



## **What Kind of Space? Multi-stakeholder Initiatives and the Protection of Land Rights**

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**Abstract.** Private and voluntary standards are forms of transnational regulation that have grown in importance over the past two decades. In the realm of sustainability standards, multi-stakeholder initiatives have become the most prevalent form because of their supposed virtues of inclusiveness and participation. Social NGOs actively participate in drawing up these sustainability standards, introducing a rights-based approach and urging companies to engage with local communities as rights holders. Yet, what changes come about ‘on the ground’? This article explores this question through an analysis of the Roundtable on Sustainable Palm Oil (RSPO) and its impacts on land tenure conflicts. Drawing on case studies of negotiation processes in Indonesian villages, observation of RSPO international conferences and interviews with key stakeholders, this article highlights the tensions between a rights-based approach and the search for conflict resolution. Informed by pragmatic sociology, it argues that negotiation processes triggered by the RSPO imply the translation of rights and personal attachments into options that are mutually beneficial to companies and local communities. Shared interests, however, may only fall under the domain of economic interests, the main drivers of company policies. As a result, the potential outcomes of negotiations fall short of the local actors’ expectations and claims; thus subjecting RSPO to heavy criticism for not delivering on its promises to protect land rights.

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## Introduction

'We asked about RSPO. They said it opens space... Like what?... What kind of space? For whom?... And real proofs that RSPO is in action? In defending which side?' (Villager of Central Kalimantan, Indonesia).

These questions raised by an Indonesian villager who lost access to his land as a result of oil palm plantation expansion are directed at a transnational voluntary standard called the Roundtable on Sustainable Palm Oil (RSPO). National and international civil society organizations have increasingly used such sustainability standards to address the impacts of large-scale investments in land, more recently referred to as 'land grabbing' (Borras et al., 2011; Sassen, 2013). Typically, they called upon national judiciaries and legislatures to enforce or change national laws (Fortin and Richardson, 2013). These processes, however, are slow and paved with numerous obstacles. Furthermore, it has been pointed out that national governments play an important role in facilitating land grabbing as they create the conditions to attract national and foreign investors whose activities depend on large-scale land acquisitions. Without necessarily abandoning such efforts of national reforms, advocacy networks have therefore explored alternative ways to resolve conflicts and protect land rights of local communities (Fortin and Richardson, 2013). Private voluntary standards, which have become an important form of transnational regulation since the end of the twentieth century, figure as one of the ways through which changes are sought.

Thus, faced with what they consider as a failure of governments to address the social and environmental problems of globalization, some NGOs have encouraged companies to participate in private multi-stakeholder roundtables to set sustainability standards and monitor compliance to these standards through third-party certification (Hatanaka et al., 2005; Fuchs et al., 2009; Cheyns and Riisgaard, 2014). Over time, the 'voluntary' nature of these initiatives has become more relative since states and regional institutions increasingly promote and occasionally require adherence to such certification schemes as a condition to access their markets. Thus, there may be overlap between public and private standards (Bain et al., 2013). For example, the European Union has formally integrated them into its Renewable Energy Directive (RED; Directive 2009/28/EC of the European Parliament and of the Council, OJ L 140, 5 June 2009, pp. 16–62) in order to ensure that biofuels are produced in a sustainable manner (Fortin and Richardson, 2013). Given their growing significance, it is crucial to understand to what extent sustainability standards actually alter practices on the ground.

This article focuses on the RSPO, which was the first of a series of roundtables that have developed in the 2000s for a single commodity (the Round Table on Responsible Soy, the Better Sugar Cane Initiative, the Better Cotton Initiative) or else for a group of commodities (the Roundtable on Sustainable Biofuels) (Ponte and Cheyns, 2013). The RSPO was formally created in 2004 under the Swiss civil code. From that moment on, the stakeholders involved worked on a common definition of sustainable palm oil. They defined seven principles covering the economic, environmental and social dimensions of sustainable development. These principles were then split into a series of criteria, indicators and guidance. After a two-year pilot implementation, the Principles and Criteria were approved by the Executive Board and adopted by the RSPO General Assembly in November 2007. The first shipment of certified palm oil arrived in Europe at the end of 2008. By 2012, 38 companies had obtained

the RSPO certification. Most of them are based in Indonesia and Malaysia as these two countries represent 80% of the world production. Nevertheless, certificates have also been granted to companies from other countries such as Brazil, Cambodia, Colombia, Ivory Coast, Papua New Guinea and Solomon Islands. Overall, 20% of the world's palm oil production is now certified (RSPO, 2015).

Representation in the RSPO is channelled through a number of stakeholder categories, with each of them given two seats on the Executive Board.<sup>1</sup> Four categories have been defined to represent the actors of the supply chain: producers, palm oil processors, manufacturers and retailers. In addition, banks and investors constitute another category as their role is considered as significant in the palm oil industry. Finally, two categories were created for the so-called environmental and social NGOs. On the environmental side, the World Wide Fund for Nature (WWF) plays a leading role. WWF's objective is to fight against forest conversion or, more precisely, the conversion of high conservation value areas. On the social side, we find a number of international and national NGOs that have pushed for a social agenda within the RSPO by drawing attention to the situations of palm oil smallholders, plantation workers and indigenous communities.

These social NGOs introduced a rights-based approach into the RSPO. Regarding land tenure conflicts, this approach implied promoting the recognition of principles recognized in international human rights law such as the protection of customary rights of indigenous peoples and the right to free, prior and informed consent (FPIC). They urged companies to engage with local communities as rights holders and to initiate conflict resolution processes. In practice, they effectively managed to force a number of RSPO member companies to make room for discussion and negotiation with local villagers. Yet it remains an open question 'what kind of space' was thus created, as strikingly expressed by the villager quoted above. What does conflict resolution mean in practice? Informed by pragmatic sociology, this article explores the effects of the 'win-win' discourse characterizing multi-stakeholder initiatives such as the RSPO. It argues that negotiation processes triggered by the RSPO imply the translation of rights and personal attachments into options that are mutually beneficial. As a result, they fall short of local actors expectations and claims; thus leading to numerous cases of deadlock in the negotiation processes.

These issues have been explored through fieldwork in Indonesia, the world's largest producer of palm oil. As a result of increasing world demand in vegetable oils, the expansion of oil palm plantations has been particularly rapid during the last decades. Since the end of the 1990s, new plantations have grown on an average of 500 000 hectares per year. Currently, oil palm plantations cover more than nine million hectares of the Indonesian territory (Direktorat Jenderal Perkebunan, 2014) and this figure is likely to double by 2020 (McCarthy, 2008). The promotion of biofuels and the expanding vegetable oils market in countries such as India and China play a significant role in this trend. At the local level, this situation has resulted in many villagers being excluded from their lands. Conflicts are thus a common feature of oil palm expansion. In 2011, the Indonesian NGO Sawit Watch counted some 664 unresolved land disputes between companies and local communities (*Jakarta Post*, 2011).

The article is organized as follows. Section 1 lays out theoretical perspectives that are useful in exploring impacts 'on the ground' of sustainability standards and presents in more detail the analytical perspective of 'grammars of commonality in the plural' (Thévenot, 2014b), which will prove particularly relevant to capture issues at stake in land conflicts. Section 2 then describes the RSPO with a focus on land rights

and conflict resolution. Finally, the last section goes down to the micro level of negotiation processes between villagers and subsidiaries of RSPO member companies. This level of analysis thus makes it possible to take into account the personal lives that might (or might not) be affected by such initiatives.

### Exploring the Impact 'on the Ground' of Sustainability Standards

The end of the twentieth century witnessed the development of private and voluntary standards as well as new institutions responsible for enforcing them. Increasingly assuming a role that was traditionally filled by governmental agencies, third-party certification emerged as a prominent regulatory mechanism (Hatanaka et al., 2005). Third-party certifiers are typically defined as 'independent organizations with the expertise to provide assessment and verification of the company's compliance with standard' (Tanner, 2000, p. 415). In order to fulfil such role, third-party certifiers must themselves be accredited by relevant organizations. Indeed, accreditation has emerged progressively as a mechanism to standardize third-party certification, thus participating in the emergence of a 'tripartite standard regime', a regime that includes standard setting organizations, certifying organizations and accreditation bodies (Loconto and Busch, 2010).

This complex architecture is intended to guarantee the independence and objectivity of the whole process, thus enhancing sustainability since producers would change their social and environmental practices to pass the audit and obtain the certificate. Yet, this depiction of linear implementation does not reflect the actual effects of standards as they touch the ground. Global standards collide with specific 'local realities' where diverse actors such as firms, farmers, public institutions or NGOs translate and negotiate their content (Ouma, 2010). Thus, certification should be seen as embedded in complex legal, political and social contexts (Bartley, 2010). It does not 'operate in a de-politized level playing field' (Ponte, 2008, p. 168) but is shaped by power dynamics and the political-economic interests of various actors (Selfa et al., 2014).

Although studies on voluntary standards and certification have initially focused on standard-setting processes (Bartley, 2010), a growing number of scholars have progressively undertaken to explore issues of implementation and impacts on the ground (for a literature review in the forestry sector, see Graeme et al., 2008). In this endeavour, some analytical perspectives are particularly fruitful. Within political economy much attention has been paid to the outcomes of certification in development countries, with a specific focus on weaker players and inclusion-exclusion dynamics within the supply chain (Ponte and Cheyens, 2013). For instance, it was shown that certification generally marginalizes small-scale producers because of their lack of managerial resources and access to networks (see, inter alia, Ponte, 2008). Other analytical approaches valuable for understanding the dynamics of implementation fall under the range of 'practice-oriented' perspectives. Through the lenses of 'assemblage' or '*dispositif*', some scholars have highlighted the heterogeneous processes that arise when a diversity of actors use standards pragmatically, thus arguing that standards govern at a distance not so much by being implemented as rules but by facilitating the emergence of specific '*agencements*' (Loconto, 2014b) and being appropriated and strategically used by multiple actors (Köhne, 2014; Silva-Castañeda and Trussart, forthcoming). Science and technology studies constitute an important source of inspiration for analysing the practice of certification through

its epistemological and ontological dimensions. From this perspective, the development and enforcement of standards partly depend on the extent to which interests of plural actors are translated and enrolled in a third-party certification process, with more recent contributions emphasizing that differences and conflicts between actors are not just epistemological (related to the meaning of standards) but also ontological (pointing to different realities) (Konefal and Hatanaka, 2011; see also Van der Kamp, 2013; Loconto, 2014a). Finally, the so-called ‘pragmatic sociology’ (also known as convention theory) is particularly useful for exploring the normative dimension of standards by highlighting how plural forms of legitimacy (Boltanski and Thévenot, 1991), are unevenly recognized in standard setting and implementation (Ouma, 2010; Silva-Castañeda, 2014). Within this sociology, later developments around ‘regimes of engagement’ (Thévenot, 2006) and related ‘grammars of commonality in the plural’ (Thévenot, 2014b) have contributed to refine our understanding of inclusion–exclusion dynamics within these multi-stakeholder arenas (Cheyns, 2011; Silva-Castañeda, 2012; Cheyns and Riisgaard, 2014).

This article contributes to this emerging literature by analysing to what extent sustainability standards are effective instruments for securing land rights, a dimension on which only few studies are as yet available (Fortin and Richardson, 2013; Köhne, 2014; Selfa et al., 2014). To this end, it relies on a theoretical framework recently developed by Thévenot to account for different arrangements, or ‘grammars’, of commonality in the plural (Blokker, 2011; Thévenot, 2014b). Before entering into the description of this framework, some explanation on previous works is needed.

Thévenot is one of the founders of the ‘convention theory’. In their seminal book *On Justification: Economies of Worth*, Boltanski and Thévenot (1991) identify a number of ‘orders of worth’ to which actors refer when they aim to justify themselves in the public space. There are six such orders of worth: industrial, market, domestic, civic, fame and inspiration. These orders constitute different modes of legitimate evaluation, each of them oriented towards a particular view of common good. The industrial order of worth, for instance, evaluates according to the principles of technical efficiency and reliability. In the domestic convention, tradition and trust are deemed to be legitimate justifications. Evaluations in the market order of worth look at price, and the civic order views worth in terms of general societal benefits, justice and equity. To this horizontal plurality of forms of legitimacy, Thévenot later added a vertical plurality of ways in which humans relate to the world around them. He coined them ‘regimes of engagement’ (Blokker, 2011; Thévenot, 2014b). Thus, in addition to the first regime, developed with Boltanski, that refers specifically to situations of dispute and justification in the public sphere (Boltanski and Thévenot, 1991), he defined more local regimes of engagement: the regime of planned action and the regime of familiarity (Thévenot, 2001, 2007).

Building on these analytical categories, Thévenot developed the notion of ‘grammars of commonality in the plural’ (Thévenot, 2014b) in order to highlight the plural ways in which people create commonality and deal with differences. This framework is particularly useful to analyse sustainability standards since they are shaped and implemented by heterogeneous actors. How can diverse concerns be taken into account? How can a composite community be maintained? Which kinds of difference are integrated? There are two basic operations for the creation of commonality: communicating and composing. The first operation relates to the transformation process required to share a concern with others. The second refers to arranging the dissimilar voices to form a common world. Thus, based on these two operations, Thévenot

defines three 'grammars'. In the 'grammar of plural orders of worth', communicating means connecting one's concern to a specific worth, thus linking personal attachments or interests with a broader vision of common good. Since orders of worth differ fundamentally in the way they envision common good, composing entails a controversial process. Yet, agreements can be reached in the form of compromises. By contrast, the 'liberal grammar' implies that the composition comes about through negotiation, the objective being to find a balance of interests. To this end, the concern has to be communicated as a choice for options, thus framed as interests or opinions. Finally, the 'grammar of common affinities' implies modes of communicating that do not require a detachment from personal attachments, unlike the two previous grammars. In that sense, it is more hospitable to intimate and familiar ways of relating to the environment (the regime of familiarity). Deep concerns, feelings and attachments are directly invested in common places, an emotional arousal indicating that the communication has been fulfilled (Thévenot, 2014a). Taken together, these grammars will prove very useful for uncovering the complexity of land conflicts and the related obstacles to conflict resolution.

## Methods

The empirical analysis is based on both field research in Indonesia and desk research for the follow-up study. Between 2008 and 2010, fieldwork in Indonesia included: observation of three RSPO international conferences in Bali, Kuala Lumpur, and Jakarta; semi-structured interviews with RSPO stakeholders and critics; and case studies at the local level. Overall, 52 actors were interviewed, including: representatives of companies that are members of RSPO; villagers in conflict with their subsidiaries; civil society organizations (local, national, and international NGOs, peasants and indigenous movements); representatives of the RSPO Executive Board and General Secretariat; auditors of certification bodies; consultants; the deputy chairman of the Indonesian Commission on Human Rights; and other specialists of the land tenure issue in Indonesia.

In order to investigate impacts on the ground, I chose three RSPO member companies and travelled to the provinces of Riau (Sumatra) and Central Kalimantan (Borneo) to interview villagers and representatives of local NGOs in conflict with their recently certified subsidiaries. These companies were: PT Musim Mas, an Indonesian company that is a major player in the vegetable oil refining industries in Indonesia; Wilmar International Ltd, the world largest processor and trader of palm oil; and United Plantation Bhd, a major Malaysian plantation group that obtained the first RSPO certificate. The villagers interviewed had sent complaint letters to the RSPO stating that the behaviour of their subsidiaries was in breach with RSPO Principles and Criteria. Among the issues raised by villagers, land tenure conflicts were explored in more depth, particularly in the province of Central Kalimantan. Compared to Riau where oil palm plantation expansion was particularly strong between 1991 and 1997 (Casson, 1999), Central Kalimantan is a more recent area of expansion. Given that palm oil companies arrived around 2003 (Potter, 2008), land conflicts were still a major issue when I visited the area; unlike in Riau where the villagers' claims were more focused on water pollution, lack of employment opportunities and legal recognition of their enclaves rather than land restitution.

This study called for significant documentary work. In addition to reviewing reports from NGOs, companies and certification bodies, I analysed the documents

specifically related to land conflicts: letters written by villagers to the companies, district heads and NGOs; responses to these letters; press releases; land certificates; maps; permits; meeting minutes; and documents describing the mechanisms of dispute settlement. For the follow-up study, documentary analysis was based on the RSPO website for data and statistics on land conflicts and on reports of various organizations, some of them relating to the same case studies as those presented in this article.

### **The Roundtable on Sustainable Palm Oil, Land Rights and Conflict Resolution**

From 2002 onwards, WWF and the multinational company Unilever assembled key players of the palm oil sector in order to initiate a roundtable on sustainable palm oil. These actors defined the key characteristics of the roundtable and officially established it in 2004. As a result of this initial balance of interests, environmental concerns dominated the RSPO agenda when Oxfam Novib and the Indonesian NGO Sawit Watch joined the Executive Board (Pesqueira and Glasbergen, 2013; Silva-Castañeda and Trussart, 2015). In order to advance their social agenda, these NGOs built on internal alliances with insider NGOs like Forest Peoples Programme, Both ENDS, Solidaridad, and Pesticide Action Network. Playing on an insider-outside dynamic, they also took advantage of external pressures from NGOs that oppose the RSPO, such as Greenpeace and Friends of the Earth. In that way they managed to bring social impacts of oil palm production to the fore, thus drawing particular attention to the situations of indigenous communities, smallholders and plantation workers. Most importantly, they advocated for a rights-based approach: introducing a language of rights into the standard and encouraging companies to engage in dialogue with local communities as rights holders (Chao et al., 2012).

These NGOs played an active role in drafting the Principles and Criteria of RSPO. In relation to the land issue, two aspects were considered as key. First, they demanded the recognition of customary rights given that they see the lack of such recognition as the root of many land disputes in palm oil producing countries. It was included in the standard most notably under Criterion 2.3, which states that companies must ensure that the use of land for oil palm does not diminish the legal or customary rights of other users. Second, they insisted on the principle of free prior and informed consent (FPIC), which is recognized in a number of international conventions related to indigenous rights. This demand was accepted without major difficulty during the negotiation of the Principles and Criteria. At that time, producers were more preoccupied with the high conservation value criteria, one of the hottest debates in the history of the RSPO (Silva-Castañeda and Trussart, 2015).

These two elements – customary rights and FPIC – can be found in most standards of multi-stakeholder initiatives such as the Forest Stewardship Council (FSC), the Round Table on Responsible Soy (RTRS), the Roundtable on Sustainable Biofuels (RSB) and Bonsucro (Chao et al., 2012). Thus, in all standards, customary rights must be recognized, documented and respected. Discrepancies between standards might, however, relate to the definition of rights holders and to the related issues of food and water security. As for the FPIC principle, the FSC, RSB and RSPO standards refer to it explicitly, while it is only mentioned in the guidance and appendix of Bonsucro and RTRS. Discrepancies also relate to who has the right to FPIC: indigenous peoples alone (Bonsucro), indigenous peoples and local communities (FSC, RSPO), landowners, users and stakeholders (RSB) or traditional owners (RTRS) (Chao et al.,

2012).

Another important dimension has to do with the process of conflict resolution. In most standards, the absence of legitimate disputes must be proven unless a process of conflict resolution has been put in place. Although their characteristics vary from one standard to the next, in general it should be consensual and underway and also in line with the FPIC (Chao et al., 2012). In other words, companies seeking certification should start a process of conflict resolution that follows a number of principles such as that of informed and free consent by local communities.

In order to facilitate dispute resolution between the parties, the RSPO created the Dispute Settlement Facility (DSF) in 2008, under the leadership of the NGO Both ENDS. In this regard, the RSPO constitutes an interesting case given that other schemes might consider developing a similar project at a later stage (Chao et al., 2012). The need to create such a space within the RSPO stemmed from the considerable amount of criticism and complaints it faced. By late 2008, the very first certificate issued by RSPO was welcomed with strong controversy: Greenpeace simultaneously releasing a report revealing that the certified company, United Plantations, continued 'business as usual' in Indonesia (Greenpeace, 2008). This report severely threatened the legitimacy of the RSPO and, as a result, the role of NGOs participating in the RSPO (Schouten and Glasbergen, 2011). And it was only the first of a wave of criticism: many reports, public campaigns and formal complaints have been raised since then. In this context, the DSF was partly seen as a way to alleviate the workload of the RSPO grievance panel.

Statistics put forward in the RSPO website give the impression that a majority of complaints are closed (31 out of 49 complaints are 'closed' or 'closed for monitoring') (RSPO, 2014). Yet a closer look at these figures reveals that reality is more complex. First, the cases 'closed for monitoring' may refer to cases in which there is a process of conflict resolution going on – be it through negotiation or mediation. In those cases, however, there is no guarantee that a solution will eventually be reached since such processes might end up in deadlock, as the next section will illustrate. Second, a number of the cases labelled as 'closed' were closed without the agreement of villagers or civil society organizations (Köhne, 2015). This raises an important issue regarding forms of legitimacy and proof that prevail within the RSPO (Silva-Castañeda, 2012, 2014). Indeed the Principles and Criteria refer to the notions of 'legitimate conflicts' or 'demonstrable rights', yet it is not clear what they actually mean. As a result, some villagers' complaints are excluded on the grounds that they do not 'represent' the community or that they are unable to demonstrate the legitimacy of their claims. Thus, a deeper analysis of RSPO statistics and data reveal that only three cases of land conflicts have been successfully resolved. This figure should still be interpreted cautiously given the limited information available on the website regarding the actual agreements reached by the parties (RSPO, 2014). Yet, it already reveals the limited proportion of cases resolved; a proportion that is even smaller if we consider that NGOs and villagers expressing public criticisms against RSPO are not necessarily willing or able to follow the formal grievance procedure and hence fall out of the scope of these statistics.

Thus, despite the large number of actions undertaken by complainants and RSPO stakeholders, most conflicts are on-going or even escalating, with some of the negotiation processes resulting in complete deadlock (Colchester and Chao, 2013; Ng and Lim, 2013). In the next section, case studies will reveal the challenges that the parties face in their search for conflict resolution.



## Spaces of Negotiation

In this section, we come closer to the lives of villagers of Central Kalimantan to explore what conflict resolution means on the ground. Two transformations will be exposed: the conflicting issues at stake are reduced to options; and conflicting interests are transformed into shared interests. This will be articulated and contrasted with an analysis of the discourse of key RSPO stakeholders.

### *The 'Liberal Grammar': Translating Rights and Personal Attachments into Options*

In Indonesian, the English term 'negotiation' can be translated into two different terms. *Berunding* means 'to confer, consult, meet, discuss, deliberate, negotiate' while *negosiasi* means 'negotiation, discussions to reach an agreement' (Indodic, <indodic.com>). Local NGO representatives use these terms to distinguish two phases of the process. Before the *negosiasi*, parties should discuss (*berunding*) in order to establish clearly the object of the conflict. It is generally during this phase that the parties engage in a participatory mapping in order to establish the boundaries of the disputed land. This first stage is still 'open' as explained by one interviewee. The *negosiasi*, on the other hand, implies the objective to reach an agreement between the parties. Indeed, in an Indonesian dictionary, *Kamus Besar Bahasa Indonesia*, this term is defined as 'the process of bargaining through a discussion (*berunding*) to reach a mutual agreement between one party and another'. Thus the process of negotiation is associated with the idea of bargaining.

In most cases of direct negotiation between companies and villagers, companies jump the first step as they intend to reach a solution to the conflict. Illustrative of this tendency is the negotiation process involving two villagers from Kalimantan Central and the local subsidiary of an international palm oil company, the local subsidiary of an RSPO member company. The conflict involving the villagers Eko and Agung is related to plots of land inherited from their ancestors who practised shifting cultivation. On these lands they had meranti trees, whose wood has a commercial value, along with fruit and rubber trees. This land also held family graves. In 2005, when the company started its operations in the area, bulldozers entered on their lands while the villagers were absent. They returned to find that the graves of their relatives had been destroyed and most of the trees had been cut. They addressed their demands to public and customary authorities. They also met the company representatives in order to discuss the amount of the monetary compensation but they could not reach an agreement. Thus, the situation was stalled when a certification body conducted the RSPO audit in 2009. Following this audit, the company started a more formal negotiation process with the two villagers; the parties signed a document called 'Mechanism of Dispute Settlement about the Destruction of Eko and Agung Family Graves'.

The mechanism of dispute settlement signed by the villagers Eko and Agung included a list of steps that the parties would have to take. The planning mentioned three dates: first, the company would send its proposals; second, the villagers would give their answers; third, a meeting would take place if the parties had not found an agreement. On the planned date, the villagers received a letter from the company. This letter presented two options: monetary compensation; or else establishing a plantation in the area that belongs to the villagers, starting from land clearing, seed, planting and maintenance for one year. On the following date, the villagers sent

their answers. They did not accept the company's offer and asked for a different amount of money. Hence, the conflict crystallized on the amount of compensation for the destroyed graves. Yet, the villagers questioned this restricted focus, as expressed in the following excerpt of an interview with them:

'Actually I don't want to put it into the value of money! How much is my loss? There are various kinds of loss... feelings, time, effort, going back and forth, up and down, it required money... First my dignity, how is it? It's related to my faith, culture... When I went to the Police, I said, I don't want to make this difficult for the company. I can't force them to pay for the value as big as this... but what about the calculation because my basic rights... they are all protected by the Constitution' (Villager A, Central Kalimantan).

The villager points to the difficulty entailed in transforming loss into a monetary value. Heterogeneous elements are brought to the fore: rights and the Constitution, culture, faith, time, money. 'Feelings' were particularly stressed during the interview. The villagers explain that they were 'destroyed along with the graves'. Confronted with the spectacle of the destroyed trees, they 'felt something had been taken from [them] and until now the feeling still exists'. Thus, they express the intimate nature of the link existing between them and their surroundings, the latter constituting a familiar environment as the family graves emblematically reveal. In that sense, land has to be understood as a 'dwelled-in environment' (Centemeri, 2015), a material and affective space that plays an important role in the intimate self-assurance of a person (Breviglieri, 2012). The frequent use of the word *harga diri* (translated by 'dignity'), which combines 'value' (*harga*) and 'self' (*diri*), also points to the highly intimate and personal dimension of the conflict.

The time passed without receiving any answer of the company holds an important place in the villager's complaints. In their view, this lack of reaction was particularly humiliating. After some years, the company finally contacted the villagers recognizing their responsibility in the damage of the graves and offering compensation. Yet, the negotiation that followed was perceived as an additional offence:

'They came again and made a bargain... they are, I said, just making fun of me. Why? Reduce again, reduce again, that's the nature of the company, that I know!' (Villager B, Central Kalimantan).

As this quote highlights, the villagers reject the approach of the company that reduces the process to a mere bargaining between parties that are primarily defending their economic interest. Anchored in a 'liberal grammar', this approach profoundly differs from a 'grammar of common affinities' signalled, in the villagers' discourse, by the word 'compassion', which points to the idea of suffering *with* someone, sharing a *common* perception of a situation.<sup>2</sup> Thus, one of the two villagers stresses the absence of such attitude:

'I told Mister X, the manager of the company : Why don't you have compassion for me?' (Villager A, Central Kalimantan).

In order to understand the resistance to the practice of 'negotiation', another dimension of the conflict must be considered: the desire to establish faults and guilt. This dimension is expressed more insistently by a villager acting as an intermediary between Eko, Agung and the company:

'The guilty should be punished. If the problem could just be solved by

compensation, it will continue everywhere. So that's why Mr Agung is still standing until today, looking for justice' (Villager C, Central Kalimantan).

Thus, this intermediary links the two villagers' concerns to a broader vision of common good, one relying on the civic order of worth (Boltanski and Thévenot, 1991) which establishes justice and equality as guiding normative principles.

A similar message appears strongly in the discourse of Laggeng, who lives in a neighbouring village. This man had been invited by an Indonesian NGO to attend an international conference of the RSPO (Bali, November 2008). During the debate time of a plenary session, he took the microphone and started to denounce the company that had occupied his land. One month later, in December 2008, he received an invitation from the company to undertake a mapping of the claimed area. The parties met to undertake the mapping one month after the conference. Company representatives, however, did not recognize the results of this mapping. They argued that most of these lands had already been compensated and only recognized two hectares as legitimately claimed. On various occasions, company representatives went to Laggeng's home to offer him some monetary compensation. The villager, however, has always refused these deals as he considers that 'the basis should be clear'<sup>3</sup> in order to start the negotiation process. Indeed, an underlying issue has never been discussed with the company:

'I got criminalized, meaning I got jailed, which was inappropriate with my mistake... I defended the land, didn't sell it, why was I thrown into jail? Here is the question that has not been clarified until now... a clarification that can please me... First, return the status of my land according to the existing SKTA [Customary Land Notification Letter]. Secondly, they just have to admit that they were at fault of having been tilling and planting [oil palms] and throwing people to jail... and they have to pay a compensation for damages... We will question and fight so that my rights can be returned... and the sense of justice is felt for me' (Villager D, Central Kalimantan).

Laggeng was jailed for six months for 'unpleasant conduct', without trial or verdict. He wants the company to recognize its guilt and offer compensation for damages. Unlike Villager C quoted above, there is no direct criticism of the logic of compensation. But the high amount of money requested might represent a form of punishment in the eyes of the villager. Like in the case of Eko and Agung it is a demand for justice that appears in his claims.

As illustrated through these examples of negotiation processes, alternative dispute resolution (ADR) mechanisms are shaped by the 'liberal grammar' (Thévenot, 2014b). Disputes would be conflicts of interests between actors who make choices between various options. Thus, behaviours would follow the logic of calculation and instrumental rationality. Yet, most conflicts do not fit this model. Parties often conceive their disputes as conflicts of principles and values. The issue for plaintiffs is not merely to negotiate a number of interests but also to defend their rights and establish fault (Merry and Silbey, 1984).

This framing of alternative dispute resolution is particularly visible in the RSPO arena dedicated to conflict resolution: the 'Dispute Settlement Facility' (RSPO DSF Working Group, 2009). Overwhelmed with complaints related to conflicts between villagers and local companies, mainly on land tenure, RSPO stakeholders created a space dedicated to facilitating dispute settlement through the use of mediation. Its

first objective is to 'provide a means for achieving fair and lasting resolutions to disputes in a more time efficient and less bureaucratic and/or legalistic manner, while still upholding all RSPO requirements including compliance with relevant legislation' (RSPO DSF Working Group, 2009). This formulation highlights the inherent tension between alternative dispute resolution and the rights-based approach that the social NGOs in charge of the DSF programme are supposed to uphold. It is considered that mediators would offer guidance on the 'recognition and regulation of rights and responsibilities' (RSPO DSF Working Group, 2009). Yet, influential actors within the DSF stress the importance of moving away from a discourse in terms of rights in order to find a solution. This message is expressed by mediators invited to share their experiences during RSPO pre-meetings on dispute settlement, but also by NGO representatives who play a central role in the initiative:

'I think the RSPO has a duty as a multi-stakeholder platform that is aiming for sustainable palm oil... well, society in the end has to benefit from the palm oil sector. How do we make that happen? One of the things, and I think it is where it starts and where it ends, is that all stakeholders notably those that so far have been at the losing end are capacitated to translate their rights in options which are also beneficial for them' (International NGO representative, skype interview).

The interviewee points to the process of translation involved in formulating issues of rights in terms of options. This transformation is seen as a necessary step in order to unlock situations of conflict. Indeed, speaking in terms of rights would lead the parties to stick to their positions while a formulation in terms of options would open the way to finding a settlement. NGOs play an important role in this transformation process as they intend to empower local actors by building their negotiation capacities (Cheyns, 2014). The overall objective is to enhance their bargaining position and achieve more 'beneficial' situations. To this end, they help local communities frame their concern through the interest format prevailing in these arenas, in line with a 'liberal grammar' that flattens issues of justice and personal attachments to a single level of interests (Cheyns, 2014).<sup>4</sup>

#### *Win–Win Solutions: From Conflicting Interests to Shared Interests*

The previous section showed how justice principles and affective attachments are sidelined when conflicts are framed in terms of interests. A closer look at negotiation discourses and practices reveals that these interests are themselves reduced to those that are common to the parties in conflict. This corresponds to a change of negotiation styles promoted in the field of conflict management. With the publication of *Getting to Yes: Negotiating Agreement without Giving In*, Fisher and Ury (1983) popularized the distinction between interest-based and position-based negotiations. These authors question the classical vision of negotiation according to which actors would define positions and progressively adapt them in order to reach an agreement with the other party. Instead of going from positions to counterpositions and compromise, an interest-based approach implies that negotiators identify their interests before defining specific solutions. Once these interests have been clarified, the parties together define alternatives that could satisfy the interests of the various parties. The latter then choose a solution among these options. The accent is put on cooperation, the search for shared interests and win–win solutions. Thus, negotiation is not

conceived as a zero-sum game in which a gain for one party would automatically imply a loss for the other side.

Within the RSPO, the interest-based approach is explicitly put to the fore. During pre-meetings of the Dispute Settlement Facility programme, mediators outlined the advantages of this approach. It was also specifically mentioned in the dispute settlement mechanism regarding the destruction of the Eko and Agung family graves. This win-win approach is in line with the spirit of the RSPO, which was defined as 'multi-stakeholder organization that promotes the growth and use of sustainable palm oil through co-operation with the supply chain and open dialogue among stakeholders' (RSPO, 2008). Thus, during the negotiation process, parties should move away from conflictive interests and positions in order to 'lead to more lasting and sustainable cohabitation of palm oil industry and local communities' (International NGO representative, skype interview). Guided by the ideal of 'liberal civility' in which disagreement is avoided (Cheyns, 2014; Thévenot, 2014b), this vision of negotiation entails that the main challenge for dispute settlement lies in the transition from asserting rights and positions to allowing 'dialogue in a way that is mutually respectful' (Mediator, Kuala Lumpur).

Shared interests, however, may only fall under the domain of economic interests, as these are the main drivers of company policies. Therefore, companies generally propose two solutions to land conflicts: monetary compensations or contract farming schemes. However, rural dwellers do not limit their claims to monetary or economic demands, as the previous section shows. Land does constitute a productive resource but it is also a 'dwelled-in environment', a place to which they are attached because of the intimate and familiar links they have forged with it (Thévenot, 2001; Centemeri, 2015). For this reason, local villagers addressing their demands to RSPO often claim land restitution as illustrated by the following intervention during a pre-meeting of the DSF programme:

'If RSPO wants to be a place of resolving conflicts with communities... If RSPO is serious, they really have to make it clear to companies... Companies need to be willing to relinquish the land' (Indonesian villager, Kuala Lumpur).

These claims are supported by some social NGOs, in particular national ones such as Sawit Watch. Relying on the principle of FPIC and customary rights recognized in the RSPO Principles and Criteria, these NGOs argue that local communities have to be recognized as legitimate holders of the land (even without a certificate) and have the right to reject a company's project for an oil palm plantation. If companies have failed to take into account the views of the local communities, they should recognize their fault and be committed to resolving the conflict, notably through land restitution. Yet, other social NGO members of RSPO consider this to be a 'too high expectation'.

'I think what is the most likely outcome of such processes is that there is a financial compensation agreed for past damage, which is not going to be a lot of money in most cases and which is not going to get the land back and certainly not going to get the forest back... Don't get me wrong, I would hope that their situations result in the more community-beneficial scenarios... but in reality there are plantations that have been established 20 years ago... From the business point of view, I think they would also be looking for a set of measures that is doable and that is also manageable in terms of

process and costs' (International NGO representative, Netherlands).

Moving away from a human rights approach that would entail recognizing local villagers' rights and providing significant remedies such as restitution (United Nations General Assembly, 2011), the NGO representative reduces issues at stake to the level of interests: the search for 'beneficial' solutions for local communities, on the one hand, and the recognition of companies' preoccupations in terms of process and cost, on the other hand. He does not present this scenario as an ideal one. Instead, he considers it as what could 'realistically' be expected from the RSPO. Although some actors are trying to pull the RSPO in other directions, his view might likely be confirmed in the future given the weight and effects of the win-win approach that lies at the heart of RSPO.

## Conclusion

Private and voluntary standards constitute a form of transnational regulation that has grown in importance over the past two decades. In the realm of sustainability standards, multi-stakeholder initiatives have progressively become the reference because of their supposed virtues of inclusiveness and participation, the cornerstones of their legitimacy (Cheyns and Riisgaard, 2014). Representing the social pillar of sustainable development, 'social NGOs' have decided to engage with the corporate sector through commodity roundtables, thus hoping to change company practices and improve situations of local actors in production sites. These NGOs have introduced a rights-based approach within these initiatives. Through their participation in drafting the standards, they linked voluntary standards to international human rights laws. They then urge companies to comply with these standards by engaging with local communities as rights holders. But what changes have come about 'on the ground'? To what extent have these initiatives effectively played a role in securing local actors' rights?

The RSPO provides an interesting case for exploring these questions through a focus on land rights. NGOs such as Oxfam Novib, Forest Peoples Programme and Sawit Watch played an important role in the drafting of the Principles and Criteria. They managed to include in the standard important elements in relation to the protection of customary rights and the principle of free, prior and informed consent. Conflict resolution also became an important issue as illustrated by the creation, under the leadership of the NGO Both ENDS, of the DSF: a space for facilitating dispute settlement through the use of mediation. Despite these efforts, most conflicts are on-going or even escalating; and the RSPO is under heavy criticism for not delivering on its promises to protect land rights.

Drawing on case studies of negotiation processes in Indonesian villages, observation of RSPO international conferences and interviews with key stakeholders, this article highlights the tensions between the rights-based approach that NGOs are supposed to uphold and the search for conflict resolutions. Exploring such tensions requires untangling the plural issues caught up in land conflicts, an analytical exercise that benefited from the framework of the 'grammars of commonality in the plural' (Thévenot, 2014b). Thus the empirical analysis reveals how the liberal grammar prevalent in RSPO reduces land disputes to conflicts of interests between actors who make choices between various options, thus excluding two dimensions that hold a significant place in land conflicts – especially when this exclusion causes ad-

ditional offense and frustration. The first level of affective and personal attachment comes from a familiar engagement with the world. Indeed, in addition to being a productive resource, land constitutes a familiar environment, a place to which rural dwellers are attached because of the intimate bonds they have forged with humans and non-humans (Centemeri, 2015). The second level, principles of justice, points to the public space, linking together many similar destinies and thus formulating a general critique. Yet the approach put forward by most RSPO stakeholders stresses the importance of moving away from a discourse of rights. As framed in the local negotiations and in the DSF, alternative dispute resolution aims at translating personal attachments and rights into options that are mutually beneficial. Shared interests, however, may only fall under the domain of economic interests, as these are the main drivers of companies' policies. As a result, the most likely outcomes of negotiations are monetary compensations and contract farming schemes, solutions that fall short of local actors' expectations.

## Notes

1. With the exception of palm oil producers who received four seats to represent Malaysia, Indonesia, the smallholder sector and the 'rest of the world'.
2. On compassion in penal affairs, see the subtle analysis of Barbot and Dodier (2014).
3. Thus, when asked if there was a negotiation process with the company, Laggeng answers 'Oh, no, there isn't, there hasn't been a negotiation because [...] the basis should be clear' (Villager D, Central Kalimantan).
4. For an analysis of the role of local NGOs in reintroducing justice and attachments, see Cheyns (2014).

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## **Value Chains or Social Capital? Producer Organizations in the Citrus Fruit Sector**

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**Abstract.** The article studies institutional performance and specifically the effectiveness of producer organizations in agriculture in areas with low levels of social capital. It finds within the same region (Sicily) one case supporting an institutionalist reading (linking low performance levels to low levels of social capital), and one success case in which, despite the burden of low social capital, producer organizations united small farmers and developed a unitary brand for their products. The article finds that the difference in institutional outcomes is due to differences between value chains, and specifically due to the extent to which the interests and power of wholesalers and producers in such institutions diverge.

### **Introduction: Sicilian Agriculture and Producer Organizations**

Many accounts of what supports or explains formal institutions identify social capital as a key ingredient of how institutions come about or what underpins their functioning. But can formal institutions work in areas where social capital is low, or the forms it takes undermine rather than underpin effective institutions? Since the 1970s the European Union and the Member States have sought to support institutional change in agriculture mainly by encouraging more effective and more encompassing producer organizations. The expectation was that such organizations can unite small farmers and reach, on their behalf, institutional arrangements with retailers, offering farmers better prices in exchange for more stable and predictable production patterns (Camanzi et al., 2009; Bijman et al., 2012). Yet it is not at all clear whether and when such newly established organizations actually produce the intended institutional outcomes in regions with low levels of social capital. While many studies on producer organizations link the establishment and performance of producer organizations to social capital, this article offers an alternative account, one that is better suited to explain the performance of such organizations in areas with low social capital. While not aiming to test social capital theses, the article argues that the emergence and performance of producer organizations can be the result at

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times of how value chains emerge, and of whether producers rather than wholesalers can keep control over certain links in the value chain. The article uses a comparison between two initiatives to unite producers and their organizations around unitary brands in Southern Italy. Thus, in a region with notoriously low levels of social capital (Sicily), one of the initiatives indeed conforms to theoretical expectations about 'low' forms of or 'negative externalities' of social capital. The other initiative contradicts expectations, finding a successful institution in an area with arguably low levels of social capital. It finds that the difference can be understood in terms of how value chains emerge in the two cases and, specifically, of whether and how producers could develop the capacity to export products autonomously of wholesalers. Thus, data suggest that local wholesalers are far more powerful vis-à-vis producers in the case of the least successful initiative than in the case of the other initiative. The findings are thus broadly institutional: they suggest that responsibility for differences in economic conditions lies with the ways in which collective forces arise and interact to favour certain forms of economic organization rather than others.

### **Institutions, Social Capital and Producer Organizations**

Ever since 1972, when the European Communities first emphasized the importance of producer organizations under the Common Market Organization framework, various European agencies and national authorities have taken up an ambitious attempt of institutional creation: trying to call into life and develop collective organizations of farmers. This attempt went hand in hand with the expectation that the concentration of farmers would bring beneficial results for agricultural development. In social science, numerous accounts indeed link development to institutional performance (Acemoglu et al., 2001; Rodrik et al., 2004; Rodríguez-Pose, 2013), in turn seen as largely determined by social capital differentials. Recently, a European-wide study of producer organizations (comparing the results of setting up such organizations between countries) argued that the variation in degrees of success is partly an effect of varying levels of social capital (Bijman et al., 2012, pp. 8, 88). In fact, much of what we know about producer organizations and institutions in general links these to social capital. Robert Putnam's initial argument linking institutional performance to his understanding of social capital and further to medieval political organization (Putnam et al., 1993) has received repeated confirmation in the econometric literature (De Blasio and Nuzzo, 2010; Becker et al., 2011, adapting the arguments to post-communist Europe; Di Liberto and Sideri, 2011; Petrarca and Ricciutti, 2013). One problematic aspect of social capital accounts of institutional performance is that they obviously bear negative implications for those areas that reflect the opposite historical legacies, low levels of social capital and, as a result, badly operating institutions; due to the formidable historical resilience of past political organization and social capital levels, improving the operation of institutions or creating effective institutions seems very difficult. Other authors, focusing on countries, regions and communities in Asia, Africa and South America, while also confirming the importance of social capital for development, discover variation in social capital levels down to the communal level and over relatively short periods of time (Grootaert and van Bastelaer, 2002; Casson et al., 2010). Consequently, in explaining this variation, they reached less rigid findings on social capital and its determinants, and to the initial explanatory factor of past political organization added several others such as present-day economic inequalities (Adhikari and Goldey, 2010; Savoia et

al., 2010), 'legal institutions and state organization' (Fafchamps, 2006), differences in status and power in social networks (Serra, 2011), internal governance (of producer organizations, Bijman et al., 2012); and differences in organizational structures, institutional arrangements, and governance of markets (again writing about producer organizations, Tisenkopfs et al., 2011).

This article's findings are more in line with the second stream of literature, going beyond social capital in explaining institutional performance: a closer look at the reasons for the failure of producer organizations in drawing the participation of producers and a comparison with a success case in the same region show that these reasons have less to do with social capital levels, but with the constitution of the respective value chain. As suggested by the literature on global value chains, issues of who exerts governance in value chains and how are crucial for understanding the operation and inclusiveness of value chains (Gereffi, 2005, 2014; Lee et al., 2012; Ravenhill, 2014). Specifically, this article focuses on the position of wholesalers in value chains and the extent to which wholesalers can govern these, and it shows how, in the case of unsuccessful producer organizations, wholesalers divide producers between several competing producer organizations and product brands. This finding is in line with the typology offered in the literature on value chains for studying governance, depicting governance as the result of either 'buyer-driven' (i.e. retailer-driven) or 'producer-driven' value chains (see Lee et al., 2012, pp. 12327–12328). Thus the trend seen in the cases studied in this article is an aspect of a producer-driven chain, in which smallholders are confronted not so much with the power of retailers, but with that of 'large processors in the middle of the chain' (referred to as 'wholesalers' in this article; Lee et al., 2012, p. 12329).

Producer organizations are seen in the development literature as a crucial tool to deal with many of the problems assumed in this literature to impede development: high transaction costs, asymmetrical information, and incomplete property rights that obstruct the proper functioning of markets and especially coordination among market actors (Dorward et al., 2004; Bijman et al., 2012). Producer organizations help overcome some if not most of these problems, as they are seen as tools allowing small farmers to have bargaining power in negotiating prices and to form economies of scale (for a review, see Dorward et al., 2004). While we know how they can help small farmers, we know little about what causes their success or failure, and most of what we know was formulated in terms of social capital explanations (Megyesi et al., 2011; Tisenkopfs et al., 2011; Bijman et al., 2012). Some of these studies have tried to look beyond social capital – into what causes social capital differentials – focusing, for instance, on the effectiveness of internal governance (Bijman et al., 2012) or on the workings of different combinations of types of social capital (Megyesi et al., 2011). This article too sets out to look beyond social capital in explaining the effectiveness of producer organizations. It uses tools of production network analysis (Kaplinsky, 2004) to study producer organizations to show how value chains (and specifically how they emerge, and who holds most power in them) in turn also impact greatly on the effectiveness of farmer cooperatives. It specifically asks why, in a region with low social capital, producer organizations perform differently when it comes to uniting growers in their area and winning for them the quality certifications (such as Protected Designation of Origin) that would guarantee them better prices.

The article studies the emergence of an institutional arrangement in a region (Sicily) and an economic field (citrus fruit production) that seems to be the most likely case for a failure of institutional creation. Sicily is the region singled out in the social

capital literature on Italy as having the institutional endowments that are the least conducive to economic development; in particular, the citrus fruit sector seemed to be dominated heavily by mafia clans historically, with one study arguing that it was this sector that favoured most the emergence of organized crime in Sicily (Dimico et al., 2012). Studying how and why institutions in Sicily emerge and survive or fail is relevant since, if the literature on social capital is correct, Sicily offers some of the most unfavourable conditions for institutional creation in Europe; consequently, lessons from institutional creation in the Sicilian context should be of interest and relevant also to those undertaking attempts at institutional change or creation in regions that are likewise negatively endowed with the prerequisites of institutional performance.

The article's next part presents a brief overview of key developments in Mediterranean agriculture, focusing on what is arguably its main field, citrus fruit production. It shows how in Sicily citrus fruit production has become increasingly problematic, especially since the 1990s, with production costs increasing several-fold and prices plummeting. However, while the eastern area around the city of Catania fully reflects these problems, in the area around Ribera, in western Sicily, production has expanded, prices remained well above (almost twice as high as) those for citrus fruits in the Catania area, and products are sold under a unitary, PDO-certified label. The second part argues that these differences are in part attributable to producer organizations: while in the Catania area the main producer organizations have faced big difficulties expanding and coordinating actions to use a unitary brand, in the Ribera area strong producer organizations secured market channels by achieving the PDO certification. The success of producer organizations in the Ribera area is down to the wholesalers in this area seeming to be less specialized and to exert less power in value chains than in the Catania area, where they historically enjoyed a far stronger position vis-à-vis producers.

The concluding part highlights several findings arising from the empirical material. It argues that while the development literature tends to treat producer organizations as devices helping producers overcome various asymmetries (from lack of scale economies to informational imbalances), one should not overlook that the creation of producer organizations can run against established interests and institutional arrangements, and against those actors that, in the case of the emergence of a value chain, would be best positioned to govern it (wholesalers in the context of this study). The creation of producer organizations and their existence needs to be seen as possibly far more conflict-ridden than has been done until now. Furthermore, at least in the Sicilian context, the lack of strong producer organizations seems not to be the effect of lacking social capital, but the effect of what has been in fact a highly developed and early modernized agricultural sector. An important implication is that the aggregation of farmers into collective organizations should be seen not so much as an effect of social capital, but of the economy's structure, allowing or not power in value chains to accumulate around wholesalers rather than producers.

In terms of methodology, the article relies on interviews with representatives of 27 farms in Sicily. Interviews took place during February–April 2014. The selection of interview partners for this qualitative study maximized variation in the sample in order to derive as much information as possible about the operation of producer organizations in Sicily. Thus interview partners differed strongly in terms of the type of products marketed, size and years in activity, membership of producer organizations, and geographical location. Appendix Table A1 presents the cases studied dur-

ing fieldwork (referred to by the name of the respective town, village, or commune).

### **The Plight of the Citrus Sector in Sicily**

Between 1977 and 2008 the worldwide citrus sector has seen massive increases in world demand and an ensuing 110% increase in production (Vaccaro, 2011, p. 68). Italy, once a major producer, has not been at the forefront of these developments over the last 40 years. The country's share in world citrus production decreased from 4.2% in 1982 to 2.8% in 2002 and to 1.8% in 2008, losing ground in the face of stronger competitors such as Brazil, China, and the United States (43% of world production in 2005–2008; Vaccaro, 2011, p. 72), and Spain, Greece, Turkey and Egypt in the Mediterranean area. Over the last decades, Spain and South Africa emerged as the world's biggest exporters. Spain in particular has dominated European exports since the 1990s, exporting some 10 times more tons of fruit than Italy in the late 1990s and late 2000s (and Greece exports some three times more). Italy's citrus production is overwhelmingly based in Sicily (other strong regions are nearby: Calabria, Basilicata, Puglia), taking up some 101 740 hectares, out of a national total of 175 520 hectares in the 2000s (Beccali et al., 2009, pp. 708–709).

Citrus fruit production and trade have played a crucial part in Sicily's economy for most of the nineteenth and twentieth centuries, at times being Europe's strongest production site for the export of oranges. In eastern Sicily, citrus production initially expanded in the areas around the port of Messina. Commercial structures emerged in and around that city already in the nineteenth century, providing strong continuity with the boom of mulberry and silk production in the seventeenth century. By the turn of the nineteenth century, Catania became the island's most important commercial centre, overtaking Palermo and Messina. Thus in the nineteenth century, citrus fruit production became Sicily's most profitable economic branch, and land used in citrus production was extremely valued, with its price estimated as 10 times higher than the price of vine orchards and 50 times higher than the price of land used for grain. It was in these years that the market for citrus fruits became an international one (the US being the main market for citrus fruits throughout the nineteenth century), with local production barely finding a regional or national market (Lupo, 1984, 1987, p. 82). Historian Salvatore Lupo argues that the Sicilian city of the nineteenth century played a crucial role for local agricultural products such as citrus fruits. However, this role did not consist of that of a regional market of consumers. Instead, cities such as Catania (together with the island's two other most important cities Palermo and Messina) mattered not as regional markets but as commercial centres, managing the export of existing production (in the words of Lupo (1987, p. 91): 'as a centre of entrepreneurial and commercial activity'). Thus, a large producer declared in 1908 that, 'As a market, Catania would not suffice as an outlet for our fruits, because only one garden in Acireale [a small town near Catania] would supply enough production to suffice for a city more populated than Catania' (Lupo, 1987, p. 91).

With local markets largely unable to consume production, a strong export orientation became one of the sector's main characteristics. A further important and enduring feature was specialization, with a very strict division of labour between producers – mostly located in rural areas or in rapidly increasing towns – and wholesalers, located in the larger towns and in the larger ports, such as Messina and most of all Catania. Thus, by the mid-nineteenth century and throughout the twentieth century the citrus sector showed many characteristics usually associated with a 'modern'

capitalist economy: investment-led growth and expansion of the sector, strong export orientation, and production almost exclusively dedicated to the (overseas) markets rather than for private consumption.

In the twenty-first century Sicily still is Italy's main supplier of oranges, even though the sector is fraught with difficulties. Problematic was especially the sector's lack of capacity to resist competitive pressures stemming from other countries. While throughout the nineteenth and early twentieth centuries Sicilian production reached markets in most of Northern and Eastern Europe and the United States, market shares began to decrease already before the First World War. This is usually explained in terms of the location of other competitors, often far closer to final markets. It is also explained in terms of the too strict division among wholesalers or between wholesalers and producers particular to citrus fruit production in Sicily (see below). Throughout the second half of the twentieth century, Sicilian products kept considerable market shares only in mainland Italy, while competition in Northern European markets strongly intensified since the establishment of the Common Market and led to the loss of these markets, despite Italy's objective of becoming 'Europe's garden' (Vaccaro, 2011, p. 87).

Most accounts explain Sicily's lack of development – or at least Italy's failure to ensure Sicily's catching up with mainland Italian areas – in terms of the characteristics of the industrialization drive of the late 1950s and 1960s (Asso and Trigilia, 2010; Iuzzolino et al., 2011). Rapid industrialization in the 1960s meant that the larger cities began absorbing labour from agriculture, raising production costs for agricultural producers. However, agriculture – and in particular the citrus fruit sector – also plays an important part in explanations of Sicily's lack of development. Lupo (1987), for instance, shows how much of the sector's vulnerability was due in part to the difficulty of selling in overseas markets a product bought at high prices in home markets: the difficult task of estimating the revenues from sales in overseas markets brought extreme complications to producers and wholesalers. A negative difference between home and overseas prices meant the bankruptcy of many wholesalers and of those producers who tried to increase their profits by postponing the actual sale of the production.

Much as in the social capital-oriented development literature, the most recent research traces back the problems of Sicilian agriculture to the lack of natural assets of certain lands and to the lack of 'assets resulting from the organization of rural lands', the lack of 'autonomy of [landed] classes' (Casavola et al., 2011, p. 66). As to more current factors impeding the development of the sector, the authors stress the disunity of producers throughout Sicily, even though these producers face common 'threats', such as 'the control over price formation and sale conditions of grand international buyers'. In brief, for these authors, the sector remains 'too agricultural, [as it is] faced with an international market which encourages aspects of commercial and agro-industrial capacity' (Casavola et al., 2011, p. 67). The main problem is the lack of collective strategies and initiatives, and the main cause of the problem is explained in terms of too many producers still being able to prosper individually in the short term, while postponing developments – such as establishing or strengthening producer organizations – that might strengthen them on global markets in the long term (Casavola et al., 2011, p. 68). The situation of the citrus sector, discussed in this article, offers a somewhat different perspective. It is not that the cognitive and strategic capacities of producers somehow prevent them from distinguishing short- and long-term interests, but that the sector's internal divisions between producers

and wholesalers – and the corresponding ways in which value chains emerge – can weaken existing producer organizations. The next section presents this idea in more detail.

### **Catania and Ribera**

At a first glance, the Catania and Ribera areas could not be more different. The eastern area around Catania (Catania and Syracuse provinces) is far larger in terms of productive plots dedicated to citrus fruit production than the area around Ribera. The area having the city of Catania as its main export outlet consists of two administrative provinces – Catania and Syracuse – with citrus production their main agricultural activity: production levels are 2.5 (Catania province) and 3.5 (Syracuse province) times higher than the Sicilian average. For Agrigento, the province of which the Ribera commune is part, the same indicator stands at only 30% of the regional average. Citrus fruit production in eastern Sicily looks back at a history beginning in the nineteenth century, while around Ribera it took off only in the 1970s (even though citrus growing traditions around Ribera go back as far as early nineteenth century, as in the case of the Catania area). An important indicator is the size of the average plot of land, as it is has generally been argued that many of the problems of Sicilian agriculture are due to small plot size (impeding the creation of economies of scale; Casavola et al., 2011). The average plot size in agriculture is slightly larger in the eastern area: the average farm in 2010 had 4.5 hectares of land in Agrigento, and 5.9 and 7.6 in Catania and in Syracuse, respectively. The trend over the 2000s was one of aggregation, with plots of land almost doubling in Catania and Syracuse, and seeing a far slower increase in Agrigento (from 3.1 to 4.5). For citrus production, average plot size in 2010 was 0.8 hectares for Agrigento, and 1.7 and 1.5 for Catania and Syracuse, respectively, in the year (Istat, 2010).

Data on social capital offers a mixed picture, also because data at the provincial or communal level within Sicily are hardly available (and one would need such data if, following Robert Putnam, social capital is an attribute of collectivities rather than of individuals; Portes, 2000). Available data at the provincial and communal levels are on political participation in referenda and on organized crime rates, but only for the late 2000s; data on trust or associationism was publicly available only at the regional level. Political participation in referenda (a common social capital measure, at least in the literature following Robert Putnam's writings, see Fowley et al., 2001, p. 267) is higher in relative terms in the Agrigento province than in Catania or Syracuse. Since the Italian Ministry of Internal Affairs allows the disaggregation of participation data down to the communal level only since the 2011 referendum, this article can only rely on data from that referendum to make inferences about social capital differences between the Agrigento province and the eastern provinces: while participation in Agrigento was on average higher (59%, compared to 56% in Syracuse and only 49% in Catania), at the level of citrus-producing communes one finds higher participation in Syracuse than in Agrigento; furthermore, in absolute numbers twice as many people participated in the Catania province than in Agrigento.

A measure of lack of social capital (or social capital with 'negative externalities'; Grootaert and Van Bastelaer, 2002, p. 2) that covers more years and that also takes into account differences between provinces is a rather newly introduced set of indicators of organized crime activities: here Agrigento tops almost all other Sicilian provinces – not to mention most of Italy's except Calabria -- in terms of numbers of



'mafia associations' closed down by the police in the years 2004–2007 (in Sicily second only to Caltanissetta); in terms of homicides, extortions and usury, crime levels in Agrigento and Catania are comparable, while in Syracuse they are so low as to be comparable to levels in Northern Italy (Sciarrone, 2010).

Thus on the basis of the idea that plot fragmentation is problematic and that producers in the Ribera area are far less experienced,<sup>1</sup> with no discernable advantage in terms of social capital, one would expect the Ribera area to be worse off than the citrus production area in eastern Sicily. Even more problematic for the Ribera area seems to be the fact that it produces types of citrus that are fairly similar to those produced in other European countries, meaning that Ribera producers face even more competition – and ensuing pressure on the prices they can ask for their products – than citrus growers in the eastern provinces, whose products (pigmented types of oranges) are unique in Europe.

In effect, on the ground one finds that while producers in the eastern provinces and around Ribera started setting up large producer organizations in the 1990s, only producers around Ribera managed to create an organization that is effective, meaning one that established a unitary brand name for oranges produced in the respective area; for this brand name it also obtained the highest European certification, Protected Designation of Origin (PDO). In contrast, in the Catania area the main organization pursuing the goal of acquiring the PDO certification sees competition from a range of smaller producer organizations initiated by wholesalers and selling production under distinct brand names (described in the next section), with the result being intense competition between producers and a sharply declining price for citrus fruits.

Table 1 summarizes the data presented so far on production level and average plot size in three provinces, the time when local producers started exporting citrus fruits to national and international markets, the two social capital measures discussed above, the average price producers get, and the level of certification achieved by producer organizations.

**Table 1.** Citrus production in Agrigento, Catania and Syracuse provinces.

Province	Citrus production*	Plot size (ha)	Total citrus area, 2013	Exports since	Social capital - participation **	Social capital (crime) ***	Price (Euros)/kg in 2010****	EU Certification *****
Catania	2.5	1.7	33600	19th century	49%	1.86	0.16	IGP
Syracuse	3.5	1.5	24052	19th century	56%	none	0.16	IGP
Agrigento	0.3	0.8	5,066	1970s	59%	5.30	0.40	PDO (highest)

*Notes:* \* relative to the Sicilian average; \*\* in the 2011 referendum; \*\*\* in terms of mafia associations, 2004–2007; \*\*\*\* the price only refers to oranges of the Navelina sortiment (see Annex 2); \*\*\*\*\* IGP and PDO are certification schemes for the quality of agricultural and food products in the European Union, with PDO considered the highest and most difficult to achieve.

*Sources:* \* Census of Italian Farms; \*\* <<http://elezionistorico.interno.it/>>; \*\*\* Sciarrone, 2010; \*\*\*\* compiled during fieldwork together with agronomists from Sicily's professional Association of Agronomists; \*\*\*\*\* <[http://ec.europa.eu/agriculture/quality/schemes/index\\_en.htm](http://ec.europa.eu/agriculture/quality/schemes/index_en.htm)>, accessed 9 October 2014.

It is highly plausible that Ribera producers faced an easier task than the ones in the eastern provinces also or mainly because the area or the number of producers they needed to unite was far smaller in absolute terms, approximately one fifth or one sixth of the surface dedicated to citrus production in the eastern provinces; even though average plot size is almost twice as small as in the eastern area. But respondents also suggested that there is at least one other important difference, namely in the structure of the citrus fruit sector: wholesalers in the Ribera area are not as strong vis-à-vis producers as in eastern provinces. Most importantly, in the Ribera area there are fewer wholesalers, they are grown out of producer structures, and they are easier to control: because there are fewer and locally known (as they are all former producers), producer organizations can thwart attempts of cartelization between these wholesalers.

Specifically, respondents (see Appendix Table A1 for an overview) reported that there are four main wholesalers, all of whom have developed trading activities *after* they have developed production in the area. The small number of wholesalers is an effect of production in the area taking off only in the 1970s, and of the relatively small size of production, at least in comparison to that in the eastern provinces. Furthermore, many other producers have initiated separate efforts to make sure that their production finds its ways to Northern Italian markets. Most importantly, the largest producers in the area keep parts of their personnel – most commonly family members – in the larger North-Italian cities for many months every year (up to six months). It is to these personnel that they send their production, and these personnel then distribute it to retail stores.<sup>2</sup>

In contrast, respondents in the Eastern provinces report that the scene of wholesalers in the eastern provinces is far more complex and larger, making it impossible to keep an overview of the number of trading agents in the area. An interview with a representative of Sicily's Association of Agronomists produced an estimate of some 200 wholesalers, out of which 20 were considered by the interviewee to be large enough as to determine the price for most of the others (Interview Trecastagni 2). Indeed, a short online search carried out in May 2014 seemed to confirm that there are far more wholesalers present in the Eastern provinces than anywhere else in Sicily (the website used was <misterimpresa.it>, which is similar to Yellow Pages, though including more detailed information, allowing search categories to be narrowed down in terms of location and field). The search identified some 200 structures in the field of citrus fruits in Sicily, out of which only two located in the Agrigento province (both in Ribera and both emphasizing that they also deal with production). Most (132) were located in the province of Catania (followed by Messina with 43 companies and Syracuse with 38). In Catania, most companies listed concentrated in towns such as Palagonia (30), Scordia (27) and Paternò (16). Many – for instance, 20 out of 10 in Palagonia, 11 out of 27 in Scordia and 7 out of 16 in Paternò – emphasized that they only focus on trade or 'export'. This indeed seemed to confirm that there is a difference between Catania and Ribera in terms of specialization in trade, with far more numerous specialized wholesalers in the former province.

One hypothesis explaining the difference in trade specialization relates to the late development of mass production in the Ribera area. Citrus production from Ribera entered markets in the 1970s, at a time when Sicily had long lost its non-European markets, and this meant that there was no need for trading structures as broad and as complex as those inherited by the eastern provinces. In contrast, in the east the early entry into world markets seemed to have created a powerful and complex

structure of trade, which in turn invested profits into expanding production areas ever more and ever farther away from the commercial centres of Messina and especially Catania. World markets were lost by the second half of the twentieth century, but Catania kept its position as main commercial centre and the citrus sector in the east kept a relatively – in comparison to Ribera – complex structure of wholesalers, as well as large areas growing citrus fruits. This structure preceded and partly impeded the growers' effort to organize collectively as argued further below.

The situation of the two citrus-producing areas can be envisaged as two institutional arrangements ordering the value chain between growers and consumers; or, to use the language of the 'global value chains' literature (Lee et al., 2012) two ways of governing the value chain: in the western area around Ribera the arrangement works in the form of several producer organizations offering the members of a relatively smaller (but also more fragmented) citrus-growing area the possibility to sell production to retail chains at a convenient price, using a single, unitary brand for the products of all affiliated members. In the eastern area, large wholesalers have made the step of creating their own producer organizations, convincing small producers in close proximity to them to join these and benefit from secure market channels. Wholesalers and the respective producer organizations set up several brands, competing with each other. To the extent that each wholesaler-led organization secures and keeps access to at least one retail chain, further cooperation and coordination to establish a unitary brand is unnecessary. The next section takes a closer look at the situation in the eastern provinces from the perspective of what has been said above. It asks why the larger collective organization – IGP Arancia Rossa – is not working as its counterpart in the Ribera area, Arancia di Ribera DOP. It shows how in the eastern provinces large wholesalers have set up their own initiatives to organize producers, dividing the sector between the growers in their organizations and everybody else. To the extent that these parallel organizations work well, there are few incentives to make the larger one (Arancia Rossa) work better in the sense of attracting a wider participation and securing a higher certification.

### **Beyond Collective Producer Organizations: Commodity Chains in Citrus Production in the Catania and Syracuse Provinces**

One thing that stands out while comparing the two areas of citrus production in western and eastern Sicily is that, while both areas have their producer organizations, the western area (Ribera) sells its entire production under one brand name, the Riberella orange, which has recently (2009) acquired PDO status for Ribera oranges. In contrast, similar producer organizations in the eastern provinces could not achieve anything similar for their brand name Arancia Rossa. A key difference is that in the eastern provinces instead of one brand name (Arancia Rossa) there are at least four other ones that have pushed it to the side; the Arancia Rossa consortium has failed to turn its name into the unitary brand for products in any given area, and instead several others compete with each other throughout the eastern provinces. Behind these four brands there are strong wholesaler-initiated organizations of producers. The strongest among them – with cultivation surfaces totaling some 3,000 hectares – is the organization selling its products under the brand of Rosaria. Although these organizations adhere also to Arancia Rossa, they use exclusively their own brands (such as Rosaria) and not Arancia Rossa. For the purposes of this research, four such organizations were studied, all of them being nominally part of

Arancia Rossa. All four organizations share one important characteristic: they were initiated by trading companies, all of which are family businesses, three out of them having been in business for at least half a century (the oldest, Cavallino in the town of Lentini, was established in 1922). Two have chosen to become consortiums and unite growers in their areas into larger organizations, officially titled 'producer organizations' (OP Rosaria in Catania and OP Bella Rossa in Lentini). The other two are still basically trading companies, Ortopiù (based in Francofonte)<sup>3</sup> and Cavallino. Ortopiù was involved in the creation of a producer organization called *Le buone terre*,<sup>4</sup> from which it buys most of its production; currently, *Le buone terre* manages orange groves totaling 1,300 hectares. Only Cavallino did not seek involvement in the creation of producer organizations, choosing instead to buy up the production of producers affiliated to IGP Arancia Rossa (on its website it claims that it buys fruit only from affiliated producers, <[http://www.cavallinosrl.com/?page\\_id=9](http://www.cavallinosrl.com/?page_id=9)>, accessed 28 May 2015), and selling it further, including in Northern Europe, using its own brand names.

Thus each of these structures sells its production under a different brand name. In interviews, their representatives mentioned the following reason why it is important for them to have their own brand names: they need these brand names as they have all developed their own 'market channels', linking them directly to the large food retail stores present in Italy (of French origin such as Carrefour, of German origin such as Lidl, or of Italian origin such as A&O, Esselunga, or Coop). Working under the conditions imposed by such large retailers is not easy and has come at a cost, such as most importantly the investments into modern storage facilities, and sorting and packaging lines. The head of one of the companies studied argued that individualizing their production by means of their own brand means making sure that they have identified and united several producers committed to work under the delivery and quantitative conditions imposed by the large retailers (OP Bella Rossa, Lentini), usually codified in the form of the GlobalGAP standard (see Lee et al., 2012, for a discussion how retail chains use this standard – a form of private regulation – to 'govern' the value chains for their products). However, the case of Ortopiù (or of Riberella) refuted this account, as the company is perfectly capable of working with international retailers without individualizing its products through own brand names, and instead it uses the Arancia Rossa logo for some of its products. Actually, it seemed to use the Arancia Rossa logo only for produce that did not come from the producer organization; whatever came from the latter, was sold under the corresponding brand name (*Le buone terre*). Hence, it is not so much that retailers impose the use of certain brands, even though they do have strict requirements regarding delivery times, quantities and quality (and codified as GlobalGAP); instead, it appears that trading companies and corresponding producer organizations such as Ortopiù, Rosaria, or OP Bella Rossa chose not to use the unitary brand preferring instead to own their brands, as their own brands allow them to mark the boundaries of the value chains that they have called into life.

Specifically, it was possible to collect the needed information regarding the detailed constitution of the value chain only for OP Rosaria and Ortopiù, as these companies either made that information public or shared it for the purpose of this study. In the case of both business entities, trading companies participated in and initiated the corresponding producer organizations. Thus Ortopiù was involved in setting up *Le buone terre* in 2005 (the owners of Ortopiù appear also among the six entities that established the producer organization). And the Pannetteri & C. Srl company plays

a pivotal role in OP Rosaria, with family members holding chairmen positions in the producer organization.<sup>5</sup> Both companies organize all harvesting, storing, packaging and shipping operations. Their customers following the commodity chain include many national and international retail chains. Thus in the case of Ortopiù, the value chain looks the following way:

Le buone terre (producer organization) > Ortopiù (wholesaler harvesting, storing, packaging, and shipping) > Carrefour (most important retail store)

In the case of the Rosaria brand, the commodity chain starts at the corresponding Rosaria producer organization:

OP Rosaria (producer organization) > Pannetteri (responsible, within OP Rosaria, for all operations from harvesting to shipping) > large retailers, such as Coop

For Riberella and in the case of the first and largest affiliated producer organization the chain looks the following way:

OP Makeda > Carrefour (among many other retailers, also in Sicily, and even in Berlin, Germany)<sup>6</sup>

Following Kaplinsky (2004) a full 'value chain' in the food sector comprises the following links: Seed design (1)<sup>7</sup> > Growing (2) > Post-harvest processing (3) > Exporting (4) > Retailing (5). The chains above correspond only roughly to links 2–5, as in the cases of Rosaria and Ortopiù wholesalers are involved already in link 2 (harvesting), and also organize shipping (4, exporting). In the case of the Riberella brand, producers control links 2–4; as mentioned, some 150 of them actually keep family members in northern cities to sell production there, in fact controlling links 2–5.<sup>8</sup> Wholesalers exist also in the Ribera area, and can participate in buying up produce using the Riberella brand, but producers have an alternative to selling to them, and no wholesaler-initiated brand has surfaced so far that could compete with Riberella DOP. According to an interviewed representative of Arancia de Ribera, wholesalers own only three packaging facilities, while producer organizations own two, and producers themselves nine others.

In conclusion, it seems that in the case of eastern wholesaler-led or wholesaler-initiated producer organizations wholesalers were in the best position to connect with large retailers and initiate the investments needed to meet the demand from food retail chains. In the citrus sector, in the eastern provinces, wholesalers have traditionally amassed many tasks that at times required employing high numbers of labourers and investing in storage houses and transportation means. Thus, although historical accounts about wholesalers may lead one to portray these as 'speculators' buying and selling citrus production without seeing it and with often only an office space as the main type of infrastructure needed in their activity, the reality on the ground is very different. In the citrus sector it is wholesalers, not growers, who organize the harvest: wholesalers find and hire the labourers needed in the harvesting process, build and maintain the storage houses to which the labourers transport the fruits, and (today) also often maintain a small fleet of trucks with which to ship production to clients. With the arrival or growth of food retail chains, it was such wholesalers – with their existing storage and transportation facilities – who were in the best position to undertake the technological improvements required by the retailers: packaging lines and computerized sorting machines needed to separate

citrus production according to the size categories ('calibres') with which the retailers work.

In the Ribera area the late development of citrus production postponed or even prevented the rise of specialized wholesalers. When the opportunity to sell production to retailers first appeared, it was local producers who seized it, as some 150 (out of 4,000) had already developed the capacities to transport production to mainland Italy. The biggest packaging facility – built from the start to include sorting machines – appeared in the Ribera area only in the 2000s, and was built by one of the area's biggest growers (owning at that time some 30 hectares of land). In contrast, wholesalers in the eastern provinces formed an important part of the sector, historically responsible for harvest and storage, packaging and transportation. The biggest cases of 'producer organizations' were initiated by trading companies, and so were the first contacts with large national and international retailers. Thus these wholesalers have tried to create and promote brands only for the production and areas that they control and that guarantee them stable contractual relationships with retailers. What lies beyond the confines of these areas interests them less.

However, beyond these confines continues to exist another world of far smaller growers and wholesalers, one that characterizes the overwhelming part of the citrus sector throughout Sicily and certainly around Ribera. More than 60% of growers in Ribera or in the eastern provinces own land not bigger than a couple of hectares, and find it increasingly difficult to cover the yearly costs of growing citrus in Sicily (see Appendix Tables A2–4 for data on costs and prices supplied by the regional Agronomists Association). This reality used to be very different: up until the early 1990s, even small plots of land of 1–1.5 hectares could feed an entire family (D'Amaro, 2011). But with growing taxation and irrigation costs, and with falling prices, reality has changed dramatically for most small producers. This is in particular problematic for those growers who, because of the specialization prevalent in the sector in Catania, postponed any investment into facilities helping them harvest, store, and transport production. Such postponement made economic sense at the time, given that by leaving such facilities in the hands of wholesalers the sector could accomplish economies of scale despite the fragmentation of land ownership. But with the passing of time, what looked developed (specialized) became deeply challenging.

### **Revisiting Arguments about Producer Organizations and Institutions**

Producer organizations should in principle help growers overcome high transaction costs, informational asymmetries between farmers and retailers, and incomplete property rights that impede the proper functioning of markets and especially coordination among market actors (Dorward et al., 2004). Producer organizations often allow small farmers to have bargaining power in negotiating prices with retailers and form economies of scale (Dorward et al., 2004; Bijman et al., 2012). This perspective depicts small farmers as too isolated, too uninformed, too under-credited, or not skilled enough to survive in the absence of producer organizations. The world of small farmers is rarely seen as a world in which actors actually end up opposing each other, as the ways in which their sectors change relative to global markets strengthen or weaken divisions in their sector, and particularly divisions along value chains. This study does not dispute the importance of producer organizations for development, but raises several questions about the conditions under which such organizations actually become effective in uniting producers.

Hence, we need to know more about when and how farmers come to face opposition to organizing collectively. This opposition might not be a function of differentials in some sort of informational or cognitive asset. Eliminating information asymmetries cannot eliminate the power differentials between growers and wholesalers resulting from the different location in the production network (the value chain): simply put, producer organizations might arise not only because producers realize their weakness in the supply chain, but because large retail chains actually demand the aggregation of supply as well as some stability in the supply. Producer organizations then resemble the captive suppliers of a lead firm – a wholesaler, for instance – depicted in the literature on value chains (Gereffi, 2014, p. 6). Wholesalers are better located not only to provide retail chains with information about the supply (which would be an informational asymmetry), but also to initiate the aggregation of supply and producer organizations, in particular in sectors where they have specialized in the assembly of agricultural products. That it is often the arrival of retailers and the conditions they impose that offer an important incentive to producers to organize is relatively well-known (Vorley, 2007); however, little is known about the processes through which production organizations emerge in response to retailers and about the actors in the supply chain that might oppose or limit the aggregation of small farmers into producer organizations. Specifically, it can very well be hypothesized, on the basis of the data presented in this article, that the rise of large retailers can favour a concentration of power in value chains around wholesalers rather than around producers, if it is wholesalers that are able to expand and maintain the necessary infrastructure. This might in turn suggest that governance of value chains stems not only from end-buyers (retail chains) and does not necessarily take the shape of certification standards (Lee et al., 2012), but also from wholesalers and takes the shape of organizations uniting producers around wholesalers.

In other words, it is important to check whether producers in producer organizations actually play a role as important as the name of the organization suggests. Such organizations might often not be really organizations of only producers, as wholesalers can play important roles – or even hold most power, as they can be far better positioned to call into life such organizations and to mediate between producers and large retail chains. This seems to be the rule in Sicily's eastern provinces, where the biggest producer organizations are in fact dominated by wholesalers or have been initiated by them. It is therefore highly questionable whether Italy has managed to achieve in this agricultural sector the aggregation of producers into organizations that it envisaged in the light of its offensive in the 2000s to create producer organizations in order to alleviate the problems of a highly fragmented agricultural sector. And it goes without saying that producer organizations in which wholesalers play such important roles are very far away from how the 'Common Market Organization' understood such organizations in 1972: 'as any organization of fruit and vegetable producers which is established on the producers' own initiative' (EC Regulation 1035/72 in Camanzi et al., 2009, p. 5).

Summing up, one can see in Sicily the operation of two different institutional orders (institutions understood as the rules of the game) defining and controlling the citrus market and the corresponding value chain, or, in other words, the space between producers and consumers. In the Ribera area, producers collude into several organizations around one consortium, representing them in front of the large retail chains that deliver their products to consumers. In the eastern provinces, traditionally strong wholesalers took the lead and aggregated producers into several organi-

zations dealing with retail chains, competing against each other and at the same time leaving out the overwhelming majority of small producers in their areas (largely excluded from dealing with retail chains). This second arrangement does not exclude that the several organizations operating in the east will collude themselves to coordinate prices and quantities, but it is difficult to see why they would seek to extend membership indiscriminately to the small producers outside of their channels (instead of cherry-picking those that fit their requirements best). For these growers, one possible solution would be the arduous road of constituting their own producer organizations, in competition to those that wholesalers already established.

## Conclusions

This article has studied the situation of citrus growers in Sicily. It has argued that even though development studies are well established explaining badly operating institutions in less developed regions in terms of low levels of social capital, we still do not know how to make sense of the variation in terms of institutional performance *within* regions with low levels of institutional prerequisites. This article found that such variation indeed exists within Sicily's citrus sector, with one area – Ribera in Western Sicily – capable of developing an effective aggregation of producers, and with another one – the far larger citrus cultivating area in the eastern provinces – failing to do so. It has also found that what could account for the variation is constitution of value chains, and specifically the early development of commercial structures in the eastern provinces, which placed wholesalers in the best position to initiate on their own the aggregation of some producers while at the same time keeping many others out. In other words, the situation of Sicily's citrus sector is somewhat paradoxical: it currently has (at least in the eastern provinces) tremendous difficulties competing internationally, but at the same time it once featured a hyper-capitalist, highly specialized structure, exporting most of its production. The argument advanced in this article is that the cause for the paradox is the institutional arrangement governing and ordering of the value chains between growers in the eastern provinces and consumers, preventing the formation of more effective and inclusive producer organizations.

## Notes

1. Casavola et al. (2011), for instance, identify the know-how of producers in south-eastern Sicily as one of the factors explaining their performance.
2. Some 150 out of 4,000 producers in the Ribera area keep personnel in Northern Italy, (according to official data supplied by the Riberella Consortium (<<http://www.aranciadiriberadop.it/>>), accessed 8 October 2014).
3. Websites associated with this company are Agricola Ortogroup <<http://www.agricolaortogroup.com>> and Mammarancia <<http://www.mammarancia.com/>>, accessed 28 May 2015.
4. A presentation of the organization together with an overview of the entities that established it is available at Le buone terre <<http://www.lebuoneterre.it>>. Details on one of the organization's biggest members (with surfaces totaling some 60 hectares): Orange of Sicily <<http://orangeofsicily.com/chi-siamo>>. A background article offering information about the establishment of this organization is available from Ortofruttaweb <[http://www.ortofruttaweb.it/italian/news/altro/al\\_002.htm](http://www.ortofruttaweb.it/italian/news/altro/al_002.htm)>, all sites accessed 28 May 2015.
5. An overview of the positions held by members of the Panneteri company within OP Rosaria can be found at Arancia Rosaria <<http://www.aranciarosaria.eu/sicilia-Organigramma-96.asp>>, accessed 28 May 2015.
6. An interview with the current (2015) chairman of the OP Makeda producer association can be accessed



- through *Momenti* <<http://www.momentiweb.it/index.php/233-tutte-le-arance-per-noi-hanno-un-prezzo?showall=1>>. A presentation of the structure established by producers in Ribera to represent them in Berlin can be found at Biofruit <[http://www.biofruit.it/assets/pdf/Flyer\\_italian.pdf](http://www.biofruit.it/assets/pdf/Flyer_italian.pdf)>, all sites accessed 28 May 2015.
7. Since 'seed design' in the case of oranges refers to the produce of plant nurseries, and since buying plants (young trees) from nurseries is an investment usually made once in decades, it has been left out of the chains depicted above. However, often orange groves suffer attacks from the citrus tristeza virus, requiring producers to replace entire hectares (the virus represents a global problem, befalling orange groves worldwide). According to A. Pannetteri (Head of OP Rosaria), the demand for young trees is usually not met by local plant nurseries – themselves potentially affected by the virus, requiring more expensive imports (<<http://www.italiafruit.net/DettaglioNews/23918/botta-e-risposta-verso-la-campagna-agrumicola-201314-volumi-in-crescita-e-una-stagione-sempre-piu-lunga-da-dicembre-fino-a-giugno-con-aurelio-pannitteri-presidente-op-rosaria>>, accessed 28 May 2015).
  8. One such producer (with surfaces of roughly 11 hectares) offers potential customers an overview of places in Northern Italy, where he can be found selling produce (usually market places in cities and towns); an interview with the producer is available from Arance Pasqualino Borsellino <<http://aranceborsellino.it/chi-siamo/6-luoghi-di-vendita.html>>, last accessed 28 May 2015.

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## Appendix

Table A1. Cases studied during fieldwork.

Tag	Location (province)	Size (in hectares)	Product or Activity	Years in activity
Agnone 1	Syracuse	2	Oranges (blond)	25–30
Zafferana 1	Catania	5	Avocado	10
Lentini 1	Syracuse	11	Oranges (red)	3rd generation or more
Misterbianco 1	Catania	100	Oranges (red)	3rd generation or more
Lentini 2	Syracuse	2	Grain and bakery	2
Trecastagni 1	Catania	1	Bakery	4–5
Trecastagni 2	Catania	2.5	Wine	4–5
Augusta 1	Syracuse	3	Vegetables	3
Agnone 2	Syracuse	5	Oranges (blond)	5
Santa Venerina	Catania	1	Citrus	3rd generation
Zafferana 2	Catania	3	Avocado, olives	10
Trecastagni 3	Catania	1	Goat's cheese	6
Viagrande 1	Catania	6	Citrus, other fruits, olives	3rd generation or more
Francofonte 1	Syracuse	50	Trade	3rd generation
Riposto 1	Catania	18	Lemons	2nd generation
Riposto 2	Catania	–	Trade	2nd generation
Licata 1	Agrigento	5	Goat's cheese	10–15
San Cataldo 1	Caltanissetta	100	Goat's cheese	10
Licodia 1	Catania	10	Red oranges, cactus pear	8
Trecastagni 4/ Francofonte	Catania/Syracuse	40	Oranges (Red)	2nd generation
Agnone 3	Syracuse	47	Oranges (Red)	8
Paterno 1	Catania	5	Oranges (Red)	3
Paterno 2	Catania	3	Oranges (Red)	10
Ragusa 1	Ragusa	–	Cow cheese	–
Viagrande 2	Catania	–	Olive products	5
Codavolpe	Catania	29	Red oranges, potatoes	2nd generation
Ribera 1	Agrigento	5	Oranges (blond)	2nd generation

Note: the cases are referred to by the name of the respective town, village, or commune.

**Table A2.** Overview of production costs for oranges for orange farms in Sicily.

Costs (EUR/HA)	1980	1990	2000	2010	2013
Real Estate Tax	0	0	300	300	750
Irrigation costs (water only)	18	105	220	320	450
Tax	90	110	130	130	200
Growing operations	106	180	310	700	800
Pruning	120	220	450	800	900
Electricity	95	200	310	920	1,200
Fertilizers	250	285	360	650	650
Foliar fertilizers	30	70	115	250	250
Fuel	15	45	65	280	350
Social security	25	40	120	300	300
Total	749	1,255	2,380	4,350	5,850

Source: compiled by agronomists in Sicily's Association of Agronomists.

**Table A3.** Overview of average revenues for orange farms in Sicily.

Product type	1980		1990		2000		2010	
	EUR/kg	EUR/ha	EUR/kg	EUR/ha	EUR/kg	EUR/ha	EUR/kg	EUR/ha
Navelina	0.30	7,500	0.28	7,000	0.22	5,500	0.16*	4,500
Tarocco	0.25	6,250	0.23	5,750	0.20	5,000	0.10	2,500
Valencia	0.60	18,000	0.30	9,000	0.20	6,000	0.18*	5,400

Note: \* in Eastern provinces; 0.40–0.45 in the Ribera area.

Source: compiled by agronomists in Sicily's Association of Agronomists.

**Table A4.** Overview of average costs versus revenues for orange farms in Sicily.

Product type	1980	1990	2000	2010
Navelina	+6,751	+5,745	+3,120	+150
Tarocco	+5,501	+4,495	+2,620	-1,850
Valencia	+17,251	+7,745	+3,620	+1,050

Source: compiled by agronomists in Sicily's Association of Agronomists.



## **Social Acceptance of Climate Change Adaptation in Farms and Food Enterprises: A Case Study in Finland**

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**Abstract.** This article identifies perceived climate change risks and adaptation aspects among farms and food processing enterprises using a case study in Finland. In addition, the article pinpoints key factors that contribute to the social acceptance of climate change adaptation and mitigation policies in the food system. The purpose is to study the willingness of farms and food enterprises to accept and adapt to different climate policy implementation. The research data consists of 27 thematic interviews conducted in 2012 and 2013. The main research questions were: 1. What risks does climate change pose to farms and food enterprises? 2. What adaptation features can be identified in farms and food enterprises? 3. What factors contribute to the social acceptance of climate change mitigation and adaptation in relation to policy practices? For data analysis content analysis was utilized. The results show that climate change is a somewhat indistinct issue from the viewpoint of the food enterprises. In addition, the adaptation to climate change in food enterprises can be characterized as a reactive strategy based on the localization and decentralization of food supply chains, as well as on the development of regional food systems. Farmers found it difficult to estimate the overall consequences of climate change for their farms. They also gave strong support to localized food systems. The study found that social acceptance of adaptation policies depends on the degree of limitation and estimated effects of the policies on the profitability of farming and food entrepreneurship. More broadly, a nexus between food security and energy security policies and climate change adaptation goals should be established. A local energy system would ensure the functioning of the local food system as well. We conclude that value-based strategic partnerships in the food supply chain could enhance the regions' adaptive capacity and resilience, as well as its social acceptance of climate change adaptation goals.

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## Introduction

Climate change is one of the greatest challenges of our time. It is the most urgent and inherently global problem because of its causes and effects, as well as its solutions (Oosterveer and Sonnenfeld, 2012; Thiele, 2013). Hence, climate change influences all of the functions of society, including agriculture and farming, and climate policy is compelled to set new goals for ways to produce and consume food (Almås et al., 2011; Paarlberg, 2013). In the context of the food system, many new policy ideas and innovations have been presented on how farms, the food industry, retail stores and consumers could reduce their vulnerability to the risks caused by changing climatic conditions. The food system can reduce emissions and enhance sustainable development in many ways, such as increasing its energy efficiency or reducing waste. It can even use waste to create new innovative products (see Stuart, 2009). This kind of development has diverse influences on agriculture and food production (Renwick and Wreford, 2011). However, the success of these climate policy implementations is dependent on the general social acceptance of the policy goals and climate change mitigation and adaptation measures.

Generally speaking, social acceptance refers to how policy goals and implementations correspond to citizen or stakeholder conceptions about legitimate policies and policy practices. Policy goals are more likely to become permanent practices if they enjoy wide social acceptance among different local stakeholders that are affected by those political decisions. However, different barriers for social acceptance (such as beliefs about the estimated negative effects of a policy) may exist among citizens. Overcoming these barriers and creating favourable conditions for mitigation and adaptation is, thus, a social process (Wolf, 2011). Hence, citizens' values and attitudes are important for making adaptation policies successful (Antle, 2009; Wolf et al., 2012). Self-assessment surveys submitted by European countries revealed that there is 'an increase in the public and policy awareness of climate change adaptation, progress in the development of the knowledge base and involvement of stakeholders' (EEA, 2014, p. 9). Although the importance of understanding public views of climate change adaptation is widely acknowledged, there is relatively little literature on the social acceptance of climate change adaptation policies. Climate change is also a difficult topic for scientists and the public to communicate about (Pidgeon and Fischhoff, 2011). Climate change is an uncertain and complex phenomenon, and according to Pidgeon and Fischhoff (2011), many people consider it a distant issue that affects others elsewhere.

This article contributes to the climate change debate by focusing on the relationship between social acceptance and climate change adaptation within the food system. The purpose is to identify perceived climate change risks and features of adaptation among farms and food processing enterprises. In addition, we identify key factors that contribute to the social acceptance of policies on climate change adaptation and mitigation. The article is based on a study that examines climate change adaptation of farms and food enterprises in Finnish inland provinces. Data were collected through 27 thematic interviews in 2012 and 2013.

It should be noted, however, that this article does not aim to make a clear distinction between climate change adaptation and climate change mitigation, as adaptation is generally 'interpreted in a wide variety of ways by a wide variety of actors, and is a highly contextual process dependent on variables such as sector, region, and size of firm' (Nitkin et al., 2009, p. 20). For example, climate change influences societal and cultural processes, but it is also intensified by societal and cultural pro-

cesses, which means that successful adaptation approaches must include mitigation efforts in the long run (Beermann, 2011). The climate adaptation means and attitudes of Finnish farms and food processing enterprises represent the key focus of this study. In this context, the purpose of the study is also to examine their willingness to accept and adapt to different climate policy implementations.

The article is structured as follows. First, we present the core theoretical concepts of the study: climate change adaptation and social acceptance. This is followed by a description of the current trends in Finnish agriculture and the food system. Then, we describe the qualitative research setting, research data and analysis, followed by the results of the study. Finally, we present our conclusions and discuss the results.

### **Climate Change Adaptation and Social Acceptance**

Climate change adaptation refers to the capability of a system (e.g. community, household, or sector) to better cope with or manage changing conditions, risks, hazards or opportunities. Adaptive capacity is context specific and varies over time, depending on the country, community and individual (Smit and Wandel, 2006). In the 2014 climate change adaptation report by the European Environment Agency, adaptation is defined as follows:

‘actions taken in response to current and future climate change impacts and vulnerabilities (as well as to the climate variability in the absence of climate change) in the context of ongoing and expected socio-economic developments. It involves not only preventing negative impacts of climate change, but also building resilience and making the most of any benefits it may bring’ (EEA, 2014, p. 8).

Adger et al. (2009a) examine in particular the social limits of adaptation. They argue that the discourse around limits to adaptation is categorized along ecological and physical, economic, and technological limits. Furthermore, they contend that climate change adaptation is also limited by societal factors that have not been adequately taken into account in academic research. Societal factors include, for instance, the ethical principles of local cultures and the ways of perceiving climate risks. These factors are also significant for adaptation in farms and food enterprises.

Adaptation is important in the food and agriculture sectors. The provision of inputs needed for plant or animal growth, as well as production itself, is dependent on climatic conditions. Farmers have to make decisions based on climatic factors and think about how to maximize economic returns and how to manage risks related to their productions. As climate change will have a major negative impact on food production and global food security (IPCC, 2015), farmers will need to make such decisions in a more difficult environment. However, these decisions and resources for making them also depend on decision makers and national policy (Antle, 2009). Building adaptive capacity, enhancing knowledge generation, and the dissemination and facilitation of mainstreaming are among the initiatives aimed at making climate change adaptation operational (EEA, 2014). Hence, climate adaptation refers to a broad variety of practices that vary among different regions and countries.

Social acceptance is, importantly, a concept that relates to the good performance of policy implementations. In this study, it refers to how climate adaptation measures correspond to the understanding of fairness and social justice by farmers and food enterprises. Social acceptance is a precondition for legitimacy of national poli-

cies. Legitimacy is constructed and based on the values, beliefs and definitions of the system or community. Suchman (1995, p. 575) discusses legitimacy in the context of organizations. He argues that legitimacy affects how people understand organizations and that ‘audiences perceive the legitimate organisation not only as more worthy, but also as more meaningful, more predictable, and more trustworthy’. Suchman has suggested three forms or sources of legitimacy: pragmatic (motivated by self-interest), moral (normative approval), and cognitive (relating to the comprehensibility of the actions). These sources give rise to the legitimacy and, in parallel with that, the acceptance of adaptation policies. In this article, legitimacy is understood as consent of different stakeholders that justifies the exercise of power of governmental organizations. This legitimacy is always contextual, taking place within a particular community’s values and beliefs. Legitimacy increases the willingness of those affected by policies or regulations to comply, and it may therefore be important not only for the sake of general ‘fairness in policymaking’ (in a democratic society), but also for the effectiveness of those policies (Kyllönen, 2013). Essentially, social acceptance creates legitimacy.

The concept of social acceptance has been used widely, for instance, in studies related to energy policy (Assefa and Frostell, 2007; Mallett, 2007; Wüstenhagen et al., 2007). Despite being a commonly used concept, social acceptance has not been clearly defined. Wüstenhagen et al. (2007) conceive social acceptance as consisting of three dimensions: sociopolitical acceptance, community acceptance and market acceptance. Figure 1 represents these levels of the concept, and it is adapted from Wüstenhagen et al. (2007); the three levels of acceptance are the same. The content of these levels is adapted from Wolsink (2012). Originally the figure refers to energy policy and therefore primarily deals with mitigation policies. However, we suggest it is also applicable in studies of adaptation policies.

Sociopolitical acceptance is acceptance at the most general level. Wüstenhagen et al. (2007) assert that sociopolitical acceptance concerns, for instance, the key stake-



**Figure 1.** Levels of social acceptance.

Source: Adapted from Wüstenhagen et al. (2007) and Wolsink (2012).



holders and policy actors of effective policies. It is the task of the stakeholders to create favourable conditions for new innovations and technologies (Wolsink, 2012). Many barriers to policy implementation are related to the lack of acceptance at this level. While sociopolitical acceptance is a general framework of acceptance, community acceptance and market acceptance are determined at particular locations and communities (Wolsink, 2012). In the context of renewable energy projects, Wüstenhagen et al. (2007, p. 2685) argue: 'community acceptance refers to the specific acceptance of siting decisions and renewable energy projects by local stakeholders, particularly residents and local authorities.' In addition, the stakeholders need to perceive the benefits and possibilities of new innovations, and that is why fairness and trust are important constituents of acceptance at the community level (Wolsink, 2012). More generally, local networks are beneficial for enhancing community acceptance (Jobert et al., 2007).

The third dimension of acceptance is market acceptance. It refers to the process of an innovation's market adoption and, thus, relates to the concept of diffusion of innovation (Wüstenhagen et al., 2007). The diffusion and innovation theory is widely used within the social and business sciences. The concept is used not only in the study of technical or commercial innovations, but also in the study of policy innovations (Minstrom, 1997). The idea of the diffusion process originates from the American sociologist Everett M. Rogers (1995), who argues that diffusion is a particular kind of communication process. Diffusion also means social change, and through that process, new innovations are adopted – but these diffusion processes are usually very slow. In terms of market acceptance, the diffusion process explains the adoption of innovative products by consumers among individual adopters and their environment (Wüstenhagen et al., 2007). Successful market acceptance is, of course, also dependent on the actors' willingness to pay or invest in new innovations. In the context of climate policy, these innovations mean, for instance, renewable energy solutions or climate-friendly food products. Wide public acceptance creates trust and is also helpful for market acceptance (Wolsink, 2012).

In the early phases, climate policies mainly focused on mitigation, but the significance of adaptation policies was later recognized (Pielke, 1998). Lack of social acceptance can emerge as a significant barrier to climate change adaptation, and social acceptance can therefore be considered an important determinant in the failure or success of adaptation policies (cf. Tompkins and Adger, 2004). Thus, social acceptance also requires attention in research. The role of stakeholders in designing adaptation activities is of high importance in increasing acceptance (EEA, 2014). Climate change adaptation policies have great significance in food and agriculture sectors. Furthermore, climate change affects agricultural yields and earnings, food prices, food quality and food safety (Vermeulen et al., 2012). Consequently, good governance that increases social acceptance of adaptation policies has direct and indirect impact on food security and, for instance, coping abilities of poor producers and consumers, especially in developing countries. Successful adaptation reduces the vulnerability of farmers. However, adaptation is also dependent on other factors in the food system, such as the effects of the complex network of international and local trades (Vermeulen et al., 2012).

In the following sections, we focus on two key stakeholder groups in the food system: farmers and food processing enterprises. Farmers have opinions at the grass-root level, and they are able to perceive changes in climatic conditions in their daily work. Mapping the opinions of farmers can also expose important cultural factors

that are significant in order to understand adaptation processes in agriculture (Huttunen et al., 2015). At the same time, identifying vulnerabilities and risks of farm livelihoods is important for enhancing resilience and food security (Järvelä and Kortetmäki, 2015). In the near future the key challenge is how to produce enough good quality food in climate-friendly ways (Jokinen et al., 2015). In addition to farmers, food-processing enterprises have an important role in this study. These enterprises are able to look at the food supply chain with regards to both ends: raw materials come from the primary industry, and food enterprises need to consider consumer behaviour in their businesses.

### **Food Supply Chains and Climate Change Adaptation in Finland**

As vulnerability and adaptation capacity to climate change varies by country, Finland is an interesting case. With respect to potential vulnerability to climate change, Finland, Sweden and the Baltic countries are the least vulnerable countries in Europe, with low vulnerability to climate change, depending on the region (Greiving, 2013). According to Greiving (2013, p. 295), the considerable adaptive capacity of Scandinavia and Western European countries lowers the potential climate impact. Therefore it is not surprising that Finland foresees higher immigration due to climate change and higher food prices (Tommila et al., 2013). In addition, Finland and the United Kingdom are the first industrialized countries to have developed a formal national adaptation strategy (NAS) and a comprehensive Climate Change Act, which covers mitigation of and adaptation to climate change (Keskitalo et al., 2012). Finland established a formal national strategy in 2005 (Marttila et al., 2005) and the Finnish government approved the proposal for an act on climate change in 2014 (Finnish Government, 2014). The Adaptation Action Plan (2011–2015) of the Ministry of Agriculture and Forestry defines 41 measures for agriculture, forestry, fisheries, game husbandry, rural policy, and water resources management (Ministry of Agriculture and Forestry, 2011). However, adaptation strategies and measures are heavily directed towards agriculture, with little emphasis on other phases of the food supply chain.

The recent developments of climate change adaptation in Finland are described well by Keskitalo et al. (2012, p. 388): ‘As the NAS has no direct impact on regional or local level, adaptation measures at these scales instead derive from changes in legislation that will eventually steer regional and to some extent local administrations. The regional and local cases of adaptation in Finland have thus emerged as a result of their engagement in voluntary initiatives with no connection to the national level.’ While national policymakers have paid attention to international development and science as driving forces in Finnish adaptation policy, the NAS has specifically targeted the national level.

Based on self-assessment surveys in European countries (EEA, 2014), the water, agriculture and forestry sectors are reported to be the most advanced in terms of implementing portfolios of climate change adaptation measures at all administrative levels. The adaptation measures in Finnish agriculture usually relate to changing weather conditions and expected increase in the average temperatures. The adaptation means discussed involve earlier sowing and later harvests, changes in chosen plant cultivars, more frequent irrigation, changes in sod farming and increased use of pesticides, to mention a few (Ollikainen et al., 2014). They might also include new innovative solutions such as climate-ready crops (Abergel, 2011). Accordingly,

the related agricultural adaptation policies concern, for example, regulations for the use of pesticides, sod farming, and economic incentives that favour or discriminate against certain practices. Small family farms have traditionally shaped Finnish agriculture. Plant production is important in the southern part of the country and dairy production in the north. In 2013, there were about 57 600 farms in Finland but the number of farms is decreasing and, at the same time, the average size of farms is growing. Currently, the average arable area of a farm is about 40 hectares (Niemi and Ahlstedt, 2014).

During the last couple of decades, the Finnish food industry has become centralized, and contractual relationships between producers and the food industry have become more common; nevertheless, the diversity of food processing and manufacturing companies is still the major characteristic of the industry. Actual disruptions due to climate change in the food industry may occur in information technology, transport infrastructure or in a supplier network. In addition, fuel shortages, loss of power, loss of water and infectious diseases may paralyse food industries. According to the Action Plan for the Adaptation to Climate Change (Ministry of Agriculture and Forestry, 2011), climate change poses direct threats to the food industry, such as the spread of plant and animal diseases and floods caused by abundant rains. In 2012, the Finnish food industry employed 39 400 persons in total. The majority of the firms employ fewer than five workers, and many of these small firms are located in rural areas. The bakery and meat processing industries are the largest food processing industries in Finland (Niemi and Ahlstedt, 2014), and producer cooperatives have a significant position in the dairy and meat processing industries. Trucks transport most domestically produced food, and a well-functioning road network is significant for the Finnish food supply chain. The importance of transportation in food distribution is emphasized in Finland because there are often long distances between farms and residential centres.

In food retailing, one of the major climate change adaptation concerns is associated with food safety. According to a study by Peck (2006), food safety regulations were the starting point for most operational risk management processes. This involved, in particular, larger retailers and wholesalers devoting considerable resources to monitoring stores, distribution sites and in-bound supplies. In retail stores, for example, it is important that the cold chain (refrigeration) is ensured in line with climate and other emission reduction targets (Ministry of Agriculture and Forestry, 2011). According to James and James (2010), temperature increases will increase the risk of food poisoning and food spoilage unless the cold chain is improved.

Centralization is also a major trend in the Finnish retail market. In fact, Finland has the most centralized retail food structure in Europe. Two main retailing companies, S Group and K-Group, dominate the Finnish food supply chain. In 2013, they had a combined market share of 79.7% (Niemi and Ahlstedt, 2014). There are approximately 4,000 food retail stores in Finland (Finnish Grocery Trade Association, 2015), and the whole food chain employs about 300 000 persons (Hyrylä, 2012). Due to globalized food supply chains, both production and processing are often located outside of Finland, which lengthens the food chain and adds to the complexity of its structure.

## **Data and Methods**

Our research data consist of thematic interviews conducted in 2012 and 2013. The

data include 27 interviews: 5 interviews with dairy enterprises, 5 interviews with bakeries, 5 interviews with agricultural professional associations, and 12 interviews with farmers. The study was conducted in Finnish inland regions. The main research questions were: 1. What risks does climate change pose to farms and food enterprises? 2. What features of adaptation can be identified in farms and food enterprises? 3. What factors contribute to the social acceptance of climate change mitigation and adaptation related to policy practices? For the data analysis, an abductive approach to content analysis was utilized to answer these research questions.

The respondents of food enterprises represented companies of all sizes, including a large dairy company (two interviews), a medium-sized bakery (up to 250 employees), three small enterprises (up to 50 employees) and four microenterprises (up to 10 employees). The respondents of farms represented all major agricultural branches, including five cereal production farms, five animal production farms and two multi-branched farms. The professional organizations in the study were the Central Union of Agricultural Producers and Forest Owners (MTK) and the agricultural expert organization ProAgria. The basic information about the interviews is presented in Table 1.

Ten interviews were completed with food enterprises, two of which were conducted in the same milk processing enterprise (with the production manager and the distribution manager). At the beginning of the study, it was challenging to find interviewees from food enterprises. Many requests were met with concerns that the questions were too difficult, the enterprise had committed to other studies, there was a change in generation in the enterprise, or that the time was not suitable. However, the final number of interviews was considered sufficient. The farmers contacted were generally agreeable to the interviews, and only a few declined. Ten interviews were conducted face to face and four by phone. All 12 interviews with farmers were conducted face to face. Seven farms grew cereal, five specialized in dairy production, one farm was a dairy breeding operation, another a poultry farm, and two were organic farms. Some farmers were engaged in two production branches. Professional organizations were asked to participate in this study as well, because they have good local knowledge of their own regions. These (five interviews) included adviser organizations and lobbying organizations.

There were three main themes in the interviews. The first theme concerned the background information of the interviewees and the activity of their organization or farm. The second was related to the interviewee's perceptions and experiences about climate change. The third theme covered foresight and adaptation to climate change in the future. The research data were analysed using abductive reasoning, which is

**Table 1.** Interviews in the study.

	Number of interviews
Bakery enterprises	5
Dairy enterprises	5
Professional organizations	5
Animal production farms	5
Cereal production farms	5
Multi-branched farms	2
Total	27

a qualitative content analysis method that connects data-based and theory-directed analysis (see Timmermans and Tavory, 2012; Silvasti, 2014). Abductive reasoning enables a coding scheme that derives codes from both the data and earlier research, and it is a particularly useful method for qualitative research concerning topics that are relatively unexplored. Furthermore, the use of the abductive method was justified by the partial unpredictability of the results, due to which it was important to be able to perform analysis without commitments to preliminary hypotheses. Thus, earlier research provided the framework for recognizing the dimensions of social acceptance found in the interviews, while the data-based part allowed space to identify 'surprising facts' that were not expected before the analysis.

The reliability of qualitative research is here understood as the consistency and quality of the research, and validity as indicating how well the findings are grounded on the qualitative data (cf. Flick, 2002, pp. 218–225). Overall, procedural reliability and the quality of research and analysis were ensured through regular discussions in the research group and comparisons of the interpretations and findings. As a qualitative study, this research does not aim to produce generalizations about farms or food enterprises but rather to identify repeated meanings as well as the most convergent and divergent points of view among actors.

The case study on Finnish inland provinces offers an interesting case because the country's agriculture and food production have certain special features due to the northern location. The weather conditions in Finland make agriculture challenging. The growing season is relatively short and early spring and late autumn frosts threaten certain crops. Agricultural production is also highly regulated in Finland, which sets its own bureaucratic pressures for farming, food production and their adaptation aspects (Järvelä and Kortetmäki, 2015). As was mentioned earlier, farming has been based on family farms in Finland. However, the number of Finnish farms has been halved in about two decades and the continuity of farming businesses is under threat for many reasons. For instance unprofitable production, lack of investments, and on old age structure of farmers creates challenges for food production (Järvelä and Kortetmäki, 2015). These issues influence the adaptation of Finnish food supply chains as well.

### **Results: Farms, Food Enterprises and the Threat of Climate Change**

The findings of this study indicate that farms and food enterprises are not well conversant with climate change-related questions. Additionally, we observed that a considerable number of entrepreneurs were unwilling to participate in the interviews, which resonates with our finding that among food enterprises, climate change issues are generally experienced as a complex phenomenon that is challenging to grasp (see also Evans et al., 2011). One reason for this discomfort regarding climate change and its risks is certainly the broad temporal span of climate change. Climate change seems, then, to be a somewhat indistinct issue from the viewpoint of food enterprises, and therefore, it is not easy to identify the intensity of climate risks and the degree of vulnerability of one's own enterprise (see Füssel, 2007). Furthermore, according to earlier studies on climate change, it is well known that awareness of climate change does not necessarily lead to action (Wilson, 2006). On the other hand, it is recognized that farms and small and medium-sized enterprises (SMEs) seldom have the time, resources or information required for mitigation and adaptation measurement, which also means that farms and SMEs do not have a clear understanding of

their own performance with regards to mitigation and adaptation (Bourlakis et al., 2014). Thus, SMEs are in the weakest position when it comes to adaptation to climate change and globalization (for the latter case, Moreira, 2011).

Despite having little knowledge of climate change, the interviewed entrepreneurs had noticed various changes in their environment. A majority of them mentioned the rapid changes in weather conditions, such as the increase in windy and stormy periods. The creeping crises that arise from incremental changes and their consequences attracted less interest. Overall, the interviewees did not consider tackling climate change the most crucial priority for their businesses, as there were more significant pressures, such as increased competition and bureaucracy. Finnish farms and food enterprises experienced these pressures equally. One interviewee mentions:

‘Well, the EU has considerable power in these matters, but people hate the ensuing bureaucracy if you are trying to do something [in business]. But, I have to say that even the public administration wants all stuff to be cheap and nothing to cost any money. So I have a sneaky feeling that the role of public policy is to cut all the costs so that in the end our products should not cost anything to the customer’ (Manager of food enterprise).

‘All kinds of forms and papers must be filled, and a lot. So there is a lot of paperwork. And for example this change of generation, it brought quite an amount of paper in front of me and after I took them around the town to every possible office, I did not know myself which papers I had taken and what kind of papers they actually were, because their amount was so incomprehensible’ (Dairy breeder).

Uncertainty about the actual effects of climate change was reflected in the discussions with farmers and food entrepreneurs. Overall, farmers found it difficult to predict the consequences of climate change for their farms: the layman’s knowledge they possessed was not directly applicable to their own circumstances. The farmers believed climate change would bring both positive and negative consequences to Finnish agriculture: the likely increase in temperatures could lengthen the growing season, which will positively affect farming circumstances, yet at the same time the risk of pest problems and plant diseases may increase. According to earlier studies of adaptation, the influences of climate change vary significantly by crop and region (Lobell et al., 2008). These influences may be both positive and negative (Vermeulen et al., 2012). Simultaneously, this variation has serious consequences for global food security and, hence, it affects the attitudes of investment organizations (Lobell et al., 2008). It is interesting, then, that when farmers were asked whether Finnish agriculture will be a ‘winner’ or a ‘loser’ in the course of climate change, nearly all the interviewees predicted that Finnish agriculture (and in particular crop farming) will be a ‘winner’ at the European level of comparison. This estimation implies that climate change will make Finnish farmers better off than their colleagues in Southern Europe, and may affect their opinions concerning adaptation policies and their legitimacy. Food entrepreneurs and representatives of professional organizations also shared this point of view.

#### *Adaptation Features in Farms and Food Enterprises*

According to the results, the climate change adaptation strategies of food enterprises

can be characterized as reactive, based on the localization and decentralization of food supply chains, as well as on the development of regional food systems. Alternatively, these strategies may be perceived as autonomous reform processes that are more consciously linked to energy efficiency than to climate change, because many of the interviewees believed the price of energy had crucial influence on the profitability of the food chain. Hence, many enterprises have adopted solutions that enhance the efficient use of energy. Moreover, energy-related issues are more concrete and easier to integrate into a business than other measures about mitigating or adapting to climate change, as these food entrepreneurs described:

‘The use of energy directs our pricing of products too. It is expensive to transport products from here, so all that is shown in the price of bread. It is clear that nobody does this job at his own cost. Everything has to be compensated somehow’ (Food entrepreneur).

‘Unfortunately we are not able to use bioenergy in transportation. All increases in energy prices also affect transportation costs and this trend has continued... Renewable energy sources are coming into use only now’ (Managing director of food enterprise).

In this context, Wallgren (2006) presents interesting results based on her own study. She estimates that in the near future, it will be possible to develop bioenergy technologies that are more suitable for small-scale farmers and enterprises, for instance, by using biogas as a fuel for transport, as well as for heating (see Huttunen, 2013). These kinds of solutions are interesting from the local food system point of view as well, and all actors in the food supply chain would achieve more benefits via that kind of development, including consumers. Development of biofuels would have significant impacts on commodity prices (Antle, 2009).

Despite possible positive effects discussed earlier, farmers perceived climate change as a non-preferable but unavoidable phenomenon. As one farmer remarked, they cannot relocate their field abroad. For this reason, adaptation to climate change is understood to be necessary. However, adaptation was a new theme for most of the farmers, and it was also considered to be an issue that will concern future generations, rather than today’s farmers. When the farmers were asked what kinds of adaptive measures they had taken or were considering, hardly any were mentioned; instead, many farmers started to describe the ways in which they had cut their greenhouse gas emissions. When the adaptation question was clarified by asking, for example, about the changes in sowing practices or adaptation to the increasing risk of storms and blackouts, it came out that different adaptive measures such as buying reserve power aggregates or evaluating the possibilities of changing the strains used had already been taken or were under consideration. Similarly to the food enterprises, the issues linked with energy efficiency (and possible self-sufficiency in energy production) were the most easily grasped themes within adaptation.

Two important and partially opposing tendencies arose from the farmers’ views on adaptation. First, the general understanding that climate change will affect agriculture and make adaptation necessary can be predicted to increase the general acceptance of adaptation policies. On the other hand, the uncertainties and complexities related to the effects of climate change may decrease policy acceptance and lead to the favouring of reactive strategies. This attitude was insinuated as farmers generally believed their farms had sufficient adaptive capacity to climate change and that they are able to take the adaptive measures themselves. These attitudes

towards climate risks are likely to affect the opinion of farmers about acceptable adaptation policies (Antle, 2009). However, in order to achieve successful adaptation policy, actions at the farm level need to be supported by the planned adaptation at higher policymaking levels (Vermeulen et al., 2012).

### *Social Acceptance of Climate Change Adaptation and Policies*

The research revealed various factors that influence the social acceptance of climate adaptation and adaptation policies. The results are discussed using the conceptual framework of different levels of social acceptance and the sources of legitimacy (pragmatic, moral and cognitive), which together give rise to the overall acceptance of adaptation policies. In total, we found four different factors that had significant effect on the dimensions of social acceptance: 1. the (perceived) obscurity of climate change, 2. the rigidity/flexibility of adaptation policies, 3. bureaucracy, and 4. economic factors.

Socio-political acceptance was affected by the perception of climate change as an *obscure phenomenon*. The interviewees did not consider themselves acquainted with the effects of climate change and the related adaptation measures. Many of the farmers interviewed held the opinion that climate change may actually make them better off. Farmers also believed that they already had sufficient adaptive capacity, although they often found it hard to name any particular measures they had taken or were planning to take. The same attitude was observed among the food entrepreneurs. This was due to a general confusion between climate change adaptation and mitigation actions and the uncertainties related to climate change. This finding is supported by Adger et al. (2009b, p. 3), who claim that adaptation and mitigation efforts 'are invariably intertwined and feed into each other' at the local level. From these premises, it appeared that there was confusion about the adaptation policies or their necessity. Thus, the lack of cognitive legitimacy decreases the sociopolitical acceptance of adaptation policies unless the reasons behind the policies are made more comprehensible to the farmers and food entrepreneurs.

*Community acceptance* was perceived to be dependent on the rigidity or flexibility of different adaptation policies. The *flexibility* of the policies increased their acceptance, whereas the rigidity of different regulations results in declining acceptance. Flexibility is conceived in our research as an issue of community (rather than sociopolitical) acceptance, because it was connected to the experiences of fairness and trust. These experiences are important elements of community acceptance (Wüstenhagen et al., 2007). They are also linked to the moral source of legitimacy, entailing a normative approval of the practices and procedures. Many farmers expressed the opinion that climate change policies are 'unfairly rigid' and argued that the ability of farmers to make the best decisions locally should be respected, as it grants the farmers more flexibility in their practices. The current inflexibility in policies is visible in, for example, the fixed dates for spreading manure on the fields. For the farmers, this was against common sense, because the weather conditions vary yearly. The experience of the fairness of the policies was then linked with the question of whether the knowledge and opinions of farmers were taken into account.

Food entrepreneurs also criticized the strict regulations and bureaucracy that make the development of local solutions difficult. This criticism concerns the cognitive form of acceptance. Here, increasing the flexibility and improving the comprehensibility of different regulations may have positive effects on the acceptance of the



policies. In climate change adaptation policies, flexibility in time and space is crucial, as the benefits of adaptation activities may take many years to take effect, and they may also be very place specific. Our findings are parallel to the wind energy-related results of Gross (2007), in that perceptions of the procedural and distributional fairness of the policy actions influence the acceptance of those policies.

Correspondingly, *substantial bureaucracy* decreases the acceptance of different suggested policies. The 'anxiety about bureaucracy' was expressed in the critical attitudes towards different obligatory practices that are considered to be useless and time consuming. This theme is related to the pragmatic and cognitive sources of legitimacy: if farming or food entrepreneurship becomes more difficult, and more time must be spent on practices that are not directly related to farming itself, it makes the actual business more difficult and burdensome. Moreover, these bureaucratic practices were often incomprehensible to the farmers, who did not see any sensible reasons for doing them. Increasing bureaucracy tends to oppose self-interest and the cognitive sources of social acceptance and may also risk the market acceptance of new innovations that could promote climate adaptation. Hence, the lack of trust in regulatory agencies, and the central and local authorities, may lead individuals to be less willing to accept climate change adaptation policies.

'The bureaucracy reminds me of the issues with the direct sale of raw milk. It has been made so difficult these days, and now there are even more regulations coming, as I read in the *Maaseudun tulevaisuus* [Rural Future, a farmer magazine], that soon, it will be impossible. There are farms that have sold it for decades, and even they are now considering giving up. This makes no sense. There are new regulations coming, and one must inspect the manures, the costs to increase and... A good idea, selling raw milk directly to those who want it, is killed by trivial paper circulation and testing' (Dairy farmer).

'Public administration has a two-way role in these issues. On the one hand, it is a trendsetter regulating via laws and rules. On the other hand, it has obstructive effects because the rules are open to interpretation. It will soon become a very bureaucratic system' (Managing director of food enterprise).

*Market acceptance* was related to the economic factors and estimated economic consequences of different adaptation measures or policies. It played a significant role in the overall social acceptance of climate adaptation, which was not surprising. Food entrepreneurs emphasized the significance of competitiveness in supranational markets. Furthermore, today's farmers view themselves more and more as entrepreneurs that make precise calculations and estimations about how to best run their farms. It was mentioned frequently that at a minimum, new policies must not weaken the competitiveness and economic performance of the farms. Market acceptance is closely linked to the pragmatic, self-interested source of legitimacy and consequently, this level of acceptance can be achieved by policies that somehow benefit the stakeholders in economic terms. The importance of economic factors also implies that supporting innovations related to renewable energy or energy efficiency (such as affordable small-scale biogas plants) could help generate adaptation solutions that enjoy broad market acceptance. Hence, the support for climate change adaptation might be undermined if wider concerns about economic sustainability are not addressed in future policy.

*Consolidating Mitigation and Adaptation to EU Policies*

The attitudes of farmers towards agricultural adaptation policies form an important part of community acceptance, which refers to the acceptance of particular policy decisions by local key stakeholder groups. The more general attitudes of acceptance towards non-specific policies belong to the dimension of sociopolitical acceptance (Wüstenhagen et al., 2007). In the context of agricultural policies and climate adaptation, sociopolitical acceptance is strongly related to the general institutional framework of agricultural policies and the role of the European Union (EU). Climate change is generally considered to be an issue demanding policies on a scale larger than Finland alone. However, when the interviewees were asked about the level on which agricultural climate policies should be made (local, national, or EU), the opinions were divided. On the one hand, many farmers strongly opined that the responsibilities should be common within the EU level. On the other hand, other farmers thought that the EU policymakers may lack knowledge and understanding of local conditions in Finland. This latter point insinuates a lack of community acceptance if policies were to be formulated at the EU level alone. Some interviewees took both viewpoints into account and favoured a consolidation between Finnish and EU level policies.

‘The challenges and benefits in Finland are totally different from the ones in Central Europe. Or so I would think. So if it is directly said from the EU that you must do this and this, that might be beyond all reason here. The guidelines should come from there, and the correctives made here. That way, I would see that the things would work out and lead to the desired results’ (Dairy farmer).

‘It must absolutely be at the EU level, now that we have this common agricultural policy, climate policy must be made at the EU level as well. Of course it has both pros and cons. Then I hope that the Finns can stand up for themselves. This is after all quite an exceptional country in comparison with, let say, Southern Europe. But the basis must be in the EU, the big guidelines need to be drawn there’ (Dairy farmer).

In this context, however, there is a difference between mitigation and adaptation activities. While mitigation policies and their goals can be designed at the EU level, this is not necessarily the case with adaptation policies. Climate change adaptation, which is context-specific and crosscuts all sectors of the economy, is characterized by long time frames and uncertainty, and does not have universally accepted targets (EEA, 2014). It has been suggested however, that ‘solidarity mechanisms between European countries and regions might need to be strengthened because of climate change vulnerabilities and adaptation needs’ (EEA, 2014, p. 19). Although long-term adaptation requires mitigation policies, not all mitigation policies support adaptation. This gives rise to a further concern: there is a risk that EU-level mitigation policies, when poorly designed, hamper the prospects of local adaptation policies and strategies. This might result from, for instance, strict regulations that prevent farmers from making changes in their farming practices based on yearly local circumstances.

Localized food systems were given strong support by all interviewees. However, their opinions were often expressed in a broader context rather than with regard to adaptation. The interviewees believed that local food had growing support among

consumers, and it would easily obtain strong market acceptance. Although local food systems support climate adaptation (Puupponen, 2015), their contribution to climate mitigation and promoting climate-friendly food systems is a more complex and disputed issue (Paarlberg, 2013; Räsänen et al., 2014). Still, local food can be seen as a market innovation that is already diffused in Finnish food markets. On the other hand, localizing and decentralizing the food system will be an enormous challenge in Finland, as currently, 80% of food is purchased through centralized national logistic systems, and only 20% of food is purchased locally (Niemi et al., 2013). Some interviewees reflected on how the current regulations and bureaucratic systems impede localization.

‘It just irritates me that today both the state and the municipalities... they are told to call for tenders, and I do not doubt at all that you can get some European food, grown with other methods, for cheaper prices than Finnish food. It is then another thing whether production meets the same criteria’ (Pig farmer).

It should also be considered that there are risks not resolved by localization. For example, a total blackout or fuel supply disruption would paralyse all current food systems, including both those that are centralized and those that are decentralized (Peck, 2006). However, the localization of food has become a clear trend, at least among quality-conscious Western consumers (see Pearson et al., 2011; Oosterveer and Sonnenfeld, 2012; Paarlberg, 2013). This should be taken into account in higher policymaking levels.

## **Conclusions**

The concept of social acceptance has three dimensions: sociopolitical acceptance, community acceptance, and market acceptance. At the sociopolitical level, ways should be found to support policies that are acceptable at the community level and in the market. Our data revealed that social acceptance of adaptation policies depends on the degree of limitation and the estimated effects on the profitability of farming and food entrepreneurship. Consequently, the base of acceptance is the economic capability of farms and food enterprises. Therefore, preferring economic incentives to strict regulations and increasing the farmers’ knowledge about policy objectives tends to increase the social acceptance of policies. Economic incentives were instrumental for farmers and food entrepreneurs to accept climate policy goals in their daily activities and at the community level. Moreover, the temporal and spatial dimensions of climate change strongly affected the perceptions of the interviewees. Climate change was often considered as something that would take place in the distant future, which was reflected in the suspicions about the necessity or usefulness of adaptation policies.

In reality, vulnerable rural communities and food supply chains in Finland will suffer from climate change. There is a factual and timely need to have a common European and national framework that centres on territorial approaches that would facilitate equal opportunities for rural populations in climate change adaptation (Kull et al., 2014; Battaglini et al., 2015). The problem concerning the development of climate change adaptation policy in Finland is that while the national adaptation strategy has been mainstreamed and institutionalized at a strategic governmental level, it has resulted in limited practical integration across regional and local levels

(Keskitalo et al., 2012). This is unfortunate news for effective climate change adaptation policy, as climate change adaptation is clearly a local process associated with local livelihood, rural entrepreneurship and community development (Paloviita and Järvelä, 2015, p. 3). Although farmers often prefer agricultural climate policy guidelines to be made at the EU level and only more detailed implementations to be made locally, bottom-up climate change adaptation efforts should be supported by the EU and national policy.

As an example of rural entrepreneurship, a localized and decentralized food system was accepted as a key adaptation feature among the interviewees. Thus, decentralization is also an important factor at the community acceptance level, along with economic factors. Furthermore, at the community level, renewable energy and energy security measures had strong positions as envisioned means to enhance adaptive capacity in farms and food enterprises. Hence, improving the understanding of the nexus between food security and energy security should be one of the goals of climate change adaptation policies. A local energy system would ensure the functioning of a local food system as well. Both local food and local energy are 'innovations' that could easily gain strong market acceptance if they provide good opportunities for local entrepreneurs and farmers. In order to realize this potential, policymakers should create favourable conditions for profitable local food and local energy solutions.

In addition, we conclude that value-based strategic partnerships among farmers, industry and trade in the food supply chain could enhance the regions' adaptive capacity and resilience. Further research on the regional impacts of climate change with respect to vulnerability and risks is required to provide decision makers with more comprehensive guidance. Finland may be less vulnerable to climate change compared to many other European countries, but the indirect environmental, economic and social impacts of climate change will definitely occur everywhere. Agenda-setting processes of climate change adaptation that occur not only nationally, but on local and regional levels as well, should gain more attention. This requires integrated multi-participant involvement on climate change adaptation across levels. Local and regional media, as well as social media, could ultimately influence public opinion and motivate more people to get involved in responding to climate change.

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## Book Review

### **Women and the Informal Economy in Urban Africa: From the Margins to the Centre**

Mary Njeri Kinyanjui, 2014

London: Zed Books

xi + 140 pp., ISBN: 978-1-78032-630-6 [pbk]

Mary Njeri Kinyanjui provides a feminist, post-colonial and post-modern analysis of the informal economy of Nairobi, Kenya. Kinyanjui refreshingly brings to light a positive outlook of the contribution of women to Nairobi's informal economy that provides revenue, employment and a grass-roots strategy against poverty. The author makes a clear call for African cities to de-masculinize and to Africanize. Documenting a case study of women operating in Taveta Road, Kinyanjui discovers a change in the demographic of women that are involved in informal economies in Nairobi since earlier studies of the 1990s. Not only are the characteristics of these women changing, but also the spaces they now occupy. This is the crux of Kinyanjui's writing; that women who have been excluded by a modernist and predominantly male approach to urban planning have struggled from the periphery of the city to its core, and in doing so have made their presence in a masculine and elitist city centre.

Kinyanjui's work is timely as women's entrepreneurialism is now recognized as a catalyst for economic development in Africa, where its potential may be harnessed through the promotion of policies that equalize male and female entrepreneurialism (Adom, 2015). But meanwhile, informal entrepreneurs are neglected spatially and more so women, who have a lower level of representation in industrial clusters and are limited to the smallest business units available (Grant, 2013). The success of women's entrepreneurialism is dependent on the places in which it is embedded. Places that Kamete (2013) argues are limited by normalized technical solutions to the spatial 'deviance' of informality in a bid to attain urban 'modernity'.

The book is rich in detail of the historic background that has shaped African cities and the effect of colonialism on gender roles, the African economy and urban planning. For this reason the book's audience is wide and includes those interested in development, gender, informal economies, entrepreneurialism, African culture, urban planning, transport geography, and human geography. The book is highly accessible with an excellent introductory chapter that describes the relevance of the informal economy in Africa. In Chapter 2, Kinyanjui sets the scene and introduces the colonial origin of Nairobi city, an exploitative enterprise that served its relationship with Europe over its hinterland. Labour offered to male migrants on a temporary basis resulted in those people living on the periphery of the city in temporary accommodation. The central business district (CBD) was constructed by white and Asian immigrants and has historically been owned by the elite. Low wages created a pattern of consumption of small quantities of goods that gave rise to the informal



economy initiated by the city administration.

Chapter 3 documents the conflicting relationship between planning and economic informality between 1980 and 2010, a period in which the city administration attempted to banish street traders. Kinyanjui highlights the hawkers' heroic agency to resist their subordination by seeking access to the CBD for their livelihoods and spacial justice. Chapter 4's focus turns to women, who, with less formal employment opportunities than men, are more often involved in the informal economy and have been marginalized by policies that restrict them from working in the city centre. Planning policy failed to support the needs of women who were subordinated by male patriarchy and were not reached by elite African feminism of the 1960s onwards.

Chapter 5 describes the importance of mobility in women's access to the most desirable spaces of business activity. By surveying women, Kinyanjui finds that the majority use a matatu (a 14-seater Nissan van) or walk. I was fascinated by the author's account of how women have given meaning to this mode of transport. The matatu signifies hope and despair: 'the essence of any struggle, be it political or economic' (p. 72). It is a vehicle of empowerment for women because it is a forum where issues of the subaltern are discussed, videos screened, radio talks broadcast and slogans displayed that inform and energize. Kinyanjui describes the matatu ride as 'a springboard towards liberation, transformation and subaltern survival strategies' (p. 72). Whereas transport planning in Africa has usually been found to disadvantage women (Peters, 2001; Porter, 2008; Olvera et al., 2013), Kinyanjui describes a level of mobility that prevents women's isolation from the city's CBD and, by sharing transport costs, the women are able to purchase goods transnationally. Kinyanjui makes an appeal for enhancing women's mobility as key to achieving their empowerment and equity.

Chapter 6 details the characteristics and role of women in the informal economy in Nairobi. Young, educated and single women are now entering the informal economy with about half of women in marital relationships. Nairobi's informal economy is an agent for young women to gain income independently, defying male patriarchy. Another key argument made by the author is that women in Nairobi are moving into the CBD, where they are selling women's fashion accessories and children's clothing.

Chapter 7 accounts the solidarity entrepreneurialism exhibited by the women who share business space, knowledge, investment capital, customers and transport costs. Through unity and an African ubuntu spirit of 'I am because we are and since we are, I am' the women have translated the Western concept of microfinancing to suit their requirements with their own indigenized chama lending schemes. This has contributed significantly to the women's ability to successfully trade within the CBD and is a strategy against material poverty. The documentation of women who have sought to enhance their gender identity through unity, negotiation, knowledge sharing, and network building is valuable evidence of a change of identity for women through indigenous, grass-roots feminism. Kinyanjui calls for women of the informal economy to be more involved in urban planning.

Kinyanjui's case study provides a colourful and insightful account of an emerging African feminine identity that has risen from peripheral subordination to an interior foothold yielded by strength in unity, femininity and indigenous culture. Kinyanjui provides evidence of the empowering agency of the informal economy for women in urban Africa. It is a call for urban planners and city administration to respond to

the requirements of women, to de-masculinize the African city and to embrace the identity and culture of its people: to identify and work with its strengths. Central to the essence of the book is the tension that abounds between the ideologies of modernization and fixed, orderly, formal business verses culture, spirit and the temporal nature of informal business that has strengthened the African female identity and makes for a very interesting read.

If a weakness of this book must be identified, then it is a lack of detail about the methodology of the case study. The author clearly illustrates findings from a survey and interviews but does not detail the sampling method used. Women that have located businesses in the CBD amount to only 6.5% of women (21 of 323) surveyed, whereas the majority remain restricted to periphery areas outlined by the city administration. Kinyanjui writes with confident positivity, but for me, the study simultaneously and quietly outlines the discrimination against women that persists of the largely masculine planning ideology that neglects women as investors with rights to lucrative business spaces (p. 89). I question what is limiting other women from also taking their businesses to the CBD?

Whilst Kinyanjui's study may not represent the ability of all women to trade in Nairobi's city centre, it offers a rich encounter with the women of Taveta Road who have successfully made the move. Kinyanjui sets out to document the change in course of a number of women from the margins of Nairobi to its business centre – she certainly accomplishes this and inspires, with succinct implications for policy.

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## Book Review

### **The Perfect Meal: The Multisensory Science of Food and Dining**

Charles Spence and Betina Piqueras-Fiszman, 2014

Chichester: Wiley-Blackwell

424 pp., ISBN: 978-1-118-49082-2 [pbk]

The central idea behind this book is deceptively simple: that our perception of flavour is multisensory. Consequently, to serve up great tasting food is not simply a matter of tickling the taste buds but of engaging a whole range of sensory experiences. Drawing on recent innovative research carried out by Spence's team at the Crossmodal Research Laboratory at Oxford University, the authors argue that we must go beyond four or five individual taste sensations (which respond to particular sensory nodes on the tongue) to focus on the interaction of multisensory experiences as it is here that flavour emerges. They show how a host of sensory elements ranging from the colour of the plate to the frequency of concurrent sounds all affect the ways we perceive flavour.

Spence and his team have published prolifically on the topic, and 'The Perfect Meal' is evidence of a wider aim to encourage those in the food industry to think about eating as a multisensory experience and therefore allow professionals to better deliver positive results to diners and consumers. Rather than looking at food itself the focus is on the particular performance of fine dining, shrouded in the mystery and spectacle that comes along with the molecular gastronomy oeuvre made famous by Heston Blumenthal or restaurants such as El Bulli. By engaging directly with this trend the authors 'hope that chefs would want to find out more about how changing the aroma of a food (by adding the aroma of strawberry or vanilla, say) can change its perceived sweetness and how changing the colour of a food or beverages can send a very powerful signal to the diner's brain about the likely taste and flavour they are about to experience' (p. 22).

Affiliating themselves with the recent term 'gastrophysics', this new, high-tech 'science of the table' uses 'well controlled experiments' to 'investigate the way in which people... respond to sensory stimuli' (p. 18) The physical responses that taste experiences elicit in us offer a potentially powerful tool in the context of the food industry by offering the scope to manipulate our experiences of food in much more precise and fundamental ways.

Throughout the book the authors methodically build a case for the inclusion of a number of elements in the multisensory perception of taste. In Chapters 2, 3, 4 and 5, they elaborate the role that different devices employed in restaurants can play in enhancing a meal. Addressing in turn the start of the meal (the menu, setting of the tables, waiters, etc.), the language and labelling used on the menu, the plate itself and the cutlery, these chapters summarize the latest research to show how these various elements affect the way we perceive flavour. A prominent example from the authors' own research is the finding that a dessert on a round white plate tasted up

to 10% sweeter than when served on an equivalent black plate. The atmosphere, the setting, heat, sound, colour – as well as tactile and cognitive cues – are digested by our brains, generating particular perceptions of flavour before the food even reaches our lips.

While the concept of the multisensory perception of flavour is central to this book, those looking for a detailed definition and analysis of this phenomenon are likely to be disappointed. The authors make some (albeit somewhat apologetic) moves towards explaining the science in Chapter 6, yet, while this relatively new area of study has excelled in demonstrating relationships between hitherto unconnected aspects in the experience of flavour, there is still a long way to go to show exactly how this works.

However, the findings so far offer fascinating provocation for food studies as well as wider social and philosophical study that relate to embodiment and food practices. By emphasizing the diversity of elements at play, the book shows that eating becomes about a lot more than what goes on in our mouths, sweeping away the static understanding of flavour as a quality of the food itself. The authors' examples explain how listening to crunching sounds can make a food feel more crisp, that the colour of a food can increase or decrease the perceived sweetness and that, by altering the pitch of sounds playing in the background, a food can be given a sweeter or more bitter flavour (see also Spence, 2013).

Raising the possibility of a 'flavour network' that spans across our bodies and includes all of our sensory faculties, the book might be productively considered alongside recent work in medical anthropology and related fields. For example, Mann and others' experiments with eating with their hands (2011), Caldwell's (2014) work on the role that the gut and digestion play in food practices, and Guthman and Mansfields' investigations into processes at the cellular level that might affect wider food practices (2013), all similarly debunk the myth of taste and flavour as being just located in the mouth. As such, the book offers an exciting provocation for more trans-disciplinary concern over our relationship with food that moves beyond traditional assumptions of bounded individuals and rational action to reconfigure the ways in which we think about taste and flavour in both social and embodied terms.

While the contents of the eponymous perfect meal is never revealed, towards the end of the book the focus shifts towards the future of such meals and the role that technology will play in advancing the experience of dining out. At its culmination in Chapter 11 this leads the authors to speculate what our meals may look like in 2084. As with all future predictions, this seems to offer more a commentary of the way we eat now rather than to act as an inspiring glimpse into a distant future. Technologies such as in vitro meat, sous vide techniques, and the use of smart phones and tablets at the table are all trends that exist already and it might be more productive to provoke analysis, not of the technological possibility of new techniques, but of the wider social, political and economic forces that play a decisive role in the spread of these practices between laboratories, restaurant kitchens, supermarkets and the home.

Where this book excels is as a provocation. Through a collection of fascinating pieces of evidence it challenges our understanding of the way in which humans experience flavour. The innovative methods employed by the research team offer grist to the mill of those interested in the study of the science and technology of food and are likely to provoke discussion around the ethical and philosophical issues at play in deliberate manipulation of food behaviours through sensory cues.

Insights derived from social sciences and food studies would offer a great deal to develop more critical analysis of these issues than offered in this book, and ‘gastrophysics’ offers particularly fertile ground for those interested in embodied experiences of consumption, cultural studies of eating and food design. Moreover, as issues such as social justice or environmental sustainability remain absent from this research, interesting questions might emerge when we consider the multisensory experience of eating in the context of such pressing agendas. How might multisensory perception affect practices around food waste for example? While social scientists have long considered the role of taste in social life, this new research might provoke us to push both medical and social sciences further to ask what role flavour might play in the ways in which we experience food both inside and outside of the laboratory.

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