



Licentiate Thesis in Sustainability Studies

Governing food systems for resilience: a view from practice

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Nästa dag foro vildgässen norrut över Sörmland. Pojken satt och såg ner på landskapet och tänkte för sig själv, att det inte var likt något av dem, som han hade sett förut. Det fanns inga stora slätter som i Skåne och Östergötland och inga stora, sammanhängande skogstrakter som i Småland, utan det var en blandning av allt möjligt. »Här har de tagit en stor sjö och en stor älv och en stor skog och ett stort berg, hackat dem i stycken, blandat dem om varandra och brett ut dem på jorden utan någon ordning,» tänkte pojken, för han såg ingenting annat än små dalar och små sjöar och små kullar och små skogsdungar. Ingenting fick lov att riktigt breda ut sig. Så snart som en slätt höll på att växa sig stor, kom en kulle och ställde sig i vägen, och om kullen ville länga ut sig till en ås, tog slätten vid igen. Så snart en sjö blev så stor, att den tog sig något ut, smalnade den av till en å, och ån fick inte heller flyta lång sträcka, förrän den blev utvidgad till en sjö. Vildgässen flögo fram så pass nära kusten, att pojken kunde se ut över havet, och han såg, att inte heller havet fick breda ut sin vida yta, utan att den bröts sönder av en mängd öar, och öarna fingo inte heller bli särdeles stora, förrän havet tog vid igen. Det var ständigt ombyte. Barrskog bytte om med lövskog, åkrar med mossar och herrgårdar med bondstugor.

The next day the wild geese travelled north across Sörmland. The boy sat looking down at the landscape and thought to himself that it was not like any of those he had seen before. There were no great plains like those in Skåne and Östergötland and no large, continuous forest areas like those in Småland, but it was a mixture of everything. Here they have taken a great lake and a great river and a great forest and a great mountain, chopped them up, mixed them together, and spread them out on the earth without any order,' thought the boy, for he saw nothing but little valleys and little lakes and little hills and little groves of forest. Nothing was allowed to spread out properly. As soon as a plain grew big, a hill came and stood in the way, and if the hill wanted to stretch out into a ridge, the plain took over again. As soon as a lake became so large that it expanded slightly, it narrowed into a river, and the river was not allowed to flow for long until it expanded into a lake. The wild geese flew so close to the coast that the boy could look out over the sea, and he saw that the sea was not allowed to spread out its wide surface either, but that it was broken up by a number of islands, and the islands were not allowed to become very large until the sea expanded again. There was constant change. Coniferous forests were replaced by deciduous forests, fields by bogs, and manors by farmhouses.

Description of Sörmland from Selma Lagerlöf's
Nils Holgersson's wonderful journey through Sweden (Lagerlöf, 1907:40)
read aloud at a Bio-district Sörmland reference group meeting.

Abstract

In light of troubling trends, challenges and crises facing today's food systems, the journey food makes from production to consumption must change significantly. One important lever for this is food-related governance, which is seen as an integral aspect requiring attention to facilitate food system change and potential transformations. In particular, research points to the need to govern food from an integrated systems perspective for long-term sustainability. While this point is increasingly clear on paper, how food system governance is achieved in practice is not. Further research is required to understand the challenges and opportunities for everyday food practitioners, such as farmers, wholesalers, cooks and dietary staff in public agencies, to work with food governance grounded in a systems perspective.

In light of this, this Licentiate thesis studies the practices of people working with food. The research focuses broadly on the efforts of public and private actors (such as municipalities and civil society organisations), and food practitioners, in relation to governance innovations concerning local produce and landscapes, with empirical cases in the region of Sörmland located southwest of Stockholm in Sweden. Transdisciplinary and ethnographic methods involving interviews and observations were employed to explore ongoing attempts at governing local food differently in practice. To avoid reproducing siloed perspectives anchored in either food production or consumption, this thesis employs a holistic social-ecological systems perspective, conceptualising local food as involving diverse forms of agency shaping food cultivation, production, processing, preparation and consumption, and emerging from the entangled relations of non-material and material elements and processes in practice. It does so by integrating research on food system governance with a practice perspective and resilience

framing. Specifically, Paper I studies practice in municipal food supply systems in the region of Sörmland and provides insights into important non-material and material conditions, including governance conditions, to build up the so-called 'missing middle' of these systems. Paper II traces two ongoing local change processes in Sörmland and provides a performative account of enacting resilience capacities and governing for resilience, highlighting practitioners' dynamic capacities to collectively work with change for implementing food system governance in practice. The thesis gives rise to three main contributions. Firstly, it provides practical insights into how challenges and opportunities for integrated food system governance play out in the interactions between diverse forms of agency in local food systems. Secondly, it provides an account of governance change from a practice theoretical perspective. Finally, the thesis illustrates how a focus on practice and capacities for resilience in change processes can help reveal the necessary conditions for implementing food system governance in practice.

Keywords

Food systems governance, social-ecological systems, missing middle, practice perspective, resilience capacities

Sammanfattning

I ljuset av de oroväckande trender, utmaningar och kriser som dagens livsmedelssystem står inför, måste den resa maten gör från produktion till konsumtion förändras avsevärt. Ett viktigt verktyg för detta är livsmedelsrelaterad styrning, vilket ses som en essentiell del av livsmedelssystemet som förtjänar mer uppmärksamhet för att underlätta förändringar och potentiella transformationer. Forskning pekar särskilt på behovet av att styra livsmedel ur ett integrerat systemperspektiv för långsiktig hållbarhet. Även om detta blir allt tydligare i teorin, är det inte klart hur livsmedelssystemets styrning ska gå till i praktiken. Ytterligare forskning krävs för att förstå utmaningar och möjligheter för de som dagligen arbetar med mat – såsom bönder, grossister, kockar och kostpersonal inom offentlig förvaltning – när de tar sig an livsmedelsstyrning grundad i ett systemperspektiv.

Den här licentiatavhandlingen tar avstamp i vardagspraktiker hos personer som arbetar med mat. Forskningen fokuserar brett på insatser från offentliga och privata aktörer (såsom kommuner och civilsamhällets organisationer) samt livsmedelspraktiker, i relation till styrningsinnovationer rörande lokala produkter och landskap, med empiriska studier i Sörmland sydväst om Stockholm i Sverige. Transdisciplinära och etnografiska metoder så som intervjuer och observationer användes för att utforska pågående praktiska försök att styra lokal mat på nya sätt. För att undvika stuprörsperspektiv förankrade i antingen livsmedelsproduktion eller konsumtion, använder denna avhandling ett holistiskt social-ekologiskt systemperspektiv, där lokal mat förstås som olika former av agens som formar jordbruk, produktion, bearbetning, beredning och konsumtion, och som i praktiken uppstår ur de sammanflätade relationerna mellan ickemateriella och materiella element och

processer. Det görs genom att integrera forskning om livsmedelssystemstyrning med ett praktisknära perspektiv inom en resiliensram. Specifikt studerar Artikel I praktiska aspekter av kommunala livsmedelsförsörjningssystem i Sörmland och ger insikter om viktiga icke materiella och materiella förhållanden, inklusive styrningsvillkor, för att bygga upp den så kallade 'saknade mitten' i dessa system. Artikel II följer två pågående lokala förändringsprocesser i Sörmland och ger en performativ redogörelse för hur resilienskapaciteter och styrning för resiliens tar sig uttryck, genom att belysa praktikers dynamiska förmåga att gemensamt arbeta med förändring för att implementera styrning i livsmedelssystemet. Avhandlingen ger tre huvudsakliga bidrag. För det första ger den praktiska insikter i hur utmaningar och möjligheter för integrerad styrning av livsmedelssystemet tar sig uttryck i interaktionerna mellan olika former av handlingskraft i lokala livsmedelssystem. För det andra ger den en redogörelse för förändringar i offentlig styrning ur ett praktikteoretiskt perspektiv. Slutligen beskriver avhandlingen hur ett fokus på praktik och kapaciteter för resiliens i förändringsprocesser kan bidra till att belysa de nödvändiga förutsättningarna för styrning av livsmedelssystemet i praktiken.

Nyckelord

Matsystem, social-ekologiska system, governance och styrning, praktiker och praktisknära, resiliens

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List of papers and author contributions

Paper I **Adamson, C.**, Milestad, R. and Borgström, S. Building up the middle of municipal food systems: understanding challenges for public food procurement from local and regional farmers in practice [manuscript in review with *Agroecology and Sustainable Food Systems*, submitted May 2025, revisions submitted December 2025]

Paper II **Adamson, C.**, Haider, L.J. & Milestad, R. Governing local food differently: studying change for food system governance through the lenses of practice and resilience [manuscript submitted to *Agriculture and Human Values*]

Comments on my contributions to the papers:

I conceptualised and developed the studies, selected the case study region and identified study participants and arranged interviews and opportunities for engaging in fieldwork through observations. I conducted the interviews and observations, coding and analysis of the collected data and drafted the first version of the papers. Rebecka Milestad, Sara Borgström and Jamila Haider provided feedback on Paper I and/or Paper II and were involved in discussions about the papers. Sara Borgström assisted with system conceptualisation in Paper I and Jamila Haider assisted in the drafting of sections in Paper II.

Other papers not included in thesis

Milestad, R., **Adamson, C.**, Ölund, E., Andersson, M., Iwarsson E., and Ståhl, I. The nitty gritty of food system governance: Implementation of a municipal food supply strategy in Sweden [manuscript in review with *Frontiers in Sustainable Food Systems*]

Thongplew, N., Kantamaturapoj, K. Colby, A., **Adamson, CJ.**, Servetoğlu, I., Laborgne, P., Milestad, R. & Lin, YC. Evaluating practice-based interventions for collaborative sustainable food supply chains: International experiences [manuscript in review with *Journal of Integrative Environmental Sciences*]

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Preface

As I sit and write, I look out over one of the workplaces that I've been fortunate to be involved with over the last years since 2019. This place is a small-scale, diversified farm with greenhouse and vegetable production, livestock (cows and sheep), and with an on-farm store, café and bakery located below the place I'm sitting. Prior to starting this Licentiate, I worked on this farm two days and at home on my own farm for the other days of the week. Nowadays, my partner is fulfilling these roles so I can dedicate time to research and study in sustainability science. I sometimes join him on his trip to work, walking around the fields and discussing how the crops are going, before sitting down to start work at the computer. I'm surrounded with many others here at the farm as I write, two owners with their adult children and their partners, a baker, kitchen staff, as well as other employees, volunteers and interns. Other people come and go of course, and during the summer months the farm is a hive of activity with customers. This farm, and our farm are both located in Sörmland, the region that is home to much of the empirical material forming the basis of the findings in this thesis.

The start and end point of this thesis is the everyday practices of people working with food, from farmers cultivating crops, to the delivery drivers and municipal kitchen staff processing and preparing it. Consider working in a municipal kitchen, perhaps you have 500 to 1000 or so portions to prepare a day, you make frequent orders to your contracted nationwide wholesaler, balancing budget demands with a prescribed responsibility to produce nutritious meals for students. You're concerned to cook food that the students will also be happy to eat, which can be a challenge in itself. You follow recommendations in the municipality to increase vegetarian options, seek to

buy organic and consider buying local, if possible, even though it usually costs more to do so. There was also that time the local potatoes you ordered came unexpectedly unwashed, which was a challenge given that produce with soil is not permitted in municipal kitchens, and the other time they were various sizes, which made the cooking time vary significantly when processing large quantities. The memories discourage you from making a local order, you know you can request a specific size and type through the wholesaler, and they also always arrive clean of soil. Budget is also most important at the end of the day and the wholesaler price is more appealing from this perspective as well.

Now consider you are the farmer producing the potatoes, seeking to increase deliveries to a nearby municipality. You've invested in infrastructure for washing the potatoes, as well as irrigation so you can have more control over watering of the crop through its different growth phases, which in turn can ensure a more standardised size. Despite this, there was limited high quality organic seed potato available for purchase this season, the type that is nice and large with multiple 'eyes'¹ which leads to more potatoes per plant and a better harvest. You also still feel unsure whether it's a good idea or not to try to increase sales to the municipality, they're potentially an important customer who can buy large quantities regularly, but their requirements create more processing and handling requirements, which costs money in terms of infrastructure investments and time. Usually, you'd take a higher price for these services. You've also had a previous contract with the municipality, however, for some reason orders from the kitchens never eventuated and you're still unsure why.

The scenarios above provide two brief examples of the mix of everyday practices, as well as the conditions surrounding them, that have a role to play in the individual and collective decision-making processes that influence and are influenced by food. It is the aim of the research in the following pages to illustrate a way to study and describe how these practices have a role to play in shaping the way food is governed in local and territorial food systems.

¹ The 'eyes' on a potato are the buds that sprout when the planted seed potato grows into a new plant.

1 Introduction

Given the title of this Licentiate thesis, you might be wondering how the seemingly minor details of food practice outlined in the preface are relevant to food system governance. Definitions and frameworks to understand and study the phenomena of food system governance have been increasing over recent years, as a potential mechanism to provide for the complexity of food-related activities from cultivation and production, through to consumption (van Bers et al., 2016; van Bers et al., 2019; Janin et al., 2023). However, there exists a gap between policy recommendations, frameworks and aims for governing food from an integrated systems perspective, and their implementation in practice (Sonnino, 2023). The aim of this research is to explore the links between aspirations and ideals for governing food systems, and food-related activities in these systems. By combining a focus on practice with social-ecological resilience theory, I study change processes aimed at building up food system governance in local and territorial food systems from the perspective of practitioners working in them.

1.1 Problem description

Modern-day systems for the cultivation, production, processing, and consumption of food from local to global scales are in a state of crisis (Webb et al., 2020; IPES-Food, 2022). The list of symptoms leading to this diagnosis are long, and first and foremost concerns the perceived shortcomings of dominant industrialised and globalised food systems in providing for the

multidimensional aspects of food (ibid). These shortcomings are evidenced by interacting crises concerning health, food access and security, the environment and climate, which also all tie into issues of equity and justice (Webb et al., 2020; Ng'endo and Connor, 2022). Small to mid-scale farming and local food systems are also suffering, often evidenced by figures concerning the rapidly declining rate of small to mid-scale farmers globally, and the hollowing out of rural communities (Brondizo et al., 2023). On top of this, industrial agriculture and food systems are the greatest contributing factors to the collapse of biodiversity and soil health, as well as greenhouse gas emissions and a warming climate (Clark et al., 2020; Crippa et al., 2022).

In response, researchers, policymakers and practitioners alike are exploring the re-localisation and re-territorialisation of food systems, as part of the answer to the multidimensional challenges facing today's dominant forms of food production and consumption (European Commission, 2020; Nemes et al., 2023; Loodts et al., 2025). Processes of re-territorialisation (and de-territorialisation) are considered broader than notions of returning to the 'local', and involve a "...set of processes that lead to the strengthening of the connections between an activity [e.g. agriculture or food consumption] and all its components of a territory" (Loodts et al., 2025:1572; also see Lamine et al., 2019). While the language and terminology used to describe processes of re-localisation and re-territorialisation are broad and varied, some of the core areas of concern are the sustainable, resilient and viable existence of small to mid-scale and diversified forms of agriculture; direct or short supply chains and systems; Indigenous, traditional and rural communities and their agroecological knowledge and practices, as well as rural-urban connections and dependencies (Arthur et al., 2022; Brondizo et al., 2023).

Research highlights the importance of local and territorial food systems for achieving long-term food system sustainability (e.g. Rööös et al., 2022; Loodts et al., 2025). It is important to note, however, that there has been a tendency for notions such as 'local' to be considered as an inherently desirable, sustainable or 'good' alternative to globalised and industrialised food systems in both research and broader society (see Born and Purcell's 2006 discussion of the 'local trap'). Another term that can be associated with this is 'solutionism', where different terms or concepts are presented as singular solutions to complex problems (Sage, 2024). These perspectives highlight the risk of employing the local scale uncritically, in turn unhelpfully masking complex issues in local food contexts that must also be addressed for their future sustainability and viability (Sonnino,

2013; Arthur et al., 2022; Wood et al., 2023). Fortunately, the risk of local food systems potentially concealing sustainability issues has also received increasing attention (Sonnino, 2013; Enthoven and Van den Broek, 2021).

Local and territorial food systems are also often highlighted for their value in enhancing the capacity of food systems to respond to crises such as the COVID-19 pandemic (Lamine, 2015; Béné, 2020; Stephens et al., 2020; Enthoven and Van den Broek, 2021). However, these findings are in part grounded in a normalisation of an “ethic of ‘hustle’” and the self-exploitation arising from the social embeddedness of transactions in local food systems, which arguably is a socially unsustainable way of producing food (Nichols et al., 2022:180). In contrast, Smith et al. (2015:46) stress that “building resilience in food systems extends beyond ensuring immediate food supply during a crisis, *to also capture the need for longer term change*” (own emphasis). Taking the need for longer term change seriously requires nuanced analyses of change in and the evolution of local and territorial food systems. This in turn involves studying local and territorial food systems for the multidimensional social-ecological, infrastructural, technical, socio-political and cultural endeavours that they are, rather than in terms of dichotomies based in archetypal types or scales of food systems (Hinrichs, 2003; Smith et al., 2015; Brondizo et al., 2023).

1.2 Research aims and questions

Given the above, it is the position of this thesis that addressing social-ecological challenges for food systems and rural sustainability entails developing more nuanced perspectives on change in local and territorial food systems in practice. It therefore explores processes of so-called re-localisation and re-territorialisation with a primary focus on the way in which new knowledge and opportunities for change and potential transformations emerge through food practitioners’ everyday engagement in the social-ecological agri-food contexts they are entangled with. In short, such a practice perspective provides an entry point to explore the way in which food practitioners and actors exercise agency in contexts of change.

In this thesis, scale, such as ‘local’ or ‘territorial’ scales, is seen as something “fixed to a degree as well as contingent and dynamic” (Wald and Hill, 2016:203). Both local and cross-scale dynamics are explored in practice, through an examination of interactions between food practitioners and different biophysical, material (e.g. infrastructure) and non-material (e.g. socio-cultural values, power relations) elements and processes in their surrounding

environments. Examination of these interactions provides insights into important conditions for building up food system governance and long-term food system sustainability in practice.

Concretely, the thesis empirically traces change processes concerning attempts on the local and territorial scales to govern food differently, firstly in cases concerning municipal food supply, and secondly in a case concerning a novel bio-district. My use of ‘governing differently’ in the thesis is a reference to evolving areas of research that highlight the importance of governing food from an integrated systems perspective (van Bers et al., 2016; Sonnino et al., 2019; Sonnino, 2023).

This thesis is anchored in the practical engagement and experiences of public and private actors² and food practitioners³ working with change processes for implementing food system governance on a daily basis. The research is grounded in a case study methodology involving action-oriented and ethnographic engagement through interviews, observations and co-production processes. In taking this approach, I seek to answer the following two research questions:

1. *What are important material and non-material conditions for building up food system governance in local and territorial food systems in practice, according to food practitioners in these systems?*
2. *How are public and private actors, and food practitioners, working with change to build up food system governance in local and territorial food systems in practice?*

This thesis proceeds as follows: in Chapter 2, I provide background on key theory and concepts for the research, before outlining the empirical context for the studies in Chapter 3. In Chapter 4, I describe my research approach and methods. In Chapter 5, I provide an overview of results and how they contribute to answering the research questions, before concluding with a discussion of main contributions of the thesis and ideas for future research in Chapter 6.

² ‘Public and private actors’ in this thesis describes governmental and non-governmental (e.g. civil society organisations) actors involved in governing, decision-making and organising of food systems.

³ ‘Food practitioners’ in this thesis describes the diverse range of actors interacting with food in practice from production through to consumption, for example, farmers, municipal dietary, meal and kitchen staff, and wholesale and logistic workers (Braun et al., 2023; Eliasson et al., 2022).

2 Background: theory and concepts

In this section, I first situate my research in the broader realm of food system sustainability, before providing background on key theory and concepts for the research.

2.1 Food system sustainability

This Licentiate thesis is interdisciplinary in nature and situated in sustainability science, with a particular focus on food system sustainability (Eakin et al., 2017). According to the United Nations (UN) Food and Agricultural Organisation (FAO), a sustainable food system is one that “delivers food security and nutrition for all in such a way that the economic, social and environmental bases to generate food security and nutrition for future generations are not compromised” (FAO, 2018: para 3). Food system sustainability is considered a core aim of the UN Sustainable Development Goals established in 2015 (in particular goals 2, 11, and 12⁴), which call for transformations of agricultural and food systems to achieve food and nutrition security by 2030 (ibid).

Due to food’s centrality in economic, socio-political, cultural and environmental aspects of everyday life, as well as a diversity of dynamics both influencing and influenced by its production, distribution and consumption, food system sustainability has become an ongoing concern for a broad range of research disciplines and academic traditions (Eakin et al., 2017). Nowadays, there is a

⁴ Goal 2: zero hunger, goal 11: sustainable cities and communities, goal 12: responsible consumption and production. <https://sdgs.un.org/goals>

diverse array of research approaches and perspectives regarding the economic, social and environmental sustainability dimensions of food systems. These approaches span rural sociology (e.g. Lamine et al., 2019), development studies (e.g. McGuire et al., 2025), science and technology studies (e.g. Vargas-Canales et al., 2024), supply chain management (e.g. Stone and Rahimifard, 2018), consumer studies (e.g. Schultz et al., 2024), policy studies (e.g. Edwards et al., 2024), political ecology (e.g. Moragues-Faus and Marsden, 2017), systems thinking (e.g. Stanley and Murrin, 2025) and many more. Each research discipline and tradition has a different entry point to the types of new knowledge needed to support change and potential transformations in food systems (Juri et al., 2024). As a Licentiate student navigating the vastly interdisciplinary field of food sustainability studies, it is difficult to anchor one's own research in a specific disciplinary context and formulate how the new knowledge generated sheds light on aspects important to food system sustainability. Therefore, in the following paragraphs, I first identify which aspects of sustainability are important in the context of the current research. In Chapter 4, I also reflect further on the aspects of doing and theorising for sustainability science.

2.1.1 Taking a systems perspective

Over time, research has sought to address food system sustainability problems from an integrated systems perspective concerning all stages of food production and consumption (Ericksen, 2008; Stanley and Murrin, 2025). Food and its related activities have not always been viewed from a systems perspective and many solution spaces for food system sustainability problems have been dominated by either production (e.g. production efficiency and gains to feed a growing global population) or consumption perspectives (e.g. equity and demand-side issues affecting access to healthy and nutritious food) (Sonnino, 2023). Ericksen (2008) provides an early and often-cited exploration of food-related non-linear, multi-scalar and complex social and ecological interactions in development of their food systems research framework. Similarly, this thesis employs a framing of food systems as complex and adaptive social-ecological systems (**SES**) characterised by multi-actor and multi-scalar interactions between socio-political, ecological and economic elements and processes (e.g. Rozas et al., 2019; Vallejo-Rojas et al., 2022).

The shift towards a systems perspective can be observed at the supply chain level (Stone and Rahimifard, 2018; Wieland et al., 2023), as well as the local, regional, territorial and even global levels (van Bers et al., 2019; López-García & Carrascosa-García, 2023; Patay et al., 2025; Vignola and Oosterveer, 2025).

Importantly, a systems framing widens the net of interacting food actors and practitioners, as well as non-material and material elements and processes across nature and society, that are important for the sustainable functioning of food systems (Hebinck, 2018). It also highlights not only rural and agricultural settings but also rural-urban relations and the role of urban environments in food system transitions and transformations (López-García and González de Molina, 2021).

2.1.2 Coupling a systems perspective with practice

Within the above research, calls for forms of food governance that provide for a systems perspective on food-related issues have increased (van Bers et al., 2019). Such an approach involves linking up governance and policy across both horizontal and vertical scales in areas such as health, sustainability, agriculture and the environment, the labour market and the economy, in multi-level arrangements (Barling et al., 2002). It also involves novel, hybrid configurations involving both public and private actors beyond traditional governmental sectors, which is characteristic of a wider move from government to governance (Hebinck, 2018; Patay et al., 2025). I provide further background on this topic in section 2.2 below.

The decision to employ a practice perspective in both Papers I and II was motivated by an intention to find a way to study the building up of local and territorial food system governance that could provide for the complex, iterative and contingent nature of such change processes. Non-linear and cross-scale interactions in SES also give rise to constant change and high degree of uncertainty and a practice lens caters for the fact the food actors and practitioners exercise agency⁵ in navigating such environments (West et al., 2019; Forney et al., 2025). In this sense, governance is not simply a set of structures or system that is *applied* to the dynamics of SES, but is rather something that *emerges* as part of the dynamic practices and interactions that constitute it. The thesis therefore seeks to contribute to an evolving area of sustainability research that studies change for sustainability, and governance

⁵ In discussing agency in this thesis, I am referring to the capacity of practitioners to both individually and collectively act to bring about change in contexts shaped by multi-agency interactions between different forms of human, biophysical and material/non-material agencies in practice (Wagenaar and Wilkinson, 2015).

change in particular, in a way that is grounded in practice (West et al., 2019; Forney et al., 2025).

2.1.3 Integrating the study of sustainability with resilience

Given rising levels of geopolitical conflict and ongoing and intertwined socio-political and environmental crises, the ability of food supply chains and systems to persist, adapt or transform in response to shocks and changing conditions while still maintaining core functions has become a key focus (Michel-Villarreal, 2023). As a result, researchers highlight the necessity of studying sustainability and resilience of local food supply in an integrated manner (ibid). While acknowledging that the concepts of sustainability and resilience are generally complementary, Silva et al. (2022) and Michel-Villareal (2023) find that both synergies and trade-offs exist in practice. Therefore, how practical decisions and compromises regarding these synergies and trade-offs are made is also a point of interest in this thesis. Further, Michel-Villareal (2023) also highlights the importance of a greater focus on sustainability and resilience dynamic capabilities and strategies, rather than measuring sustainability and resilience as static characteristics of supply systems.

While the aim of this thesis is not to attempt to further marry the concepts of sustainability and resilience, it is guided by Michel-Villarreal's (2023) findings in relation to the integrated treatment of sustainability and resilience in terms of capacities and supporting strategies. Rather than seeking to contribute further knowledge on *what* these capacities and strategies might be in terms of categories or principles, the current research provides insights from an agency perspective into *how* such strategies or capabilities might be enacted and evolve over time in practice by everyday food practitioners. It also provides insights into possible complexities for enhancing sustainability and resilience across different temporal and spatial scales in practice. One clear example is the complexities between navigating short-term food supply and security on the national level, meeting global-level sustainability ambitions, as well as catering for the social, environmental and economic conditions for local and territorial food systems in northern-European countries such as Sweden.

As I further explain in sub-section 2.4, a particular focus of the thesis is the enactment of resilience capacities in practice (Haider and Cleaver, 2023). This framing of resilience is employed as a way to study and describe change and practitioners' capacities to work with this change in the aim of building up food system governance. From this perspective, it may be possible to identify

alternative pathways towards more integrated ways of governing food systems that are grounded in everyday practice, rather than abstract or normative governance aspirations or ideals.

2.2 The ideal of Food System Governance

Van Bers et al. (2016:10) provide a widely cited definition of food system governance as the “processes and actor constellations that shape decision-making and activities related to the production, distribution and consumption of food”. Calls for integrated approaches to food system governance and policy are available from as early as the year 2000 (Barling et al., 2002). Research in this area falls under various headings, including ‘integrated food systems governance’ (Hammelman et al., 2020) and ‘whole-of-food-system-governance’ (Patay et al., 2025).

Despite ongoing and concentrated efforts to progress integrated food policy and governance both globally and within the European Union (EU), the segmented and siloed nature of both public and private food sectors appears to be stubbornly fixed and hard to overcome in practice (Patay et al., 2025). This segmentation is in part caused, and strongly reinforced by, the fact that food policy and regulation development has been occurring within a market-focused framing and with a “strong policy synergy between a corporate led, private-interest governance regime on the one hand, and a corporatist EU state-based regulatory regime on the other” since the 1980’s (Marsden et al., 2018:1303). The result of this is said to be that food systems in Europe are nowadays embedded in siloed and “somewhat outdated and some would argue dysfunctional governance and regulatory systems” (Marsden et al., 2018:1301). Broadly speaking, existing governance arrangements in the EU are questioned for their ability to holistically provide for the complexity of food systems. Hence, the commitment in research and policy to identifying new modes of governance that can better handle food system complexity.

While integrated food system governance and policymaking is often cited as the ideal, it continues to struggle with complexities and challenges for its implementation in practice (Sonnino et al., 2019; Sonnino, 2023). Research stresses cooperative or collaborative solutions between public and private food actors (including for novel and participatory food system governance), however further research is required concerning the intricacies of these processes and relations (Laforge et al., 2017; Hebinck, 2018). Alternatively, La Grouw et al. (2024) highlight the importance of focusing on small everyday practices of

collaborative governance to illuminate the challenges of multistakeholder approaches to wicked problems.

The above challenge has led to criticisms regarding the abstract nature of food system governance (Candel, 2014; Sonnino, 2023) and calls for further research regarding how it is “actually functioning” (Sonnino et al., 2019:110). Some research explores on-the-ground empirical accounts of the implementation of food system governance. For example, Sonnino et al. (2019:111) looked at the practical dimension of a systems approach by studying different interpretations and meanings attributed to “a systemic approach to food” by municipal policymakers across 33 cities (majority European) and considered the transformative potential of food systems thinking. Further, Sonnino (2023:2) looked at practical implementation across two key governance scales (i.e. the urban and the global), finding an ongoing need for “development of stronger forms of collaboration between actors, disciplines, constituencies and, crucially, governance scales.”

Other studies have looked at the non-linear and dynamic implementation of integrated food policy, however this research tends to focus on urban food settings and specific government/administrative units or levels, such as municipal authorities (e.g. Clark et al., 2021). This motivated me to include a diverse range of food practitioners in my research, to avoid singular agency, or siloed production or consumption, perspectives.

Overall, Sonnino et al.’s (2019:110) call for “a new research and policy agenda focused on the dialectical relationships between ordinary food practices and infrastructural transformations ... to meet the challenge of systemic food change” still applies today. For me, this call signified a switch from more top-down, structural or system-level perspectives on change for food system governance, to one that prefaces a focus on agency and practice, as proposed by Scoones et al. (2020) in relation to transformations more broadly. It also signified the need for alternative theoretical and conceptual perspectives on studying change and the emergence of novel governance configurations in practice. Therefore, I grounded my research in a practice perspective and further describe change in practice through the conceptual lens of social-ecological resilience (i.e. resilience capacities) (Figure 1). I also sought out the places in food systems where diverse food-related practices and infrastructures interact, and this led me to explore the middle, or so-called ‘missing middle’ (Veldhuizen et al., 2020), of local and territorial food systems.

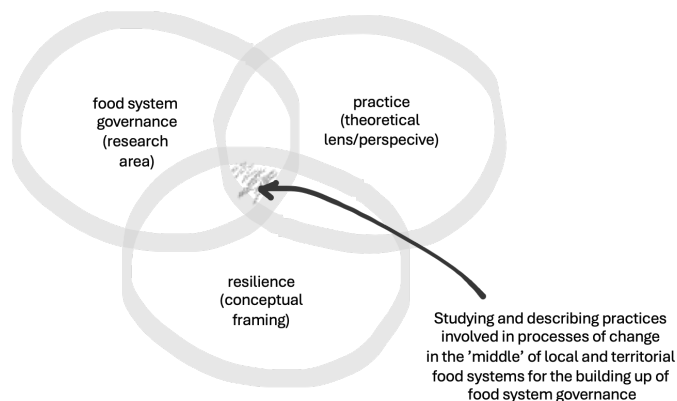


Figure 1: visual representation of the intersection of different aspects of the research regarding food system governance, practice and resilience that provided a way to study and describe change for the building up of local and territorial food system governance in practice

2.2.1 The 'missing middle'

Different notions of the 'missing middle' have been explored in agri-food related research (Morley et al., 2008; Marsden et al., 2018; Veldhuizen et al., 2020; Jonas, 2024). For some, the notion signifies the disconnect between production and consumption in global food systems (e.g. Veldhuizen et al., 2020), while for others it is more specifically the missing mechanisms by which local and smaller-scale producers can collectively access markets run by larger actors, such as supermarkets and public institutions (e.g. Morley et al., 2008). This latter framing of the missing middle has been criticised for its singular focus on increasing capacity of local producers to reach larger markets, as it is considered to place undue emphasis on increasing production capacity and food as commodity, rather than providing for local and territorial food systems that account for the multidimensional values of farming and food (Jonas, 2024). Alternatively, Jonas (2024:51), with the help of Wezel et al. (2020), provides a more emancipatory framing of the middle as a place "...to build solutions collectively for the infrastructure that is *intrinsic* to agroecological production,⁶

⁶ Agroecological production, part of agroecology more broadly, refers to both a method and science of farming grounded in ecological concepts and principles and focused on managing interactions between plants, animals, humans and ecosystems (FAO 2018).
<https://openknowledge.fao.org/server/api/core/bitstreams/3d7778b3-8fba-4a32-8d13-f21dd5ef31cf/content>

with aims to re-embed food systems in local economies” (author’s own emphasis).

In order to support a holistic approach to the middle, novel forms of governance that can account for both the non-material and material conditions of local and territorial food systems are required. Marsden et al. (2018:1305) provide a framing of the missing middle that calls for ‘new civil-regulatory assemblages’ with hybrid relations between public and private actors, and the capacity for reflexive forms of governance. Innovative and democratic governance and policy bodies, such as Food Policy Councils,⁷ are seen to carry potential for building capacities in these new civil-regulatory assemblages. However, the middle is still considered the weakest link in building the transformative potential of new food assemblages (Marsden et al., 2018:1305). Exploring everyday food practices that engage with material and non-material elements and processes in the middle of local and territorial food systems therefore provides an entry point to studying how the middle can in fact perform an instrumental part of processes of re-localisation and re-territorialisation, as well as change processes for building up food system governance.

2.3 Studying change through practice

In both Papers I and II, a focus on practice is employed to examine attempts at implementing food system governance. In Paper I, these efforts concern building up local municipal food supply, and in Paper II, the efforts are more targeted at certain scales of the local food system (i.e. local produce and landscapes). While in Paper I, I employed a more interpretive stance in relation to practice as means to explore practitioners’ experiences of different obstacles arising from interacting material and non-material elements and processes in municipal food supply systems, in Paper II I looked more intensely at using practice theory to explore the dynamics of individual and collective practical experiences in emergent processes. In the following section, I focus on outlining my approach to Paper II.

In employing practice theory, I needed to navigate an expansive and complex array of research to identify a suitable theoretical approach. While some broader areas of food system sustainability research take a practice-oriented perspective

⁷ Food Policy Councils are entities that enable citizen and civil society participation in the governance of food through participatory processes.

for the study of emerging agri-food value chains (Braun et al., 2023), explanations of what a practice perspective might entail theoretically in the context of food governance change are limited. Explorations of practice are more readily available in relation to social practice theory and aspects such as everyday food consumption practices (e.g. Standal and Westskog, 2022). Research also explores aspects such as the disruption of COVID-19 and subsequent socio-materially bounded experimentation of food practices (Hoolohan et al., 2022) and social practices involved in transformation of urban food markets (Everts et al., 2021). Rather than social practice theory, I sought to employ a theoretical practice perspective that looked specifically at the emergence of new knowledge in practice in the context of complex SES. This aim therefore drew me to theory development in sustainability science grounded in contemporary pragmatist theories of practice (West et al., 2019).

For my approach, I appreciated the guidance of West et al. (2019) and their exploration of practice theory in relation to sustainability science, as well as the approach to governing for social-ecological resilience in practice outlined by Wagenaar and Wilkinson (2015). West et al. (2019:540), drawing on Behagel et al. (2017), helpfully map out the diverse family of practice theory approaches available across sociological, post-humanist and pragmatist traditions. I had made an initial attempt to employ practice theory in my master's thesis (Adamson, 2023) and also returned to my research from this time to assist with navigating the broad range of potential approaches.

West et al. (2019) seek to map out the dynamics of linking knowledge and action in transdisciplinary sustainability interventions to provide for the fact that the nature of this coupling is rarely linear, as it involves navigating complex and uncertain social-ecological situations. West et al. (2019) argue for a practice-based approach to analyse the knowledge-action relationship that is anchored in human experience in order to account for the non-linear, emergent and contingent nature in which knowledge and action are linked in such complex situations. In particular, West et al. (2019:539) draw on the tenets of Deliberative Policy Analysis for its ability to capture, for example, "action-oriented, interpretive account(s) of governance" in contrast to positivist policy analysis. They note that this approach and the pragmatic nature of Deliberative Policy Analysis as "...particularly well-suited for shedding light on attempts to "link knowledge and action" for sustainability" (West et al., 2019:540).

I draw on and extend West et al.'s (2019) reasoning concerning linking knowledge and action to the study of how practitioners make sense of emerging

food system governance configurations in practice. Knowledge about the functioning of food system governance is therefore understood to emerge from ongoing practical interventions and experiences. This approach has the potential to be more sensitive to the nuances of, for example, the enactment of policy in practice (Wagenaar and Wilkinson, 2015; La Grouw et al., 2024). This is important since an ideal of food system governance might be well-defined or conceptualised in research or policy, yet the precise pathways, steps, experiences and decisions needed to reach this ideal may largely be unknown. As outlined by West et al. (2019:542) referring to Cook and Brown (1999), “a practice perspective suggests that we live and operate in fields of intersecting (material and social; human and nonhuman) agencies, with which we actively engage – activity that is itself a kind of continual act of sense-making or “knowing””.

Paper II pursues a performative account of practice, in the sense used by Wagenaar and Wilkison (2015) in their exploration of how social-ecological resilience is enacted in practice in an urban governance context. Practice is understood as “the hundreds of different activities that everyday actors ... engage in over time to navigate, as well as they can, the everyday world of urban governance” (Wagenaar and Wilkinson, 2015:1266). In focusing on a performative perspective, rooted in pragmatism, emphasis is placed on knowledge as emerging from or as an artefact of practices.

As outlined in Paper II, the key focus for the study is the dynamic interactions between practitioners, biophysical and material elements and processes in practice. Following the language of Pickering (1995), as employed in Wagenaar and Wilkinson (2015), this involves exploring the ‘dialectic of resistance and accommodation’ and describing multi-agency interactions between different forms of agency in practice. As is illustrated in the two local change processes traced in Paper II, focus on thinking and acting with the elements of 1) local produce (i.e. the potato) and 2) local landscapes (i.e. Bio-district Sörmland) play a central part of the change work of practitioners. Overall, Paper II draws on practice theory to study the dynamics in which resilience capacities are enacted by food practitioners in the local change processes for building up food system governance and in turn also focuses on how public and private actors are collectively governing for resilience (i.e. governing with change). I provide further detail below regarding the way practice theory as described above is combined with resilience to study dynamics of and capacities for working with change for long-term sustainability in food systems.

2.4 Describing change with resilience theory

Social-ecological resilience is broadly described as a way to understand the ability of complex and adaptive systems at multiple scales to persist, adapt or transform in response to both expected and unexpected change and disturbances, to maintain identity and core functions (Folke et al., 2016). A broad range of research, including supply chain management, and environmental and social sciences, has sought to explore resilience in agri-food supply chains specifically (Smith et al., 2015; Stone and Rahimifard, 2018). Interestingly, frameworks and conceptualisations of resilience illustrate a general tendency to focus on resilience in terms of shorter-term responses to crisis that largely maintain the status quo (Béné, 2020; Arthur et al., 2022). This shorter-term focus often dominates discussions of resilience in relation to food systems over broader understandings of resilience that see it as the ability to embrace and work with change and disturbance, through for example, learning and experimentation and in turn making space for novelty and potential transformations (Folke et al., 2021; Haider and Cleaver, 2023).

What is clear in relation to the current crises of food systems is the need for comprehensive change and transformations (Juri et al., 2024), including significant, long-term change in the way food systems are governed (Patay et al., 2025). Therefore, Paper II draws on a co-evolutionary understanding of resilience, emphasising the co-constitutive and mutually reinforcing nature of social-ecological dynamics, relations and interactions across space and time (Davoudi et al., 2012; Folke et al., 2021; Haider et al., 2021). Transformation, rather than persistence or adaptation, is seen as central to long-term sustainability under a co-evolutionary framing of resilience (Folke et al., 2021). Further, viewing resilience in terms of co-evolutionary dynamics in practice, emerging from and in response to social-ecological entanglements and interactions, provides new openings for long-term sustainability (Haider and Cleaver, 2023).

Haider and Cleaver (2023) employ a co-evolutionary notion of resilience to explore agency and interweaving individual and collective capacities to persist (respond), adapt or transform practice when faced with disturbance or crises, to maintain core identity and functions. The dynamic concept of 'resilience capacities' provides a way to describe the capacities of practitioners to work with change in practice in the context of local and territorial food systems (ibid). From this perspective, resilience is about seeing and understanding change,

coping and responding to change, and in general being, working and becoming with change.

In Paper II, I explore the ways in which food practitioners work with processes of change through the enactment of resilience capacities. This conceptual framing adds further dimensions to on-the-ground accounts of building up food system governance in practice. In line with this, and as an umbrella concept for the paper, governing *for* resilience is defined as private and public actors supporting the agency of food practitioners to enact resilience capacities in practice.

3 Study context

The results of this thesis are grounded in empirical fieldwork in the agri-food context of Sweden with its Northern European climate, relatively short growing seasons and diverse regional agroecosystems due to shifting climatic conditions and soils along its elongated north-south orientation (Saifi and Drake, 2008). Generally speaking, the southern parts of Sweden are considered the most favourable for agriculture production (Swedish Food Agency, 2025). In fact, 52% of Sweden's primary agricultural output comes from the region of Skåne in the most southern part of Sweden and Västra Götaland in the southwest (ibid). A historical combination of environmental, socio-political and market factors and dynamics have led to a longstanding dominance of forestry in Sweden, which covers 68% of the Swedish land territory in contrast to agriculture at just 7% (Swedish Bureau of Statistics, 2022). Despite the current relatively small percentage of land used for agriculture in contrast to forestry, the sector has played a significant historical role in Sweden (Saifi and Drake, 2008).

The latter parts of the twentieth century unfolded as a “significant period of economic growth, modernisation and plenty” in Europe, and with this came the rapid expansion of global supply chains (Marsden et al., 2018:1301). Agriculture and food systems in Sweden rapidly evolved during this period, shaped by EU accession in 1995, a significant increase in import dependence, as well as broader trends of industrialisation (Horn et al., 2022). Nowadays, Sweden's population belongs to the 80% of the world's population that live in import dependent countries (ibid).

The above national trends are also apparent in the region of Sörmland (or what is known historically as the Sörmland landscape, see Figure 2) This region

reflects the boundaries of the newly established ‘Bio-district Sörmland’ and is also home to Södertälje Municipality. Both the Bio-district and Södertälje Municipality are two key entities in an empirical case study for this thesis, as described further in Chapter 4. The geographical area of the Sörmland landscape in south-eastern Sweden covers 21 municipalities, as well as two different counties, namely Sörmland County (black in Figure 1) and the southern part of Stockholm County (red in Figure 1).

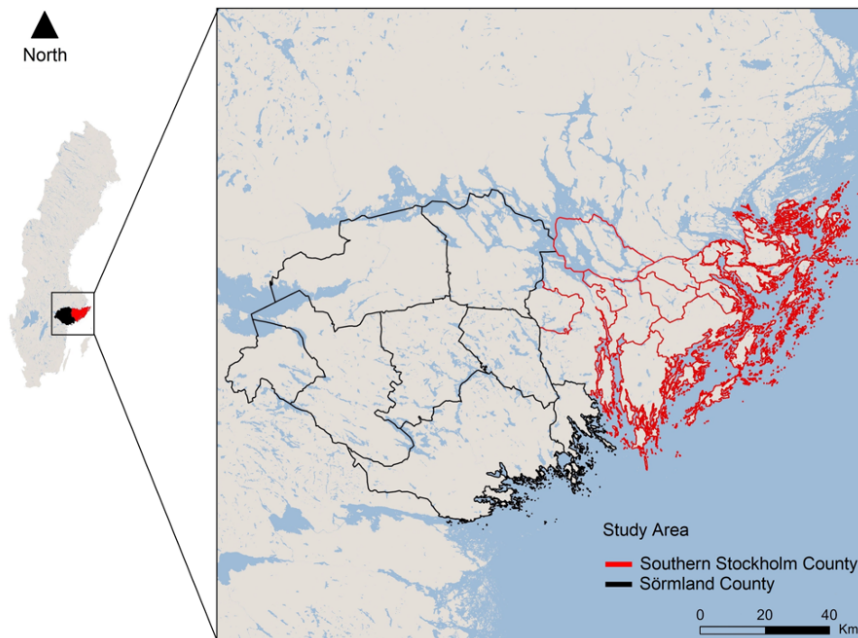


Figure 2: Map of Sörmland Landscape created based on the National Land Cover Data (NMD; Naturvårdsverket 2020), Karta Över Sveriges Kommuner (Statistics Sweden 2008; accessed in April 2025), and LstAB Länskarta Stockholms län (County Administrative Board N.D.; accessed in April 2025). Map from Paper I.

3.1 Food system governance in Sweden

The Swedish political governance system is classified as decentralised with governance on national, regional and municipal (local) levels and self-governing authority on the local level (Ehnert et al., 2018). As mentioned, Sweden is also a member of the EU and therefore implements laws and policies from the EU-level. At the regional level, Sweden is divided into 21 regions, which are responsible for governing a limited number of matters such as healthcare and

public transport. County Administrative Boards are government agencies that also operate at the regional level to independently implement government policies, including in relation to agriculture and primary production. At the local level, Sweden has just under 300 municipalities that are responsible for a broad range of areas, including but not limited to schools, elderly care, and land use and spatial planning. Importantly, Sweden's municipalities are also responsible for providing nutritious cost-free meals in schools and pre-schools, and in elderly care homes. Municipal budgets are primarily funded by municipal tax income, which is determined by each municipality individually and stands on average at 32% nationally (Statistics Sweden, 2024). Given the above factors, municipalities in Sweden are considered to hold a strong position to integrate local food governance and policy aims across diverse sectors (Andersson et al. 2025; Milestad et al., forthcoming).

From a systems perspective, there are a plethora of agri-food related sectors and activities that are relevant to the governance of food systems in Sweden. These sectors and activities, including for example agricultural and primary production, animal welfare, food nutrition and safety, food wholesale and retail, are traditionally governed independently of one another. Since Sweden's membership in the EU in 1995, a broad range of EU-level regulatory and policy instruments have shaped agri-food related activities in Sweden, including instruments such as the EU Common Agricultural Policy and later the EU Farm to Fork Strategy. More broadly, food-related activities, such as public procurement for public meals served in municipalities, as well as food health and safety, are also shaped by EU directives and regulations.

Since 2017, a Swedish National Food Strategy (**NFS**) has broadly characterised food system governance in Sweden (Swedish Government, 2017). An updated National Food Strategy 2.0 (**NFS 2.0**) was published in 2025 (Swedish Government, 2025). Food strategies also exist at the regional and municipal levels. The NFS 2.0 focusses on cross-sector collaboration between food-related industries and agencies, including the Swedish Food Agency and the Swedish Board of Agriculture, and maps out a long-term strategy for the sustainable development of the Swedish food system. The Swedish Growth Agency is responsible for coordination of diverse agencies and implementation of the NFS at both national and regional levels. The NFS 2.0 is also grounded in the Swedish National Environmental Objectives (Swedish Environmental Protection Agency, 2020) to ensure that domestic food production contributes to sustainable development in the country.

Since publication of the original NFS, food actors have navigated drought conditions in Sweden in 2018 and across Europe more broadly, the COVID-19 pandemic, as well as increasing levels of geopolitical conflict in Europe, including Russia's invasion of Ukraine. Increasing uncertainty in global markets and supply chains has also led to increasing inflation and prices for both food, as well as agricultural inputs (Swedish Government, 2025). As a result, agri-food governance in Sweden is in somewhat of a state of flux and rapid development at present alongside an accelerating civil crisis preparedness policy agenda in the country. This agenda is unfolding in parallel with an ongoing focus of sustainability, and new policy discourses and framings such as 'hållbar beredskap' (English translation: 'Sustainable Preparedness') in relation to food are emerging (Måsbäck et al., 2025).

Subsequently, publication of NFS 2.0 has been framed with a heightened focus on food security and strengthening domestic food production and self-sufficiency. The main umbrella objective for the NFS 2.0 is competitive supply chains and its three accompanying strategic areas are 1) increased robustness in food supply chains; 2) promotion of exports; and 3) Swedish quality and gastronomy. NFS 2.0 also proposes planned targets for production increases of different foods. These national changes also occur against a shifting agri-food policy landscape at the EU level (Mangnus and Candel, 2025).

NFS 2.0 outlines the importance, as well as some of the challenges, of coordinating the implementation of the strategy at the regional level (Swedish Government, 2025). The NFS 2.0 also notes the positive development of food strategies and action plans at the regional level that were developed following publication of the original NFS. Further, it also highlights the importance of coordination at the municipal level. This is due to, as mentioned above, the fact that municipalities have governing authority over a broad range of social, economic and environmental activities at the local level, including a monopoly on land use planning and responsibility for approvals for food handling activities. Public agencies such as municipalities are also a large consumer of food through public procurement for public meals.

Multi-level governance arrangements, such as those in Sweden, are considered favourable in meeting food system governance and policy aims (Edwards et al., 2024; Sonnino et al., 2019). It is therefore valuable to examine the multi-level governing context in Sweden in relation to both processes of re-localisation and re-territorialisation, as well as the emergence of integrated food system governance. While the current governance arrangements in Sweden are seen as

beneficial for ensuring nuanced and contextually relevant policymaking, challenges arise in ensuring effective coherence of food system governance across each of the local, regional, national and supranational (EU) levels. This is especially the case in relation to the need for more integrated or holistic approaches to food system governance across different industries and sectors (Patay et al., 2025). Lessons can therefore be learned from Sweden in the broader context of Europe and EU-level regulations and policymaking on food-related issues (Stein and Polychronakis, 2024).

4 Methods and methodology

4.1 Research approach

This Licentiate thesis has been developed in the context of a broader transdisciplinary project by the name of “Co-creating sustainable short food supply chains through cooperative business models and governance” (CO-SFSC). The CO-SFSC project involved ‘hubs’ of researchers and practice partners in Sweden, Germany, Turkey, Thailand and Taiwan. The focus for the Swedish hub in this context was governance and the potential role(s) of actors such as municipalities in improving the sustainability and resilience of local food system systems. The CO-SFSC project influenced the development of research for the Licentiate, and early experiences with practitioners influenced my choice to focus on practice in the different case studies in Sörmland.

Sustainability science involves solutions-oriented research focussing on place-based real world, and often so-called wicked problems, using inter- and transdisciplinary methodologies (von Wehrden et al., 2017). In line with this, my research approach was place-based, highly iterative and involving aspects of bricolage (i.e. patching together different methods and empirical materials (Ben-Asher, 2022)). This approach made it possible to be responsive to practical research needs and local contexts in early interactions with practice partners in Sörmland (Tracy, 2013).

Overall, my research approach followed an exploratory case study methodology and incorporated aspects of participatory action research and ethnographic methods (Baxter and Jack, 2009; Yin, 2009; Cornish et al., 2023). The research questions were explored empirically in case studies concerning municipal food supply systems (Papers I and II) and change processes for novel local and

territorial governance configurations (Paper II), which are bounded geographically within the region of Sörmland (Figure 3). Both local food systems and bio-districts have been conceptualised as systemic food governance frameworks by Arthur et al. (2022) and therefore provide valuable cases to reveal more about the phenomena of interest (i.e. building up of food system governance in practice) (Yin, 2009). Södertälje Municipality’s policymaking for food system sustainability and the establishment of Bio-district Sörmland are also considered pioneering in nature, and it is therefore of value to explore case studies in this region and connected initiatives (Sellberg et al., 2020). My involvement and observations in the case studies through broader transdisciplinary research and farming also allowed for observing the dynamic nature of practice in these food systems over time.

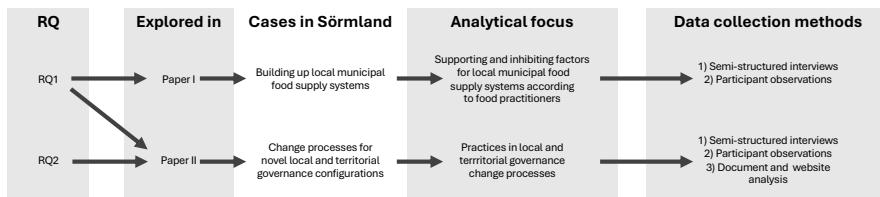


Figure 3: Visual overview of research approach and methods employed in the thesis for exploring and answering the research questions outlined in Chapter 1

My approach is also described in terms of participatory action research due to its open-ended, iterative and collaborative nature (in particular, in the context of Paper II), and the co-creation of knowledge and artefacts in tandem with efforts to bring about change (Cornish et al., 2023). This also accounts for my involvement as researcher and practitioner, which I discuss further at subsection 4.1.2 below. Part of increasing the transformational potential of sustainability science as a “solution-oriented endeavour” (Wiek et al., 2012:5) involves developing and engaging with more co-productive and collaborative processes for research between academia and practice. For example, engaging with co-production and co-learning processes with the founding and reference group members of Bio-district Sörmland allowed for engaging with both questions of research and practice in an embodied and relational way (West et al., 2020). In this context, I was able to go beyond descriptive analysis of sustainability issues by immersing myself in “...decision processes that are embedded in societal transition processes...” (Wiek et al., 2012:7) and collaboratively produce action-oriented knowledge and artefacts together with other food practitioners (Schlüter et al., 2022).

4.1.1 Methodological perspective

The current research is grounded in a broadly interpretivist paradigm due its focus on the way reality is interpreted and experienced by different groups in practice (Junjie and Yingxin, 2022). Within the specific cases, a focus on practice exists within an epistemological framing of food systems as complex adaptive SES. However, following West (2016:11), the SES concept is employed as a “productive boundary object” assisting in conceptualising food systems holistically in both research and practice (also see Stojanovic, 2016). For example, for the research and fieldwork in Paper I, the SES perspective provided a helpful way to organise, discuss and represent the empirical areas of interest for the study. Research on practice is framed as possessing a ‘flat ontology’ (e.g. Beunen et al., 2021). According to Beunen et al. (2021), a flat ontology brings attention to both the relational, emergent and contingent nature of governance. This ontology links in with a broader ontological shift towards relational thinking in sustainability science, which amongst other things focusses analysis on context-specific and continually unfolding processes and relations (West et al., 2020).

4.1.2 My role as researcher and practitioner

My experience with farming in Sörmland, and my ongoing relationships with the farming landscapes and people in the region have undeniably shaped my research approach. A simple example, in talking to local farmers about their efforts with organic potato production in the 2023 season, I had recent memories of the overwhelmingly wet nature of that season and the water that flooded many Sörmland fields, including ours at home. I also had less recent but strong memories from growing during drought in 2018. Or another example from a week in later October 2025, writing this cover essay, preparing input to the new Sörmland regional food strategy as a board member of Ekologiska Lantbrukarna in Sörmland (English translation: Organic Farmers Association), harvesting beautiful beetroots to our vegetable boxes and wondering why we do not celebrate (and eat) them more given the way they thrive in Sörmland clay soils. The various practical experiences I have as a farmer provided useful insights, and a degree of intuition, about where to look for the tensions and possibilities in studying practice and the need to account for diverse forms of agency in these contexts. I’ve also had opportunities for more structured autoethnographic reflections when engaging with resilience from a practice perspective in a project outside of the Licentiate (Adamson and Olsson, 2024).

In accounting for my role as practitioner, I was also inspired by agrarian-scholar-activist Tammi Jonas' (Jonas, 2024) commitment to following the notion of 'mêtis' as described by James C. Scott (1998) in the book *Seeing Like a State*, which describes a form of knowledge learned through practice and "a mode of reasoning most appropriate to complex material and social tasks where the uncertainties are so daunting that we must trust our (experienced) intuition and feel our way" (Scott, 1998:221 cited in Jonas, 2024). Due to my position, I was able to closely study this practice-based form of knowledge, which can highlight and enable local action and dynamic responses in constantly shifting and complex social-ecological contexts when used in combination with institutional and scientific forms of knowledge.

All of the entangled experiences in the research framed the way I saw situations more broadly, and how others saw my role in different contexts. This required that I remained reflexive about how my experiences as a practitioner shape my position and perspectives as a researcher, for myself as well as for others (Lazurko et al., 2025). Beyond reflexivity, however, I'm aware of the way my research is part of "creating or 'performing' the worlds we inhabit" and a "productive ontological intervention" (Gibson-Graham, 2008:614). Take, for example, the simple way in which the newly created map of the Bio-district in Paper I, and the guiding maps in Paper II, potentially contribute to the broader emergence of this territorial entity.

4.2 Data collection

The main methods for data collection involved semi-structured interviews, participant observations and document/website analysis in the context of the different cases (Table 1). Ethnographic methods, such as the semi-structured interviews and observations employed in the context of case studies in Sörmland, are seen as central to researching practice (Gherardi, 2019). Combining interviews with observations in diverse food-related settings also gave me a sense of the way in which topics that were discussed in meetings or workshops were practiced on the ground (Tracy, 2013; Beacham, 2018). In Paper II, I also used document and website analysis to explore and confirm data collected through other methods (Table 1, Yin, 2009; Tracy, 2013).

Table 1: Overview of different methods employed for Papers I and II

Methods	Paper I	Paper II	Further details
Semi-structured interviews (Leavy, 2020; Tracy, 2013)	N=17	N=12	Overlap of 8 interviewees Further details in Paper I and II supplementary materials
Participant observations (Guest et al., 2013)	Farm visits and apple harvest, municipal kitchen visits, wholesale visit and delivery run to municipal kitchens	Potato-game project workshops, meetings and activities (including delivery), Bio-district reference group meetings and related activities	Further details in Paper I, and Paper II supplementary materials
Document and website analysis (Bowen, 2009)		Number of documents and websites: approx. 30	Further details about types of documents in Paper II supplementary materials

4.2.1 Semi-structured interviews

The semi-structured interviews for both papers were flexible in structure to enable for a shared discussion of topics related to local food systems and the two main ongoing empirical cases concerning municipal public procurement from local farmers, including in the specific context of the potato-game project, as well as the development of the Bio-district at the landscape level (Leavy, 2020; Tracy, 2013). For Paper I, a number of interviews with both farming, kitchen and logistics practitioners were done in-person and also involved time spent in the interviewees' professional settings. I prioritised travelling to interview participants where practical in order to both reduce the formality of the interview and also gain insights into different professional settings relevant to the research. For Paper II, the semi-structured interview was instrumental in exploring and confirming data from observations and attendance at relevant meetings and events for the ongoing change processes, as well as to gain insights into the individual experiences of different professionals involved in these processes. Beyond collecting individual insights, interviews for both papers were important for gaining deeper understanding of the processes of knowledge production in practice as practitioners interact with and reflect on day-to-day situations (Leavy, 2020).

4.2.2 Observations

Participant observation is a qualitative, interactive and relatively unstructured method for data collection that allowed me to develop an understanding of important empirical aspects of the case studies that went beyond data available through activities such as interviews, and that were highly relevant to the practice focus of the studies in Papers I and II (Guest et al., 2013). In many instances with practitioners, this method was also central to minimising reactivity and the impact of my presence of the nature of data collected. My level of involvement in different events and processes differed over time. For example, in some meetings I focussed on passive notetaking and observing, yet on a visit to an apple farm for the study in Paper I, I assisted with apple harvest while in discussion with a farmer. During the Bio-district Sörmland reference group meetings, I was more involved in the discussions given my co-production role with founding members, as well as my broader involvement in farming in the region. I conducted ongoing notetaking during participant observations and analysed this data alongside other forms of data in order to build a more comprehensive picture of the processes and dynamics I was observing.

4.2.3 Document and website analysis

Document and website analysis was primarily used to further explore and confirm data from other methods in Paper II (Bowen, 2009). For example, policy documents, such as municipal or regional food strategies, were often mentioned in the context of observations in different workshops and meetings and I then noted these texts for further reading and analysis. Additionally, analysis of websites, such as the public websites of nationwide wholesalers, also provided information about the diverse material conditions of local/regional and national/international supply chains and ordering systems. Finally, I also analysed documents that were produced in the context of the change processes studied in Paper II, for example, a self-evaluation of the potato-game project that was completed by study participants, as well as the guiding maps that I was involved in co-producing for Bio-district reference group meetings.

4.3 Data analysis

Analysis of the interviews for Paper I was highly inductive, allowing for the experiences of the practitioners to come forward and be considered in relation to each other. Following initial coding in MaxQDA (VERBI software, 2024), I transferred the coded data segments to an Excel document and paraphrased the

statements of interviewees, condensing their meaning to enable further grouping and comparison (Leavy, 2020). I then grouped statements with shared or similar meaning within practitioner groups in order to gain a sense of the main perspectives on supporting and inhibiting factors for each group. These statements were then considered in relation to key empirical areas of interest (i.e. governance, municipal operations and logistics and processing). The method for analysis is further outlined in the supplementary materials of Paper I. For the paper, I used the Lucid application⁸ to visually represent the key statements regarding supporting and inhibiting factors for each practitioner group on the system diagram conceptualised for the study.

Paper II involved a more iterative and abductive process of analysis, initially in the aim of being open to surprise or to follow unexpected insights from the data. Iterative analysis of diverse forms of data over time led me to delve deeper into practice theory, and also draw on the notions of thinking with (Tsing, 2015) and acting with (Pickering, 2025) local produce and landscapes to frame the results in Paper II. Coding of the interviews involved mixed and exploratory methods, prioritising the experiences and processes in the empirical data, as well as patterns and interactions involving biophysical and material elements and processes (Saldaña, 2009). This approach enabled a form of emergent theorising in relation to practice and subsequent conceptual framing in relation to resilience capacities.

4.4 Reflections on research approach and limitations

The research approach employed gives rise to in-depth and contextual knowledge about practice in change processes for building up local and territorial food system governance in Sörmland, Sweden. Guidelines and frameworks provide for critical appraisal of qualitative research design, pointing to the importance of aspects such as coherence between research aims and questions, and case study selection and design, to enable readers to consider the credibility of the research (Tracy, 2013). My prior and ongoing involvement in the region as practitioner, and now also researcher, enabled nuanced consideration of these aspects. Collection of data using multiple entry points and methods is also important for ensuring reliability through confirmation and convergence of findings in case studies (Baxter and Jack, 2008). I have also had

⁸ <https://lucid.co>.

the opportunity to share findings regarding my research to the practice partners in the CO-SFSC project and received feedback that my role and analysis has been helpful and relevant (Tracy, 2013).

One limitation of the research is the partial application of participatory action research methodology, which I largely account to practical limitations in my current role as Licentiate candidate. I didn't have the capacity to engage with a participatory action research methodology to the extent I would have liked given the time and resources available. As I move into the second part of my PhD research, I think the research could be strengthened through, for example, further collaborative and co-production processes, including co-producing analysis in collaboration with practitioners in the context of a 'living lab'⁹ involving Bio-district Sörmland that I will be part of after the Licentiate.

Finally, studies focussing on practice have been criticised for being highly, or simply, descriptive (Gherardi, 2019). This has been a challenge of the practice perspective pursued in the current research; to tie the attention to detail on practices to the problem and solution-oriented aims of sustainable science more broadly (Lang et al., 2012). What is the value of such accounts, do they explain everything and nothing? The key value of the current research is its focus on practice as a way to understand patterns, connections and interactions between diverse forms of human, material and biophysical agency that are an integral part of evolution and change in non-linear SES. Such a perspective provides a sense of how it feels to work with change and transformation in food systems from the perspective of practitioners, which is often missing or marginalised in research concerning the need for transformation of food-related governance (Forney et al., 2025).

4.5 Ethics

I reviewed ethics and data management aspects of the research with support of my supervisor Rebecka Milestad. The KTH Research Support Office also reviewed and provided feedback on ethics documents and plans for the research. As I was not seeking to collect sensitive data as defined by the Ethical Review

⁹ The concept of a 'living lab' has numerous definitions but in the context of the current research involves collaboration and co-production between research and practice for innovation in real-world environments.

Act (2003:460), it was not deemed that a legally prescribed ethics review by the Swedish Ethics Review Authority was required for the research.

Participants in the research were provided with an information sheet and consent form, and informed consent was obtained from participants. I sought to provide information to participants, so they had at least one week to review documentation before consenting to participation in the research. This information sheet for the research also outlined how personal data and data collected during fieldwork was to be handled, including in relation to the EU General Data Protection Regulations. I conducted data collection in the context of participant observations in a way that provided for individual rights and interests given the practical difficulties of obtaining written informed consent at times in these contexts (Guest et al., 2013).

In Paper I, codes for individual participants and a general description of the organisations they work for are used to preserve the identities of the individuals and organisations. In Paper II, code names are also used for individual participants, and consent was provided for use of the municipality and civil society organisation names. Participants were also provided the opportunity to review and give feedback on quotes used in both papers.

4.5.1 Doing and theorising for sustainability science

It is possible to sense the hurry with which research for sustainability is being done, the problems are overwhelming and an urgency for action reigns. At times, I have questioned my focus on theorising and coupling theories from diverse disciplines to find ways to describe and engage with change in local and territorial food systems. However, I have also found it an important aspect of understanding how to do sustainability science ethically, and of developing an approach that can account for the complexity of issues, values, interests and desired outcomes across different spatial and temporal scales. The question of the value of theorising in sustainability science has been raised by others (e.g. Schlüter et al., 2022), pointing to the need for non-linear and relational way of linking knowledge and action for sustainability (West et al., 2019) and the possibility for “innovative ways of theorising where theories emerge from joint problem solving in transdisciplinary change making processes” (Schlüter et al. 2022:1). Drawing on West et al.’s (2019) theorising in relation to both being a part of and describing change in practice helped me to both conceptualise, and remain attentive to, the complexity of the situations I was observing and acting in during the research.

My involvement in farming and the continuous tension I feel between practising research and researching practice helps me to understand how theorising is a generative, relational and embodied act. However, I'm still finding my way along the road of theorising practice in food systems in a way that is sensitive to the complexity of doing sustainability science. I am also cognisant of the fact that many of the theories developed to overcome nature-society dualisms and account for diverse forms of agency to further sustainability research are the result of "...localized limitations of a certain knowledge tradition—a Euro-Western one" (Haider and Rieser, 2024:3, referring to Sunberg, 2014). I have benefitted from research exploring perspectives and approaches from areas such as de-colonial, Indigenous and feminist scholarship (e.g. Jonas 2024; Lécuyer et al. 2025), as well as West et al.'s (2024) guidance on "improving the art and practice of theorizing in the Anthropos in the Anthropocene¹⁰ [through] situating theory, practising theory and theorizing together". As I move into further processes of co-production in the transdisciplinary living lab after the Licentiate, I will continue to explore the ethical dimensions of doing and theorising for sustainability science.

¹⁰ The 'Anthropocene' is a broadly used concept in environmental sciences describing "...a new geological epoch characterized by the often-- destructive effects of human activities in the earth system..." (West et al. 2024:261 referring to Steffen et al. 2004).

5 Papers and results

This chapter outlines results in Papers I and II and then provides an overview of how the main findings contribute to answering the research questions framing this thesis.

5.1 Paper I

Title: Building up the middle of municipal food systems: understanding challenges for public food procurement from local and regional farmers in practice

Paper I focusses specifically on the case of municipal food supply and public procurement for public meals from local and regional farmers as a potential integrative measure for addressing interlinked and systemic challenges and crises both caused and faced by modern day food systems. I limit my focus to fruit and vegetable supply due to the low production of these foods in the study region. As outlined in the article, many theoretical expectations regarding public procurement are, to date, only achieved to a very limited degree in practice. In light of this, the study is grounded in a practice perspective and seeks to analyse the diverse experiences and perceptions of food practitioners engaging with local municipal food supply on a daily basis. The aim of the paper is to contribute with further scientific understanding of the different material (e.g. biophysical, resources and infrastructure) and non-material (e.g. values, governance and power relations) elements and processes that these practitioners interact with on a daily basis, and to enhance the understanding of how these elements and processes either support or inhibit local municipal food supply. In the paper, I also analyse how perceptions of these inhibiting and supporting factors vary

between these practitioner groups, and possible implications of these differences. The study reveals inhibiting and supporting factors affecting different practitioner groups and considers important governance conditions for local municipal food systems in light of these factors.

The study employs a systems perspective and defines the municipal food supply system for public procurement according to three empirical areas of interest for the study, namely, 1) governance, 2) local logistics, processing and storage, and 3) municipal operations. These areas of interest were identified and defined during early fieldwork and participant observations, as well as through numerous iterations of the focal system. The main results of Paper I are presented below.

Due to a diverse range of inhibiting factors and challenging material conditions, there is a broadly shared perception by all food practitioner groups that local municipal food supply is highly limited in practice. The different practitioner groups have varied perceptions regarding the key inhibiting factors, namely:

- Farming practitioners raised the challenges of producing fruit and vegetables according to organic/sustainable methods in the biophysical and economic conditions of the Sörmland landscape in a Northern European climate, and of producing large quantities of standardised produce to a relatively low price (compared to the prices received through direct sales to private customers or restaurants etc.). They also raised their concerns around uncertainty in dealing with municipalities and public procurement processes and arrangements.
- Wholesale and logistics practitioners were concerned with the low number of 1) local producers with capacity and willingness to produce fruit and vegetables to municipalities in the region and 2) locally adapted logistics and processing facilities, as well as delivery solutions. Practitioners in this group also raised concerns regarding the uncertainty of dealings with municipalities and the absence of longer-term contracting arrangements as inhibiting factors.
- Municipal kitchen practitioners were concerned with being able to obtain both delivery security and quality from the small number of local producers in the region. Further, this group raised concerns regarding workload demands where local produce required further management and processing compared to the produce ordered from large-scale nationwide wholesalers. A central concern for this group was balancing different and oftentimes conflicting policy aims regarding health,

sustainability, civil food preparedness and cost when planning menus and preparing meals, while also balancing the needs and preferences of end consumers, often with specific needs (e.g. children and elderly).

- Municipal meal & diet practitioners raised the challenges of identifying and entering into contractual relationships with the few local producers available in the region, as well as the additional administrative, communicative and management burdens of procuring produce locally. Key inhibiting factors were also EU and national public procurement laws and regulations, as well as food wholesale and retail market dynamics. Similar to kitchen practitioners, practitioners in this group also focussed on the material conditions in kitchens as an inhibiting factor for managing and processing local produce.

Despite the above inhibiting factors, the study identified key areas of alignment regarding supporting factors in the areas of 1) governance, 2) local logistics, processing and storage, and 3) municipal operations that can better enable municipal food supply from local and regional farmers. In relation to governance, all practitioner groups raised the value of municipalities working with local food production and supply from a holistic or system-level perspective, including through acknowledging the instrumental role of the municipality as a 'spider-in-the-web' that can work with a broad range of material and non-material conditions for local food systems, including land-use planning, food-related business development and activity approvals, as well civil crisis preparedness/food security and broader pedagogical aspects of local food production. Further, municipal food-related policies and strategies were seen as supporting factors for local food, including through increased integration of food policymaking across diverse areas falling within the scope of municipal governing authority.

In terms of local logistics and processing, two key supporting factors that were identified were 1) the presence of municipal-owned storage and logistics facilities and 2) the presence of local wholesale actors as an active component in bridge-building for relations between local farmers and municipalities. Finally, in relation to municipal operations, supporting factors related to a shift in public procurement practices from municipalities in order to increase the local adaptedness, as well as long-term sustainability, of arrangements with local and regional farmers. Increasing the proximity and mutual nature of relationships of farming and municipal practitioners was also seen as a key supporting factor for local supply to municipalities.

Paper I concludes with a discussion of how the above inhibiting and supporting factors could be either overcome, or harnessed, through building up the ‘missing middle’ of municipal food supply systems. The point of departure in Paper I is its focus on making space for governance processes that are suited to the multidimensional and dynamic conditions of local municipal food systems, rather than attempting to fit local food systems into the material conditions of current industrialised municipal food supply systems that deliver efficiency and standardisation through a high degree of consolidation and vertical integration. Reflexive and context-specific forms of governance, including platforms to facilitate local public procurement governance processes, are identified as important but missing factors. The absence of these forms of governance can be attributed, in part, to both current EU and national-level legal and regulatory conditions, as well as the market dynamics, dictating municipal public procurement practices.

5.2 Paper II

Title: Governing local food differently: studying change for food system governance through the lenses of practice and resilience

Paper II provides an exploration of experimental efforts to build up integrated food system governance at local and territorial levels. It responds to the lack of on-the-ground insights of what it means for a diverse range of food practitioners to exercise agency in navigating change as a part of shifts from linear or siloed, to holistic, forms of food system governance. In doing so, it couples a performative account of practice with theory on resilience capacities to capture the dynamic, emergent and contingent nature of food governance change. A performative account of practice, taking inspiration from the approach of Wagenaar and Wilkinson (2015), is valuable due to its focus on how practitioner knowledge about situations emerges from practical interventions in different environments and through engagement with diverse forms of agency (i.e. human, biophysical and infrastructural) in practice.

The findings of Paper II are drawn from a case study of two ongoing local change processes for the building up of food system governance within the same region as Paper I. In particular, the study traces two change processes concerning attempts by municipal practitioners together with other private and civil society actors to govern local municipal food differently. In the results of the Paper II, the findings are structured according to these two processes and the observation emerging from fieldwork that practitioners sought to think (Tsing 2015) and act

(Pickering, 2025) *with* the different material and biophysical aspects of 1) local produce and 2) local landscapes as part of working with and enabling change. The findings of the paper highlight the importance of food practitioners' individual and collective engagement with diverse forms of agency in the environments around them, and the way in which enacting resilience capacities emerges as a part of navigating the 'dialectic of resistance'¹¹ and accommodation' (Pickering 1995; Wagenaar and Wilkinson 2015) in multi-agency interactions in practice. The results provide an overview of different forms of resistance and accommodation, as well as more detailed descriptions of key aspects of these dynamics as part of the enactment of resilience capacities.

Paper II concludes with a discussion of two key insights regarding the practical and governing capacities important to the building up of food system governance. The insights, discussed in more detail in the paper, are that 1) *Thinking and acting with local produce and landscapes involves different food practitioners enacting capacities to persist with, adapt and transform their practices, to individually and collectively accommodate a) the multidimensional aspects, and b) the diverse agencies (e.g. biophysical, material), involved in food production and supply in local food systems. Resilience capacities are not static or possessed but emerge and evolve within practice;* and 2) *Governing for resilience involves supporting the agency of food practitioners to persist with, adapt and transform their practices as they seek to accommodate the diverse agencies of different elements and processes in the environments around them. Acknowledging the entanglement of human and non-human agencies in the context of food systems is therefore key to governing for resilience.* The paper ends with reflections on the value of capturing a performative account of practice in the context of change processes for building up food system governance.

5.3 Overview of results

To conclude this section, I provide a brief overview of how the key findings contribute to answering the research questions, namely:

¹¹ In contrast to widespread uses of the term resistance in rural sociology studies, including to describe where resistance to hegemony materializes in places of production (Van der Ploeg 2007), the use of resistance here pertains specifically to what practitioners' experience during their engagement with diverse forms of agency in the environments around them in practice.

- 1) *What are important material and non-material conditions for building up food system governance in local and territorial food systems in practice, according to food practitioners in these systems?*
- 2) *How are public and private actors, and food practitioners, working with change to build up food system governance in local and territorial food systems in practice?*

5.3.1 Research question 1

In Paper I, I identify the building up of the missing middle as key to establishing important non-material and material conditions for building up food system governance in local municipal food systems, including both non-material and material forms of infrastructure. In particular, practitioner experiences indicate that governance conditions need to support the opening up of new spaces to govern the missing middle that are specifically suited to local and territorial food systems.

As illustrated in both papers, municipal practice can support the opening up of these spaces by working across different temporal and spatial scales in practice in local and territorial food systems to reconfigure relations between different non-material and material elements and processes of food production, processing and supply, including for example:

- food policy strategies, documents and processes within meal/diet units and across different units of the municipality
- municipal-owned processing, storage and logistics
- public procurement practices (e.g. new internal strategy groups), including public procurement arrangements (i.e. longer term and innovative purchasing arrangements and subscriptions for produce, payment for additional services (e.g. pedagogic) etc.)
- statistics and monitoring data processes and practices
- professional roles and identities of practitioners working with food in the municipality
- relationships in the supply system, e.g. kitchen staff and local farmers co-planning crops.

Additionally, Paper II illustrates the emergence of the Bio-district, as an example of an entity and actor at the landscape level who can operate as part of the middle in local and territorial food systems. The existence of such a middle actor, depending on how it is formed, could become anchored in the non-material and material elements and processes unique to this middle “place” in

local and territorial food systems (e.g. logistics, infrastructure, policymaking, relations etc).

5.3.2 Research question 2

Paper II illustrates how public and private actors, and food practitioners, work with change through enacting resilience capacities and governing for resilience in practice in the context of two change processes for novel local and territorial governance configurations. Through engaging with processes of thinking and acting with 1) local produce and 2) local landscapes, public and private actors intervene at diverse temporal and spatial scales in local and territorial food systems simultaneously. This involves interventions at the scales of product, policy, markets (including labour market), landscape and more. The paper frames these interventions as a key component of governing for resilience, which supports the agency of different food practitioners to adapt, persist and potentially transform their practices to accommodate 1) the multidimensional aspects (i.e. added values), and 2) the entanglement of diverse agencies, in local and territorial food systems.

Resilience capacities are not static or possessed but emerge from practitioners doing things and their practical engagements and interventions in environments around them. Through the potato-game project and Bio-district Sörmland, public and private actors create and engage in inclusive and deliberative spaces and processes to support the enactment of resilience capacities and the broader emergence of integrated food system governance. These findings highlight the iterative and contingent nature of governance change processes in practice. Further, they highlight the importance of ensuring policy coherence between municipal, national and EU/international policies, strategies and regulations to ensure that the conditions for this type of practical engagement are supported.

6 Discussion

This thesis began with a description of the phenomena of re-localisation and re-territorialisation, seen as processes to combat some of the challenges and crises both facing and caused by globalised and industrialised forms of food production and consumption (Loodts et al., 2025). Both processes entail a move to reconnecting where and how food is grown, produced, processed and distributed, to where it is eaten. Governance is identified as a central leverage point for bringing about change and potential transformation in food systems, and plays a key role in processes of re-localisation and re-territorialisation. In particular, research points to the need for a move toward governing food from an integrated systems perspective for long-term food system sustainability. While this point is clear in research, how food system governance is achieved in practice is not. In Papers I and II, I therefore explore aspects of practice in relation to the building up of food system governance in local and territorial food systems. The findings in the thesis give rise to three main contributions on this topic, which I discuss further in sections 6.1-6.3 below.

6.1 The role of the middle for food system governance

As mentioned in the introductory sections of this thesis, the middle of local and territorial food systems is often described as missing (e.g. Morley et al., 2008). Beyond this, I would argue that what is also missing is coherent research and policy agendas involving theorising for, and holistic conceptualisations of, what a middle that supports important material and non-material conditions in local and territorial food systems looks like for those that work in it in practice. This includes uncovering how this component of local and territorial food systems can play an instrumental role in processes of re-localisation and re-

territorialisation and the building up of integrated food system governance at local and territorial scales. Marsden et al. (2018) recognise this, describing the need for new ‘civil regulatory assemblages’ and social and physical infrastructures of the middle. More recently, Jonas’ (2024) discussion of the middle in relation to the intrinsic infrastructure of agroecology provides a promising and emancipatory starting point that supports local food economies.

Below, I provide some further reflections on the topic of the social and physical infrastructures of the middle (Marsden et al., 2018).

1. Social and physical infrastructures for practice in the middle

Both papers illustrate the importance of understanding and working with the dynamic interactions between different forms of human, non-material and material agencies in food systems as a way to comprehend not only challenges, but also opportunities, for building up food system governance in practice. As outlined in Paper II, these interactions arise from what Pickering (1995) and later Wagenaar and Wilkinson (2015), describe as practitioners engaging with the ‘dialect of resistance and accommodation’, or the ‘dance of agency’ (Pickering, 2010).

Luoni et al. (2021:115) provide an interesting exploration of the missing middle in the context of the U.S., stressing that their account is part of “...a reflection on the public goods (food sovereignty, security and resilience) sacrificed with the disappearance of the middle market structure”. They point to the significance of this loss given that “[s]tructure is information; and reclamation of the intelligence, appropriate technologies, and resiliency lost to monopoly market structure is urgent since serious fault lines are appearing in the industrialised food complex...”. I would add practices and practical knowledge to Luoni et al.’s (2021) list of what needs preserving and/or reclaiming. Their vision involves food hub complexes as components of the middle to re-establish food and its production as a public good with multidimensional values (Luoni et al. 2021). The potentials of food hubs¹² are reported in food systems literature and not something explored within the scope of this thesis. However, entities such as food hubs and their related functions could be part of middle configurations that

¹² A ‘food hub’ can be defined in a number of ways according to its market orientation and overall aims. For example, according to Barham et al. (2012:4) it is “a business or organisation that actively manages the aggregation, distribution, and marketing of source-identified food products primarily from local and regional producers to strengthen their ability to satisfy wholesale, retail, and institutional demand”.

go beyond simply providing logistics and distributions solutions, and become the social and physical infrastructures that enable processes of re-localisation and re-territorialisation conducive with long-term food system sustainability.

2. The middle as instrumental for inclusive and deliberative processes of re-localisation and re-territorialisation

In Paper I, I uncover a high degree of uncertainty for food practitioners regarding which actors and practitioners should assume different types of risks and responsibilities associated with building up horizontal configurations for food production, logistics and processing in local municipal food systems. Further, both papers highlight certain challenges for municipalities to balance risks and responsibilities related to 1) short-term crisis preparedness, 2) broader sustainability aims, and 3) the socio-economic needs of local and territorial food systems. This in turn highlights the need to reflect critically on the role of state-led change for local and territorial food systems considering broader equity considerations (Luger et al., 2025). Food systems engaging a diverse range of public and private actors are also not always seen as the most viable or resource effective way to organise food production and supply and can also mask inequalities within local systems (Zerbian et al., 2022; López-García and Carrascosa-García, 2023; Zerbian et al. 2023).

The above issues point to the importance of social and collective movements involving actors outside of government agencies, that have the capacity to work with local government authorities in progressing the broader system-wide needs of local and territorial food systems. This is where middle actors of civil society organisations and entities, such as Bio-district Sörmland working at the landscape level, can have an important role to play. The existence of Bio-district Sörmland could ensure that both public and private efforts make space for novel governance configurations involving deliberative and inclusive processes for long-term food system change (Passaro and Randelli, 2022). The linking up of different local initiatives at different practical scales is also part of identifying what Zerbian et al. (2023:1) describe as “... the possible coexistence of different but symbiotic spaces for transition governance”.

The emergence of the Bio-district as a novel governance space potentially “fill[s] out gaps in the governance context” identified by Sonnino (2023:5). It can embody and overcome boundaries in and between private and public realms, and in turn potentially fill in missing middles in local and territorial food systems. Sonnino (2023:8) expresses that “[a]n investment in the material and social spaces that facilitate interactions between food system actors across

jurisdictions and set boundaries (e.g., wholesale markets, food hubs, large-scale urban and peri-urban agriculture schemes) could create more meaningful connections between food policies and the planning system, helping fragmented and small-scale initiatives ... to acquire a combined transformative potential”.

Finally, and instrumentally speaking, the Bio-district potentially plays a central role in building up food system governance at the local and territorial levels by defining and assisting with systemic sustainability metrics, assessments and monitoring (Sonnino et al., 2019). Data is often not disaggregated or defined at the local level, as shown in the lack of definition of ‘local’ in many municipal contexts in Paper I, to illustrate fully both the problems and also potential of working across local, territorial and national levels. Further, data is rarely linked across diverse policy areas, such as health and nutrition, agricultural productivity and food security (ibid). By working with sustainability at the local and territorial levels, an entity such as a bio-district could also highlight potential conflicts and trade-offs between sustainability and resilience across different temporal and spatial scales (Silva et al., 2022; Michel-Villareal, 2023), a challenge observed in the empirical contexts of both Papers I and II.

3. The need for not only horizontal, but also vertical, policy and governance interactions involving the middle

In the scope of this research and the CO-SFSC project, I have had the opportunity to study ongoing efforts for food system governance across temporal and spatial scales, including the local municipal supply chain in practice in Paper I, local produce and landscapes in Paper II, as well as integrated food policy implementation in Södertälje Municipality in Milestad et al. (forthcoming). The multi-level governance context with strong governing autonomy on the local level in Sweden provides favourable and context-adapted conditions for working with food system governance. However, the different cases examined had rather limited representation from both public and private actors at other governance and market scales, in line with findings by Sonnino et al. (2019).

There is an ongoing need for governance and policy arrangements that not only operate on the local governance scale but also enhance coherence across vertical scales, in order to address the missing elements and processes of local and territorial supply systems (Sonnino, 2023). Zerbian et al. (2024:1), in their study of “the potential role of multi-actor urban food governance spaces in developing more inclusive and territorialised knowledge-policy interfaces” similarly highlight the need to align local, national and transnational processes to

improve existing social and physical infrastructures in local and territorial food systems. Otherwise, there is a risk that systemic governance and policy mechanisms, such as public procurement, potentially lose their “integrative potential” (Sonnino et al., 2019:114).

A potential policy solution to support this could, for example, include the development and implementation of EU or national-level principles that support conditions for more hybrid, polycentric and networked configurations of governance and policymaking in the middle of food systems, involving public and private industry outside traditional governance realms. In situating this suggestion in the findings of this thesis, creating a policy mechanism grounded in resilience could facilitate governing for resilience and the creation of spaces for practitioners to exercise agency and enact resilience capacities in practice.

6.2 Exploring change for food system governance in practice

The second contribution of this thesis relates to its use of a practice perspective. Forney et al.’s (2025) book about everyday agri-environmental assemblages provides an exciting basis for describing what the use of practice theory has provided in the analysis of change and governance in the current research. Forney et al. (2025:4) use an assemblage perspective to study agri-environmental governance, asserting that “governance results from the encounter of diverse instruments and localised sets of daily and concrete interactions”. They stress “[a]n everyday perspective takes us beyond the bureaucratic and command-control approach to governance, by understanding that agency and power lie not within the (powerful) actors but distributed across human and non-human actors, as well as through their complex relations. In practice, this viewpoint enables us to comprehend the diverse ways governance is directed: top down, bottom up, sideways, and across sectors” (Forney et al., 2025:9). Studying change therefore involves exploring small, yet consequential, everyday interactions in practice to “anticipate whatever path a transformation would take us onto, and ... detect less obvious and smaller forms of stability which drive transformation (Forney et al., 2025:95; Rao et al., 2024).

Similarly, focussing on practice in this thesis enabled me to describe the way food-related governance feeds into and plays out in everyday interactions between diverse forms of agency on farms, in municipal kitchens and offices, along delivery routes and in processing facilities, and more. Examining the dynamics of resistance and accommodation in change processes provided an alternative starting point for understanding the building up of food system

governance. From this perspective, it is possible to focus more intensely on some of the stubborn issues plaguing the building up of holistic and systemic forms of food governance in practice, namely, “an enduring disconnection between the main steps in the food production; the lack of new knowledge creation among the actors involved in the reality of agri-environmental practices; and the lack of autonomy in a very controlled food system” (Forney, 2016:2 cited in Forney et al., 2025).

Finally, a practice theoretical framing provided a way to explore how knowledge, including knowledge about food system governance, emerges as an artefact of practice. West et al.’s (2019:536) exploration of practice theory provided helpful guidance for how I could explore the change processes in Paper II in a way that acknowledges practitioners need to find “workable solutions to situations of dynamic complexity that are fundamentally open-ended and unpredictable”. Delving into this complexity is an important way to diminish the gap between the research and practice of food system governance. As further support to exploring this complexity, a focus on resilience capacities and governing for resilience is helpful to describe necessary conditions for actors and practitioners working with change and potential transformations.

6.3 Resilience capacities and governing for resilience

In Paper II, the change processes involving the potato-game project and Biodistrict Sörmland illustrate the intensive and innovative role municipal policy and practice can play in building up food system governance in practice. These processes also illustrate the demand on diverse capacities of public and private actors, and food practitioners, to execute these food system aims. Paper I similarly illustrates the need for municipalities to engage holistically in processes with local producers and other food actors and practitioners as supporting factors for the building up of local municipal food systems (Ehgartner et al., 2025). By thinking and acting with 1) local produce and 2) local landscapes, municipal policy and practice can (and needs to) intervene at different temporal and spatial scales simultaneously, involving the scales of product, policy, markets (e.g. labour market), landscapes and more. Working across these diverse fields or scales in practice is a key component of municipalities governing for resilience.

Key to public and private governing for resilience is acknowledging the entanglement of diverse human, biophysical and material/non-material agencies in working with local produce and landscapes. In this way,

“organisations can spur the recognition of the agential capacities of matter that within the history of Western thought otherwise have little [recognition]” (Beacham, 2018:536; Roe and Buser, 2016). An important example of this arises from the realised need in the potato-game project to pay attention to different biophysical and material conditions of local food production and how these conditions influence the relations between different food practitioners, including the shifting focus for these relations over time. Importantly, this aspect of the potato-game project highlights that resilience is not just about food security through shorter-term increases in domestic food production in Sweden, but broader and more comprehensive change and potential transformations for long-term sustainability in local and territorial food systems (Smith et al., 2015).

Further, the role of actors such as municipalities can be, as also shown by the potato-game project in Paper II, to uncover the connections and interactions between diverse material and non-material elements and processes of the food system for different actors. Sonnino et al. (2019) point out that there is often a missed opportunity for policy integration given food actors do not have a full understanding of the interactions in the system (biophysical, human, infrastructural etc.). In contrast, Södertälje Municipality is an example of a local governing authority that has been able to develop these capacities through ongoing engagement with food system issues over a significant period. One contemporary example is the municipality’s efforts with the pilot project for a Farming and Food Arena¹³ and working with the systemic needs for local agriculture and society in relation to the labour market and conditions.

Finally, the use of resilience capacities and governing for resilience to explore and describe processes of change brings to light important tensions in relation to resilience, and resilience thinking more broadly. Firstly, it highlights the tension of institutions and governance systems needing to ensure a “productive balance” between bureaucratic control and stability on one hand, and flexibility and experimentation on the other (Beunen et al., 2017:10; Forney et al., 2025). Further, it highlights the tension regarding the transformative potential of resilience as a concept as it evolves in parallel to the advent of New Public Management and ongoing “neoliberal economic rationalities permeating public administration, policy, and governance” (Olsson, 2020:102). Olsson (2020) points to the importance of maintaining modes of resilience thinking in tension

¹³ The Farming and Food Arena is part of a pilot project in Södertälje Municipality, discussed in Paper II.

with neoliberal rationalities that emerge from practice as key to the transformative potential of the concept. The use of resilience in this thesis from a co-evolutionary perspective and focusing on the exercise of agency contributes to this imperative (Haider and Cleaver, 2023; Beunen et al., 2017). It does so by providing a way to describe governance conditions for the long-term sustainability of local and territorial food systems, which importantly emerge from practice.

6.4 Reflections on future research

This Licentiate thesis constitutes the first stage of research for a PhD project that will continue with connections to the landscape of Sörmland and to actors and practitioners working in local and territorial food systems in this region. As the research will continue in the context of a territorial agroecological living lab, there are numerous pathways to be explored in relation to co-production, as well as performative and action-oriented sustainability research aimed at bringing about change.

The thesis provides an alternative perspective on food system governance, which is currently predominantly researched and conceptualised from a top-down perspective (Janin et al., 2023). This alternative perspective accounts for diverse practical realities and material and non-material conditions of these realities in the middle of local and territorial food systems. Holistic conceptualisations of the middle that account for practical realities through interdisciplinary and transdisciplinary theorising could provide avenues for bridging policy on food system governance and stakeholder agency (a need highlighted by van Bers et al., 2019). Further research about how national and transnational policy, regulatory and market conditions can support the middle as an instrumental place for the emergence of food system governance in local and territorial food systems could also be further explored. Research in this area would also contribute knowledge about the potential institutionalisation of innovative local and territorial food system governance frameworks (Lamine et al., 2019).

The current research also points to the value of exploring alternative framings of food system governance configurations linked to practice, such as the assemblage framing presented by Forney et al. (2025). I will continue to explore the evolution of food system governance in the context of re-localisation and re-territorialisation processes by drawing on the notion of assemblages, and assemblage theory (e.g. Briassoulis, 2019). I have noted a growing interest in

studying and analysing change processes (including (re)-territorialisation) in food systems in this way (e.g. Loodts et al., 2025).

The linking of practice theory to sustainability studies, and social-ecological resilience in particular, are also areas to be explored further. Describing change in practice using resilience was motivated by an intention to capture the iterative and contingent nature of change processes for building up food system governance, including the entangled contexts in which practitioners exercise agency and enact capacities for resilience and actors govern for resilience. There is further scope for developing the connections between these different areas of theory, which have a role to play in ensuring that conceptualisations and uses of resilience theory and thinking remain transformative in nature (Olsson, 2020). This in turn could helpfully shape policymaking for resilience across local, national and transnational scales, and improve conditions for working with and governing for change in food systems. This work could also assist in moving discussions of problems and solutions beyond archetypal dichotomies regarding types or scales of food systems. Instead, focus may be placed on the relational and dynamic conditions that enable long-term food system sustainability.

Finally, I would like to explore the role of discourse in shaping material realities in practice. Or, in the words of Orlikowski and Scott (2015), exploring “the effect of the discursive on the material and material on the discursive”. Paying further attention to discourse could also provide new avenues for better understanding dynamics of power in food systems. For example, one question that has remained with me through the Licentiate is how dominant emerging discourses concerning civil crisis preparedness in Sweden are performing to shape the material realities for practitioners in local food systems.

7 Conclusions

This Licentiate thesis illustrates how top-down governance and policy developments interact with on-the-ground realities in practice. Research must cater for this fact through suitable theoretical and conceptual perspectives to understand how aspirations in research and policy regarding integrated forms of food system governance are often experienced as hinders and opportunities in the hands of food practitioners. This involves providing for the iterative and contingent nature of change processes, and acknowledging that they are key to the sense-making and creation of knowledge that allows food practitioners, and public and private food actors, to understand what constitutes or makes food system governance viable or even possible. It's hard to believe that aims for food system governance pursued through system-level policy instruments, such as public procurement for public meals in schools, might fall short due to infrastructural hinders, soil on a potato, the size of trucks, the number of deliveries, or the method of delivery and handling. However, as experienced in the empirical contexts in this thesis, interactions involving these elements and processes play a crucial role, often overlooked in top-down systems or policy analyses. Focusing on practice illustrates how interactions and dynamics arising from the non-material and material conditions in local and territorial food systems influence broader food system governance aims. Aspirations or ideals for food system governance, while appealing on paper, will fall short if research and policy does not provide for their practical and on-the-ground implications.

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Appended papers