rules, and cultivated through social imaginaries rooted in ideas of solidarity and alterity. The network's hybridity with other forms of provisioning and other imaginaries was key to its expansion but may also represent a barrier for calls to a wider and more radical transformation of the food system.

1.2 Disposition

The extensive discussion of each of the abovementioned points is structured as follows. First, **Chapter 2** situates the topic within current academic debates by critically reviewing the most relevant Anglophone and Italophone literature on degrowth practice, Alternative Food

Networks (AFNs) and GAS. Then, **Chapter 3** expands this introduction by formulating the thesis aims and key research questions. **Chapter 4** includes the explanation of the employed research methods, including data collection, data analysis, ethical considerations and my positionality as a researcher. After that, **Chapter 5** contextualises the case study and its relevance with an overview of the territorial dynamics in which GAS operate. **Chapter 6** highlights the voices of the interviewees by introducing the findings according to the codebook structure. These are further explored in **Chapter 7**, which answers the research questions by discussing the findings in comparison to the existing literature, as well as opportunities for the consolidation and upscaling of the network, and the research's limitations. Finally, **Chapter 8** concludes by summarising key takeaways, their contribution to academic debates, and pointing to opportunities for the applications of such results and for further research.

2. Literature Review

This research draws upon three different bodies of knowledge: degrowth practice, AFNs and GAS. To mirror this complexity and better define the research gap, the literature review is accordingly structured across three separate but interrelated sections. The following section aims to summarise and compare existing knowledge on degrowth practice, building on the related concepts of decolonial degrowth and nowtopias. The second one gathers Anglophone and Italophone sources on AFNs, focusing on their definition and key features. The third one covers instead the Anglophone and Italophone literature on GAS, depicting the network's recent history, its functioning and motives, and key features.

2.1 Degrowth practice

This section aims to situate the case study within the wider Degrowth literature. Particularly, it examines how grassroot initiatives are conceptualised and integrated by Degrowth, as a movement and a theory. Its goal is therefore to summarise and critically review this knowledge, to highlight its core concepts and limitations. These will provide the theoretical background for the subsequent discussion, underscoring the why and how GAS, among other AFN, represent a potential case of degrowth in practice.

2.1.1 Degrowth and emergence

Degrowth calls for a planned and democratic effort to redesign our economies towards equitable wellbeing and ecological sustainability, which will require reducing our ecological impact and therefore result in a lower GDP, constrained by sparer resource use (Kallis et al. 2025). Much attention in the Degrowth literature has therefore been devoted to analysing the ills of the current global system and to designing wide-reaching policies to fix them (Weiss and Cattaneo 2017, 222), including in the financial sector (Colacchio and Forges Davanzati 2020; Buch-Hansen and Koch 2019), labour issues (Fagnart, Germain, and Van Der Linden 2023; Oberholzer 2023), democratic governance (Cattaneo et al. 2012), and welfare through universal basic income and services (Mulvale 2019). Degrowth theory therefore often emphasizes the need for coordinated and planned action at the national or international scale (Smith, Baranowski, and Schmid 2021, 1). While often fruitful and necessarily ambitious, top-down approaches fall short of accounting for the complexities that emerge from applying policy to different contexts and autonomous actors.

In fact, the idea that it is possible to accurately govern the unfolding of social change with a universalist policy approach in all fields is arguably misguided and may carry unintended consequences (Boonstra and Joosse 2013; Weiss and Cattaneo 2017; Nirmal and Rocheleau 2019). As Degrowth moves from being a "research programme" to a structured field capable of advancing concrete solutions (Boonstra and Joosse 2013, 172), Degrowth practice is emerging as a strand of this literature that aims to better understand the intricacies and contradictions of realising Degrowth in a widely capitalist world. Smith, Baranowski, and Schmid argue that "emergence and uncertainty are inevitable aspects of social change [...]. If radical transformations happen in conditions which are not of our choosing, [...] degrowth strategy must come from an understanding of circumstance and uncertainty" (2021, 2). Degrowth practice is hence concerned with understanding local conditions and designing context-based pathways towards a Degrowth society, from the point where we stand (Asara 2022). One of the motivations is that a politics of Degrowth will hardly emerge from the core of mainstream consumerist culture which perpetuate the current state of affairs: it must be cultivated from the grassroots (Alexander 2012, 364). This does not diminish the importance of striving for transformation in institutions and policymaking. Rather, it highlights the strategic importance of seeking change across different scales and create broad alliances (Bärnthaler et al. 2024, 1). The significance of Degrowth practices for the wider movement emphasises the need for better understanding their diverse origins, strengths, and challenges.

2.1.2 Decolonial degrowth

Degrowth practice is related to what Nirmal and Rocheleau call a "decolonial degrowth", and the post-development pluriverse (2019; Demaria et al. 2023). As a theory and movement " developed by and for the North" but intellectually rooted in Southern thought (Gräbner-Radkowitsch and Strunk 2023, 2), Degrowth could benefit from abandoning universalist ambitions and joining the convergence of sympathetic movements, like Indigenous rights movements, buen vivir, ubuntu, and other forms of food and energy sovereignty (Gerber and Raina 2018; Nirmal and Rocheleau 2019; Kothari et al. 2019). These degrowth-aligned struggles reject *in practice* the imperative of growth and neocolonial extractivism intrinsic in many Western-led "development" schemes. These movements have long existed in the Global South and among Indigenous communities of the Global North, as independent ventures with their own identity and language (Gräbner-Radkowitsch and Strunk 2023). Gräbner-Radkowitsch and Strunk (2023) highlight the global diffusion of degrowth-aligned practices, from Latin America (Otto 2017; Pérez-Rincón, Vargas-Morales, and Martinez-Alier 2019;

Renkert 2019), to Asia (Pansera and Owen 2018; Adityanandana and Gerber 2019) the Middle East (Ertör-Akyazi 2020; Ibrahim and Sarkis 2020), African countries (Gezon 2017; Piccardi and Barca 2022) and indigenous communities worldwide (Frost 2019). They all set important precedents in articulating what fighting capitalist dynamics looks like concretely, with mutually reinforcing practices of resisting and recovering. Opposing, even physically, capitalist-colonial interventions on one side; on the other, reweaving the socio-ecological relations such interventions broke or threaten (Nirmal and Rocheleau 2019, 472).

2.1.3 Strategic importance of Global North

It is however in the global North, at the core of the empire, that citizens have the most power in influencing the outcomes of the global economy, as their governments are responsible for the most resource intensive and ecologically impactful economies (Hickel 2020; Dorninger et al. 2021; Hickel et al. 2022). Moreover, they hold most decisional power in international organizations like the World Bank, where voting power is allocated based on national financial shares, or the International Monetary Fund (IMF), where it is assigned mainly based on gross domestic product (GDP) (Leech and Leech 2004). It is also there that the extraction frontiers are not so visible nor impact citizens as directly as they do elsewhere, although with notable exceptions. Therefore, the logics of capitalism become more agreeable and pervasive, decreasing the urgency of finding alternatives even while inequalities steadily rise and basic services like housing become increasingly exclusive (Çelik 2024; Filauro, Parolin, and Valetto 2025). More than other regions, the global North hence experiences a crisis of imagination in thinking about and working towards alternatives to neoliberal capitalism (Parrique et al. 2019), or lacks the capacity to turn innovative proposals into action. This underscores the need for degrowth initiatives within the Global North to challenge dominant paradigms while building long term and concrete alternatives. Key lessons on how to deal with this tension can be learnt from grassroot initiatives that advance Degrowth "quietly" (Daněk and Jehlička 2020).

2.1.4 Social theory of practice

A different framing of what is needed to break through the growth paradigm comes from the social sciences, particularly social theories of practice. This literature highlights that a Degrowth society, like any other society, cannot start in a vacuum. Instead, it would develop from within pre-existing social structures (Boonstra and Joosse 2013). These studies therefore explore existing social structures through the concept of "practices": the mostly repetitive and usual performances of everyday life, which are invested with meaning and constitute part of a

wider culture (Smith, Baranowski, and Schmid 2021). Practices are influenced (although not entirely determined) by their surrounding culture and individual habits (Boonstra and Joosse 2013, 178), which in capitalist societies are based on extraction and accumulation. For example, in the food realm consumer behaviour is simplified by routines, black boxes that guide our choices without pushing us to reconsider them at each purchase. Their breakdown can only occur if the outcome becomes uncomfortable in terms of taste, ethics, or other criteria (Brunori, Rossi, and Guidi 2012). Facilitating this breakdown and stimulating the search for concrete alternatives to capitalism requires opening and sustaining new spaces, where people can think and act freely from profit-oriented considerations (Koch 2020, 10). At the same time, it can be argued that the need to create such alternatives has emerged from *within* capitalist societies. The emergence of new practices is allowed by the "inherent variety of social life", which at times escapes the control of existing social practices and can trigger transformative changes if the time is right (Boonstra and Joosse 2013).

Looking "horizontally" at everyday practices, these studies remind of the need to avoid enigmatic over-theorizing (Schmid and Smith 2021). Moreover, they bridge two key aspects of degrowth, which are the *cultural* critique of modernity and the *ecological* critique of growth (Muraca 2013), stating that our actions and their ecological impact are deeply shaped by the cultural and social context in which they are embedded. They argue that reshaping the economy to maintain the planet's ecological functions requires a parallel evolution of culture and social dynamics. In the context of this research, social theories of practice thus suggest analysing GAS not just as economic actors but as embodied social practices that reshape participants' everyday routines.

2.1.5 Nowtopias

Spaces free from the growth imperative, as called for by Koch (2020), have been identified in intentional and small-scale community initiatives which centre on conviviality, care, and solidarity, which gather a significant attention in Degrowth literature (Demaria, Kallis, and Bakker 2019, 436). Beyond the reduction of material consumption, this literature focuses on the importance of group dynamics, of culture and of action at the local scale (Cunico, Deuten, and Huang 2022). One example is grassroot food initiatives, like food cooperatives and community-supported agriculture (CSA), whose values have been connected to Degrowth through the language of food sovereignty, and who often cooperate with the Degrowth movement in practice with shared events and longer-term collaborations (Strenchock 2020;

Cunico, Deuten, and Huang 2022; Spanier, Guerrero Lara, and Feola 2024; Michaela Pixová et al. 2025). Another example are energy cooperatives, whose affinity with Degrowth comes from the shared attention to democratic participation and local development through government support (Rommel et al. 2018; Dall-Orsoletta et al. 2022). Similarly, co-housing projects have been framed as a form of degrowth, because they encourage the commoning of land, living spaces and services (Cucca and Friesenecker 2022; Lacol 2022). Local currencies are also often mentioned as a degrowth tool to encourage the re-investment of added value in local networks, through systems like time banks or brand-new community money (Dittmer 2013). All of these grassroot ”efforts to reclaim and reinvent work against the logic of capital” or *nowtopias* (Carlsson and Manning 2010, 925), are born from the will to create a different future in the present, and are thought to boost the imagination of alternatives as well as further mobilisation through example (Demaria, Kallis, and Bakker 2019, 438; Sekulova, Anguelovski, and Argüelles 2023).

While being presented as a unifying framework for Degrowth-aligned initiatives, nowtopias are criticised on the theoretical and practical levels. On the theoretical level, definitions of nowtopias are rather loose, focusing on reinventing labour to build an alternative future from the present (Carlsson and Manning 2010; Demaria, Kallis, and Bakker 2019). Young, activist, and digitally savvy actors have gathered most attention in this literature, which misses out on a wide range of seemingly ordinary nowtopian practices carried out in different contexts (Demaria, Kallis, and Bakker 2019, 438). For instance, Gearey and Ravenscroft highlight the work of elders in taking care of a riverbank in the UK, as a way to reclaim agency through “direct action, conviviality and living well” (2019, 1). The authors argue that their activism emerged because of a lifelong experience of the retreat of the welfare state, weakened by neoliberal policymaking, and from the resulting lack of support during their old age (2019, 4). Alternative motivations and successes like that of the elders risk being overlooked if nowtopias are only loosely defined in terms of reclaiming labour and productivity (2019). Different criteria are needed to assess these degrowth practices, making visible their diversity and ensuring that their resonate with a wide audience. As nowtopias now seem to act on different scales, towards a variety of goals and through disparate means, a more detailed definition would also allow for constructive comparison among the initiatives, spurring mutual recognition and learning in practice.

Criticism about nowtopias in practice relates to their focus on the local scale and localised needs, which is both a strength and a limit (Carlsson and Manning 2010, 927). Locality can in fact support strong attachment to the community and its immediate environment, but it also limits the initiatives' members and potentially customer bases, restricting their impact (Gearey and Ravenscroft 2019; Cunico, Deuten, and Huang 2022; Maiolini et al. 2023). Most of them are in fact limited in time or space, bringing up the question of whether nowtopias can achieve longlasting transformations beyond their inspirational role. The constant struggle for survival that comes with scarce resources and shifting volunteers' engagement may also limit their capacity and/or desire to engage with institutions and lead structural change (Sekulova, Anguelovski, and Argüelles 2023, 11). This lack of direct political engagement sets them apart from the decolonial Degrowth-aligned practices mentioned above. As intentional communities, mostly in the Global North, nowtopias are generally depicted as having the privilege of choosing how and to what extent they wish to advance their alternative vision. Rather than direct political activism, this literature highlights a range of softer transformative practices, which entail a significantly lower risk for participants. Garey and Ravenscroft accordingly note that "nowtopianism does not sit comfortably with people living in poverty with few, if any, choices facing them" (2019, 7). Although this statement downplays the agency of people in resisting the growth imperative and sustaining alternatives regardless of their affluence, it does point to a contradiction. It is therefore essential to find ways for different degrowth-aligned initiatives to communicate constructively and ensure that their individual goals strengthen each other's.

2.1.6 Working towards structural change

The first step towards successful collaboration is to define each initiative's goals and understand how much progress has been made towards them. Sekulova, Anguelovski, and Argüelles propose a unifying framework for defining success in community-based degrowth initiatives, including nowtopias, grassroot innovations, social enterprises or innovations, and the social and solidarity economy (2023). They argue that success is the journey as much as the destination: respect of members' needs, communication within the group, its cohesion, inclusion and democratic decision-making are indicators of a thriving community as much as the targets they reach (2023). In their view, focusing on the internal groups' politics is important to better understand participants' needs and appreciate their developments, even if it implies pausing more visible work toward the group's goals (2023).

However, the attention to internal dynamics should not ignore the position of nowtopias in the wider economy. Argüelles, Anguelovski, and Dinnie highlight that promoting citizen participation and volunteerism has been a key neoliberal strategy to compensate the insufficiencies of the market (2017). Initiatives which provide services compatibly with key neoliberal ideas like the self-regulating markets and a state separated from civil society, are therefore favoured over disruptive projects (2017, 32). On the long term, this has constrained the initiative's imaginaries and the perception of what is feasible and desirable (2017, 31). Therefore, "though community economies have the capacity to challenge the increasing individualization of the environmental cause, the increasing individualization of the community economy itself (Busa and Garder, 2015) has raised concerns about the danger of creating another creative class bubble" (2017, 32). Arguably, successful degrowth-aligned initiatives should then also reflect and act upon issues of accessibility and redistribution, to ensure that their actions benefit a wide range of citizens and contribute to structural change.

In sum, advancing degrowth in practice is not an unprecedented project, rather an alternative way to bridge already existing post-development initiatives with nowtopias and other community-based projects which relate to different imaginaries. Degrowth as a theory and a movement can learn from a rich history of degrowth-aligned practices, and in turn strengthen their stance with specific policy proposals and a vision for the future which speaks to citizens and policymakers in the Global North. It is in fact there that most ecologically destructive decisions are taken and supported. To encourage a constructive collaboration between degrowth-aligned initiatives globally, projects in the Global North should pay attention to the political value of their actions beyond the local level, working on expanding the reach of the benefits they provide to participants, aligning with and building on the material critiques of capitalism advanced by others. Since "disentangling and dismantling economic connections with capitalism must happen in conjunction with restoring and reinventing lost or missing connections to support life as we wish to live it outside of the growth paradigm" (Nirmal and Rocheleau 2019, 472), the work of degrowth-aligned initiatives in the Global North is urgent and strategically important, to criticise "from within" the injustices and exploitation on which the current economic system is based. More research is therefore needed to better define these initiatives and find strategies for supporting their work while learning from their practical experience in dealing with complexity.

2.2 Alternative Food Networks

This section aims to define AFNs based on existing literature, summarising and reconciling different existing concepts into a working definition to be used throughout this research. It also wants to highlight the strengths and weaknesses of AFNs in practice, to accordingly anticipate interesting features or shortcomings of GAS.

2.2.1 Defining AFNs

Being so essential to human wellbeing, food systems are a critical arena for testing Degrowth in practice. As the movement advocates for principles of autonomy, commoning, and conviviality among others, independent food initiatives emerge as strategic spaces for resisting and imagining alternatives to the commodification pursued by capitalist markets (Nelson and Edwards 2020). ANF is an umbrella term that refers to a broad range of production, distribution and consumption practices which act in opposition to the mainstream food system (Michel-Villarreal et al. 2024). The concept first emerged in the 1990s and is becoming increasingly popular in academic literature (Gori and Castellini 2023, 6). Early on, Feenstra clarified that AFNs are "rooted in particular places, aim to be economically viable for farmers and consumers, use ecologically sound production and distribution practices, and enhance social equity and democracy for all members of the community" (Feenstra 1997, 28). Over time however, the definition of AFNs evolved to include other key aspects, summarised by Michel-Villarreal et al. in whatness, alterity, connectedness, proximity and sustainability (2024, 423). The following paragraphs expand on these five elements.

Concretely, *what* are AFNs? They are described as socially embedded food networks, which involve producers, consumers, and stakeholders with shared objectives who come together to create alternatives to the mainstream food system (Michel-Villarreal et al. 2024, 424). The latter is understood as the intensive, large-scale, high-input and corporation-led system that since the second half of the 19th century increasingly produces, processes, and distributes most food in the global North (Michel-Villarreal et al. 2019, 2; Paciarotti and Torregiani 2021, 1; Gori and Castellini 2023, 1). The picture is somewhat different in the global South, where corporations do control most of the farmland, but smallholdings provide much of the consumed food calories, over 70% in Asia and sub-Saharan Africa (Fanzo 2017).

Alterity in food networks can be claimed if their products are materially different (e.g. biologically produced), as well as circulated in alternative networks (e.g. distribution channels),

and inscribed in alternative economic practices (e.g. non-profit cooperatives) (Rosol 2020). However, defining alterity is complex and highly dependent on the context (Misleh 2022). In fact, all initiatives must eventually cope with a market regime which does not favour the integration of social and environmental values into food production (Misleh 2022, 1029), and the compromises that they make to keep going blur the line between what is an alternative, and what not. To indicate the mixed results of the interactions between AFNs values and the social, political and economic context in which they operate, Gori and Castellini talk of the hybridization of AFNs (2023, 13), while Misleh refers to the dialectic relationship between the processes of societal embedding and marketisation (Misleh 2022, 1029).

Based on their level of independence and difference from the mainstream, AFNs can be termed "weak" or "strong" (Watts, Ilbery, and Maye 2005). The distinction has also emerged as a response to the increasing co-optation of AFNs' language and methods by mainstream food suppliers, who mimic certain aspects of alternative markets to cater to critical consumers and increase profits (Rosol 2020, 53). This testifies to AFNs' relevance but also underscores the importance of keeping the focus on the third key element of alterity, that of alternative economic practices. In fact, co-optation becomes harder when AFNS are also defined by non-economic considerations and focus on values over profit (Rosol 2020). Better connecting the literature on AFNs with critical economic thought, like Degrowth, could strengthen this point. Overall, to contextualise AFNs' alterity, these systems should be understood as innovative social processes in the food system which, however, develop within the constraints of the wider neoliberal regime (Misleh 2022, 1038).

AFNs are also expected to foster *relational connectedness*, a sense of care, trust and commitment, and *material connectedness*, since they allow producers to avoid costly intermediation and educate consumers on agricultural production and environmental issues in the meanwhile (Michel-Villarreal et al. 2024). The result can be new or renovated forms of social associationism and market regulation (Gori and Castellini 2023, 2). However, fostering connections through AFNs risks leaving out specific groups of citizens. AFNs are in fact often critiqued for predominantly involving white, middle-class citizens, which limits their accessibility and inclusion (Goszczyński and Śpiewak 2023; Turkkan 2023). In fact, AFNs, and nowtopias more broadly, mostly appeal to privileged segments of the population because of the often-higher prices of food products and time commitment they require to get to know the

network, and potentially contribute, for example by volunteering (Paciarotti and Torregiani 2021).

Proximity refers to AFNs' capacity of reducing the distance between producers and consumers in geographical terms, as well their metaphorical distance in the supply chain, and the informational distance which decreases with personal interactions and transparent communication around the products (Marsden, Banks, and Bristow 2000). For instance, GAS membership diversifies participants' access to sources of information about food production and quality (Brunori, Rossi, and Guidi 2012). The concept of proximity draws from a related strand of literature on short food supply chains (SFSC), which was initially proposed as a substitute for the concept of AFNs, deemed too general. Today, SFSC and AFNs are understood to be broadly synonyms, although the former has been more often adopted by policymakers, due to its narrower focus on reducing the number of intermediaries and/or reducing transport distances (Michel-Villarreal et al. 2024, 430). For example, the EU defines SFSC as "a supply chain involving a limited number of economic operators committed to cooperation, local economic development, and close geographical and social relations between producers, processors and consumers" (Regulation 1305/13). SFSC is then a more technical term, neutral about the alternative economic practices which Rosol identified as key to avoid co-optation (2020).

Finally, AFNs incorporate elements of social, economic, and environmental *sustainability* in their alternative practices. For example, AFNs are expected to reduce the material footprint of food production by lowering inputs through biological or biodynamic agriculture, shortening transport distances, and favouring local and/or seasonal foods (Ciervo 2024). Another expected benefit is the preservation of local agricultural knowledge and crop varieties, supported by buying from small and often value-based producers (Michel-Villarreal et al. 2024). Differently to sustainability assessments of mainstream food production, all three dimensions of sustainability are commonly considered in studies which assess the sustainability of AFNs. The social dimension is the most studied, followed by economic and environmental aspects (Michel-Villarreal et al. 2019). This reflects AFNs' understanding of sustainability as a holistic and multi-layered goal. Due to the variety of AFNs practices, contexts, and products, it is essential to consider their sustainability on a case-to-case basis, which makes comparisons less common (Michel-Villarreal et al. 2019). Paciarotti and Torregiani (2021) conducted an

analysis of the logistics of SFSCs which also provides relevant insights on the weaknesses of AFNs (*see Table 1*), due on the similarities between the two concepts.

Table 1 Logistical weaknesses of SFSCs

Weaknesses of SFSCs
Niche market due to high prices
Limited variety and quantity of products
Problems in supplying public institutions with adequate product quality and quantity
Organisational and coordination difficulties
High logistics and transportation costs when compared with other conventional distribution systems
Limited logistics and commercial organisation
No scale economies due to the small size of farms
Consumers do not always know how and where to get products
Problems with getting to the selling points
Limited resources (budget and skill) for marketing and communication
Limited capacity to expand for some small farms
Possible 'burnout' caused by small workforce and reliance on key multi-tasking individuals

Source: (Kneafsey et al. 2013; Sini 2014; Rapisarda et al. 2015; Casolani 2015) as cited in (Paciarotti and Torregiani 2021)

All the abovementioned factors hence limit the economic sustainability of AFNs, both on the consumers' and the producers' sides. For the relatively few consumers who take part in AFNs, alternative purchases risk becoming burdensome in terms of time commitment and financial expenses, while producers might have to rely on an unstable demand, which hinders

long-term planning and farm expansion. As mentioned before, these issues are not characteristic of all AFNs but should be accounted for in any critical evaluation. Overall, there is a lack of empirical research regarding whether AFNs succeed in advancing economic sustainability (Michel-Villarreal et al. 2019).

To summarise, AFNS are defined as socially embedded food networks, which create alternative strategies for food production and distribution in opposition the mainstream food system. Their material qualities, the networks in which they circulate and the economic models they use show this alterity in practice, but the economic model is most determinant. AFNs tighten connections among stakeholders in relational and material terms, fostering trust but also skipping intermediaries. They hence bring closer producers and consumers, geographically, logistically and information-wise. Finally, they are expected to be sustainable in social, economic, and environmental terms although the last two claims lack systematic empirical evidence. SFSC is a tightly related concept but lacks the emphasis on alternative economic models which is instead key in connecting AFNs with Degrowth theory and practice. Therefore, for this research the term AFNs is to be preferred. Comparative cross-country studies are needed to better assess the sustainability of AFNs, and multiple stakeholders should be included in their examination to get a holistic understanding of the network. While a systematic cross-country study is beyond the scope of this research, the research design was consequently adapted to include a broad variety of stakeholders.

2.3 GAS or Solidarity Purchasing Groups

"The relocalisation of production and consumption of food is one of the central objectives in proposals for degrowth […]. It refers to a process in which food production and consumption is 're-located' from globalised industrial food systems to personal networks" (Boonstra and Joosse, 2013, p. 179)

Despite the interest in re-localising food among Degrowth scholars, GAS have only seldomly been connected with Degrowth in the existing literature. Grasseni mentions the Degrowth movement as one among many responses to sustainability challenges in Italy, along with the shift to critical consumerism that informed the first GAS (Grasseni 2014). Mortara briefly explores GAS as an example of voluntary simplicity and hence an individual intervention towards sustainable development (Mortara 2013), which is partly confirmed by the report of Forno, Grasseni, and Signori on Degrowth as a motive for participation in GAS (2013b), as explored in *Section 2.3.3*. However, these texts mostly connect the network to early definitions of Degrowth, drawing from the work of authors such as Latouche (Mortara 2013).

According to this literature review, relations with the Degrowth scholarship of today remain unexplored. This section therefore aims to lay the basis for starting to draw such connections. It introduces the case study through a brief historical overview, based on academic accounts, and afterwards critically reviews the literature that discusses its main features and activities.

2.3.1 A short history of GAS

Several AFNs around the world have been considered the 'seeds of transition' towards a new economy (Wiskerke and Ploeg 2004). However, co-optation by the mainstream agro-industrial regime has somewhat dampened enthusiasm over time (Boonstra and Joosse 2013). An interesting case of AFNs that stood the test of time and reached a considerable diffusion, is that of the Italian Solidarity Purchasing Groups or *Gruppi di Acquisto Solidale* (GAS). GAS emerged in the late 1990s in Italy, following the example of a pioneer group in Fidenza, born in 1994 (Binotto 2020, 140). In that occasion, a group of families had come together to translate into practice the ideals promoted in Verona during the 1993 citizen assembly titled "Arena 5: When the economy kills... one must change", of Christian Catholic and pacifist inspiration. The assembly, featuring international speakers and a radically new economic agenda, explored the role of the economy in creating injustices and conflicts in the blind pursuit of profit. The still recent Gulf War provided a concrete example of such dynamics, and citizens were encouraged to take a more active role in their everyday purchases through the Justice Budgets (*Bilanci di Giustizia*), a self-tracking tool promoting ethical and critical purchases among families (Brunetti, Giaretta, and Rossato 2007; 'Arena 5 (19.09.1993)', n.d.).

During the following 15 years GAS spread through word-of-mouth, and similar initiatives were taken first to Reggio Emilia and Piacenza, eventually multiplying and involving up to 19% of the Italian population (Borri, Borsotto, and Aguglia 2020). During these years of growth, GAS lost much of their initial bond with the Catholic and pacifist movement, which is in fact not mentioned in recent literature. In 2008, the economic crisis, austerity measures and the ensuing recession stimulated a range of innovative solidarity initiatives in the countries that were hit hardest (LIVEWHAT 2016), also boosting interest and participation in GAS, who promised quality food at accessible prices in a perspective of solidarity with struggling producers (Guidi and Andretta 2015). An increased attention to price, as well as to reducing waste, the declining trust in the market and in agribusinesses, and producers' need to find new markets to sustain their production, made the GAS movement well positioned to respond to the emerging needs of that historical moment (Grasseni 2014, 189; Guidi and Andretta 2015).

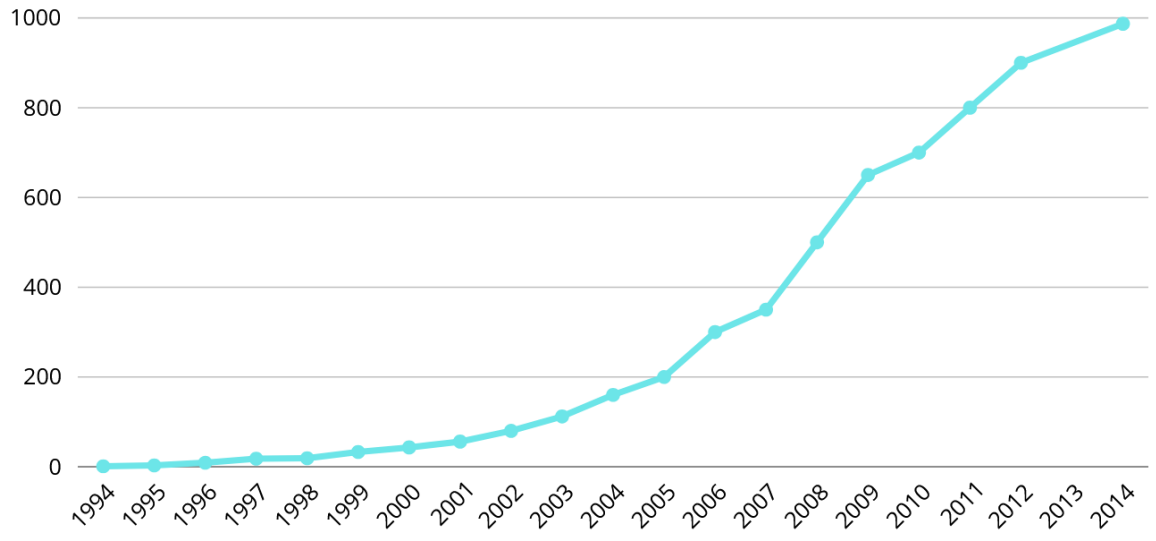

Figure 1 Number of registered GAS on retegas.org in 1994 – 2014
Source: 1994-2004 data re-elaborated from (Saroldi 2005) as cited in (Brunetti, Giaretta, and Rossato 2007). 2004-2014 data re-elaborated from (Guidi and Andretta 2015, 450)

2.3.2 Defining GAS

Brunetti, Giaretta, and Rossato define GAS as "free [and often informal] associations of people who chose to pool their supply of products of general and widespread consumption, particularly food" (2007). This description should be integrated with the notion that "solidarity", in the groups' name, refers to the criteria that they use for selecting suitable producers, which are not strictly economic criteria (Brunetti, Giaretta, and Rossato 2007). In a more recent paper, Grasseni notes the expansion of their focus, as GAS increasingly became interested in non-food provisioning, from clothing to energy supply (2014). Building on the long-lasting lack of representation of consumers in the economic and socio-political fields, the literature articulates GAS activities as reclaiming citizens' power to choose, by practicing 'positive' political consumerism: actively educating participants' preferences and concretely building alternative infrastructures for buying and selling goods, rather than only opposing capitalist economy actors (Brunetti, Giaretta, and Rossato 2007; Brunori, Rossi, and Guidi 2012; Guidi and Andretta 2015, 447).

While many studies are empirical and mainly aimed to map GAS, define their key features and developments (Forno, Grasseni, and Signori 2013b; Guidi and Andretta 2015; Brunori, Rossi, and Guidi 2012), others have focused on their political and economic dimensions. Several scholars argue that while existing within the market, GAS access it on their own terms, not strictly abiding by the logic of utility maximization, and introducing a dimension

of care (”affect” or ”regard”) to re-embed food in social networks and local ecologies (Grasseni 2014, 189; Dal Gobbo 2024). In fact the Solidarity Economy, of which they are an example, can be described as standing between market and non-market economic models (Coscarello 2012).

Because of these characteristics, they can be understood as strong AFNs (Watts, Ilbery, and Maye 2005; Maestripieri, Giroletti, and Podda 2018). On the other hand, GAS are a very specific case of AFN, which is not exhausted in creating an alternative, but set for itself the specific goal of standing in solidarity with farmers and nature, as well as transforming lifestyles (Grasseni 2014).

Testifying to their relevance in the national landscape, a legal amendment was approved in 2007 to define their status as “non-profit associations created with the aim of performing collective purchases and distribution, without any mark-up, exclusively to members” (244/2007). Brunori, Rossi, and Guidi note that this step was the result of successful lobbying and that it pushes for the increased structuring of the groups, since it protects formal associations from potential accusations of tax evasion. They argue that increased structuring can bring them more visibility and opportunities (Brunori, Rossi, and Guidi 2012).

2.3.3 Motives for participation in GAS

The literature highlights a variety of motivations for being part of such groups. Building on the groups’ own descriptions, they are oftentimes connected to the concept of ”critical consumption”: carefully examining the activity of consuming goods and in terms of its economic, environmental, socio-cultural, and ethical implications (Forno, Grasseni, and Signori 2013b; Tassan 2023; Dal Gobbo 2024). For instance, many GAS were originally constituted to increase access to organic products, scarcely available on the market in the early 2000s (Brunetti, Giaretta, and Rossato 2007).

Other motivations pertained to accessing fresh and high-quality food, supporting small producers, reducing the time spent on groceries, and when possible, making economic savings. Everything is done is a perspective of solidarity, towards society at large, producers, and among participants themselves (Brunetti, Giaretta, and Rossato 2007; Grasseni 2014). Other less common motivations relate to environmental issues, such as spreading sustainable agriculture, environmental education, and clean energy, as well as to its political aspects, such as fairtrade,

self-production, ethical finance, the fight to organised crime, and Degrowth (Forno, Grasseni, and Signori 2013b).

However, these studies risk being outdated, as recent literature is scarce and the conditions in which GAS act have continued evolving. For instance, Dal Gobbo has highlighted the emerging importance of health considerations, understood as both an individual performative pursuit and as something deeply enmeshed with the surrounding environment and the socio-economic system that exploits and pollutes it (Dal Gobbo 2024, 1331). This gap underscores the importance of taking into account new dynamics when studying GAS, at the risk of idealising or underestimating emerging features of the network.

2.3.4 Participation

Although still a niche, GAS represent to this day a popular and well-established type of food sharing. It is unclear how many GAS are existing and active due to their informal nature and to the lack of rigorous mapping, but estimates vary between 1000 and 3000, involving 8-10% of the Italian population ('Trova un Gruppo di Acquisto Solidale', n.d.; Forno and Graziano 2022). The groups are unevenly distributed across Italy, with most of them in the Northern regions, particularly around Milan, Venice, Bologna, and Turin ('Trova un Gruppo di Acquisto Solidale', n.d.). Their scarcer presence in the South was attributed to the more direct contacts between producers and consumers, which satisfies one of GAS main purposes, or to the higher economic insecurity in the region which leaves less space for participation (see *Table 2*; Cantalino 2024).

Table 2 Distribution of GAS in Italy

Area	**N° GAS**	**Percentage**
North – Emilia Romagna, Friuli-Venezia Giulia, Liguria, Lombardia, Piemonte, Trentino Alto-Adige, Valle d'Aosta, Veneto	321	76,98%
Center – Lazio, Marche, Toscana, Umbria	70	16,78%
South and islands – Abruzzo, Basilicata, Calabria, Campania, Molise, Puglia, Sardegna, Sicilia	26	6,23%

Source: ('Archivio Organizzazioni | Economiasolidale.Net', n.d.)

Participants are generally described as non-activists, rather citizens or families concerned with ethics, sustainability, health, taste and affordability (Borri, Borsotto, and

Aguglia 2020; Dal Gobbo 2024). They tend to come from the well-educated and white ”lower middle classes, mainly employed in poorly paid but secure jobs in education or in the public service sector” (Grasseni 2014, 186; Graziano and Forno 2012, 128; Dal Gobbo 2024). In 2012, almost a quarter of them earned relatively low salaries of less than 2000 euros per month, while half earned average incomes, between 2000 and 3600 euros per month (Forno, Grasseni, and Signori 2013a). This characteristic was possibly strengthened during the 2008 crisis, in which the network experienced increased participation of the economically depleted middle class (Guidi and Andretta 2015). About half of GAS participants surveyed were 30-40 years old, and most of the other half fell between 45 and 60 (Forno, Grasseni, and Signori 2013a).

While providing a starting point for understanding GAS participation, this data reflects the abovementioned issue with obsolete studies. Over ten years later, GAS participants' average age seems to have sharply increased while their socio-economic composition persisted (Dal Gobbo 2024), in line with the demographic profiles of AFNs customers across Italy (De Bernardi et al. 2020). Differences in these trends emerged between urbanised areas and more rural areas, with urban areas possibly experiencing more youth participation (Tassan 2023).

2.3.5 Internal functioning

Forno, Grasseni, and Signori argue that GAS' internal structure and methods are what binds the different local experiences together, which are otherwise diverse (2013b, 135). In fact, each group can involve from a few to several tens of households (Tassan 2023). Moreover, the GAS' active members meet regularly to discuss organisational issues such as the entrance or exit of new producers from their pool of supplier, but the frequency of the meetings varies from biweekly to several months (Forno, Grasseni, and Signori 2013b).

Still, within the groups collective purchases are “highly ritual and routinized” (Guidi and Andretta 2015, 462). Each producer is linked with a GAS member, who will be the contact person for gathering and placing the food purchases from that particular producer, as well as managing the products' delivery and distribution (Forno, Grasseni, and Signori 2013b, 135; Guidi and Andretta 2015). Doing so, GAS organise direct purchases which bypass all intermediaries allowing higher margins to the producers, who do not have to pay expensive distributors and retailers to enter the supply chain, and lower prices to GAS members, who can negotiate reasonable group discounts without impacting the business' sustainability. On the other hand, they remain dependant on the volunteering work of their members (Forno, Grasseni,

and Signori 2013b, 128), which might create tensions in a context where lifestyles increasingly lack structure (Tassan 2023).

Active participation is in fact seen as their most essential resource, which is reflected by the groups' requests to all members to take part in the activities rather than simply buying through them (Grasseni 2014). This results in frequent interactions between members and with the producers. The ensuing conviviality and mutual trust should supports long-term engagement and lifestyle changes, through the reflective co-production of food (Guidi and Andretta 2015). They become spaces for re-negotiating one's values and identity, particularly in regard to the economy and well-being (Forno, Grasseni, and Signori 2013a; Guidi and Andretta 2015). GAS hence offer members the possibility to enter the market on non-capitalist terms, while challenging their values and identity. Unknowingly answering Koch's call for spaces free from the growth imperative (2020), GAS emerge as an interesting case study for exploring Degrowth in practice.

2.4 Relevant theories

As highlighted by the literature review, GAS can be understood as an example of degrowth in practice, a nowtopian initiative, and fall under the definition of AFNs. Therefore, a framework to study them should incorporate elements of all these aspects.

The Multi-Level Perspective is a commonly employed theory to analyse socio-technical sustainability transitions. It has also been applied to Degrowth (Khmara and Kronenberg 2020; Vandeventer, Cattaneo, and Zografos 2019). It describes transitions as non-linear processes which cross three levels. First, niches are societal subsystems which host radical innovation, such as nowtopias or grassroot "efforts to reclaim and reinvent work against the logic of capital" (Carlsson and Manning 2010, 925; Khmara and Kronenberg 2020, 5). Second, the regimes, or "dominant way[s] in which societal needs are fulfilled", that Degrowth struggles to change are economic growth, dependence on fossil fuels, and profit-oriented business models (2020, 5). GAS would be understood as a niche phenomenon in the overarching food regime. Last, landscape trends are long-term and exogenous influences such as the neoliberal capitalist socio economic system, urbanization, and globalization (2020, 5).

The Multi-Level Perspective has collected criticism regarding its rigid approach to social change and the oversight of how social order is actively upheld in everyday life (Andreola 2024, 2) but remains widely employed and has evolved to overcome some of its limitations.

Strategic Niche Management is particularly concerned with how niche innovations are strengthened and scaled up to the regime level (Zimmermann and Palgan 2024). In this sense, upscaling the GAS niche would mean it spurs change within the dominant regimes in food production and distribution, as explored by Brunori et al. (2012). Still, the definition of the regimes that each niche is embedded in and struggles with remains elusive: a clear methodology for defining the three levels is lacking (Holtz, Brugnach, and Pahl-Wostl 2008).

Another theory that may be considered in this study defines Alternative Forms of Resilience (AFR) as "diverse repertoires of citizen direct solidarity actions and aims, […] conceptualised as non-mainstream/capitalist economic and non-economic activities through which citizens build community" (Kousis and Paschou 2017, 140). The authors explicitly mention the Solidarity Economy network in Italy, of which GAS are part, confirming the applicability of the framework to this case. However, AFR are contextualised within times of crises, declining welfare and economic hardships (Kousis and Paschou 2017, 152), and although the 2008 economic crisis may indeed have played a role in the diffusion of GAS (see *Section 2.4*), the groups both existed before the crisis and still exist today. Only studying GAS through this theory would therefore be restrictive. AFR's focus on crises and economic hardships remains useful in highlighting the role that 2008 economic crisis had on GAS which, to the best of my knowledge, is a still an underestimated aspect in the literature (see Guidi and Andretta 2015).

A third framework that can be used to define degrowth in practice is that of Real-Existing Degrowth territories (RED) (Varvarousis et al. forthcoming). To counterbalance the predominance of future-oriented and normative scholarship in the field of Degrowth, this framework aims to systematise research on existing practices that either resist, adapt to or thrive beyond growth (Varvarousis et al. forthcoming). It recognises that these attempts are incomplete and at times contradictory, as they deal with the complexity of advancing Degrowth-like practices in an economy geared towards exponential growth.

The RED framework particularly focuses on their territorial dimension, meaning their interplay with the geographical and social surroundings, rather than on internal features. This interplay can give rise to a range of REDs. One typology, "nowtopian" REDs, particularly resonates with the GAS elements of prefiguration of a different food system. The authors define three dimensions in which to study RED: 1. the **material fabric** includes the physical or calculable characteristics of a territory that are distinct from the attributes defining the growth

regime of the given territory; 2. **territorial regulation** is the sum of the (in)formal rules and agreements that create, govern, maintain and recreate REDs; finally, 3. **social imaginaries** collect the various values, norms, and meanings that territorial actors employ (Varvarousis et al. forthcoming). Each dimension is further defined by several indicators, or second tier variables. The indicators are however dynamic given the great variety of REDs, and different sets can be tailored to each case study (Varvarousis et al. forthcoming).

Among the examined theories, the RED framework therefore appears most suitable in examining GAS from the different angles of degrowth in practice, nowtopias and AFN. A subset of the RED indicators can be employed to explore if and how GAS represent an example of degrowth in practice, while their nowtopian element is incorporated by one typology of REDs, and the key elements of AFNs identified by the literature review (namely social embeddedness, opposition to the mainstream food system, alterity in material and economic terms, and sustainability) are also highlighted by the indicators.

3. Aim and Research Questions

The research aims to characterise an example of a Real-Existing Degrowth in Milan, Italy, by analysing its territorial presence across multiple scales. By applying the RED framework to a well-established initiative, the study aims to provide insights for starting to imagine a grounded Degrowth transition in Italy, built through local experiences and diverse practices and imaginaries which resonate with local audiences.

To do so, the research investigates Milan's GAS current reality according to the three interrelated dimensions of the RED framework, hence exploring their material fabric, territorial regulation and social imaginaries. This knowledge also provides a basis for reflecting on existing obstacles and strengths of the network, as well as possibilities for consolidating and upscaling its activities towards a wider Degrowth-oriented transition of Italian food systems.

The geographical area of Milan was chosen as it is one of the most active areas in Italy in terms of GAS, other types of AFNs, and the Solidarity Economy network. Several new forms of food sharing are emerging there, along with significant developments in the city's Food Policy. In this sense, it is a best-practice case study, where GAS and other network members can be studied together. This scope fits with the intention of exploring GAS as a part of wider territorial social processes: focusing on the city of Milan and the Lombardy region in the case of producers, sets boundaries in which their impact can be better analysed.

Therefore, the thesis research asks the following research questions:

1. **Material Fabric –** How does Milan's GAS network differ materially from the territorial growth-oriented food system?
2. **Territorial Regulation** – How do (in)formal arrangements support and regulate GAS network's activities in and around Milan?
3. **Social imaginaries** – How does Milan's GAS network employ narratives and imaginaries to sustain its work?

4. Methods

4.1 Methods for data collection

Building on the literature review, the research questions were answered through document analysis and qualitative interviews, aimed at collecting respondents' opinions on the case study characteristics as highlighted by the RED framework. Document analysis included an analysis of grey documents from 1) the City of Milan, regarding Milan Food Policy (the main food governance office in the city), the Urban Food Policy Pact, and other food-related areas of work, 2) GAS, regarding the individual groups foundation and key values, as well as network-wide foundational documents. These were also used to prepare for the interviews with stakeholders, ensuring understanding of the context in which they operate.

Insights from the documents were expanded and enriched by the interviewees. They included three groups of stakeholders: GAS members, other network members (as producers and distributors), and policy makers connected to Milan's Food Policy. Their different roles and relationships were explored through the interviews. The findings on GAS features and activities were analysed to understand whether they constitute an example of RED, in terms of their material fabric, territorial regulation, and social imaginaries. Several stakeholders were included to reflect the embeddedness and complexity of the Solidarity Economy network and Milan's province in which GAS operate, and that co-produces their material fabric, determines which regulations they adopt or are subject to, and shapes and reflects their social imaginary. Moreover, studies of AFNSs can benefit from more holistic research approaches including more than two stakeholders, which are still scarce in existing literature (Michel-Villarreal et al. 2019).

GAS members were reached by first mapping all existing GAS registered in the City of Milan, according to the archive of EconomiaSolidale.net, E-circles and further online research. Initially, the list included 24 groups. Producers were thereafter identified through the lists of producers publicly shared by GAS and other network members (see Appendix 2), and contacted if located within Lombardy region, which hosts the most immediate agricultural lands around Milan. Policymakers were instead selected according to their responsibility in the Milan Food Policy, which is the municipality office most directly involved with food initiatives and food networks in the city. All GAS on the initial list and all producers identified in Lombardy were invited for an interview. Interviewees were purposefully selected, favouring those with a

considerable experience in the GAS network or in the city's Food Policy, ensuring that they could share balanced insights and a thorough understanding of their dynamics. In the case of GAS and other network members, this was obtained by making the criteria explicit in the invitation and leaving each initiative to select its representatives. Policymakers' contacts were instead obtained through an expert consultation with a specialist of food initiatives in Milan, who recommended the interviewees as qualified and responsible for the relevant topics in Milan's Food Policy. The interviews were therefore aimed at gathering expert understandings of the focus issues, rather than the general opinion of e.g. less active GAS members.

Respondents' opinions were collected mainly through individual, semi-structured interviews, allowing for targeted conversations while ensuring freedom of expression to the participants. Additionally, one focus group was held with a GAS, enriching the analysis with room for a debate and experience sharing among active members of the group. The interview questions were adapted to the different stakeholders' expertise (see Appendix 4). Online and in-person options were provided for the GAS and policymakers interviews, while producers interviews were conducted entirely online due to geographical distance, resulting in (14) online interviews, (2) in-person interviews, and (1) in-person focus group (see *Table 3*). All the interviews were conducted in Italian, while selected excerpts were translated by the author to be included in this research as exemplary statements. The interviews lasted between 27 minutes and 84 minutes. They were all recorded, allowing for an accurate transcription of the collected data.

Table 3 Overview of interviews

N°	**Role**	**Date of interview**	**Format**	**Interview duration**
1	GAS member	11/03/2025	Online	53 min
2	Policymaker	11/03/2025	In-person	29 min
3	Policymaker	11/03/2025	In-person	27 min
4	Producer	13/03/2025	Online	31 min
5	GAS members	17/03/2025	In-person focus group	75 min
6	GAS members	18/03/2025	Online	47 min
7	DESR member	20/03/2025	Online	60 min
10	GAS member	28/03/2025	Online	58 min
11	Producer	31/03/2025	Online	37 min

12	Logistics provider	01/04/2025	Online	84 min
13	Producers	08/04/2025	Online	45 min
14	Producers	08/04/2025	Online	65 min
15	Producers	15/04/2025	Online	32 min
16	Producers	15/04/2025	Online	44 min

4.2 Methods for data processing

The interviews recordings were transcribed as clean read text, meaning that all words were noted but sounds and interjections were left out, and slang was translated in standard Italian (Mayring 2014, 46). This system reflects the analysis' focus on content rather than on discourse per se. The transcripts were afterwards qualitatively analysed through Nvivo software. Qualitative content analysis is a mix-methods approach, which consists in assigning categories to text according to specific content rules (qualitative-interpretative step) and thereafter analysing the frequency of such categories across several texts (quantitative step) (Mayring 2014). Qualitative content analysis is particularly suited to this research because the time constraints, resulting in a restricted sample, and the lack of pre-existing suitable data would not have allowed for a quantitative analysis. Still, using such a content-analytical approach allows for a both systematic and contextual interpretation of the data (Mayring 2014, 40). Moreover, it allows for a mixed descriptive-explorative research design, where the texts are analysed both deductively, using a category system developed from the RED framework's second-tier indicators, and inductively, adding emerging categories to the pre-established ones (Mayring 2014, 12).

Second tier indicators were adapted as codes by firstly selecting those indicators that could be applied in the analysis of a territorial initiative, like Milan's GAS network, rather than of the territory itself. For instance, the indicator "steady population" (MAF17) would not have been meaningful when the sample only encompasses the initiative's participants. Secondly, codes were extrapolated from the selected indicators by rephrasing them to centre the topic of interest rather than the attributes assigned by the RED framework. For instance, the indicator "Localised and inclusive forms of decision making" (TER3) was shortened into the code "Decision making". This allowed for a broader range of statements to be coded, highlighting both the decision-making forms that were localised and inclusive, and those that were not, allowing for a more nuanced analysis of the transcribed materials. All codes included in the codebook appeared at least once in the transcripts, while others were excluded.

The addition of emerging categories is suitable to the RED framework, as its authors explain that it should be critically adapted to the case study and its unique characteristics, by possibly developing new indicators or discarding some of the proposed ones (Varvarousis et al. forthcoming). Therefore, the codebook was first tested through a pilot transcript coding (Mayring 2014, 13), and reviewed iteratively. The final version can be found in Appendix 3. Once the codebook was finalized, all transcripts were checked again for coherence with such version, avoiding potential incoherences. Finally, stability of the coding was tested via intra-coder agreement, in which a part of the material was re-coded by me without knowing the previously assigned categories, resulting in only marginal differences (Mayring 2014, 112).

4.3 Ethical considerations

The research design was approved by the Ethics committee of the University of the Aegean and respects the institution's ethical guidelines. The interviewees' voluntary participation to the study was furthermore ensured by the data collection methods detailed above, in the form of an open invitation. An informed consent form, detailing the researcher's affiliations, the thesis aims, and the use of collected data was shared with all interviewees before the interviews took place (see Appendix 1). Interviewees accordingly had the ability to stop the interview when desired or not answer any given question.

Recorded audios were saved on a personal computer protected by password, and the list of participants was stored on a separate hardware also protected by password. The transcripts were only coded and analysed after being anonymised, and all findings were accordingly reported anonymously or by only specifying the group to which the interviewee was associated. While all individual names were anonymized and their involvement in this research kept confidential, the tightness of the GAS network does not allow for the complete anonymity of involved groups and entities, if readers were to be familiar with the local context. All data will be deleted five years the competition of the thesis project and related academic publications.

4.4 Positionality

This section is meant to briefly clarify my own cultural, political and personal positionality in relation to the thesis topic. The biases introduced in the research by my perspective can hence be anticipated and explained, hopefully supporting the reader in understanding the context of this research. Overall, my personal motivations for focusing on this topic relate to hope, personal values and cultural identity.

As a student interested in the intersection of environmental and political sciences, I find it often overwhelming to maintain a solution-oriented mindset in the face of existential environmental threats and their doubling down through extreme inequalities and unjust power dynamics. The need for positive action has led me to appreciate critical theories and their analyses of neoliberal capitalism and deriving social structures. Ecological economics and Degrowth have provided me with tools for confronting different environmental and social challenges and come up with just solutions. Therefore, by strengthening Degrowth theory by drawing connections to an akin food initiative, I want to contribute to this hopeful discussion.

Moreover, exploring a food-related topic allows me to connect my academic life with personal values, by using my time to support the struggle for human and more-than-human justice carried out by many food movements worldwide. Building on my own family's experience as GAS participants, I am interested in how food production contributes to the climate crisis, and in how it can be leveraged for transforming both the environment and the economy systems that surround us.

Last, as an Italian citizen that has pursued all her higher education abroad, I have over time grown apart from the reality of things in my home country. Through this project, I wished to reconnect with the current state of affairs in Italy, and gain vocabulary and experience by collaborating with Italian initiatives.

5. Case Description

The city of Milan represents an interesting case study because of the contrasts between the city's reputation as the Italian international capital of finance and luxury, and the active grassroot food movements which have been able to expand and consolidate their presence in the area since the early 2000s (Dal Gobbo 2024, 1323). The two aspects are not irreconcilable. The city has historically been a centre of production and commerce, not last in the food sector, thanks to its central position in the Po Valley, a fertile flatland which held, and still holds, major importance in the industrial and agricultural production of Italy. To this day, about 16% of the city's surface is dedicated to agricultural use. Almost half of such land is run by the Milan Agricultural District (*Distretto Agricolo Milanese*, DAM), a consortium that gathers the biggest agricultural firms in the city and aims to maintain ties of interdependence and collaboration with the urban areas ('La tradizione agricola a Milano', n.d.). Around Milan, other agricultural districts, defined as homogeneous territories sharing agricultural activities and "goods or services of particular specificity", characterise the city's surroundings ('Springboard Plan Milano' 2022). The districts are all part of a Framework Agreement for Territorial Development (*Accordo Quadro di Sviluppo Territoriale*, AQST) which exists since 2012 to strengthen the rural vocation of Milan ('Springboard Plan Milano' 2022).

Part of this agreement are also the Milan 2015-2020 Food Policy guidelines, in which the municipality defined five priorities for improving the city's food system, namely "ensure healthy food and water for all citizens; promote the sustainability of the food system; promote food education; fight against food waste; support scientific agri-food research" (ESTà 2018). The Milan Zero Food Waste Hub is one of its initiatives, aimed at reducing food waste by redistributing unsold goods to residents in need through neighbourhood distribution points ('Obiettivi e priorità della Food Policy di Milano', n.d.). Across the Food Policy public documents, GAS are acknowledged as an element of Milan's food system but are otherwise not frequently mentioned (ESTà 2018). In preparation of the World Expo 2015 titled "Feeding the Planet, Energy for Life" in Milan (Bureau International des Expositions, n.d.), the administration also outlined the Milan Urban Food Policy Pact, an international protocol meant to tackle food challenges at the city scale, which was implemented internationally ('The Milan Pact', n.d.).

Despite this renovated interest in food issues, the rural surroundings of the city struggle to find a suitable and sustainable path for development. The post-industrial decades have left much of the previously agricultural lands neglected and punctuated by abandoned facilities or construction sites, which remain underutilised also due to their lack of connectivity with the city (Tzortzi, Guaita, and Kouzoupi 2022). Some steps for promoting the value of rural areas have been taken in the South Milan Agricultural Park (*Parco Agricolo Sud Milano*), a green belt which comprises the agricultural and forested lands of 60 municipalities in the vicinity of Milan, for a total of 47.000 hectares managed by the province as a rural protected area ('Parco Agricolo Sud Milano: Coltivazioni', n.d.). This safeguard gave citizens and local associations a framework to prevent dysregulated urban expansion, and start restoring the park's ecological and social relevance through regenerative agriculture (Tzortzi, Guaita, and Kouzoupi 2022).

This is the context in which Milan's GAS have developed since the late 1990s. Lombardy hosts the highest number of recorded GAS, for a total of 7.100 families divided in about 450 groups, 150 of which only in Milan's province (Forno, Grasseni, and Signori 2013a) and at least 50 in Milan (see *Image 1*). Even though other regions have not been systematically surveyed, likely leading to an underestimation of GAS density outside Lombardy, Milan's GAS are a compelling case study because of their relatively long history, scale and geographical proximity. It also fits within the scope of the RED framework, which is meant to study territories where the concentration of degrowth-like practices is particularly high (Varvarousis et al. forthcoming).

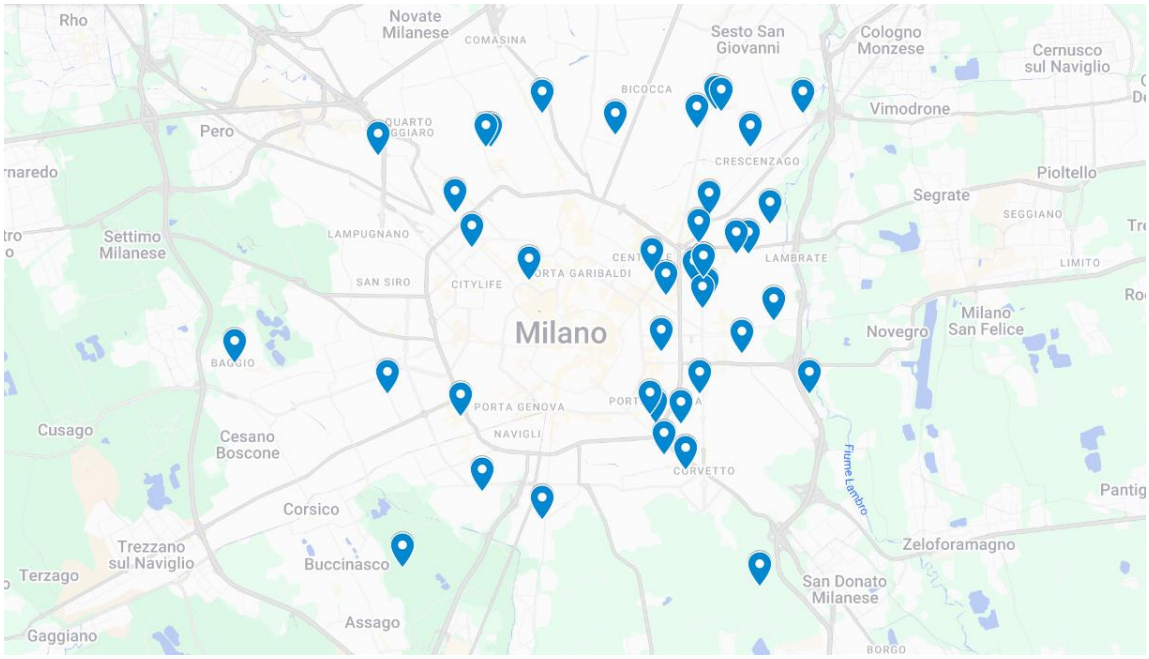

Figure 2 The distribution of GAS in Italy. Source: re-elaboration of my own data

Already in 2002, the first 19 groups of the city were coming together to form InterGAS, a self-managed network aimed at stimulating new relations between initiatives, sharing information, and pooling resources ('InterGAS Milano', n.d.). The network in Milan reflected a wider interest in networking strategies within the Solidarity Economy, which in the same year was explained in the seminar "Networking Strategies for the Solidarity Economy" ('Strategie Di Rete per l'economia Solidale', 2002). Drawing inspiration from like-minded grassroot networks in Latin America, Canada, Spain and France, the meeting highlighted commonalities between the global Solidarity Economy and Italian initiatives including GAS, small producers, *Bilanci di Giustizia* participants (see 2.4), fairtrade initiatives, ethical finance institutions, and others. Such points in common included strengthening existing solidarity economic practices, reflecting on and systematizing the theory, raising awareness, and advancing political proposals to transform society ('Strategie Di Rete per l'economia Solidale', 2022, 25)

GAS were hence encouraged to work as a fluid network of local agents, developing shared methods and tools, and organising on a regional or national scale to increase awareness around food and social issues. At the regional level, some GAS have the option of joining Solidarity Economy Districts or *Distretti di Economia Solidale* (DES), as of 2025 active only in the provinces of Venice, Bergamo, Pisa, Modena, Torino and Treviso (economiasolidale.net, n.d.). These territorial networks aim to connect all local examples of the solidarity economy, including GAS, producers, suppliers and other associations. Moreover, the Italian Solidarity Economy Network, or *Rete Italiana Economia Solidale* (RIES), aims to connect these local initiatives across Italy, translate their ideals in policymaking through advocacy, and connect the solidarity economy to other movements of transformative economics (RIES, n.d.). One of its members, *CO-Energia*, is a second-level association of GAS, DES and other GAS networks, focuses on education and support to its members. For example, their Solidarity and Future Fund consensually collects a small percentage of the producers' profits and reinvests them into local projects that strengthen the Solidarity Economy (CO-energia, n.d.).

Milan's GAS can hence also be considered a network, spanning from GAS members to producers, and crossing different levels of organisation, from informal to legally recognised. The following sections report on the findings that emerged from the diverse interviews conducted across Milan's GAS network, which is meant as an inclusive term to indicate all stakeholders involved in the groups' activities.

6. Findings

The data collected from the interviews with GAS members, producers, policymakers and the other network stakeholders is presented below. An overview of the interviewees can be found in Appendix 5. The interviewees were asked about their perception of the material fabric, territorial regulation and social imaginaries of the GAS network. Subsequently the information was categorised according to the codebook based on the RED indicators (see Appendix 4). The following paragraphs present the results in a descriptive way (Mayring 2014, 14), while a critical discussion and the connection to existing literature can be found in **Chapter 7**.

6.1 Material fabric

The **household metabolism** (MAF1) of GAS members is expected to be lower than average. Although a quantitative assessment was beyond the scope of this research, GAS members indicted that high shares of the food they consume is sourced through the group purchases, above 70% for most interviewees. Given the sustainability criteria of GAS purchases, their groceries can be expected to have a lower environmental impact that the mainstream counterparts. Moreover, several GAS members reported an increased attention to avoiding food waste, products that have come a long way, and plastic packaging since they joined the groups (F, J, E.2). On the other hand, meat and animal products were purchased by all groups (A, E, F, J, Q).

Beyond individual households, **social metabolism** (MAF2) also appeared to be lowered by the GAS network. Except for imported products like coffee, chocolate, and bananas (purchased only by one group), all other mentioned products were coming from Italy or bordering countries and were delivered to Milan mostly through road **transportation** (MAF15) given their vicinity (A, E, F, J, Q). Some network members were also concerned with the social metabolism of their territories, criticising their development trajectory and engaging in actions to change them, e.g. by advancing plans to protect regional water quality (M) and engaging with municipalities on the outskirts of Milan to reform their food procurement policies (G). **Energy provision** (MAF12) was not explored in depth by the interviewees, as their communal infrastructure is embedded in the city energy. Only one GAS member mentioned solar panels as a criterion for selecting producers (F).

Producers in the network carry out **ecosystem and land practices** (MAF10) that go in the same direction. Organic production emerged as the standard across the network, although not all producers have or even plan to obtain the EU certification (D, G, K, M, N, O, P). GAS members understand the complications of obtaining the certification, and there seems to be widespread support for producers who are transitioning to organic practices or can prove to act accordingly without the certification (A, F, G, J, Q). All interviewed producers had small or medium non-intensive productions, in terms of utilised land and final production. For instance, animal farmers raised between 15 and 200 animals open air (D, O, M, P), in a region that has one of the biggest and most intensive animal farming sectors in Italy (ISTAT 2020). Other regenerative practices mentioned by the producers were avoiding overgrazing (M), farming or processing derivates of less common breeds that preserve genetic diversity (M, O, P), cultivating a variety of crops on their property (D, K, O, P), crop rotation (P, O), low-impact or no tilling (M, P), paying attention to food waste and energy consumption (N), as well as encouraging other producers to follow suit (M). In one case, the relation with GAS groups allowed the producer to start engaging in such practices (P), but mostly it represented the main sales channel for the final products (G, M, N), while the producers were already convinced of the need to engage in regenerative farming (D, K, M, N, O).

The material **communal infrastructure** (MAF6) of the network mainly consists of spaces in Milan where producers can deliver the orders, and where GAS members can sort and redistribute them, as well as hold meetings and potentially public events. Some groups had a secure and private space, rented from the municipality (A) or private entities (E), while others shared space with other associations (F, J, P, Q), received deliveries in public spaces (F), or took turns among members' houses (D, O, P). These uses of space are not mutually exclusive, as many cited the lack of refrigeration (A, D), time availability (L, Q) or direct road access (J, L) as reasons to choose a different delivery location depending on the product characteristics and quantities. Financial difficulties are a common theme in the access and maintenance of communal infrastructure (E, F, J), which remained precarious or inadequate for many groups (E, J). The issue was somewhat underestimated by policymakers, who were concerned with the scarcity and cost of space in Milan (B, C). One considered the assignation of public space to GAS as an area for improvement since there is access issues to open calls by the municipality, for which only formal associations are eligible (B), while the other highlighted the inefficiency of assigning public space to GAS given their limited weekly needs (C).

Yet, these spaces emerged as key for the groups' **social interactions** (MAF8) and opening to the public. The groups met regularly every one or couple of months (A, E, F), and many host or participate to events to meet producers (E, L, P, M). However, some reported that their social interactions in person have decreased in recent years, perhaps also due to the Covid-19 pandemic in 2020 (A, E) and in spite of good interpersonal relations (A, Q). Interviewees also reported that not all GAS members share the group feeling nor invest in its social life (A, E, J). One producer, also a former GAS member, attributed the failure of their group to the lack of cohesion and sustained dedication (K). One GAS only welcomed active members, which however led to reduced participation (Q). Another interviewee explained that:

"The GAS works if we manage to keep the social fabric alive. When it becomes a supermarket it's very complicated, because people do not participate and it also becomes denaturalised, in fact for us it is first of all the construction of a local community" (J).

Being present in the **public sphere** (MAF8) was described as desirable and interesting by many GAS, as it gives them a chance to increase membership (F, J), organise farmers' markets (E), and chiefly promote critical education on food, energy, clothes, and other products (E, G, J). The groups also emerged as a good information sharing network for likeminded initiatives (A, F, Q). On the other hand, public initiatives were also perceived as time-intensive (E), and beyond the group's capacity in case of two smaller GAS (A, F, Q). Besides one GAS being involved in events promoted by the city of Milan (J), the municipality is not directly involved in any public interactions of the GAS network (B, C). One possibility advanced by a policymaker was to include GAS representatives in some of their public events relating to the city's Food Policy and Food Hubs (B), while the other pointed to their legacy in the public sphere in successfully having brought bringing attention to good, fair, and healthy food (C).

The **use of technology** (MAF11) in the GAS network is mostly related to the collection and communication of the food orders within groups, and then with producers. The contact person for each product is generally in charge of the orders, which were collected in spreadsheets (A, Q), with dedicated platforms that were designed to facilitate GAS work, such as reteDES and goGAS (F), or a mix of the two depending on the products (J). The logistics cooperative used an e-commerce platform designed by some they have direct relations with (L), while two producers used their self-designed platforms (M, P). Otherwise, communications run through email groups and group chats on common phone applications such as Facebook or Whatsapp (D, E, L, Q).

One of the key goals of the network was to promote **local markets over multinational trade** (MAF14). The groups favoured as-close-as-possible producers, which might mean within the city of Milan or within Italy depending on the product, their availability, and their price (A, F, J, Q). This is reflected by the locations of the producers that Milan GAS source from (see *Image 2*), which concentrate around Milan but expanded even beyond national borders. GAS members and producers alike valued breaking with market logics that underpay producers and push for industrialisation (D, E, G, J, K, L, N, P). They repeatedly criticised NaturaSì, an Italian organic supermarket chain, and other seemingly alternative food retailers for reproducing the logics of large-scale distributors (A, E, J, L, M, N, O, P, Q). The network therefore also aims to regain control over the production and distribution of food, implicitly working towards **food sovereignty** (MAF13).

"The last piece in which large-scale distributors cannot and do not want to be confronted is labour, because when we talk of labour one needs to exploit people, or will never make a profit […] when we talk of rights and of knowing how many cents of that orange go to the producer from whom it was bought, then we stop discussing and clearly see where the greenwashing is" (L)

"You can get a better price where the price is not dictated by a market logic, by a stock exchange, because agricultural products are commodities, nowadays they are listed on the stock exchange like gold. Meat is listed, […] every Monday in Milan and the prices they pay to the slaughterhouses are that, if you earn, good, if you are losing, it is your problem. Instead, [I can] have a balance and an activity that are, from an economic and financial point of view, certainly healthier" (P)

Other benefits of local GAS-oriented markets where the savings on marketing (N), the potentially efficient logistics when collaborating with many groups in the same area (N), and the direct payments of products (P). A weak point of the system is the workload it implies. Producers spend time in organising the orders (A, D, K, P, O). Another problem mentioned was that conventional GAS groups do not have high enough orders to justify efficient deliveries (A, L, N, O) nor to buy the whole production of their suppliers, pushing them to diversify sales channels and increase their workload (J, M). There also seems to be a general decline in the purchasing power of individual GAS (M, N, O). On the other hand, Aequos, a cooperative of GAS of which one of the Milan GAS is part, seems to unite enough groups to successfully tackle both issues (J, M) (see 6.2).

Figure 3. The distribution of producers from which Milan GAS' purchase in Italy.

Source: Re-elaboration of my own data

GAS members valued the **direct relation with producers** that this system affords (A, F, E), and producers also expressed appreciation for their personal and trusting relations (D, M, N, O). This manifested in direct communication about production practices, prices, news, and logistics (D, K, N, P), visits to the firms by the whole group or the contact person only (E, F, J, O, Q) and occasionally personal friendships (M). However, it also seemed to be increasing difficult to maintaining such direct relations once the producers have become part of the network (A, L, M, Q). In fact, GAS often order from the same pool of producers, which decreased the need to personally "verify" their practices once they have been approved by likeminded groups.

6.2 Territorial regulation

GAS emerged as nearly **autonomous** (TER1) entities in terms of institutions and regulations. Interviewees confirmed that the 244/2007 Law recognises the existence of GAS as associations, but it does not cover all groups, since some are informal (F), or have unique characteristics (E). This was a reason for some to become formal associations, so that all economic transactions are transparent (A, J), or take precautionary steps like following the requirements of the HCCP certification (E). However, many felt that most food regulations do not apply to the GAS case, which is alike to direct sales between producers and private people and that doing the bare minimum in this respect is sufficient and simple enough (A, D, E). At the municipality scale, GAS are not perceived as having any particularly defined role and are not an active part of the city's Food Policy (B, C). It appeared that the city, due to its scale, only works with well-structured initiatives with clearly identifiable representatives (B, C, G). This was not considered a problem, but rather a consequence of the very decentralised structure of GAS and of their declining activity in the city (B, C). Collaboration with the neighbourhood municipalities of Milan, smaller institutional units within the city, was considered more feasible by GAS members (F, G, J).

While the increased institutional autonomy came with perks like simplification of bureaucracy (A, D, E), it also meant that the network, particularly informal groups, do not enjoy institutional support in key areas such as obtaining access to public spaces or funding (B, F, E). Even when formal groups could apply for spaces, the available ones required too high initial investments (E) or too high rent compared to the GAS minimal resources (J). For producers, attending to all the bureaucratic and regulatory work (concerning certifications, permits, updated agricultural standards, etc.) was a persistent issue, which participation in the GAS network does not directly influence (K, P). However, the network in the south of Milan and one GAS supported several producers while converting to organic production (E, G), and there were proposals to develop a peer-to-peer organic certification that would reduce the need for obtaining the official one (K). The direct relations with customers sometimes avoided the need for a organic certification altogether, as they could verify by themselves (D, K, N).

The different GAS in Milan share their knowledge and experiences in informal **networks of peer-to-peer exchange** (TER2), for example when members move between groups (A, E, G), testify for producers whom they previously bought from (A, E, L, Q), educate other members about production practices (M) or observe the work of other groups in Milan

(E, G). Word-of-mouth was a key communication channel for all of the above, among the groups and beyond, in farmers markets, public events, and more (A, J, L, N, P, Q).

"Generally, in the whole supply chain it is hard to find someone that will "get smart", because then if the GAS finds out, you can forget about all of them since they are connected with one another. Just like so many groups called us through word-of-mouth […], in the same way […] they would send us away" (N, producer)

There was wide consensus about what "standard GAS practices" are, constituting an immaterial toolkit as a result of the knowledge exchange that has been ongoing for two decades (E). In two cases, smaller GAS reported collaborating with others to place bigger orders (A, F). Collaborating with GAS also spurred collaboration among producers in some cases. Either loosely, with some producers taking turns in doing deliveries for others (D), or buying from other local firms to then resale to GAS (O, P); or in more structured ways, as in the case of a producer who created a small logistics service that collects orders from local producers and charges a percentage to redistribute them among GAS groups (N). These methods, and the knowledge sharing that comes with it, were highly valued by producers, who expressed the need to improve and expand them despite the difficulty of doing so (D, M, N). Difficulties in creating producers' networks related to a spirit of competition or even cases of corruption (M).

Decision-making (TER3) in the GAS was largely horizontal and transparent. Each group autonomously decides what to buy, when, and how, based on their capacities and shared interests. Decisions, regarding producers, events, and logistics, are taken during the group meetings, which are open to every member and represent open spaces for dialogue (A, E, F, J, O, Q). While it is generally only one person placing the order, some groups reported that the spreadsheets and final balance are shared with the whole group for transparency (A).

Accordingly, **leadership** (TER11) of the groups is only formalised in the official associations, where the Board takes on an administrative role and was assigned formally through elections, but practically to the members who wished to take on the role seen the lack of competition (J, Q). For instance, a GAS member who joked about having had a "great internal career", was also the created of a time bank for the GAS group, who ran for several years and represents the only instance of use of **alternative currencies** (TER7) identified in the network (Q).

In theory, Milan GAS would fall within the network strategy of the Italian Solidarity Economy, based on **confederal networks of organisation** (TER4). However, two attempts to

create a city-wide network failed because of internal controversies and lack of active collaboration (F, J, M):

"The second [network] is dormant, so it would be nice to do some initiatives together, but unfortunately GAS are a bit anarchic and everyone does its own thing. I lost every hope by now. But on the operational side we collaborate with other GAS to make orders together, this we do. But initiatives together… that's very hard." (F, GAS member)

Some Milanese GAS are part of the Rural Solidarity Economy District (*Distretto di Economia Solidale Rurale*, DESR) in the south of Milan, beyond the city's borders, which connects them with local producers and other associations (C, G). Others are in contact with nearby DES (J). A different type of confederal network is that of Aequos, a cooperative of GAS that aims to promote consumption through GAS. Aequos is non-profit and charges a small percentage on the orders to sustain its logistics and pay a few employees, leveraging the orders of many GAS to make the process more efficient and larger in scale (J, M). This type of confederation allows some producers to sell their entire production through GAS and to grow within the network (J, M).

Beyond purchasing food in a perspective of solidarity with the producers, GAS engaged in a variety of **Social and Solidarity economy** initiatives (TER8). In case of natural disasters, such as the earthquakes that struck Emilia Romagna in 2012 and Central Italy in 2016-2017, several GAS placed orders with affected producers to avoid further losses of products and finance their recovery (A, Q). Economic difficulties were also an important theme, as two producers were supported by GAS in this regard. One producer, being unable to pay growing debt, could benefit from coordinated donations from GAS groups that allowed the company to continue working (G, M). The other, also facing growing debt, was supported in a transition to reduce the number of raised animals and switch to organic production by GAS purchases and small "investments" in the form of advance payments on products (G, P).

"With this large company we made a pre-financing operation, so we pre-purchased a whole lot of their products a year and a half in advance. They committed to going from almost 3000 pigs to 250, all fed with natural organic food from their fields. They completely freed themselves from that vicious circle they had ended up in, slowly managed to pay off all their debts and realized that a lot of money was coming into their pockets. Because we pay the product at the right price, […] the farmer has his income, can invest in his activities and above all a relationship of trust is created between the producer and the buyer." (G, DESR member)

Moreover, they paid attention to workers' rights and to exclude companies that make use of illegal hiring (E, G, L). They also considered the social and solidarity values of producers,

buying from cooperatives that employ inmates, disabled workers, former drug users, and other people that are at a disadvantage in the job market (A, E, F, O). Local initiatives such as bookcrossing, objects exchanges, and timebanks where also created by a few groups (E, Q). Some groups also benefitted from being part of this economy, for example by paying lower rent in virtue of their work (E) or being able to use the spaces of other non-profits (F, J, P, Q).

Such initiatives also represent instances of **social mobilisation** (TER13), obtained through the Solidarity Economy network. A different kind of mobilisation was not tied to emergencies but focused on capacity-building. The DESR acted as a catalyst for action in the area south of Milan, facilitating the conversion to organic agriculture and supporting farmers by providing seeds, putting them in contact with agronomists, processing facilities and likeminded cooperatives (G). They also coordinated a system to collect excess production from local gardens and redistribute it to low-income families (G).

Due to the limited time and financial resources, GAS only occasionally engaged in **cultural production** (TER9), which was generally not supported by dedicated institutions and networks. The public events mentioned above (see 6.1) were informally organised by interested people within the groups, and mostly amplified other people's work (E, G, J). Only one GAS had a specific "culture roundtable" (J).

The structure of GAS does not lead to the creation of much financial **surplus** (TER12) to begin with. In one case, the spare resources were donated to charities in line with GAS values (Q). In another however, volunteering and reducing expenses and membership fees to a minimum was seen as the key to keep the products accessible and at production cost (E).

6.3 Social imaginary

Interviewees showed awareness of their **alterity** (SIM2), as compared to mainstream food producers and distributors. Producers distinguished their practices based on respect for animals (D), farm size and territorial connection, which requires important changes and some risk-taking (P); while GAS members pointed to the traditional GAS model, which is partly inspired by the fairtrade movement and an economy based on personal relations (E, G), and where you are asked to pay in advance, volunteer, and pay higher prices for supporting producers (E). In general, the alterity of the GAS network was treasured and well-integrated with the interviewees' lifestyles and beliefs:

"As far as I am concerned, the fact of being inside the GAS system for twenty years now is a way of life, a life philosophy if you wish. And clearly it is a priority." (E, GAS member)

The sense of alterity therefore also tied in different **imaginaries of the good life** (SIM3). Network members appreciated the food purchased through GAS in terms of its taste, health impacts and social impacts (A, E, G), being able to take part in GAS (J, E). Several producers placed emphasis on the fulfilment felt by doing stimulating work which is socially relevant (D, M, N, P).

"The idea is that who eats well lives well, and who eats badly lives badly, there's nothing to do about it because food is our first medicine […] it means living better, living in a healthier context" (G, DESR member)

Equality (SIM4) and **social inclusiveness** (SIM5) were not common explicit themes in the interviews, although several mentioned the importance on including as many people as possible in their activities (A, E, F, G, J). In one group, the interviewee was asked to take on a leadership role since the GAS presidents had always been older men (J), while the other groups did not mention any gender equality issues. However, the desire to include a wide range of people clashed with the difficulty of reaching youth and low-income families, particularly with a migration background, who are barely present in GAS due to the comparably higher costs for buyers (F, G, J, L):

"In the social housing we were saying: let's buy tons of pasta, rice, but it is literally not feasible. There are costs. I realise that we are privileged compared to the people who live there, and whom I know because we are here in the same neighbourhood. […] I realise that, but as a GAS we don't manage to lower the prices enough to satisfy the needs of these people." (F, GAS member)

"GAS generally attracts at least middle-class people, it's very hard to approach lower socioeconomic profiles, and I don't blame them. In the sense that those who can't, do groceries at Lidl and it's totally fine by me. It's not their responsibility to get involved in this kind of stuff." (J, GAS member)

On the same line, both GAS members and producer make **openness and solidarity** (SIM7) an integral part of their work. GAS members were open to the idea that even non-members benefit from their work through friends and family (A), to members buying very little (J), to helping other groups and likeminded initiatives whenever possible (A, J), to shifting their food preferences depending on availabilities (E), and they showed solidarity with producers by highlighting their difficulties, listening to their requests and not putting them in competition with each other by offering products from similar firms (A, E, F, G, J, N, Q). In one case only, a producer reported quitting the network upon logistical difficulties and tensions with local

GAS groups, who underestimated the value of their product (K). GAS members were also concerned with the pursuit of a common good beyond the group itself (E, G). Producers and the logistics collective were instead open to sharing their knowledge and workload with fellow producers (D, M), and to protecting the rights of the people working with them (L, N).

These attitudes stem from a widespread **trust and reciprocity** (SIM6) across the network, based on well-established and transparent relationships between groups and producers (A, D, E, M, N, O, P) initially built through personal visits to verify the alignment of the production methods with the group's values (D, E, M, P). On the other hand, those producers who do not meet the groups' expectations in terms of quality or reliability may end being excluded from these connections (K). Beyond the mere production, GAS were originally also looking to get to know the producers personally, to build trust in their ethics (M). While GAS aim to support the work of producers, some producers also wished to support and reinvent the existence of GAS through their work in the current downturn (M, N, O). The mutual trust allowed producers to successfully communicate why GAS members should buy a certain product rather than a more popular one, the reason behind unfamiliar product characteristics, debunk fake news, or justify a rise in prices (N, P).

"A fresh product like meat starts being spoiled after a week, it must be sold. I am thinking about solving the leftovers issue, the fact that people want only steaks, fillets […] and with the rest of the animal, what do we do? […] Instead, GAS, if you explain them well what we are doing and why, we can decide what they should eat, they agree to whatever is well argued and understood." (N, producer)

"We never had with the groups, in 23 years, a single person who did not pay us. So the reliability that is behind these people, besides the experience and skill in choosing the producers, leads to this kind of ethics for which you gave me something and I will pay you. That's worth something." (M, producer)

The network's **attitudes towards the environment and non-human beings** (SIM8) were varied. Overall, they understood ecology to be indivisible from food systems, repeatedly connecting ecosystem health with animal and human wellbeing (G, J, L, M, N). The consumption of meat and other animal products is widespread, albeit less than before due to health and ethical concerns (A, N). Interviewees were concerned with the wellbeing of farmed animals (A, D, N, P), natural production methods (A, D, P), the preservation of natural areas (G), and climate change (F, J, L, N). Producers showed a more hands-on connection with the environment and non-human beings than GAS members, highlighting the importance of natural

cycles (D), as well as individual practices like organic agriculture (K, N), no-GMO (N), open air grazing for reducing the use of antibiotics (P), and natural breeding (D).

"Even before collaborating with GAS, we already had some rather clear ideas of what we wanted to do, something a bit more natural, respecting natural cycles, both of animals and of the land. So to be honest it came naturally, to choose a buyer who would be sensible to these issues." (D, producer)

Interviewees also took **pride** (SIM10) in their work and skills. GAS members claimed their efforts into building and running the local network (A, E, Q), while producers took pride in their artisanship and unique products (D, M) as well as innovative ideas for production and delivery of products (N).

Slowness and moderation (SIM11) were common attitudes among the interviewees, often in the form of the pragmatism necessary to run such a grassroot network. For instance, despite their recognition of the many advantages of buying through a GAS, several members showed understanding for those who choose not to be part of a GAS, and for buying certain products through supermarkets, which most of GAS members do to a certain extent (A, G). The difficulty, or impossibility, to have all products available through the GAS emerged partly as an obstacle and partly as a choice:

"There is a will to not have everything, not to be a supermarket. For example, chips, you will never find those here. In the sense that we aim to have here, first the basics clearly, and then all those things that are requested if we have the possibility. If there is a person or two that ask you for a particular product, but we don't have the conditions to have it […] in the end you dismiss that product. If someone wants it, they need to go somewhere else" (E, GAS member)

Moreover, GAS members are expected to have patience in case a product is not immediately available as bigger deliveries are organised every couple of months (E, N), or different in quality or quantity from what was expected (J). Patience was key in the DESR strategy too, which recognises that territorial changes require time and boring maintenance of newly introduced practices (G). Educating people around food was perceived as a similarly slow process, where planted seeds might sprout only in the future (F, G). The production and distribution of food purchased by GAS was also characterised by slower rhythms than industrial firms (D, M), a moderation in the amounts produced as a necessary consequence of more natural and artisanal methods (D, M, N), and a moderation in the expected returns as well, whose reliability was valued more than making high profit margins (L, N). On the negative side, the network itself was at times perceived as not very reactive to change, requiring long periods of

work and advocacy for introducing new practices (J, M, N). Overall, the informality and scarce availability resources that characterise the network encouraged slowness and moderation across all the abovementioned aspects.

By being engaged in the network and its related events, interviewees showed interest in **politics and participation** (SIM12), especially in informal politics relating to social and environmental justice, and food sovereignty. Members started from the personal dimension, what they buy or produce, to then reflect on their influence on wider economic and political issues (E, J, M, N). According to the research design, all interviewees have long been involved in the GAS network, which testifies to their engagement and long-term active participation, which many wished to share with more people (A, E, F, G). Participation was in fact seen as key to sustaining the network and advancing its values and objectives, since GAS should not be a mere service but a participated experience:

"What you buy, what you decide, the choices of purchases you make, that then also expanded to the energy provider and ever further, is the first way for me to, in theory, influence the general state of things. That fundamentally is the economic level, determining 90% of everything, I'm afraid. Everything else trickles down." (E, GAS member)

However, in every group there seemed to be a core of active members who take on most work, while others participate significantly less (A, E, J, O). The members of several groups were also described as highly active in other social initiatives (J). Older members are most active in GAS, which was in some cases attributed to their previous participation in leftist political movements (E, J, Q):

"They're used to participation; they spent most of their lives in this stuff and the GAS becomes another experience of this kind. The fact that there is food consumption, well, is only interesting to a certain extent. I believe there's a core of this kind, for whom it's more about fighting the system, really about the relations, the community, and I appreciate them a lot because they are the ones putting in the most effort." (J, GAS member)

Understanding the value of political participation also emerged as a sort of pre-requisite for joining GAS, since they remain almost invisible if one is not already part of these dynamics (J). For the logistics provider, their very business was seen as a political activity to create a more just economy (L). Despite these connections and the establishment of GAS in the city being originally supported by Milan's leftist social centres, who preceded them in supporting organic and small farmers (N), their political orientation is nowadays considered liberal but not explicitly positioned (L, M). Connections to institutional or formal politics were in fact mentioned far less frequently, pertaining mostly to the DESR, that engages directly with small

municipalities around Milan to advise them on development plans, food provisioning and the construction of a local food community (G).

Conviviality (SIM13) emerged as an important tool for building trust, friendship, community and even for accessing resources in an unconventional way. For instance, some spaces were found through personal connections, which also facilitated institutional dialogue (E, F, G). Personal relations also helped a producer to find contacts for entering the GAS market in Milan (J) and gave the original idea to the logistics provider (L). Visits to producers are mostly convivial occasions, where GAS members can meet the farmers and visit the production site while tasting the products and spending time socialising in nature (A, D, M, P). One producer, organising an event to support the transition to organic agriculture of another producer, described the opening event as facilitated by conviviality:

"We had a party two weeks ago, we invited the groups and 120 people came. There were 20 groups, mainly from Milan, that came to eat. Everyone had fun, they saw the project, they all signed up. It will go on; we will organise another one next month." (M, producer)

Similarly, educational events hosted by GAS are often mixed with tastings or social dinners (E, L). However, due to decreased participation and aging members, convivial moments were often cited as increasingly harder to organise and less crowded that before (E, J, N).

6.4 Emerging categories

Both the political participation and the need to construct alternatives expressed by interviewees were rooted in a spirit of **critique of the economy** as it currently operates. Network members were critical of both local mechanisms, such as the systematic underpayment of producers by large distributors in the pursuit of profit distributors (A, E, J, L, M, N, O, P, Q), and of larger scale mechanisms like the top-down "development" of the agricultural that leads the financialization of land (G), or the industrial overproduction of food that is then discharged on charities and food banks to avoid the payment of waste taxes (L). One interviewee pointed to the connections between the limits to participation in the Solidarity Economy and the wider economy:

"If we are distributing a food that costs that much because the whole supply chain has been fairly paid and the pensioner, the worker, can only dream of buying our tomato sauce at 3.50€ […], that's also our issue. […] The problem is, why do we earn 500€ a month for 8 hours of work per day?" (L, logistics provider)

While no one mentioned issues of **co-optation** of the network itself, as a successful promoter of organic food and of a functioning alternative model of distribution the network's ideas have been co-opted to a certain extent. The access to organic products, which was one of the early objectives of the network (see *Section 2.3.1*), is now commonplace in supermarkets across Italy, also due to the influence of GAS on public opinion (C, L):

> *"The rhetoric on sustainability and food health has been internalised by the mainstream system. If before you wouldn't have the organic stand, or it was the niche stand in the supermarket, nowadays organic products are on every shelf […]. So large distributors and public policy have "taken up" that theme" (C, policymaker)*

Network members did not particularly criticise this change, although considered supermarkets' organic products of inferior qualities for different reasons, from taste to actual sustainability impact (E, J, L). Differently, some local distributors adopted the GAS model, turning it into a commercial enterprise which gained popularity during the Covid-19 pandemic, but was seen very critically by interviewees, who defended the non-profit nature of GAS (E, G, L, N, O).

Upscaling the GAS model was a common emerging theme. The paths envisioned were varied but not mutually exclusive. Some wished to see more GAS, even if small, around the city (J, O), while other proposals focus on updating the model in line with its original values. For instance, food coops were envisioned as a desirable evolution for the network (J, F, K), as well as producers' networks (D, M, N), paid positions within the GAS (J, N), and more GAS cooperatives on the model of Aequos (M). Upscaling was however considered unrealistic by some, who highlighted that GAS have remained a niche market to this day, which is even declining (C, M, N).

The collaboration and mutual support of the groups appeared to be at least partially hindered by internal differences and disagreements. GAS members expressed **critiques of other network members**, with other groups and group members being perceived as at times too radical (A, J, Q), insensitive to their specific needs (F), or blind to the potential of coming together as cooperatives of GAS, which however implies small surcharges to sustain the logistics and is frowned upon by some (J).

Network members shared an underlying **willingness to learn from tradition**, in the sense of adopting the logic and teachings of the people coming before them, to update them and fit them to the current context. Most producers were the second or third generation of farmers

in their family, taking on the farming and business knowledge while carrying on the work in line with their predecessors (M, N), and reinventing it when the previous model was no longer economically or environmentally sustainable (D, O, N). GAS members who were not part of their groups' foundation also expressed gratitude to the original group and meant to carry on their work (J, F).

"The farmer not only has to carry tradition, but nowadays also needs to be innovative, has to be cultured, has to be a scientist, because otherwise you die immediately" (N, producer)

Accordingly, GAS and producers also worked to somehow preserve their legacy and aimed to **educate** as many people as possible about food practices, through practice and dedicated educational events (A, E, F, G, J, K, N, O, P, Q). Some interviewees advocated for need of food education on a larger scale (D, G), which the municipality was also interested in (B). However, not all GAS participants were perceived as open to learning about them, with some perceiving GAS as a service:

"There is someone who has been part of this GAS for years, comes twice a year and asks you: "Excuse me, do you have…?", and you tell them: "Look, we are not a shop." They nod, and all right, we are seeding [change]." (F, GAS member)

Part of updating this heritage, particularly for producers, was by increasing **diversification**. To reduce risks, increase and even improve life satisfaction, farmers reported that they engage in diversified activities and sales that go beyond simple food production. To begin with, many producers host a variety of species and crops on their farms (D, O):

"We developed a dairy farm with 100-120 cows, then we have a semi-wild pig farm, about 40 each year, then we have farmyard animals, ducks, pheasants, guinea fowl, etc. And we have a cheese factory where we process our milk, and another important production is wheat, we have a few hectares of wheat and the project to make bread…" (O, producer)

They were engaged in educational visits and school programmes (K, D, O), hospitality and catering (D, O, P), event organisation (K, O, P), farm experiences for customers such as fruit picking (K), food processing (D, K, O), and work programmes to include workers with disabilities (O). Moreover, some diversified their sale channels, involving GAS, but also direct sales to privates through own retail points (O, P), other retailers (K, M, P), farmers markets (D, O), and in one case, public procurement and occasionally larger scale distributors (M). In two cases, producers mainly sold to GAS groups and focused on diversifying and increasing the number of groups instead (N, P). The logistics provider also carried out diverse activities

beyond distributing to GAS, from creating a labour union, to producing liquor and organising events in their headquarters (L).

Diversification was not the only **change happening over time**, since GAS groups have also evolved over time. As the groups grew over time, there seemed to be a trend of popularisation and deradicalisation of their practices (A, C, N, Q). Their purchasing power was also mostly described as declining (M, N, O), with some significant exceptions, as one group's purchasing power doubling over the past twenty years (E), and the Covid-19 pandemic increasing sales by 30% for a producer and across the network (J, N). Producers changed their way of working too, as compared to the early years of the network, for example by setting a minimum for orders and aiming for larger scale economies (A, N, O).

The aging of members also impacts the groups' purchasing power, as families turn into older couples with lower food requirements (A, M, N). The average age of GAS members has been increasing due to the scarcity of younger people joining the groups and was described between 50 and 70 years old depending on the group (A, F, J, M). Youth coming to the groups were drawn in by their parents (A), curiosity (A, F), and in one case by the gentrification of the GAS' neighbourhood, which attracted younger middle-class people to the area (F). One interviewee also pointed to the privileged position of Milan GAS in this respect, as the city hosts a young population by Italian standards (J). The lack of participation of younger members was potentially attributed to their rejection of commitment, individualism, different interests, their increased capacity to obtain quality food from less time-intensive channels, the communication style of GAS (mostly based on emails and rather far from social media), and the social distance between them and a group of older people which makes GAS less attractive as a community (A, G, J, M, N). This was mostly seen as a challenge and a source of sadness or frustration (A, J, E, N, Q), with only one person accepting the change as inevitable (G).

One of the abovementioned factors that also resonated with current network members was the high **workload** that the system implies. For producers, selling to GAS means delivering products in medium to small packages, which increases the processing, management, and delivery times, along with the chances of committing mistakes (A, D, L, M). To reduce the problem, some producers organised specific delivery days according to the GAS locations and to their own schedules (M, N, O, P). At the same time, individual packages save time and space to GAS as compared to a single package for the whole group, which afterwards needs to be sorted and distributed by their volunteers (J, F). In general, being part of a GAS requires a

higher level of commitment and dedicated time than traditional groceries, due to the volunteering, recurrent trips to pick up incoming deliveries, and the community building which are essential to its functioning (E, F, K, J, N, Q). One GAS, which has run a small food emporium just open to members for two years, reported an even higher workload since opening the space, which requires volunteering shifts to cover opening hours and the increased management of products. However, it reduced members' time spent on groceries, which was considered a successful strategy (E). The work dedicated to running the basic functions of GAS was also considered excessive to fully concentrate on other projects, like public events and outreach (F, Q). Work sharing was seen as the key to a better management of the workload, but the lack of participation made this difficult at times (E, J). Bigger groups coped with the issue better than smaller groups, as the even higher workload could be more widely distributed (J). In contrast, Aequos relies on a few paid employees to manage key operations and some of the distribution, in collaboration with GAS volunteers (J). Moreover, buying unprocessed foods increases cooking time at home (E).

7. Discussion

This chapter discusses the findings and contextualises them within the existing literature to answer the research questions outlined in **Chapter 3**. The discussion is hence organised according to the research questions, followed by suggestions for the consolidation and upscaling of the GAS network, and a discussion of the limitations of the thesis.

7.1 How does Milan's GAS network differ materially from the territorial growth-oriented food system?

The GAS network in Milan differs materially from mainstream food systems in several ways. Firstly, it supports a lower household and social metabolism through sustainable production methods, attention to food waste and packaging, and the short distances between producers and consumers. While the examined literature did not quantitatively assess the metabolism of GAS in particular, there is a wide consensus on the positive environmental impacts of the abovementioned practices (Vulcano 2024; Sanders et al. 2025) and of SFSCs (Jia et al. 2024). Moreover, GAS increasing members' attention for waste reduction is confirmed by Ciervo's analysis, which finds that the groups' food waste amounts to only 1-5% against the conventional 50-60% (2024). Sustainable production in the groups' case refers to ecosystem and land practices that are organic, small scale, non-intensive, biodiverse, and respectful of more-than-human wellbeing.

These practices resonate with Infante Amate and González de Molina (2013), who argue that substantially reducing resource use in the food system (while maintaining food quality and farmer livelihoods) requires a transition to organic farming, seasonal local products, and corresponding consumption patterns. By supporting the abovementioned practices, Milan's GAS contributes to this shift within the Italian food system. On the other hand, energy provision and transportation, which is handled via road rather than air or complex logistics systems, are not affected by participation in the network beyond initiatives of individual members or producers.

Participation in the network appears to have supported the emancipation of producers from suffocating debt relations. These often result from high-input agriculture and from the loans necessary to sustain it (Guerrero Lara et al. 2023). Regenerative practices, supported by

GAS purchases, instead reduce the need to create debt in the first place, loosening the pressure towards productivist methods and the pursuit of profit as a survival mechanism.

The network's communal infrastructure is diverse and independently managed by each group as they see fit. Groups' spaces are accessed mainly through other associations, as already observed by Brunori, Rossi, and Guidi (2012), but some groups rent spaces from the municipality or privates. These are complemented by the use of public space and members' households when necessary, as most locations lack equipment or freedom of access. In doing so, GAS make use of underutilised spaces within their neighbourhoods and re-contextualise the distribution of food in the urban fabric without impacting the local landscape. However, while the groups might wish to build solid communal infrastructure, they are constrained by difficulties related to these inadequacies, or to the sheer amount of financial resources necessary to rent or expand the used spaces. The tension between the groups' goals and the self-limitation imposed by scarce resource underlines many of the key topics discussed in this section.

In contrast, producers rely on their own resources for carrying out the packaging and delivery required by GAS. Nevertheless, as it creates a high workload, they also experiment with various cooperation schemes, whose upscaling appears to be a recent and uneven development across the network. Such dynamic aligns with Baldi et al. suggestion that farmers around Milan should cooperate to provide larger volumes and a wider variety of products (2019), and with the trend towards professionalisation of GAS and producers alike identified by Guidi and Andretta as a consequence of the 2008 crisis (2015). Increased efficiency is also associated with the Solidarity Economy, as it strives for fair solutions that function well in the local context (Coscarello 2012).

Technology constitutes a different type of communal infrastructure, with dedicated platforms being successfully used in addition to regular communication channels to facilitate food orders. Previous research has highlighted GAS reliance on classical communication channels like e-mails (Brunori, Rossi, and Guidi 2012). However, the creation of dedicated management systems by network members or friends indicates creative problem-solving targeted to GAS' needs. Such software arguably approximate the convivial technological tools envisioned by scholars to support the implementation of Degrowth (Vetter 2018). The increasing use of technology was also highlighted by Guidi and Andretta (2015), and seems further motivated by the ever-present need to reduce or avoid the high workload required by more traditional tools.

Social interactions are deemed essential for GAS activities but are not without challenges, as participation in community life has been declining. Public sphere interactions are not the focus of GAS activities, and although members find them interesting and desirable, essential activities often do not leave enough resources to fully commit to them. The key goal of GAS is in fact to promote fair, local and convivial markets over multinational trade. This is done by paying producers a fair price, covering logistical costs through a very low membership or crowdfunding, and by not collecting surcharges on the products, which therefore remain as accessible as possible. Local producers are generally preferred over others but, in line with the findings of Baldi et al. (2019), other considerations related to food quality, safety, or logistics sometimes prevail.

7.2 How do (in)formal arrangements support and regulate GAS network's activities in and around Milan?

The GAS network is supported and regulated by both formal and informal rules. While a national legal recognition exists (law 244/2007), it is largely under-applied by smaller GAS, which are considered simple collaborations among privates. Both formal and informal groups felt that food regulations did not apply in their case. Formal associations have to sustain some bureaucratic work but also have access to public funding and other opportunities, unlike informal groups. This affects informal groups mostly positively, as they avoid investing scarce time and capacity in additional management tasks, but it still hinders their visibility, access to resources and to policy platforms as also highlighted by Brunori, Rossi and Guidi (2012). Although GAS are largely excluded from the city's Food Policy, some groups interact with municipal neighbourhood networks or public programs focused on environmental protection, sustainable food production, or related subjects. Producers are more affected by formal regulations, which increase their workload, as experienced by smallholders across the agricultural sector (Whitaker 2024). Direct relations and the ensuing trust between GAS members and producers partly reduces the need for certifications and bureaucratic work, by allowing buyers to verify production methods first-hand.

Informal rules are instead used to organise the groups' work with recurrent meetings, a volunteer-based work division, horizontal and transparent decision-making, meritocratic leadership, and the systematic evaluation of producers. These practices demonstrate an embedded civic participation and support for Social and Solidarity Economy values. The know-how and personal relations are shared among the network via informal networks of peer-to-peer

exchange, supported by mobility among groups and word-of-mouth. As a result, GAS can rely on informal but well-established procedures which constitute a shared toolkit, albeit with local variations. These "traditional" repertoires of action are considered foundational for GAS' work (Brunori, Rossi, and Guidi 2012; Forno, Grasseni, and Signori 2013b; Guidi and Andretta 2015). Still, their informal nature and their base in broad socio-environmental values rather than specific criteria, leaves space for compromises and exceptions. Flexibility around for example, (non-)organic production, allows the groups to pragmatically reconcile their values, such as solidarity and attention to the environment, with the need to keep prices accessible and to simplify logistics. The flexibility of the network's rules was also noted by earlier studies (Brunori, Rossi, and Guidi 2012; Coscarello 2012), which considered it a peculiar strength. Shared but flexible organisational models hence emerge as key to adapting to different territories, and the circulation of information and values as essential in cultivating trust and solidarity within the network (Coscarello 2012).

Solidarity initiatives are organised in the wake of natural disasters and economic difficulties, while producers that operate in the Solidarity economy, for instance by employing disadvantaged workers, are preferred. Social mobilisation is therefore mainly used to catalyse economic support for worthy causes, which are also sometimes supported through the donation of surpluses. Besides these infrequent acts of charity, Milan GAS seem to align with other groups in redistributing their surplus value by default, by avoiding intermediaries and relying on voluntary work (Brunori, Rossi, and Guidi 2012).

The groups' informal rules hence also shape their access to the market, as the evaluation of producer and the shared decision-making directs the groups' resources to producers who need support or deserve recognition for their ethical production. As noted by Orazi, in GAS "there is not a negation of the market as an institution, rather the shift from its bureaucratic configuration to one that does not make automatic the extension of commodification and capitalist relations to (monetary) exchange mechanisms" (2013, 67). Consequently, most network members do not explicitly aim to create an alternative to the capitalist economy, but rather to introduce an aspect of care or affect in their monetary transactions (Grasseni 2014).

The confederal networks of the Solidarity Economy of which Milan's GAS are technically part are not so present in their daily activities. The regional and national networks are in fact more focused on the production of cultural meaning in the form of online articles, internal documents, and events or on facilitating specific initiatives. Given the groups' strong

focus on the everyday work, most GAS do not otherwise invest in specific institutions nor networks for cultural production. Their social and public events are instead organised informally by interested members. For instance, Milan's smaller groups informally interact with others to place combined orders, which is a standard GAS practice (Brunori, Rossi, and Guidi 2012), while others are part of various types of collaborations, like the cooperative of GAS Aequos. The stalemate of the network strategy for the Italian Solidarity Economy in Milan emerges as a novelty in contrast with the optimist prospects of less recent research (Brunori, Rossi, and Guidi 2012; Forno, Grasseni, and Signori 2013b).

In sum, the overall regulatory system of GAS is shaped by horizontal governance, informal cooperation, and shared ethical commitments rather than hierarchical control or profit incentives. Formal regulations have little influence on the regular operations on GAS, although they could be leveraged to gain access to important resources such as spaces and fundings. This comes at the condition of increased structuring, which smaller GAS are not necessarily willing or capable to sustain. The tension between structuring and informality appears therefore unresolved, as it requires a relatively high resource investment to begin with, but could prove beneficial in the long run. Supporting smaller groups in the process may improve their chances to access better spaces, opportunities and visibility. Moreover, GAS do not seek to dismantle capitalist economic institutions, such as markets, but to rather transform their guiding principles. In this sense, GAS can be considered a non-capitalist rather than actively anti-capitalist initiative. Informally, Milan's GAS groups are enabled by light rules which produce common working methods, enabling the groups to recognise each other and to collaborate occasionally. GAS' rules remain flexible and loose enough to be autonomously adapted by each group. This arguably allows the long-term sustainability of such practices. Their presence at the city, regional and national levels is weaker, mediated by higher level networks with whom they do not regularly interact.

7.3 How does Milan's GAS network employ narratives and imaginaries to sustain its work?

The social imaginary that sustains GAS in Milan is deeply rooted in notions of solidarity. GAS members view their engagement as a political and ethical act aimed at supporting small producers, while supporting human and more-than-human wellbeing. This stems from a holistic understanding of food supply chains and of the GAS' role in it, which scholars argue is acquired through participation in the network (Forno, Grasseni, and Signori

2013b; Maiolini et al. 2023). Narratives of alterity are furthermore central to the construction of the groups' social imaginary. Network members reflected on their participation as a conscious step away from mass-market food systems and profit-oriented distributors, informed by values like openness, trust and reciprocity, equality and inclusion, and non-violence.

Buyers and producers' core values are in fact aligned, which proves the success of GAS' search for likeminded farmers, and reflects the fringe but ongoing revival of smallholdings and regenerative agricultural practices in Italy (Ciervo 2024). In agreement with Corrado (2013), network producers were just as critical as GAS members of the myth of "modernity", and instead research a new role for agriculture, built on traditional techniques adapted to the environmental and social challenges of the present. Several producers are in fact highly innovative and proactive network members, who reinvented family businesses to survive in a changing market and social landscape. Both their willingness to learn from tradition and their essential contribution to the network's activities were previously emphasised by Brunori, Rossi, and Guidi (2012). Network producers therefore fit in a "post-productive" farmer identity, which involves an increased attention to environmental factors and the diversification of land management (Burton and Wilson 2006).

The alignment and convivial relationships between GAS members and producers allows them to co-produce meanings around food that revalue healthy and sustainable practices. Previous research suggests that the pursuit of healthy food is prevalent in Lombardy's GAS, perhaps as a response to the high-input agriculture that prevails in the region (Forno, Grasseni, and Signori 2013b; Baldi et al. 2019). While the findings do not allow for a comparison with other areas, they confirmed that health concerns are increasingly a driver of participation in Milan's network. However, the clear distinction made by Baldi et al. and other studies between hedonistic and altruistic motives for participation in GAS inadequately reflects members' motivations (2019). In fact, GAS participants understood human and more-than-human wellbeing as related and interdependent: healthy "good" food was perceived as such when its production benefitted farmers and the environment too. More fittingly, Dal Gobbo writes of GAS members' perceiving a double environmental/health problem, for which territorial and personal health are harmed by an economic system that prioritises profit (Dal Gobbo 2024).

The groups embody collective memories of resistance, as they draw inspiration from past movements such as fair trade and pacifism. These movements survive in the groups' values and perceptions, rather than spurring explicit political advocacy. Political participation is in fact

mostly limited to informal politics, particularly to the political labour required by critical consumerism and likeminded social initiatives. As Dal Gobbo also finds, while AFNs' narratives resonate with the anti-capitalist imaginaries articulated by struggles for human and environmental health globally, they do not necessarily correspond to radically alternative practices (2024). In fact, imaginaries do not automatically spur influential action beyond daily practices (Argüelles, Anguelovski, and Dinnie 2017). In a survey by Forno, Grasseni, and Signori over 70% of respondents among GAS members reported that participation in the network did not make them feel more capable of influencing politics (2013b, 140). Moreover, participation in the groups themselves suffers due to the products' generally higher costs and to a lack of generational replacement. Slowness and moderation are instrumental attitudes in dealing with this and other difficulties, as GAS members sustained with patience everyday tasks and adopted a long-term perspective on the issue of participation.

The findings therefore point to the importance of qualitative research in understandings initiatives' social imaginaries, allowing for a better characterisation of their motives, goals and cultural references. A shared value system is an essential compass in setting the groups' priorities, and in articulating and justifying the choices of network members in key arenas such as price versus quality, or convenience versus health, which cannot be solved merely by additional information (Brunori, Rossi, and Guidi 2012). The incorporation of such values in their identity and lifestyles can hence sustain long-term moderated transformations through the repetition of coherent everyday choices. In line with social theories of practice, GAS network's imaginaries both sustain and are reinforced by practice (Boonstra and Joosse 2013, 178). If internalised, they can result in political literacy building and an embodied politicisation of members' lifestyles (Grasseni 2014).

Moreover, the finding align with Guidi and Andretta (2015), who argue that the hybrid pursuit of individual and social benefits through food activism allowed middle-class citizens to find meaning, and influence their local markets, if not the capitalist economy as a whole. They also show that while subscribing to the abovementioned narratives and social imaginaries, GAS members widely belong to a share of consumers that stands in a grey area between the capitalist economy and its alternatives. As Boonstra and Joosse put it, "people often have one foot in a capitalist economy, and the other foot in an urban garden or buying club", even if unconsciously or reluctantly (2013, 184). The values of network members hence co-exist with contrasting

ideas and material limitations which push them to understand their work as hybrid, imperfect, and gradual.

7.4 Consolidation and upscaling

Besides identifying and systematising the study of REDs, the framework aims to look ahead by charting potential future trajectories, "identify policy interventions and enable future conditions that can enhance and expand the RED territorial constellations - scaling them up, out, and deep" (Varvarousis et al. forthcoming). This section hence aims to elaborate on the emerging needs and possibilities for consolidating and upscaling the GAS network in Milan. Through targeted recommendations, it also hopes to support stakeholders in advancing the network's goals.

Upscaling is generally understood as a process of increasing: participants, products, reach, or resources. However, the literature on scaling up sustainable innovations rather points to the emergence of new practices and structures – upscaling here refers to "a qualitative shift towards a structural transformation of a societal (sub) system" (Augenstein et al. 2020). This definition is helpful in framing the qualitative changes that are already ongoing within the network. New models, based on stable communal spaces where products can be stored, and that members-customers can access during opening times are already being experimented by GAS in and around Milan. Others, like food coops, were considered a promising model for the future of the network, bolstered by successful examples like that of Camilla, a "community store" in Bologna that opened in 2019. Still others experimented with the confederal model of Aequos, in which coordination among groups balanced the impacts of their decreasing purchasing power on producers, and successfully expanded the groups' reach and options. Producers also contributed to innovation in the network by creating cooperative models among themselves, by setting up SFSCs with nearby producers, or by sharing the burden of logistics either systematically or informally.

While these developments prove the network's need and capacity to innovate its methods, the resources to do it are often lacking. The lack of generational turnover, the tensions between affordability, inclusion and the will to compensate producers fairly, as well as the under-use of potential support mechanism like the city's, contribute to the slow but visible decline of the network's potential in Milan. This trend could be reversed by first finding new members, particularly among youth, who would increase the groups' purchasing power but

most importantly their capacity to share the workload, organise social and public events, and reflect new perspectives. Although the sample was too small to give a reliable estimate, groups with more than 25 members emerged as more capable in these fields, which is confirmed by Brunori et al. (2012).

Even bigger groups were however struggling with youth participation, suggesting a gap between GAS activities and the interests of younger consumers. To remain relevant and pass their legacy to the next generation of critical consumers, GAS should start addressing this gap. Changing GAS communication channels to more open ones, like websites and social media, could be a first step in sharing the network's goals and activities more widely and reaching likeminded audiences, also among youth. Given the scarce resources of most groups in this field, targeted support from the regional and national networks, as well as from the city or other institutions, could strengthen the groups visibility and build autonomy when new skilled members could take on such tasks. For instance, RIES and CO-Energia already articulated the network's goals and strategies in multiple documents that could be shared by the individual groups. Another example, pertaining to the city, is the invitation of grassroot food initiatives to take part in public events related to Milan's Food Policy, which could be extended to GAS representatives.

If this first step were successful, GAS could benefit from translating their core values and imaginaries into more accessible concepts for younger generations, with their direct participation. For instance, plant-rich diets became increasingly popular among youth and the general population in Italy as worldwide (Stenico et al. 2023), but GAS rarely offered plant-based substitutes due to a lack of interest. More plant-based products in GAS' baskets may appeal to young consumers, while strengthening the groups' ethical and sustainability commitment.

However, expanding the network's reach could also attract new participants that are different from the initially rather homogeneous group in terms of age, socio-economic and cultural background, increasing the risk of conflicts and loss of attachment to the group identity (Maiolini et al. 2023, 1401). Scholars have argued that these tensions can be managed. For example, through the increased codification and promotion of the core group principles or by, as some GAS in Milan already do, implementing a dual decision-making process in which participants make decisions in assemblies but carry out their tasks in smaller groups to favour personal relations. Another strategy is avoiding impersonal tools such as spreadsheets, and

instead manage logistics through contact people, which is a standard tool of Milan's network (Maiolini et al. 2023, 1401). By popularising these strategies, which are in part familiar to the groups, Milan's GAS could become better prepared to welcome new members.

As explored in previous sections, there is still an unresolved tension between the need to pay producers fairly and to not make GAS purchases a luxury experience. The issue is not new, and represents a common thread in the literature on European AFNs (Argüelles, Anguelovski, and Dinnie 2017; Dal Gobbo 2024). Until wider structural changes will allow a majority of the population to afford such prices or support their access to the network through dedicated funding, the GAS model is bound to remain a niche. However, its consolidation and expansion, albeit marginal, are an essential prerequisite for that process and can provide meaningful benefits to participants and society as a whole. The abovementioned strategies, combined with creative solutions for including lower income segments of the population could go some distance in this direction. Examples are already being implemented by the network, like the *cassette sospese* ("suspended boxes") schemes, which cover the expenses of vegetable boxes for low-income participants through minimal surcharges on the contributions of others.

Finally, GAS and the wider Solidarity Economy could also engage in a re-politicisation of their work, more strongly advocating for the social and economic changes that are necessary to address these structural constraints. The Degrowth movement, which incorporates calls for grater equality, wealth redistribution, and the implementation of Universal Basic Services (Fitzpatrick, Parrique, and Cosme 2022), could be a fruitful framework to direct these efforts in coalition with entities and initiatives that largely are, as this thesis demonstrated, like-minded.

7.5 Limitations

The research aimed to give a complete and nuanced view of the activities and characteristics of the GAS network in and around Milan. However, the sampling strategies used in selecting GAS members, producers and policymakers might have introduced biases that reduce the generalizability of findings and may result in findings that do not reflect the views of the entire GAS network. GAS members, policymakers, and producers who have long been involved in the network were explicitly preferred. The groups and the companies could hence decide whom would take part in the interviews. This likely skewed the result towards the opinions of the most experienced and active members in each group or company.

Moreover, while all detected GAS in Milan and network producers in Lombardy were contacted, their voluntary decision to dedicate time to the research might have resulted in a sample that is more active and positively oriented towards the network's activities than average members. Furthermore, policymakers were sampled purposively, based on my access to direct communication channels. Still, their roles of responsibility within the city's policies testify to their suitability for the research. The interviews therefore gathered expert opinions on the focus issues and should not be considered representative of the opinions of the network's majority, e.g. less active GAS members.

In addition, Milan and the region of Lombardy are a peculiar case study, which presents characteristics that do not apply to other areas of Italy or abroad. While these features motivated the selection of the case study in the first place, and add to its relevance, they further limit the generalisation of findings and their applicability to other cases. Key insights should therefore be considered signposts for potentially relevant aspects of AFNs elsewhere and be reconsidered in the light of different contexts.

Finally, the study faced several limitations due to the time constraints of the thesis project. Conducting more interviews among GAS members in and around Milan, and particularly with those that have reinvented GAS strategies and values in new projects, would be beneficial. It could yield additional insights on the relations and possibilities for cooperation with smaller municipalities, as well as on the many ways in which the network has inspired and supported other forms of alternative food production and distribution. The qualitative study could also be supported by quantitative research, such as on the changing demographic and geographical features of the network, supporting a better understanding of the underlying causes of these changes and potentially strengthen the characterisation of the network through the RED framework. Still, the thesis presents a starting point for unpacking and interpreting current dynamics, as well as systematising GAS' similarities with REDs and degrowth-like practices.

8. Conclusion

In conclusion, this thesis has explored the key features and activities of the GAS network in Milan through the application of the RED framework. It examined how the interrelated dimensions of material fabric, territorial regulation, and social imaginaries played out in practice in the case study. Overall, the findings offer a nuanced account of how GAS groups operate at the intersection of alternative food networks, grassroots initiatives, and value-driven collective action, and contribute to ongoing debates on what makes such networks distinct and potentially transformative.

The analysis of the material fabric has shown that the GAS network's infrastructures and technological arrangements are structurally distinct from those underpinning growth-oriented food systems. GAS groups operate through localized, often informally organised, infrastructures that encourage trust-based relationships between network members. This material configuration gives rise to networks which are best suited for the unique features of their territory, affording GAS a chance to bypass market-driven imperatives by establishing a contextually appropriate and relatively efficient alternative.

Regarding territorial regulation, the research has highlighted the centrality of horizontal decision-making, informality, and established value systems in shaping the everyday functioning of GAS. Formal regulations, while largely peripheral to their regular operations, could be strategically mobilized to access resources, albeit at the cost of increased structuring. Importantly, GAS do not seek to dismantle capitalist institutions outright, but rather to transform their guiding principles, positioning themselves as non-capitalist rather than anti-capitalist initiatives. The flexible and adaptive nature of GAS internal rules, which are light enough to be autonomously adapted by each group, arguably ensures the long-term sustainability and replicability of the model.

The exploration of social imaginaries has underscored the importance of qualitative approaches in capturing the motives, goals, and cultural references that animate GAS and AFNs more generally. The shared value system that emerges among members is not merely rhetorical, but functions as a compass for navigating group decision-making. The incorporation of these values into members' identities and everyday practices sustains a form of gradual, moderated transformation, which can foster political literacy and an embodied politicisation but does not necessarily translate into direct or radical actions. Such values rather coexist with material

limitations and contrasting ideas, resulting in a pragmatic, gradualist approach to change that acknowledges imperfection and hybridity as constitutive features of the GAS network actions.

Taken together, these findings contribute to academic debates by exploring the interplay between material infrastructures, (in)formal territorial regulations, and shared imaginaries in shaping the trajectories of grassroot AFNs. The thesis challenges binary framings of anti-capitalist versus capitalist initiatives, offering instead a more nuanced account of how grassroots groups challenge, but also negotiate with, dominant economic logics through everyday practice. Its contribution is twofold. Firstly, the thesis enriches the understanding of the territorial dynamics of Real-Existing Degrowth by applying the novel RED framework to a well-established initiative. The insights gained through this research should be used to enrich such framework, particularly by considering whether the codes that emerged from the analysis should be incorporated as second-tier indicators. Secondly, the study also provides useful information to the GAS network and the Italian Solidarity Economy in general, by articulating the differences that set it apart from growth-oriented competitors and how to sustain those.

There are several opportunities for the application of these results. Practitioners and policymakers might draw on the insights regarding GAS's regulatory and organisational dynamics to refine their strategy or design supportive interventions. Given the informal and somewhat elusive nature of GAS groups, the thesis can prove helpful in giving them a better picture of the initiative, having updated previous academic findings with combined insights from several network members. As previously discussed, the networks effort may be well placed when addressing the gaps with the segments of the population that are currently least represented in the groups, to bring in new energy and ideas. Context-based investigation is furthermore needed to explore the implications of increased formalization of the groups, and on the ways in which policy interventions can support them without compromising their autonomy.

Moreover, comparative studies within Italy and internationally could shed light on the ways in which the three RED dimensions enable different types of Degrowth-aligned AFNs, while strengthening the framework with insights from diverse urban and rural contexts or even in sectors other than food, such as energy or housing. Lastly, deeper exploration of the formation and maintenance of collective identity and shared values within GAS networks could shed light on how participation in these groups (fails to) fosters political agency and advocacy for structural change.

The GAS network finally emerges as both a quiet resistance and a partial, slow, building of a food system that is yet to come. The groups cultivate not only alternative paths and production methods for food, but also new forms of trust, reciprocity, and an imperfect but persistent defiance of capitalist logics. Their work invites us to de-commodify food and understand it as the direct outcome of communal choices regarding the environment, human, and more-than-human beings. Limiting the pervasiveness of the dominant economy, GAS are spaces where solidarity can be practiced to overcome growth for its own sake. The network has hence shown how transformation, often perceived as a rupture or sudden revolution, more often unfolds patiently in the everyday acts of choosing, sharing, and imagining otherwise.

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Appendix 1: Informed Consent Form

Thank you for your interest in participating in this research. Please take the time to read the following information carefully. If any point is not clear, reach out to the researchers at the end of this text.

The research is conducted by a student of the Erasmus Mundus Joint Master in Environmental Sciences, Policy and Management. The programme is hosted by a consortium universities: Central European University (CEU, Austria), the University of the Aegean (UAegean, Greece), Lund University (ILU, Sweden), the University of Manchester (UoM, UK). The thesis project is hosted and funded by the University of the Aegean. The researcher will uphold themselves to relevant ethical standards, namely the Code of Ethics and Good Practice of the University of the Aegean.

WHAT THIS STUDY IS ABOUT? This study looks at the Gruppi di Acquisto Solidale (GAS) of Milan from a Degrowth perspective. The aim of the study is to characterise these initiatives as Real-Existing Degrowth, through the Real-Existing Degrowth (RED) framework. The purpose of the study is therefore exploratory, and it aims to better describe how GAS represent an instance of degrowth in action.

WHAT DOES PARTICIPATION INVOLVE? Participation in this study entails sharing your own opinion and experience during an individual semi-structured interview of 30-60 minutes. This means that you will be asked questions along an overall structure, but there will be space to freely express yourself throughout it.

DO I HAVE TO PARTICIPATE? No, participation in this research is completely voluntary. After agreeing to the interview, you also have a right to withdraw from the study at any moment or choose not to answer specific questions, without consequences nor need to provide reasons.

ARE THERE ANY RISKS IN PARTICIPATING? While the researcher will take all precautions to respect your personal boundaries and preferences, this research may touch upon some personal or sensitive experiences. In any scenario, all the information you provide will be strictly protected from unauthorized access and disclosure. Your identity will be anonymised, unless you explicitly request not to do so.

ARE THERE ANY BENEFITS IN PARTICIPATING? There are no direct benefits to the participants. However, by taking part in this research you will contribute to advancing and refining the general knowledge on the subject.

HOW WILL THE INFORMATION I PROVIDE BE RECORDED, STORED AND ANALYSED? The interviews' audio will be recorded, then transcribed using a transcription software aided by AI, and stored on Central European University's cloud folder with end-to-end encryption and password protection. For the purpose of this research, the interview transcripts will be analysed by the researcher through Nvivo software, a standard tool for qualitative coding. All data will be stored in accordance with the General Data Protection Regulation (GDPR), Regulation (EU) 2016/679. All members of the research team are likewise bound by data secrecy obligations and understand GDPR compliance requirement. All data will be deleted within 1 years from the completion of the thesis project and possible related publications.

WHAT WILL HAPPEN TO THE RESULTS OF THE STUDY? The research findings will be analysed and included in the academic thesis, which will be publicly accessible through the Central European University's thesis repository. The data might also be employed for related academic and policy-oriented publications.

WHO SHOULD I CONTACT FOR FURTHER INFORMATION? For any additional information, you can contact the researcher, Cecilia Massa (she/her) at cecilia.massa@mespom.eu or the thesis supervisor, Dr. Thanasis Kizos (he/him) at akizos@aegean.gr.

By signing the informed consent form, you confirm that you have the intention to participate, while still being able to withdraw at any time.

Assessment

- I have received this consent form in Italian, or English when requested.
- I have read the information sheet and was able to ask any additional question to the researcher.
- I understand I may ask questions about the study at any time.
- I understand I have the right to withdraw from the study at any time without giving a reason.

- I understand that at any time I can refuse to answer any question without any consequences.
- I understand that I will not benefit directly from participating in this research.

Confidentiality and Data Use

- I understand that none of my individual information will be disclosed to anyone beyond the research team and that my name will not be published, unless explicitly requested.
- I understand that the information provided will be used only for research conducted by this researcher.
- I understand that data (consent forms, audio recordings, interview transcripts) will be retained in a secure cloud location.

Future involvement

☐ I wish to receive a copy of the scientific output of the project.
☐ I consent to be re-contacted for participating in future studies.

Having read and understood all the above, I agree to participate in the research study:

☐ Yes
☐ No

Full name of participant:
Date: Signature:

To be filled in by the researcher:

- I declare that I have thoroughly informed the research participant about the research study and answered any remaining questions to the best of my knowledge.
- I agree that the abovementioned person participates in the research study.

Date: Signature:

Appendix 2: Online sources

GAS archives employed for an initial mapping of the groups in Milan:

1. EconomiaSolidale.net https://economiasolidale.net/mappa
2. E-circles https://e-circles.org/cerca?type=GAS&what=Milano

Producers lists shared by GAS in Milan and other network members, as identified through online searches:

1. https://bbmfrance.com/#produttori
2. http://www.equogas.org/wp/elenco-produttori/
3. https://emma-aps.org/prodotti-disponibili/
4. https://filodipaglia.org/cop.html
5. https://www.associazionemindthegap.it/i-produttori-del-nostro-paniere/
6. https://www.alnaturale.it/produttori.html
7. https://www.gaslola.org/produttori/
8. https://gas77.wordpress.com/fornitori2/fornitoriattuali/
9. https://monlugas.blogspot.com/
10. https://sites.google.com/site/villabriantea/i-nostri-fornitori
11. https://www.desrparcosud.it/adesione-al-desr/
12. https://www.fuorimercato.eu/tag-prodotto/agrinova/

Appendix 3: Nvivo Codebook

Category label	Category Definition	Anchor example
MATERIAL FABRIC		
Communal infrastructure	Reporting on the (lack of) physical or administrational infrastructure that the GAS groups collectively make use of	[Interview D] I have some GAS that have structured headquarters, very structured. They have rooms, refrigerators, etc. and so they even gave me the keys, I go, I open, I unload the stuff when I want.
Ecosystem and land **practices**	Mention of ecosystem and land practices carried out or supported by the speaker	[Interview P] We instead follow crop rotations from year to year and we grow organically. We use low-impact methodologies also in working the soil. And we are also quite attentive to biodiversity, we have reintroduced native breeds of pigs or more rustic breeds of pigs.
Energy provision	Mention of the energy system that support the activities of the speaker, or the activities of someone they buy from/sell to	[Interview F] We pay attention for example to whether [the producers] have solar panels, if they manage theirs.
Food sovereignty	Statement about network activities supporting food sovereignty in practice, or education/awareness about food sovereignty.	[Interview A] And so let's say the story was born a bit from this. In short, let's say the acquisition of awareness regarding the quality of the food you eat, linked to a series of issues related to consumption, linked to distribution chains, to all the various and sundry things that in our opinion should distinguish membership, participation in a GAS.
Group social interactions	References to the (lack of) internal social interactions among members of the Solidarity Economy. Issues of participation go under "political participation"	[Interview J] GAS works if you manage to keep the social fabric alive a bit. When it becomes a supermarket, it is very complicated, because people do not participate and it is also distorted, because in fact for us it is first and foremost the construction of a local community.
Social metabolism	References to a (lack of) lower level of society-wide metabolism, or to actions which reduce energy or material consumption at the societal level.	[Interview G] I realize that municipalities have fewer and fewer resources coming from the central administration. So what do they do? In order to support a whole series of public services they continue to build, so that with the urbanization costs they pay [...] the public services [...] on the one hand they sell off their wealth, which is the territory, to be able to take money that is immediately spent on these things. Then you find yourself with nothing left, you find yourself managing a territory that is damaged precisely because of building speculation.
Household **metabolism**	References to a (lack of) lower level of household metabolism, or to actions which reduce	[Interview K] the other problem of GAS, surely already recorded somewhere, is the fact that you go to get the cheese, then tomorrow the jams arrive,

	energy or material consumption at the household level.	and you go the other way… so forget the km0, at the end you put in so many kilometers that it's not really worth it.
Local markets vs. multinational trade	Issues of scale and distance in markets and supply chains, including production, distribution, retailing	[Interview J] So it's not a simple dynamic on which the principle of proximity applies but in which a thousand other issues come into play: availability of products, guaranteeing an adequate variety, prices...
- Local markets vs. multinational trade // **Direct relation with producers**	Mentions of the (lack of) direct contact with producers, through commercial ties or personal relations (visits, friendship, etc.)	[Interview L] In an ideal world you should go and meet the producers, go and visit the company, see what they do, but this happens very little even in the most virtuous GAS.
Public sphere interactions	How the GAS interacts with people who are not part of the Solidarity Economy network in the neighbourhood and publicly, through events, initiatives, personal relations	[Interview E] Let's say that the style of the purchasing group can represent a difficulty for some people, right? Depending on family situations, it can be a difficulty, but it can also be not so easily reachable, because you don't know the people, because you don't know where it is. Instead, the fact of being an association shine some more light on you, makes you a little more visible. The decision, the choice, to be visible and therefore more easily reachable becomes evident. Not only for the issue of doing the shopping, but also for the themes that we try to advance through meetings and initiatives. With difficulty.
Transportation	Mentions of transportation used by the Solidarity Economy network	[Interview J] We have so much stuff that AEQUOS delivers to us in Milan with a truck.
Use of technology	Mention of the type of technologies used by the Solidarity Network, such as software, tools	[Interview M] Half of the money that had been invested by the Lombardy region went into making the platform etc. Burned, never to be seen again. Eventually we made the program ourselves, it works very well, it has been working with the GAS since 2015.
SOCIAL IMAGINARIES		
Attitudes towards **the environment** and non-human beings	Statement expressing network members' attitudes towards the environment and non-human beings	[Interview D] Animals are animals. It's not exactly a stone we're talking about, so we also like to treat them appropriately.
Conviviality	Statements referring to moments of conviviality, or that reflect the network participant's (lack of) habit or like of conviviality	[Interview D] Often GAS are also driven by a more social, more aggregative side, so they often come to the company to visit us. We held days dedicated to GAS several times.
Imaginaries of the **good life**	Mentions of important elements of a network member's life that make it good under any point of view.	[Interview J] I chose to go and live in the GAS area, because for me it has become a fundamental component of my way of life in Milan.
Local **pride**	Statement expressing the network member's (lack of) pride	[Interview M] We are artisans, because we don't have a brand, [...] We make the mozzarella by hand

	in the identity or achievements of their initiative or of partner initiatives	and we still collect the ricotta with a ladle, we make all the *caciotte* by hand.
Memories of **alterity**	Statements claiming the (lack of) alterity of a network initiative, also on the basis of its historical roots	[Interview F] You can find pasta at Esselunga for one euro, here you pay 1.50, because there is a different project behind it.
Mutual respect and non-violence	Statement referring to (lack of) mutual respect/non-violence as important principles for the Solidarity Economy member, or to actions exemplifying those	[Interview N] GAS help doesn't have to go into a fake solidarity or just – quote unquote – socio-political [...] I respect the environment, the animal, and you, and you respect our work, you understand our work as much as possible and you are in solidarity with our, let's say, requests or in any case we are in solidarity with each other.
Openness and **solidarity**	Statement referring to (lack of) openness/solidarity as important principles for the Solidarity Economy member, or to actions exemplifying openness/solidarity	[Interview J] I was afraid that GAS were only for families, because there is this thing about collective orders. Instead I went, and they were extremely welcoming, and I started to participate, to do the shopping, even though I bought like a fennel and half a head of lettuce, but it is a GAS that is very open in principle.
Culture of political **participation**	Statement expressing the (lack of) willingness, tradition or importance of being active in a political sense, weather in formal or informal politics.	[Interview E] So the fact of feeling involved, of actively participating, of being in all the dynamics, is really a question of lifestyle. [...] Because you believe in the fact that there can be situations in which you break a bit with the logic of the market, this kind of thing.
- Culture of political participation // **Formal** politics	Statement indicating that the political participation is directed to formal politics (parties, institutions, official political processes)	[Interview M] I have been presenting projects on water for maybe 25 years. They have never approved me one in the municipality.
- Culture of political participation // **Informal** politics	Statement indicating that the political participation is directed to informal politics (grassroot movements, socio-economic and broadly political issues)	[Interview J] The core from which our GAS was born [...], they are that generation of today's 60-year-olds who had either a bit of Catholic-left, half between the Catholic Church and the left or all left, political participation in that sphere; that is accustomed to participation, has spent a lot of their life in this thing and therefore the GAS becomes another experience of this type and whether it is then about food consumption or not, well, that is interesting only to a certain extent.
Slowness and **moderation**	Statement expressing the (lack of) willingness, tradition or importance to not exaggerate, do with what is available (sufficiency), progress step-by-step.	[Interview E] If there are no eggs, since they are finished now, you don't go looking for eggs on the elsewhere, you eat tuna since we have it anyway, and it is still a source of protein. - You wait till tomorrow for them to arrive. - As it used to be.
Social appreciation of **equality**	Statement expressing the (lack of) importance, willingness, or tradition to act towards equality on a broad social scale.	[Interview L] So producing food to claim rights, to emancipate migrants, women, people in difficulty, from exploitation in the unfortunately many forms that it has.

Social inclusiveness	Mention of the (lack of) willingness/need to include disadvantaged (economically, socially, etc.) people in the Solidarity Network activities	[Interview F] In my opinion we should try to buy at the lowest possible prices so that these things are accessible to everyone.
Social trust and reciprocity	Statement expressing (lack of) trust or reciprocity towards others, or (lack of) actions aimed at building trust or reciprocity	[Interview M] For us it is still important, and we still have very intense relationships with the groups, in a very personal sense. I have always been very empathetic.
TERRITORIAL REGULATION		
Alternative **currencies**	Statement referring to an economic transaction that takes place through a different unit of account than mainstream currencies.	[Interview Q] After joining as a member of the GAS I founded a time bank that lasted a few years because then I got bored since I didn't enough time [to dedicate to it].
Confederal networks of organisation and participation	Statement referring to the presence/lack of higher levels of organisation within the network.	[Interview J] An important thing about our GAS is that it is part of a GAS cooperative called Aequos. Aequos is a GAS cooperative, so it is a cooperative that brings together mainly solidarity purchasing groups as members, plus some individual members who are the founders.
Decision-making	Statement expressing how decision-making takes place within the network initiative.	[Interview E] We decide together what we want to buy, who we buy it from, how much we buy. Collectively we decide and make the purchase.
Institutional **autonomy**	Statement referring to the (lack of) autonomy from mainstream institutions (such as the state or the municipality) and their expressions, such as laws, regulations, etc.	[Interview J] So we don't particularly need [institutional support] but perhaps because we haven't even thought about it. Maybe if I think about the issue of space… because often the main obstacle to the establishment of a GAS is space, in Milan here. If the municipality made something available…
Institutions and networks of cultural production	Statements referring to (the lack of) in/formal institutions and networks that foster cultural production within the network.	[Interview J] I'm trying to set up some sort of subgroups for the box-sorters, for the accountants, for those who enter data into the system, the treasurers, the communication group, the culture table [...]
Interactions among the p2p networks	Mention of (the lack of) interactions among separate networks of active exchange of knowledge and tools	[Interview F] We have relationships with the DESR of the Parco Agricolo Sud. But we are not part of the DESR itself.
Leadership	Mentions of how leadership is obtained and practiced within the network.	[Interview Q] Then I joined the board, for a few years […] now I am no longer part of the board [...]. I started from the bottom as a participant in the GAS and I made a great internal career. If you had a spirit of initiative there was room, right?
Network for social mobilisation	Statement referring to the (lack of) networks for the coordination	[Interview G] There were farmers who could allocate 4-5 hectares of their land to grow wheat. So we made sure to procure the seeds of the so-called ancient grains [...] and we made sure that this

	of action across society on issues that are relevant to the network.	grain was cultivated and gradually ground. We contacted some bread-making entities who are very happy to do this type of work.
Networks of **p2p exchange** & collaboration	Statement referring to the (lack of) networks of active exchange of knowledge and tools between similar initiatives, mutual help	[Interview F] A network of all the GAS had been created, in fact we tried to do this twice. But even there it wasn't possible. [...] it would be nice to do some initiatives together, but unfortunately the GAS are a bit anarchic and so everyone is on their own. I have now lost all hope. However, from an operational point of view we collaborate with other GAS to place orders together, that we do.
Social and **Solidarity Economy** initiatives	Mention of initiatives that align with the principles of the Social/Solidarity economy (such as decent work, sustainability, social justice)	[Interview A] When there was the earthquake in Amatrice [...] we immediately placed an order to help these people get back on their feet and then we never lost contact. Just like when there was Zani in Reggio Emilia, with Parmigiano Reggiano. When we know that there are struggling realities, if we can we help and then contacts are established, relationships that last over time.
Use of surpluses	Statement explaining how the network's (monetary, material) surpluses are employed.	[Interview E] The money raised… because gas requires a membership, you pay 5 euros a year to join the gas [...], is then donated to good causes.
EMERGING CODES		
Changes over time	Mention of changes within the network as compared to previous times, or of foreseen changes for the future	[Interview A] Over time things have changed a lot, and it has also become a larger-scale economy for GAS suppliers, at least this is what I observed.
Changes over time // **Demographic groups**	Changes that relate different demographic groups	[Interview J] And this is a topic in many GAS, [...] people are very old and there is no turnover. We are one of the youngest GAS, but because we are in Milan, it is easier anyway. In smaller places, where there is no turnover, GAS go to die because then people at 80 years old leave and there is no generational turnover; therefore, this is a very open challenge.
Co-optation	Mention of the uptake of certain network features by the mainstream food sector, in a different economic model than the network's	[Interview C] All that rhetoric of sustainability and health of food has been very internalized by the mainstream system. If before there was no organic counter, it was the slightly lame supermarket stand, now organic products are on all the shelves, even in different more or less appealing positions. Therefore, the large-scale retail trade and public policies have very much appropriated, so to speak, that theme.
Critique of other network members	Statement expressing a critique or disagreement with the actions or ideas of other network members	[Interview Q] I can't stand the extremists... I'm an extremist myself, but you must try to see a little further than your nose and your little world and understand how the systems work on a bigger scale.

Critique of the economy	Statement expressing a critique of or disagreement with the current economy at a wide system scale.	[Interview G] Finance is none of this. Finance is pure specious calculation to be able to give frightening values to things without any concrete economic root. This is the huge problem. In fact, speculative bubbles arise, economic crises arise, all this because we have a finance that is at least ten times bigger than the economy.
Diversification of economic activities	Statement expressing the engagement of network members in different kinds of economic activity	[Interview K] Multifunctionality […] it's something that is fundamental for an agricultural company like ours, if we had to rely only on the sale of fruit or vegetables, we wouldn't be able to keep standing, we wouldn't pay our direct costs.
Educational purpose	Statement expressing a network's initiative intent to educate its members, customers, or citizens in general	[Interview Q] in the first few years we were very active in providing training, education on the quality of food.
Logistics	Statement about the logistical aspects of the network's activities, including timing, transports, operational strategies	[Interview L] Distributing a pallet containing the products of 20 GAS in one place makes everything much more manageable, easier. Even if it isn't always easy, because the truck doesn't arrive, it got lost, it was unloaded somewhere else, but these are low-impact problems.
Quality food	Mention of food quality as related to enjoyment, production methods, health benefits	[Interview G] To produce healthy food you need a healthy territory, there's nothing to do about it, and so the municipality must ensure that its territories, especially agricultural ones, continue to be healthy and allow them to make healthy production.
Willingness to learn from **tradition**	Statement expressing the network member (lack of) willingness to learn from or act in accordance with their predecessors, or pre-existing initiatives in the field	[Interview N] While I was doing a university course, I was trying to truly understand the value of the work behind it, what the two crazy old partners were doing, what they had been trying to do since the '70s.
Upscaling	Statements referring to the (lack of) potential for upscaling the GAS network in terms of participation, reach, offer, etc.	[Interview J] There was a proposal, […] a store based on the GAS system, but that stuff requires a huge effort, or you win a tender. Maybe we could imagine a greater capacity to participate in projects that include funding, to experiment with measures that broaden our audience. […] One thing I could hope for is that the GAS develops the capacity to create quality work.
Workload	Statement referring to the workload entailed by the network's activities, and to the members' feelings on the workload	[Interview E] having a space to manage is a bit more complicated than the normal management of a GAS. Because consider that we're open six days a week. [...] So we need volunteers who are here to manage the space. That is, it's not just placing the order. The contact person places the order with the producer and then it arrives. But here everything has to be managed.

Appendix 4: Interview Guides

GAS members

Introduction

1. Can you tell me more about yourself?
2. How did you first get involved in this GAS?
3. What motivates you to join GAS, compared to traditional shopping?
4. How did you choose which GAS to join?

Products & Producers

5. Can you describe how a food order through your GAS usually happens?
    - Where do the meetings and food distribution take place?
    - How do you ensure access to the spaces needed for your activities?
    - How do you make decisions in the group?
    - What are the main challenges in your everyday activities?
6. Approximately, how much food is distributed through your GAS annually?
7. What share of your food consumption is covered by GAS products?
8. Do you think that the GAS is a primary source of provisioning for members?
9. What are the key characteristics you look for in a product?
10. Where do the products mainly come from?
11. What criteria do you use to select producers?
12. How would you describe the relationship of your GAS with producers?
13. Can you describe any collaborative initiatives born from the relationship with producers?

The GAS

14. How do you manage payments and other financial aspects within the GAS?
15. In your experience, do GAS change the perception of food among their members?
16. How would you describe the composition of your group in terms of gender, age, income?
17. Do you have measures in place to improve the accessibility of the GAS? (economic, social, physical)
18. How do you think existing regulations limit/support your activities?
19. What are some key words in your communication to the public?
    - What ideas, initiatives or movements do they refer to?

Collaborations

20. Does your GAS collaborate with other entities or initiatives? For example, members of the Solidarity Economy (RIES – Rete Italiana Economia Solidale, CO-Energia, Distretto Economia Solidale Lombardia), NGOs, institutions?
    - If so, how does the collaboration with the wider Solidarity Economy network work? If not, why do you think your GAS does not collaborate with them?
21. How do other entities influence the functioning of the GAS network?

Future

22. In your GAS, is there an explicit interest in growing the Solidarity Economy network?
23. What food system would you like to see in the future?
    - What role would GAS and the solidarity economy have?

24. Is there anything you would like to add that has not been covered in the previous questions?

Producers and Other Network Members

Introduction

1. Can you tell me more about yourself and how you first engaged in the Solidarity Economy?
2. Can you tell me more about your company/initiative?
    - Do you have multifunctional activities in your company/initiative?
3. What motivates you to collaborate with GAS?

Production & Products

4. What types of products do you supply to GAS and how do they differ from those sold in traditional markets?
5. How do you determine the price of products sold to GAS?
6. Do you have other sales channels?
7. Can you describe how a delivery of products to GAS takes place?
8. What are your agricultural practices that are most appreciated by GAS members?
9. Has your participation in the GAS network influenced your agricultural practices or your profits?
    - Could you run your business/initiative without collaborating with GAS?
10. Can you describe any collaborative initiatives born from the relationship with the GAS?
11. What are the challenges or points to improve in your collaboration with the GAS?
    - Do you think that any regulations hinder your ability to work effectively with GAS?

Regulations & Upscaling

12. What support would you need to engage more in the Solidarity Economy?
13. What strategies could be adopted to involve new farmers in the GAS network?
14. In your experience, does participation in a GAS change the way a customer perceives your products? For instance, by appreciating certain characteristics more.
15. Is there anything you would like to add that has not been covered in previous questions?

Policymakers

Food Policy

1. How did you first engage with the food policy sector in Milan?
2. What is your current role within the city governance?
3. What are the priorities and main challenges in Milan's Food Policy at the moment?

GAS

4. How do you see the role of GAS within Milan’s food system?
5. How does the city of Milan collaborate with GAS or, more generally, with the Solidarity Economy network?
6. Is there a specific regulatory framework that regulates the operations of GAS in Milan?
    - If not, has there been any discussion about creating one and what would it entail?
7. What are existing policies that (in)directly benefit Milanese GAS?

8. Do you think GAS foster social inclusion in Milan?
9. Do you think it is possible/desirable to better integrate the activity of GAS with other municipal initiatives?

Collaborations

10. What regulatory obstacles affect the collaboration between municipal institutions and independent initiatives in the food sector?
    - What are possible solutions?
11. In general, what role do you think the city should play in promoting or regulating such initiatives?
12. How do you see the communication between the Municipality, GAS and other actors in the local food chain? Are there channels or strategies defined to coordinate the various stakeholders?
    - How could it be improved?
13. What is the long-term vision for Milan's food policy?
    - Do you think GAS could be integrated in the future?
14. Is there anything you would like to add that has not been covered in the previous questions?