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The role of multi-actor governance in aligning farm modernization and sustainable rural development



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ABSTRACT

The Common Agricultural Policy can be seen as a partial success story because it has resulted in increased food production at reasonable prices for consumers. However, its main focus was on agricultural productivity and economic growth. Although recent CAP reforms have led to better integration of agricultural and rural policies there is a need for more recognition of the role of multi-actor governance in aligning farm modernization with sustainable rural development. In this paper we explore how multi-actor governance systems are being implemented and the limiting and enabling factors involved. Our analysis is based on eleven case studies carried out as part of the trans-disciplinary RETHINK research programme. In this paper we first identify five strategies that we interpret as responses to the challenge of reconnecting farm modernization and sustainable rural development. Based on the experience within these strategies we discuss six vital conditions that cut across these different strategies: they include the role of informal networks, effective coordination, polycentricity, bottom-up initiatives, agency and trust and transparency. Although most of these conditions are recognized by the scientific world, in practice they are rarely translated into effective policy strategies to support territorial development.

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1. The evolution of agricultural and rural policies at the European level

Since the 1960s, the scope of the European Union's Common Agricultural Policy (CAP) has been steadily expanding. The original emphasis of the CAP was on tackling structural problems in the agricultural sector by supporting productivity (Platteau et al., 2008). Structural policy for the agricultural sector focused on farm enlargement and rationalization (Wilson, 2001; Wilson et al., 2007). The agricultural sector was considered to be the engine of

growth of rural economies and consequently, rural and agricultural issues were considered to be virtually synonymous. It was assumed that agricultural and rural objectives could be pursued through a single set of policies designed to improve the economic performance of agricultural sectors (Shucksmith, 2010; Ward and Brown, 2009). Policy was implemented top-down through centralized planning and was inspired by a vision of the 'provider-state'.

The modernization of the agricultural sector has resulted in a sufficient food supply and a professionalization of the agricultural sector. However, it also had negative consequences for the economy, the environment, and rural communities (Galdeano-Gómez et al., 2011; Knickel, 1990; Van Huylenbroeck and Durand, 2003). The modernization paradigm has been criticized as distorting development disconnecting agriculture from rural development. The focus on intensification narrowed the role of agriculture in the rural area to food production. For example, small scale landscape elements lost their agricultural function and the importance of farm labour for the local rural economy reduced significantly

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(Galdeano-Gómez et al., 2011; Kristensen et al., 2014). It has been argued that the focus on intensification have stimulated the development of increasingly large farms in agriculturally favoured areas and led to land abandonment and the marginalization of farms in less-favoured areas (FAO, 2006; MacDonald et al., 2000). Hence, it has been cast as a destructive form of development: income and investment support for farmers has not resulted in the socio-economic development of rural areas, or the maintenance of the social structures and environmental qualities necessary to maintain vibrant rural areas (Knickel, 1990). Finally, it has also been interpreted as a dictated development, devised by external experts and planners from outside rural areas (Ward, 2002). In other words, the measures intended to support the modernization of European agriculture have not simultaneously steered rural society towards more sustainable development (Mettepenningen et al., 2012). Critics of modernization have argued the case for redesigning agriculture and rural policy so it aligns more closely with other global, economic, social, policy and environmental trends (Marsden and Sonnino, 2008; van der Ploeg et al., 2000).

Since 1992, three successive rounds of CAP reforms have resulted in a shift away from a single focus on production to also include competitiveness, sustainability and rural development (Messely, 2014). After the introduction of the agri-environmental measures in the MacSharry reform in 1992, the Cork Declaration of 1996 recognized the declining economic role of conventional agriculture in marginal rural areas and the need to find other rationales for public subventions (Lowe et al., 2002). The declaration set out an agenda of more 'place-based' development, strengthening the LEADER approach (Wilson et al., 2007), and formed the basis for the establishment of the Second Pillar focused on rural development (Lowe et al., 2002). This pillar, institutionalized in the Agenda 2000 reform, sought to encourage rural initiatives and support farmers in diversifying, improving their product marketing and restructuring their businesses (Delgado et al., 2003). It was therefore a first attempt to realign agriculture with rural development.

2. From top-down policies to governance and partnerships

Point five of the Cork Declaration¹ specifically is about the governance of rural development and emphasized the importance of *vertical coordination* for rural policy making. This view was incorporated into the European Rural Development Regulations (Council Regulation (EC) No. 1257/1999, paragraph 14). Vertical coordination takes place through multi-level interactions involving both, state and non-state actors. It embraces decentralized decision making and encourages bottom-up approaches (see Andersson and Ostrom, 2008; Hooghe and Marks, 2003; Knüppe and Pahl-Wostl, 2012). Vertical cooperation therefore stimulates increased levels of self-governance, that is a mechanism of mutual interaction and adjustment of actors and their related networks (Ostrom, 1990).

In addition, and closely in line with the Cork declaration, the OECD (2006) developed 'The New Rural Paradigm' advocating a *multi-sectoral, territorial approach* where the government's role is to invest in capacity building and endogenous rural development (Shucksmith and Rønningen, 2011). In other words, rural policy making will also need increased forms of *horizontal cooperation*, taking place through interactions between different sectors both at economic and political level. Horizontal cooperation shifts the focus towards territorial development with multi-disciplinary approaches (Cairol et al., 2009; Faludi, 2009).

This change in favour of more participatory rural development

with increased forms of horizontal and vertical coordination led to a greater reliance on framework approaches towards rural policy (Rogge et al., 2013) and the increased involvement of stakeholder 'partnerships' in the design and implementation of policy (Dwyer, 2011; Shortall, 2008). Under this approach government becomes an enabler of processes in which stakeholder partnerships help to develop and oversee strategic directions. This is in line with most other policy spheres, which are moving towards more engagement of stakeholders in developing and implementing governmental objectives: a shift from 'government' to 'governance' (Curry, 2001). Governance as a general term refers to the act of governing both, in the public and/or private sector (Emerson et al., 2011). Within the context of collective action, Ostrom (1990) considers governance as a dimension of jointly determined norms and rules designed to regulate individual and group behaviour. More specifically, governance is 'a set of coordinating and monitoring activities' that enables the survival of the collaborative partnership or institution (Bryson et al., 2006, p. 49). It is characterized by the multitude of actors involved, vertically including international, national and the local actors, and horizontally including NGO's, businesses, citizens, different policy departments and other governmental bodies (Loft et al., 2015).

Multi-actor governance allows for a better adaptation to local, and changing circumstances, increases the possibilities of capturing added value, increases the legitimacy and transparency of policies, empowers local people (see e.g. De Vries, 2000; Hooghe and Marks, 2003; McGinnis, 2005; Pahl-Wostl, 2009) and supports territorial development reconnecting agriculture and rural development (Bryson et al., 2006). But there are disadvantages too, such as a lack of capacity and authority to make this work, the potentially high costs involved and the danger of ending up with fragmented and inconsistent policies (Benz and Eberlein, 1999; Herzberg, 2005; McGinnis, 2005; Meynen and Doornbos, 2004; Wiskerke et al., 2003).

The previous paragraphs reveal a gradually changing view about the governance of agricultural and rural development. However, two aspects of this seem still to be under-appreciated. First, there is a need for a deeper understanding of the *connections* between agriculture as a social-ecological and economic system and the development of rural areas. The dynamics of change in agriculture and rural development are closely related and to understand them we need to adopt a systems approach (Darnhofer et al., 2010; Sinclair et al., 2014). Second, there is still no sufficient appreciation of the role that *multi-actor governance* can play in fostering synergies between farm modernization and sustainable rural development. To foster these synergies, governance should be adjusted so that there is more vertical, and horizontal coordination.

This raises a number of questions: first, to what extent is this new approach to governance of rural areas really taking place? Second, how much does it actually contribute to moving towards a new rural development paradigm? And third, is it actually creating a resilient agricultural sector? This is a key point since, 'restat[ing] and position[ing] [the] land-based agricultural production is a central dimension in achieving rural sustainability goals' (Marsden et al., 2002, p. 810).

Despite the existence of many structural barriers, there is a wide range of experiments and initiatives by farmers, consumers and other stakeholders, all of which imply a rethinking of modernization. They are based on a holistic view of agriculture and seek to align agricultural practices to the prevailing local and regional ecosystems and to use local and regional resources sustainably (Chappell and LaValle, 2011). Many of these initiatives implicitly or explicitly question the economic 'imperative' and demonstrate that there are viable alternatives. In this paper we look at eleven case studies, undertaken as part of the European research project

¹ http://ec.europa.eu/agriculture/rur/cork_en.htm.

RETHINK, where groups are experimenting with alternative practices and alternative ways of farming. This research revealed the development of new governance approaches that display the traits of increased vertical and horizontal coordination. Rethinking agriculture therefore also leads to a search for new governance mechanisms that can orchestrate multi-actor, multi-level and multi-sector rural development trajectories. If we want to encourage the strengthening of the linkages between agriculture and wider rural society, it is clearly essential to understand the governance mechanisms that shape these linkages.

The next section introduces the case studies and the methodology. Then we identify and describe five governance strategies of which we explore the characteristics and the effects they have on agriculture and rural development. The final section concludes by discussing the main lessons learnt and providing some policy recommendations.

3. Methodology

This paper is based upon eleven case studies from the RETHINK project. Each case is an expression of an innovative development trajectory that highlights the potential synergies between farm modernization and sustainable rural development. Table 1 provides an overview of the case studies and the associated governance issues. The research consortium first developed a conceptual and analytical framework (Darnhofer et al., 2014, 2013) and a research guideline. This guideline contained questions about the institutional environment of the cases, the role of governance partnerships, their history, organizational structures and the lessons learned.

Data was collected in the period between January 2014 and November 2014. Each case study report is based on a minimum of 15 semi-structured, qualitative interviews (Bernard, 2006), with relevant actors from stakeholder organizations and at different policy levels. Additionally, this data was supported with field visits, legislative texts, policy documents, grey literature, observations of project meetings (BE, DK, FR) and three countries (DK, ES, AT) collected data through focus groups (Barbour, 2007). The combinations of multiple sources of evidence allowed the research team to see the situation from the respondents' point of view without superimposing their opinions or preconceptions (Fontana and Frey, 2005). Based on the collected data, each research team analysed their case and developed a research report following the research guidelines. For the comparative analysis on governance, the eleven case study reports were coded using NVIVO software. This coding was structured along three main questions:

- How do governance partnerships align agriculture with rural development and societal concerns?
- How are alternative governance mechanisms implemented?
- How do these approaches to governance achieve a more balanced social, environmental and economic development of rural areas?

Based on the results from this analysis we identified five different strategies of rethinking agriculture and sustainable rural development. First; integrating diverse land use interests, second; reconnecting consumers with more sustainable producers, third; farmer cooperation in quality production and along the food chain, fourth; positioning agriculture in a bio-based economy and fifth; self-governance among smaller farms.

In a second phase we re-coded and analysed the case-study reports searching for success and failure factors of the governance mechanism at hand. Interpreting our results based on international literature we were able to distinguish six conditions

that are necessary to support the shift towards multi-actor governance in rural areas. These conditions are presented in the discussion section of this paper. Although our findings are derived from the entire set of eleven cases we choose to illustrate them with examples from single cases to increase authenticity.

4. Results

The case studies provide evidence of the diverse ways in which agriculture can be reconnected to the rural area in which it is embedded, the multitude of actors who live there, and society as a whole.

The following sections describe five strategies and focus on how they try to increase vertical and horizontal coordination. We discuss the objectives of each strategy and evidence of the governance mechanisms that increased horizontal and vertical coordination. Finally, we discuss the possible implications for the further development of agriculture and rural areas.

4.1. Integrating diverse land use interests

4.1.1. Mechanisms and goals

The first strategy tries to reconnect agriculture with the wider countryside through multifunctional land use and innovative landscape management. This involves designing new forms of coordination and governance that allow different land use interests to coexist in order to develop more attractive landscapes and enhance social and ecological services and the sustainability of agriculture. As such, this strategy would increase the economic, social and ecologic added value within rural areas.

Two cases experimented with new forms of coordination for landscape management. In the Danish case farmers along the Odderbreak watershed organized themselves in a Stream Board Association (OSA) and initiated several projects to improve and restore the stream and the surrounding landscapes (Pears et al., 2015). The Belgian case involved the establishment and governance of a landscape fund, through which industrial partners and local residents could financially contribute to planting trees on agricultural land to form a buffer zone between residential areas and the harbour (Koopmans et al., 2015).

4.1.2. Evidence of increased horizontal and vertical coordination

In both these cases, the farmers showed a great willingness to integrate different land use interests and become involved in managing the landscape and in both cases there was increased coordination between a variety of actors at the local level.

Denmark has a governmental hierarchy with a top-down approach for planning and for regulating the countryside. This approach was not having the desired effect in the Odderbreak watershed so a group of Danish farmers decided to organize themselves into a formal association and take joint actions to improve water and landscape management.

An important aspect of this was the trust-based dialogue that was established between the municipality and Stream Board and between the municipality and individual farmers. This was stimulated by the chairperson of the Stream Board also being an elected politician on the city council, providing informal, but direct relationship between the two. The chairperson was also a major driver in trust building and nurturing relationships between landowners and the municipality. Because of this twin informal network with the authorities, the Stream Board was given the opportunity to experiment and achieve a level of self-governance that would otherwise have been difficult to obtain. The municipality gave the board the authority to design and implement management rules for the entire stream and to then seek approval and agreement

Table 1
Overview of the cases studies.

Country	Case study	Relevance in terms of governance
Denmark (DK)	Collaborative governance of the Odderbreak watershed and its surroundings.	Example of a clear shift of the roles and responsibilities of state and non-state actors.
Belgium (BE)	Evaluation of the establishment and governance of a landscape fund.	A new governance mechanism was introduced that promoted cooperation between different sectors over the environmental management of a region.
Germany (DE)	Analysis of development in a region where the production of bio-energy was stimulated.	Several pilot programmes and financial incentives led to the development of new cross-sectoral partnerships and cooperation.
Italy (IT)	The establishment of a production consortium involved in extensive production of the Cinta Senese pig with PDO certification.	Example of network governance in which both state and non-state actors play important roles.
Spain (ES)	Establishment of Camposeven, a producers' cooperative	Farmers are more actively involved in the governance of the production and marketing of their products
France (FR)	The development of organic agriculture in the Drôme region	The abundance of networks that are involved in the development and governance of organic agriculture.
Switzerland (CH)	Comparison of different value chains for milk in the agglomeration of Bern	Focus on the governance of the supply chain
Austria (AT)	The development and role of organic farming in Salzburg province.	The dynamics between state actors and farmers in the developing organic agriculture and increased horizontal co-ordination between farmers and other rural actors.
Latvia (LV)	Explores small farms' development strategies in Latvia.	The importance of diversity in the governance of small-scale farming.
Lithuania (LT)	The role of alternative food supply chains in rural development	The role of public policies in the development of alternative marketing strategies.
Turkey (TK)	The role of the Sheep and Goat Breeders' Union in supporting ruminant farmers.	Governance strategies that are relevant for small-scale farmers in rural areas.

from the rural authorities.

Whereas the Danish case was a bottom-up initiative, the Belgian case was initiated from the top-down by the Flemish Land Agency. Despite of this, a power shift also took place as farmers were granted the authority to designate the most suitable places to plant the trees. In both cases, the role of farmers was extended from food producers to nature managers. In both cases new forms of coordination emerged. In Belgium, farmers, industry and inhabitants developed a shared strategy to contribute to the green infrastructure of their region. In the Danish case, the municipality and the farmers cooperated to manage the Odderbreak stream. The cases are both good examples of reconnecting stakeholders in order to govern landscape maintenance in their area.

4.1.3. The effects on agriculture and rural areas

The Stream Board Association in Denmark became the cradle for many other projects at the interface between farming and landscape management. Its example has also led the local authority to change its planning culture and to enter into partnerships with local communities wishing to enhance nature, landscape and the environment. This new governance mechanism thus succeeded in establishing new relationships between agriculture, the landscape and the wider rural community. A multi-dimensional, multi-actor network allows for formal and informal understandings and agreements to be reached between different stakeholders and to adopt a creative and solution-oriented approach.

The Belgian case shows that it can be difficult to develop mechanisms of self-governance because it challenges well-established routines and roles. Although the initial goal of the project, to develop a green buffer zone between the seaport and the rural area, was successful, the attempt to establish a self-governing landscape fund did not succeed. The project period of three years was not long enough for local stakeholders to accept responsibilities that had traditionally belonged to the government. One of the factors that played a role in this is that the local stakeholders did not develop enough ownership over the landscape fund. Another inhibiting factor was the peer pressure that participating farmers experienced. They did not want to be labelled as 'green' farmers by their colleagues yet did not want to break away from these informal networks.

To conclude, these two cases illustrate how stakeholders can develop multi-actor and multi-level partnerships with increased

self-governance to address environmental challenges. This resulted in a better-integrated strategy where agriculture and nature development coexist. Furthermore, this strategy illustrates that it is possible to go beyond the traditional roles of farmers, local inhabitants and local authorities.

4.2. Sustainable producers reconnecting with consumers

4.2.1. Mechanisms and goals

In the second strategy producers socially innovate to reconnect themselves with consumers. Instead of focusing on technical innovation, increasing the economies of scale and supplying commodity markets, the farmers focus on economies of scope and niche markets and search for new business models based on creative ideas that allow them to use their skills and knowledge. In doing so they take a systemic approach and consider the implications of their practices for the environment, for rural society and other actors along the food chain. Their aim is to preserve things of value in age-old traditions and to adjust them so that they can compete in the contemporary market environment.

The case studies from Austria (Darnhofer and Strauss, 2015), France (Lamine et al., 2015) and Switzerland (Bourdin et al., 2015) of organic farming and short supply chains illustrate this strategy. Organic agriculture is based on a 'closed system' approach, which utilizes a diverse range of crops and animals, and biological processes for building soil fertility and for controlling pests and diseases, but is also ensuring fairness in distribution and trade, and contributing to food sovereignty and the quality of life (DARCOF, 2000).

The Austrian case shows the potential contribution that organic farmers can make to strengthening resilience. The French case studies farmers' trajectories towards ecological production in the Drôme Department while the Swiss case focusses on short food supply chains near Bern.

4.2.2. Evidence of increased horizontal and vertical coordination

Organic agriculture started out as a bottom-up movement of farmers and consumers that has gradually found a niche in the market. Over the years it has been able to scale up and to receive support through direct payments, coordination programmes and specific marketing initiatives from European, national and federal governments. In addition, local institutions are often involved in

stimulating organic agriculture, sometimes through local food procurement programmes. In France, for example, the local authorities in Drôme used the motto of ‘turning this hinterland of the productivist period, into a foreland of the quality turn’ (Lamine et al., 2015, p.16).

In addition to this increase in vertical coordination, the organic farmers in our case studies actively look for new types of horizontal cooperation. In Austria the farmers sought to collaborate with chefs in restaurants and hotels who were interested in emphasizing regional identity. Additionally, in all three cases, informal forms of coordination between various bottom-up initiatives played an important role for the farmers involved.

In terms of interactions within the larger agri-food system, both public authorities and private stakeholders have set up initiatives to develop organic production and local procurement. This is especially the case in France, where many public institutes are involved in the governance of the organic sector.

4.2.3. The effects on agriculture and rural areas

This reconnection strategy develops a territorial understanding of farming, rather than a sectoral approach, seeking to work together with other entrepreneurs in the region, especially in the service and tourism sector.

While states have played largely a positive role in stimulating organic production and local food procurement, their involvement has also some negative consequences. Complex regulations and a lack of coordination between them makes it difficult for farmers to set up new initiatives. Over recent decades, various regulations (especially concerning hygiene in food processing rooms and labelling requirements) have become increasingly complicated and stringent as has the process of applying for funds. Thus, while on the one hand state organizations promote organic farming and local food procurement, the multitude of regulations creates high entry barriers for farmers that want to employ this strategy, trying to add value through processing and direct marketing.

The multiple centres of decision making that govern the organic sector also raises issues of coordination. In the Swiss case there was a lack of institutionalized coordination between organizations at the regional level. In the other two cases there were reports of rivalries between historically well-established structures, such as the Chamber of Agriculture and more recently established alternative ones.

While there are challenges in increasing vertical coordination in the governance of organic agriculture, the increase in horizontal coordination and the push for a more territorial approach creates synergies and reconnects agriculture with the rural. In all three case studies farmers indicate that they rely on their informal networks to exchange information and knowledge, to create collective markets, and for exchanging and jointly using machinery and materials. One of the advantages of these small, networked structures is that they are nimble and flexible. As such, they can respond very quickly, for example to changing consumer preferences. In Switzerland some regional value chains (notably for berries, milk and vegetables) are dominated by short food supply systems and the stakeholders are well-linked to each other. These networks offer good opportunities to strengthen the regional economy and mutual confidence.

4.3. Farmer cooperation in quality production and along the food chain

4.3.1. Mechanism and goal

This strategy involves reconnecting various food chain actors into formalized partnership organizations. By integrating production, processing and trade in one partnership, produce can be better

positioned in the market. In addition to having economic objectives, this strategy aims to reconnect with, and protect social and cultural values both within the organizational strategies and throughout the production processes. Two cases highlight this way of reconnecting. The Italian case involved the development of a consortium to preserve traditional, regional production of the Cinta Senese pig. The consortium developed a set of standards for production and processing that allowed it to apply for a Protected Designation of Origin (PDO) product specification (De Roest and Ferrari, 2015). In Spain the case study focuses on the establishment and governance of an Agrarian Society Transformation (AST) Camposeven. This partnership has established relations with both private and governmental actors in order to develop a new cooperative culture based on trust and transparency, that prioritizes quality over quantity (De los Ríos et al., 2015).

4.3.2. Evidence of increased horizontal and vertical coordination

Both cases illustrate the emergence of partnerships that integrate social, cultural and economic objectives. Both partnerships have a formal character with internal rules, a governing board and a formal decision-making procedure. Membership is open to a wide range of actors and members include suppliers of seeds, fertilizers and external technical services (financial and legal) as well as transporters, traders and industry associations.

In the Italian case, the government assumed responsibilities that were traditionally the responsibility of actors from the agricultural sector, as the conventional support mechanisms and market environment were threatening the continuation of the production of the Cinta Senese pig. In Spain, farmers felt the need to regain control over the production and marketing of their produce and wanted to be less dependent on governmental support. Both cases however, reported problems with incoherent, badly-targeted or coordinated policies from different governmental departments and policy levels. Both partnerships faced considerable layers of bureaucracy that delayed their development and undermined their innovative culture. Camposeven has been waiting two years for the City Council to approve a building permit to expand their warehouse facility. This is exactly why Camposeven aimed for independence from public support. Both cases illustrate the need for better integration and coordination between different government levels and for policies that are responsive to the real needs of producers.

Both partnerships are horizontally coordinated with different actors and networks. In Spain, Camposeven is an active member of the Agrifood Platform, which serves as a meeting point for agrifood businesses and works with universities and technological centres related to the food industry when faced with specific problems. The director of Camposeven is also the President of one of the Agrifood Platform's working groups. In addition to formal types of horizontal coordination, the actors in both partnerships also share knowledge and information through informal networks.

Finally, both cases illustrate the importance of having a shared vision that acts as a consolidating element for the partnership. However, developing a shared vision is often challenging in a multi-actor environment. In the Italian consortium, the traditional farmers argued that the meat produced according to traditional extensive production methods should be valued more than the meat produced more intensively, although still according to PDO standards, by ‘modern’ farmers within the same consortium. This difference of opinions led some traditional farmers to leave the Consortium in 2000. In Spain, 80% of the farming families who are members of Camposeven previously marketed their products through another cooperative. Most of them disagreed with the management and marketing strategy of this cooperative and left it to create Camposeven.

4.3.3. The effects on agriculture and rural areas

The establishment of partnerships that collaborate along a chain of high value agricultural products can considerably contribute to the improvement of rural areas. They not only hold the possibility to improve farmers' incomes but they can also enhance farmers' sense of pride and their interpersonal relationships while increasing societal acceptance and integration, environmental sustainability, and consumers' trust (expressed in their willingness to pay for high quality food). According to local and regional government agents, the Camposeven partnership is a role model in agriculture, exercising territorial leadership. The Italian example illustrates how this strategy can support the maintenance of cultural capital in a rural area. In both cases these partnerships for production and marketing not only bring economic benefits but also contribute to more resilient agriculture and to rural development.

4.4. Positioning agriculture in a resource-efficient low-carbon economy

4.4.1. Mechanisms and goals

This strategy aims to re-shape the role of agriculture in a resource-efficient low-carbon economy. It promotes territorial cohesion and enables collective action through multi-dimensional, multi-actor and cross-sectoral forms of coordination and collaboration.

The German case study about bioenergy production, which illustrates this strategy, started as an experimental pilot scheme that aimed to providing concrete experiences to serve as models or prototypes (see Peter et al., 2015). Both the Regional Action Programme (RAP) and the Bio-energy Regions (BR) schemes demonstrate how cross-sectoral connections that align different interests can simultaneously support both agriculture and rural development. RAP (2002–2007) pursued an integrated, multi-thematic approach to rural development, while BR (2009–2015) focused on developing networks to promote bio-energy, an endeavour that extended way beyond the agricultural sector. Increasing the production and use of biomass to generate renewable energy involved linking numerous different actors. The case illustrates some of the challenges inherent in the transition towards a resource-efficient low-carbon economy and highlights that governance arrangements play a central role in steering such developments.

4.4.2. Evidence of increased horizontal and vertical coordination

This case shows some of the challenges that are encountered when building new partnerships at a territorial level and when (micro-) regions try to increase their self-governance and gain more control over the management and use of local resources. One of the essential features of this case was the issue of decentralizing power to districts, municipalities and civil society organizations.

State and non-state actors both played a role in the transition towards a resource-efficient low-carbon economy and the organizational forms that emerged were diverse, multi-actor and cross-sectoral. In large parts of southern Germany, it has been noticeable that districts, municipalities, and civil society organizations are prepared to take over responsibility, and to drive developments with the aim of achieving more autonomy in their energy supply systems and to decrease reliance on large power suppliers and state agencies.

In the German case a range of actors are involved. These included;

- the farmers producing biomass, operating biogas plants, or growing wood for energy

- energy cooperatives, financing the grids, and distributing electricity and heat;
- machinery rings and other organizations that promote multi-farm use of different resources (machinery, labour etc.), and provide advice to farmers;
- municipal utilities and energy suppliers helped finance and facilitate the energy producers (e.g. regarding local heating networks), and;
- regional manufacturers of renewable energy facilities, who contributed to the expansion of the demand and supply of renewable energy through advisory services for communities, companies and the agricultural sector.

The Regional Action Programme provides a good illustration of how state intervention can be complemented by less institutionalized mechanisms. So-called 'regional partnerships' were established in each model region to support cross-sectoral and multidisciplinary exchanges of information, to interlink key actors and groups, and help to raise awareness of the potentials of the programme for regional development. In the bio-energy regions, the initial emphasis was explicitly on network funding and competence building. However, in some German pilot regions the 'history' of subsequent funded networks (including LEADER) contributed to the partnerships having the regional knowledge and organizational structures that made it easier to successfully tap into funding resources. In this process, regional management teams played (and sometimes continue to play) a key role as agents of networking and skill building. They supported the development and inter-linking of projects and prepared decisions within the regional partnerships. One aspect of these more sector-focused activities was that they were less embedded in wider social networks, and played less of a role in empowering broad citizens' and consumers' networks than integrated cross-sectoral approaches.

4.4.3. The effects on agriculture and rural areas

'Rethinking' agricultural modernization in this strategy means valorising renewable resources in ways that are sustainable and adapted to regional conditions. The aim of adding value to natural resources while using them more sustainably opens up new opportunities. It is line with Marsden's (2012) concept of an eco-economy as a 'strong form of ecological modernization, entailing a regional/local geographic scale' and an 'embeddedness in local environmental conditions', with 'value capture(d) at local and regional levels', and 'connectedness to rural-urban landscapes and consumer networks'.

In the Regional Action Programme, the multi-actor networks elaborated development strategies, that were tailored to specific regional conditions. Therefore, new forms of governance – notably expressed in new actor network constellations – played a vital role.

4.5. Self-governance for smaller farms

4.5.1. Mechanisms and goals

This fifth strategy highlights the self-governance mode, which is a typical characteristic of small farms. Despite the huge numbers (in Europe, 6 million farms are very small farms, less than 2 ha)² and the diversity of small farms they share similar challenges and opportunities. The predominant focus on technological modernization and production efficiency in agriculture (Darnhofer et al., 2014) has created policy, market, financial infrastructures and support systems that are targeted at larger and more commercially oriented farms. In many respects small farms are outside the mainstream

² <https://epthinktank.eu/2014/02/15/future-of-small-farms/>.

and rely much more on individual agency and self-sustained development strategies.

Most of the case studies in RETHINK included small farms and we draw our results from all of them, but we primarily focus on the cases of Lithuania (Šūmane et al., 2015), Latvia (Atkočiūnienė et al., 2015) and Turkey (Giray et al., 2015) as these cast most light on the governance of small farms. All three cases are characterised by fragmented agricultural structures and agricultural production systems that are not capital-intensive. Collaboration, collective initiatives and organizations all help small farmers to overcome challenges that such fragmentation can create in terms of their market engagement, political and public representation.

4.5.2. Evidence of increased horizontal and vertical coordination

In all three cases, besides direct payments, there are few formal support mechanisms that address the needs of small farms. These small farms are often unable to take advantage of the structural support for agricultural modernization and innovation as they do not meet the criteria (Atkočiūnienė et al., 2015). In Turkey, public grants are only accessible to a few farmers as there are technical and financial requirements that farmers with little education and no capital resources rarely meet. Horizontal coordination is essential for successful market involvement but there is a lack of cooperation among small farmers and few formal organizations that explicitly address and represent their interests. The lack of such organizations can be partly explained by the diversity of small farmers and their potentially diverging interests. And, as small farmers are scattered, their influence often depends on how much they support each other.

A considerable share of small farmers in these cases operates in conventional markets, but some of them are building or engaging in alternative market mechanisms. They often involve informal market exchanges such as barter. In Turkey the shepherds sell milk and dairy products from their farms. The governance arrangements are built on social, ethical and environmental principles and give consideration to consumers' needs, food preferences and expectations. Formal rules and roles are partly substituted by trust, allowing participants to keep more control over production and distribution.

Informal networks play a considerable role in small farm development and produce a form of local social capital that is expressed through personal contacts and traditions of sharing and cooperation. However, sometimes such informal links are difficult to maintain. In Turkey for instance, shepherds spend the majority of their time in distant meadows and remain socially isolated.

As they are partly excluded from conventional markets and financial structures, many small farms have created self-governance structures to survive and develop. Small farmers in Lithuania and Latvia are highly reliant on public subsidies, which provide a considerable part of their income, but otherwise they use few external inputs and rely on their own resources (land, buildings, finances, skills, workforce and energy) which they put to a maximum use. This self-governance contributes to the socio-economic stability of rural areas (Šūmane et al., 2015). However, autonomy can also restrain farmers from taking risks, starting unfamiliar activities or entering into uncertain relationships (Šūmane et al., 2015).

4.5.3. The effects on agriculture and rural areas

The huge diversity of small farms in itself can be seen as a benefit for rural development as this maintains a diverse environmental, social and economic resource base. Small farms keep people socially and economically active and in some regions, they provide jobs or livelihoods for a considerable part of the population.

In social terms, small farms often valorise local culture and

traditions (e.g. local breeds, culinary heritage and local knowledge). In Lithuania and Latvia many of the small farmers participate in local community groups, civic society organizations (e.g. rural women's groups, cultural and artistic groups) and local government, all of which contributes to the social cohesion of the rural community.

In environmental terms, small farmers often have a good knowledge of the specific agro-environmental conditions in which they work. In Latvia, small farmers were even willing to compromise productive efficiency in order to preserve natural and landscape values. However, they also faced some difficulties in complying with environmental regulations and interests (e.g. the storage of manure).

Small farmers can challenge the dominant policy and public discourses about agricultural and rural development that primarily emphasize economic development, profitability and income. They strongly value non-monetary aspects such as family well-being, social relations, personal satisfaction, self-control and the freedom to organize one's own life and work (Šūmane et al., 2015). Small farmers may bring awareness of this broader set of values into the governance structures they participate in and into the wider agricultural and rural community.

5. Discussion

Based on the empirical evidence of eleven case studies in a variety of national and regional context, we were able to distinguish five major strategies that are being developed in order to reconnect agricultural and rural development. Despite this range of common strategies and a continuous shift of European policy towards more participation and increased horizontal and vertical coordination, the cases show that this is not an easy path. It requires a joint long-term effort by many different stakeholders to reconnect farm modernization and sustainable rural development. Our comparative analysis, leads us to identify six conditions that are necessary to support the shift towards multi-actor governance in rural areas.

- i. Informal networks are an essential ingredient of well-functioning governance mechanisms.
- ii. The professionalization of bottom-up initiatives, adequate coordination mechanisms, effective communication and the legitimacy of decision-making bodies are important.
- iii. Polycentric decision-making is a way to balance power and to respond to sudden shocks and changes.
- iv. Lessons learned from bottom-up initiatives need to be integrated at multiple levels of policy
- v. Agency is important for developing alternative governance mechanisms
- vi. Trust and transparency are key success factors for coordination and collaboration across different governance levels and across sectors

We will look at these conditions in turn.

5.1. Informal networks

The management of land and landscape is related to a complex web of social and economic relations, including farmers and other land managers, the local community, local authorities and central policy makers (Pinto-Correia and Kristensen, 2013). This implies that initiatives that aim to reconnect agriculture with the rural, through providing public services, such as landscape or nature management, inevitably face the interplay between state and non-state actors. They have to develop collaborations that cut across different sectors and political levels (Cross et al., 2002).

Informal networks can facilitate such forms of collaboration. They can be very flexible in terms of enrolling new members, the role and types of actors involved and the connections they forge. Because of an absence of formal control, they are more open-ended, and can support multiple ways of envisioning and operationalization. This allows them to develop innovative strategies more easily. In Austria for example, the informal networks of organic farmers formed the basis for developing new market outlets.

Almost all the governance mechanisms in the case studies were supported by informal networks. These networks had various functions: the exchange of information and knowledge (Darnhofer and Strauss, 2015; De los Ríos et al., 2015), the creation of collective markets (De Roest and Ferrari, 2015), the exchange and joint use of machinery and materials (Šūmane et al., 2015), collective marketing and so much more.

Although informal networks can function independently, they do not necessarily replace formalized organizations and institutes. They often operate within, and complement, formal networks (Kettle, 2000). This means that when governance partnerships go through a process of professionalization it is important to maintain a good balance between formal and informal forms of governance (Pears et al., 2015).

5.2. The professionalization of bottom up initiatives

Within all groups bottom up initiatives are an important trigger for change. However, at a certain point many organizations feel the need to scale-up and the need to develop more formal structures to govern their organization. A formalized organization makes it easier to work with other actors and sectors. For example, in the Italian case, the network needed to cooperate with a slaughterhouse to receive a PDO certificate and organic farmers in Austria cooperated with the tourist industry to diversify their income. Furthermore, a formal organizational structure is often required to receive subsidies from governmental institutions (De Roest and Ferrari, 2015).

In this context, several cases illustrate the importance of individuals who acquire a brokerage position. Brokers are involved in different social, economic, and cultural networks (Emirbayer et al., 1998) and because they move back and forward between these networks, they can seize opportunities for new interventions (Emirbayer et al., 1998). This is one of the mechanisms for increasing horizontal and vertical coordination in rural areas (Pears et al., 2015; Koopmans et al., 2015). Moreover, brokers can play an important role in translating problems as they can relate to the 'language' of different groups (Cash et al., 2006; Cross et al., 2002). They thereby contribute to effective communication, facilitate coordination and contribute to the legitimacy of the partnership. For example, in the Belgian case the mayor of the municipality involved in the establishment of the landscape fund was also a farmer and member of the local farm organization. This contributed to the legitimacy of the partnership. A similar thing occurred in Denmark where the founder of the water association was also a farmer and a city councillor.

Scaling up also means choosing direction and building shared meaning through articulating a common purpose and objectives. A common language needs to be developed, in which the concepts and terminology that participants will use needs to be agreed. In this context, the importance of clear leadership emerged (De los Ríos et al., 2015; Koopmans et al., 2015). Emerson et al. (2011) state that an essential driver for the development of collaborative governance mechanisms is the presence of an identified leader who is in a position to initiate and help secure recourse and support for the initiative.

Nonetheless, scaling up also holds the risk that the original

initiators no longer relate to the project and leave the partnership (De los Ríos et al., 2015; De Roest and Ferrari, 2015). In other words, governance partnerships have to balance the tension between effectiveness, participation and legitimacy.

5.3. Polycentric decision making

As early as 1961, Vincent Ostrom et al. explored the advantages of polycentric systems compared to centralized governance frameworks. Elenor Ostrom further developed the concept and defined polycentric systems as 'the organization of small-, medium-, and large-scale democratic units that each may exercise considerable independence to make and enforce rules within a circumscribed scope of authority for a specified geographical area.' (Ostrom, 2001, p.2). In RETHINK, most of the governance systems were complex and polycentric.

Polycentric systems can better cope with abrupt changes and better address challenges in a continuously changing environment (Ostrom, 2001; Pahl-Wostl, 2009). Different organizations or entities at different levels have the autonomy to experiment with alternative governance strategies in response to these changes. As a result, they can develop a great diversity of response capabilities that can serve as valuable input for other similar decision-making centres (Ostrom, 2001). The abundance of potential strategies within polycentric systems makes them better able to respond to sudden shocks and changes. However, in order to be effective, it is important that different organizations and political entities learn from each other. The German case is an example of successful polycentric decision-making. Different organizations at different political levels were involved in developing a bio-economy by connecting, reconnecting, and sharing knowledge and experiences.

On the other hand, polycentricism also brings certain challenges. This is demonstrated in the French case, where a plethora of policies, programmes and initiatives have been set up by both public authorities and private stakeholders in order to promote organic production and local procurement. This huge diversity of actors and strategies raised issues of coordination. Also in the Swiss case, the lack of institutionalized coordination between organizations on a regional level is seen as a potential threat.

5.4. Lessons from bottom-up initiatives

Policies increasingly have to reconcile top down, international and strategic needs with the now-embedded ethos of local partnership and stakeholder consultation in rural governance (Dwyer, 2011). This implies a growing search for an effective division of responsibilities among central, regional and local governments (Gedikli, 2009). As Louw et al. (2003) state policy development can be a major challenge, especially where political-administrative responsibilities within territories are divided among municipalities, regional governments and many sectors of government (Rogge et al., 2013).

All of the cases highlighted the complexity of working with different policy levels. Inconsistency and incoherence between legislation at different levels was pointed out as a major issue (Pears et al., 2015; Bourdin et al., 2015). Furthermore, the multiple policies on agriculture generate an enormous burden of bureaucratic red tape. Although farmers fully accept that regulations are necessary (not least to ensure a level playing field for all farmers), they also claim that the system is becoming dysfunctional and is increasingly constraining them. Thus, while new multi sector-multi-actor initiatives are being promoted, the multitude of regulations creates high entry barriers for farmers wanting to pursue an innovative development trajectory. Several farmers have argued that policy expects that agricultural, rural and food initiatives work

in an integrated way. Policy itself however, is not integrated at all.

This means that there is still a major challenge for policy-makers to develop governance mechanisms that are able to support integrated agricultural and rural development. The cases demonstrate that actors at the local level are able to integrate different policies. Governments should use these examples to learn and to identify opportunities for cooperation at higher institutional levels. Pilot projects initiated and supported by government actors (see for example the Belgian case) are a good example of such experiments. In order to develop truly adaptive governance, these experiences should be used to develop new policy strategies at higher political levels.

5.5. Agency

The industrialized agricultural sector, predominantly producing for the global market, is shaped by hierarchical structures of decision-making where farmers are at the bottom of the value chain and often have very limited decision-making power (Powell et al., 2011). The cases illustrate farmers searching for alternatives to these hierarchical pre-defined governance structures. They describe how farmers, by cooperating with other sectors, by creating new markets and establishing cooperatives, display agency and shape social structures (Giddens, 1984 in Powell et al., 2011; Darnhofer, 2014).

To develop these alternative mechanisms farmers and rural actors need the awareness, self-esteem and capacity to act on their choices. This poses them with the challenge of cooperating in order to address common problems and to set aside any differences in values they may have. Boyte (2007) called this 'civic agency'. In the cases, this civic agency has helped farmers to link to broader strategic agendas such as producing public goods and improving product quality. In the Danish case for example, farmers cooperated in landscape management to achieve collective environmental goals, in the Spanish case a cooperative was set up to achieve socio-economic goals. Both had other beneficial spin-offs.

Policy-makers should pay attention to how farmers develop dynamic capabilities that support the process of making choices, strengthen farmers' capacity to act (Darnhofer, 2014; Vorley et al., 2012) and look for new policy designs that leave room for farmers and other rural actors to develop forms of governance that fit their specific context.

5.6. Trust and transparency

Trust has been a long-recognized *sine qua non* of collaboration (Huxham et al., 2000; Koppenjan and Klijn, 2004; Leach et al., 2005; Ostrom, 1998). Our findings also show trust and transparency to be the key factors for developing viable governance mechanisms (De los Ríos et al., 2015; Bourdin et al., 2015). Trust is particularly important as a central binding element in informal structures as there are no formal roles and rules to guide and control people's actions. Interpersonal relationships and people's conduct and behaviour are the base needed to generate prosperity in rural areas (Cazorla et al., 2013). In networks, trust is instrumental in reducing transaction costs, improving investments, stability in relations and in stimulating learning, knowledge exchange and innovation (Koppenjan and Klijn, 2004). Trust generates mutual understanding that in turn generates legitimacy and finally commitment (Emerson et al., 2011). Finally, trust enables people to go beyond their personal, institutional and jurisdictional frames of reference and towards an understanding of other people's needs, values and constraints (Bardach, 1998; Ring and Van de Ven, 1994; Thomson and Perry, 2006).

Trust develops over time as parties work together, get to know

each other, and prove to each other that they are reasonable, predictable and dependable (Fisher and Brown, 1989). Trust has therefore an important time dimension that should be considered when developing pilot programmes, especially from scratch.

6. Conclusion

To summarize, multi-actor governance is a first step forward in the process of fostering synergies between farm modernization and sustainable rural development. Although such governance has been specified as necessary in the recent CAP reforms, the RETHINK project shows that still many obstacles appear that need to be overcome to succeed in establishing more territorially-based, multi-actor, governance systems. All over Europe alternative development trajectories, each context-specific, are being developed. Drawing on our analysis of these examples we have identified six vital preconditions that cut across the different strategies. Although the scientific work is already familiar with most of these conditions, in practice they are rarely translated into effective policy strategies that can support territorial development.

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