



## **Global Shocks, Changing Agricultural Policy and the Viability of Rural Communities**

HILDE BJØRKHAUG AND KATRINA RØNNINGEN

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### **Background**

Recent global shocks and perceptions of their dimensions – uncertain food stocks, the aftermath of the last financial crisis and the new crisis many are facing now, reconstruction of stable economies, climate change and extreme weather events, energy pricing and shortage – influence state dispositions and priorities regarding agriculture and food production. These developments also impact the future of rural areas. This Special Issue of IJSAF engages with these challenges at several levels in its call for empirical and theoretical articles dealing with the following issues.

First, what are the prospects of a *new international political regime*, where the moral and economic imperatives are turning towards increasing food production, which some authors have described as neo-productivism? Could the environment and rural communities be protected from extreme market fluctuations? What is the ideological and political climate for trying?

Especially within Europe, multifunctional agricultural policies have been designed, in addition to securing food production, to support other outcomes, primarily sustaining rural communities, landscapes, biodiversity and cultural heritage. Within these agricultural policy regimes, multifunctional agriculture has been seen as the industrial backbone of the rural community and the basis for the diversification and development of new rural businesses. Others have criticized such policies for propping up unviable European producers and disadvantaging struggling farmers in developing nations. Policy instruments in Europe and elsewhere have moved towards a decoupling of support away from agricultural production towards rural development, land stewardship and rural housing. The articles in this Special Issue examine some of the effects of multifunctional policies. Will we see a continuing rise of green and/or rural subsidies? What kinds of instruments are viewed as legitimate?

Second, at a different level, *what are the consequences of changing agricultural policy for rural communities?* Is agriculture necessary to sustain rural communities or vice versa? Is agriculture sustainable without rural communities? Changing conditions for agriculture require new and innovative ways of creating a rural livelihood for those who want to live a rural lifestyle, and for those that do not have any other alternatives. What are the preconditions for the sustainability, and/or creation, of

Hilde Bjørkhaug and Katrina Rønningen are Senior Researchers at the Centre for Rural Research, NO-7491 Trondheim, Norway; email <katrina.ronningen@rural.no>, <hilde.bjorkhaug@bygdeforskning.no>.

rural diversity? Do existing regulations and property structures enable new rural development?

The third level is related to the situation for rural populations under *different and changing policy regimes*. This includes aspects of changing industries, recruitment and qualifications necessary to cope with these changes. What are the consequences of major policy regime changes for the overall food production systems, food security and access to land and production means? Who stays, who leaves, and who enters rural areas under shifting policies?

Underlying all these issues is climate change: how policies of different societies are responding to this, and not least how agricultural industries, farmers and rural communities adjust or react to these changes.

The topic of this Special Issue was discussed at the XXIV European Society for Rural Sociology Congress in Crete, 2012, by the Working Group on Global Shocks, Changing Agricultural Policy and the Viability of Rural Communities.

A call for papers was sent to the participants of the working group in addition to an open call to relevant scholars across the world. The articles in this issue represent a mix of working group attendants and other writers. We are pleased to present a broad collection of studies on the relationship between agriculture and local communities under severe changes and global shocks. The studies span the globe, representing different agricultural, political and economic systems, in addition to varying climate conditions for agricultural activities.

### Articles in this Issue

Starting in New Zealand where deregulation of agricultural production has caused massive changes in production for farmers. Sheep have been replaced by dairy with support of farmer cooperative Fonterra, which has been very successful in export terms. In the article 'Conversion of Family Farms and Resilience in Southland, New Zealand', Jérémie Forney and Paul V. Stock address what farmers gain and lose with this major transition in production. Converting to dairy, according to Forney and Stock, enables farmers to keep their farming identity and farms to be succeeded into the future. For local communities, conversion to dairy farming has provided economic income and reversal of population loss, leading to improvements in the social and economic sustainability of farming communities. A more negative aspect of this conversion might be the total dominance of dairy production in the communities, and dependence on the future success of Fonterra in the global dairy market. Another increasing issue is environmental and climate change concerns related to this shift. However, at this point such concerns are not perceived universally applicable to all farmers or agricultural systems, just to some 'bad farmers'.

Another, yet different, example from dairy production is presented in Michael Santhanam-Martin and Ruth Nettle's article 'Governing Australia's Dairy Farm Workforce: A New Terrain for Negotiating Rural Community Sustainability'. Santhanam-Martin and Nettle discuss the tensions between neo-liberal policies individualizing ideology and the need for collective/community-oriented approaches to secure continuation and quality in the dairy-industry workforce. They state that 'if the neo-liberalizing project is understood as a work in progress, then the issue of the farm workforce can be seen as another dilemma to be worked through'. The Australian dairy industry faces challenges in securing sustainable production systems, even in major dairy areas such as the state of Victoria. The economic situation

is vulnerable and efforts to increase efficiency and expansion to cut production unit cost are a continuing dogma in the industry. Yet neither sustainable businesses nor local farming communities can develop without recruitment of a skilled and stable workforce. Acknowledging this challenge, Santhanam-Martin and Nettle show that collective actors in agricultural industries, communities and governments can work together to accommodate rural communities' abilities to sustain themselves in a competitive global industry.

In the article 'Crisis? What Crisis? Marginal Farming, Rural Communities and Climate Robustness: The Case of Northern Norway', Hilde Bjørkhaug and Katrina Rønningen illustrate some of these aspects linked to food security and national food production in agriculturally marginal areas, but within a context of a highly subsidized agriculture. Food security and some extent of national food sufficiency forms part of the historical legitimacy behind the Norwegian agricultural policy regime. In more recent years, multifunctional aims linked to cultural landscapes, biodiversity and the role of farms in rural diversification have been stressed in this non-EU member country, as within the EU's Common Agricultural Policy (CAP) and the 'European model of agriculture'. A disastrous year, 2010, saw up to 100% crop losses in the Northern Norway county of Troms, and it revealed the inherent lack of robustness of both the farm economies and the support systems, which were not equipped to meet such exceptional years. Such climate-related disasters may be expected to occur much more frequently in the future. An increase in farm closures followed the 2010 crisis, and the regional production of especially dairy was reduced, with consequences for the sector and its related industries. Northern Norway has, except for grazing resources and a potential for producing very high nutritious and clean products, limited importance in terms of overall contribution to national or international food production. However, with the increased liberalization of Norwegian agricultural policies, ongoing restructuring and farm closures, the authors ask whether reduced food production in areas such as Northern Norway is a problem: does it matter in a risk-preparedness context?

Through their European Union membership, Nordic countries neighbouring Norway have policy instruments oriented differently towards agriculture and rural communities. In their article 'The Rural under the Common Agricultural Policy of the European Union: Sustainable Rural Development Aspects of Pillar II in Finland and Estonia', Michael Kull, Olli Voutilainen, Stamatios Christopoulos and Ramon Reimets compare how Finland and Estonia have adapted to and made EU policies and instruments available for improvements of the socio-cultural and environmental situations in their respective rural communities. The analysis in this article presents major differences in how individual countries such as Finland and Estonia accomplish funding for environmental support measures: 'Finland exhibits an unprecedented coverage of areas under environmental support measures, as a Pillar-II component, while implementation of the same policy in Estonia results currently in the coverage of less than half of the potential areas.' The imbalances between the two countries in terms of actual financial support per hectare are also considerable. Thus, the Common Agricultural Policy (CAP) visions of equal opportunities may be said not to have been fulfilled. While large agricultural areas in Finland receive environmental support under Pillar II (rural development), Kull et al. find that agri-environmental considerations in production are lacking in claims for Pillar I (direct payments). In its current design, the allocation of funds from CAP does not reflect, according to Kull et al., the local and territorial needs to secure better sustainability

in future development of these areas. The authors further state that future allocations of funds should incorporate equality and improvement opportunities also to strengthen trust in the EU institutions.

CAP policy is also the focus in Tanja Mölders's article 'Multifunctional Agricultural Policies: Pathways towards Sustainable Rural Development?' Mölders presents a content and concept analysis of multifunctionality in CAP policy in the context of global shocks. In order to be able to analyse how multifunctional agricultural policies are able to promote sustainable rural development, Mölders argues that sustainable development 'asks for sustainable economies that preserve and regenerate society's ecological and social functions'. This also calls for solutions that are able to integrate sometimes different and contradictory goals. Based on her analysis, Mölders offers two interpretations of multifunctional agricultural policies. 'Adaptation' sees multifunctional agricultural policies from a critical perspective, and argues that the economic mechanisms and strategies that have led to the crises in rural areas are reproduced rather than reflected upon. 'Transformation' introduces a visionary perspective in its argument that multifunctional agricultural policies lead to a changed and extended perspective, so that (re)productive economies can be developed and established, and a transformation process initiated towards sustainable rural development. In this latter interpretation, scientists, politicians and local actors can question and challenge traditional certainties and work together for increased robustness facing global shocks in rural areas.

Zemfira Kalugina describes in her article 'Agricultural Policy in Russia: Global Challenges and the Viability of Rural Communities', post-Soviet agricultural transformations, adaptations and effects, and describes what she terms as 'institutional traps'. The main focus is on the small-farm trap: of permanent unprofitability and of lowering wages and poverty amongst the rural population. The economic reforms during the 1990s were intended to radically transform Russia's agrarian sector. These included a reorganization of collectively owned farms, land reforms, and support for the private sector. Land was divided and formed the basis of start-up capital for business development on a cooperative or individual basis. Radical changes in ownership patterns were assumed to lead to an efficient allocation of land and other means of production, and would promote the development of private entrepreneurship in agriculture and in its services. Administrative restrictions on developing household plots were lifted, and agricultural subsidies reduced significantly. Kalugina finds that the reforms have not only failed to achieve what they intended, but have in some sense 'turned back the clock'. Instead of modernizing agricultural production through privatization, they have contributed to an increase in small-scale production relying heavily on manual family labour, and socio-economic marginalization of people living in rural areas. Negative effects are in particular reduced overall productivity, a drastic reduction of agricultural output, and a significant increase in imports of agricultural products. Small-scale, privatized farming has not filled successfully the space left by the collective farms. Kalugina argues that a major reason for this failure is that the model of agrarian relations imposed from above has taken into account neither traditions and historical experiences, nor the symbiotic relationship between collective and individual farming in Russia.

Contrary to the development in Russian policy, agrarian movements and national governments such as Venezuela have used food sovereignty as a call for a new model of agriculture, expressed as explicitly anti neo-liberal. In 'A Twenty-first Century Socialist Agriculture? Land Reform, Food Sovereignty and Peasant State Dynam-

ics in Venezuela', Daniel Lavelle describes aspects of the Venezuelan land reform. As a self-proclaimed socialist state, the Chavez Government framed its agrarian policies to prioritize land redistribution, smallholder agriculture, and sustainable forms of production. Yet, rural dynamics have been characterized by conflict over land, and land occupation has been seen as an attack on private property. The article investigates the dynamics of technically illegal peasant occupation of estates in a seemingly 'pro-peasant' policy context. By rationalizing occupation in terms of what constituted 'appropriate' production within Venezuela's Bolivarian agricultural programme, campesinos contested the meaning of production within a project framed in terms of food sovereignty. While campesinos refer to Chavez and the constitution, which legally and rhetorically have encouraged land occupation, campesinos occupying land have been chased and also killed, and killings have not been prosecuted. State-led agrarian development in Venezuela is now moving towards a largely productionist model, where food production and supply concerns capture increasingly large shares of resources and policy attention. State-driven, large-scale agriculture projects, green revolution research and development, and policies that bolster the commercial agriculture sector may be increasingly more central to agriculture policy. A more marginalized peasantry in terms of resource control and policy influence could see the potential for food sovereignty to devolve into food self-sufficiency, Lavelle suggests.

### **Implications of the Special Issue**

The articles in this special issue represent experiences and analyses of cases from very different policy regimes across the world. All of them do, however, illustrate aspects of various shocks to agricultural systems, including financial crises, climate change and challenges related to neo-liberalization of agriculture and food production, and changing ideologies and policies for agriculture and rural communities. It seems that a common denominator for all these cases is the failing ability or willingness of current polices to incorporate sufficiently local and territorial particularities and needs to enhance development in rural areas.

In Europe, the design of the means for rural development policy is closely connected to agricultural activities. Future needs for the sustainability of rural communities might call for policy and support for the development of activities that are less connected to this. However, in a food security or risk-preparedness context, viable rural communities with a certain level of food production 'all over the country', which has been a Norwegian slogan, may still be of relevance for future strategies and policies.

One experience from the failing market reforms of post-Soviet Russia is how local, rural people may return to self-sufficiency strategies, subsistence agriculture, and extreme pluriactivity as part of an informal economy in a time of increasing rural poverty, not furthering a positive, sustainable development. While the failure of socialist reforms in Venezuela and the campesinos' struggle for food sovereignty might give way to more productivist approaches, self-sufficiency strategies may well be the remaining strategy for the rural poor.

Challenges regarding the 'fair distribution' of production means are extremely obvious both in Russia and Venezuela. At the same time, possibilities linked to green box and agri-environmental schemes are not (fully) utilized by recent WTO-member Russia, nor EU-member Estonia. At the other end of the scale, Norway is facing chal-

lenges to meet its own highly ambitious multifunctional objectives. The Norwegian model, which for a long time was designed to protect local communities, is being decomposed gradually in an increasingly neo-liberal and neo-productivist mode, implying strong structural changes and inadequate agricultural support. In this new regime, food security and food production are based on expectations of efficiency in production through increased dependency on imported feed and input factors and less use of locally based resources. This might be a high-risk development in uncertain global financial and energy markets.

By implication, nation-state policies and international foras and organizations such as WTO, OECD and FAO need to incorporate policies and strategies that include food security and risk-avoidance perspectives, taking into account territorial aspects and challenges. Agriculture is special as it is such a place-based economic activity. The articles in this Special Issue point to intended but also major unintended consequences of policy programmes and reforms for local agricultural communities. The researchers in this special issue call for visionary policy models that incorporate collective solutions at the regional and local levels, where communities, industry, politicians and scientists can contribute to developing more sustainable and robust rural communities that can cope with global shocks.





## **Conversion of Family Farms and Resilience in Southland, New Zealand**

JÉRÉMIE FORNEY AND PAUL V. STOCK

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**Abstract.** The well-known deregulation of New Zealand agriculture prompted the growth of dairy farming, particularly in the region of Southland. The formation of the giant cooperative Fonterra only exacerbated the conversion of sheep farms into dairy farms that challenged both farmers' and the region's traditional identity as a sheep country. Interviews with converted farmers show that farming families convert to dairy primarily in an attempt to preserve what is important for them: farm succession and a professional identity. At the community level, conversions to dairy prompted economic revival and a reversal of population loss. This article engages the literature on resilience and rural communities to explore Southland's adaptation to new economic and farming realities while exploring potential shocks in the future around financialization and environmental well-being.

### **Introduction**

Rural sociology tries to understand social change (Lowe, 2010). Though assumptions of the rural often presume descriptions such as tradition, natural and the rural idyll (Lowe and Ward, 1997), alternative interpretations counter with moral conservatism, backwardness, and other variations on the hillbilly theme (Bell, 2006). The tension between persistence and adaptation permeate analyses of the rural and family farming throughout the agri-food literature (Buttel et al., 1990; Wilkinson, 1991). In this article, we examine farmers' perceptions and experiences of dramatic economic changes in relationship to farm(er)- and community-level changes. We focus particularly on issues of personal motivation and identity for farmers and adaptations and resilience at the community level. While theoretically engaged with

Jérémie Forney is Scientific Collaborator at the School of Agricultural, Forest and Food Sciences, Bern University of Applied Sciences, Länggasse 85, CH-3052 Zollikofen, Switzerland; email: <jeremie.forney@bfh.ch>. Paul V. Stock is Assistant Professor at the Department of Sociology and the Environmental Studies Program, University of Kansas, Lawrence, KS, United States. Our thanks to the Centre for Sustainability at the University of Otago, especially to Hugh Campbell, Chris Rosin and Angga Dwiartamma for the many discussions around New Zealand agriculture and resilience. We gratefully acknowledge funding from the Swiss National Science Foundation and from the New Zealand's Ministry of Science and Innovation (formerly the Foundation for Research, Science and Technology) for the Rural Futures project, in conjunction with AgResearch, from which the interview data are drawn. Special thanks to Sue Peoples too.

issues of community and resilience, this article presents the case study of agriculture in Southland, New Zealand, to explore adaptations, continuity and loss in response to major economic shocks. At the same time, the article offers an empirical description of farm conversion from sheep to dairy in New Zealand. Despite playing a huge role in contemporary New Zealand agriculture, conversions have not been documented well thus far.

The major trend of conversion from sheep to dairy is related to the evolution of New Zealand agricultural and rural politics. Under Finance Minister Roger Douglas in 1984, the fourth New Zealand Labour Government implemented a range of reforms (nicknamed 'Rogernomics'), which eliminated subsidies and most state support to agriculture, including the rural bank that provided farm-specific loans. This process is commonly referred as 'deregulation' and created a unique case to study the consequences of a drastic neo-liberal turn in an industrial country (Campbell, 1994; Cloke, 1996; Liepins and Bradshaw, 1999; Larner, 2000). While some scholars integrated New Zealand's reforms into an analysis of the broader transformation of global agriculture (Le Heron, 1993), the research at the national level demonstrates a great interest in the destiny of family farmers. These authors dedicated their work to cataloguing the adaptations of family farmers trying to cope with the new 'rules' (Campbell, 1994; Wilson, 1994). Others took a longer-term view incorporating pluri-activity and adaptation at both the individual and community scales (Johnsen, 1999, 2001, 2003; Liepins, 2000; Smith and Montgomery, 2003; Haggerty et al., 2009).

The swift deregulation of agriculture did not affect the different agricultural sectors equally, though. In fact, the two main sectors, meat and dairy, were affected very differently by the withdrawal of the state subsidies, which were mostly concentrated on the meat and wool industries. Though dairy farmers still had to cope with the other effects of deregulation, such as skyrocketing interest rates, they were already engaged in free-market negotiations internationally. In addition, while the New Zealand (NZ) Dairy Board processed and commercialized the totality of the milk production, the NZ Meat Board and NZ Wool Board lost their major role and influence (Campbell, 1994). Dairy farming grew continuously from then on, notably colonizing the sheep farming areas of the South Island in Canterbury and Southland. There, low and flat land with good fertility encourages sheep farms and farmers toward intensive dairying. In this region, both the decline of sheep farming and the growth of dairy led to major social and economic changes in community life.

Wilkinson (1970, 1991) defined the 'community field' as a dynamic and unbounded configuration of social fields. Drawing on interactionist inspirations, Wilkinson challenged the notion of 'community' as a static construction. The 'local community' emerges through the *interaction* of many fields, including agriculture (Wilkinson, 1991). This definition of community incorporates social change and adaptation as normal features of social life. Community evolution is an ongoing process and not a succession of stabilized systems separated by periods of disruptions.

This emphasis on changeability offers interesting connections with the developments on adaptability and transformability in the theory of the resilience of socio-ecological systems (SES) resilience. Walker et al. (2004) draw on the concept of 'basins of attraction' to give a non-linear understanding of SES's stability and change. Systems are always evolving, due to internal or external forces. They move around an ideal state of equilibrium or an 'attractor'. The basin is the image representing this course of evolution. The actual state of the SES can be seen as a marble rolling in a bowl. Resilience is then understood as the capacity of absorbing changes



and evolving, while staying essentially the same, i.e. not rolling out of the basin. If changes are too important, the system might meet a threshold and evolve toward a new equilibrium, which is to fall into another basin of attraction, or it might collapse. Adaptability and transformability are the two ways for human actors to deal with the evolution of the SES. Adaptability is the capacity to manage the change while staying in the same basin of attraction. Transformability is the capacity to create new systems, when the present one becomes untenable. Folke et al. (2010) bring in one last element that is crucial for this article: resilience adaptability and transformability interrelate at multiple scales. This multiscale perspective is necessary to understand the dynamic interplay between persistence and change. Thus, 'resilience thinking' allows a nuanced understanding of dairy conversions in Southland, where change and continuity are entangled.

Recent work out of Australia deals with similar issues, looking at tensions between expectations of rural decline and the evidence of rural resilience (McManus et al., 2012). They summarize the definition of social resilience as 'the ability to embrace change, with a capability to adapt seamlessly to largely exogenous events (such as technological change) in a form termed *stable adaptation*' (p. 21). In their paper, they emphasize the crucial role played by people's (notably farmers') perceptions and sense of belonging in the resilience of the community. This article follows similar aims in exploring connections between social change, community, farming strategies and farmers' motivations.

### *Agriculture in Southland*

Most Southlanders today remember the region as traditional sheep country. Sheep farming was central to the local and regional economy and social organization in the mid- to late-twentieth century just as it was in Canterbury (Hatch, 1992). However, many interviewees have memories of dairy farming prior to the 1950s and the prevalence of dairy factories throughout the region. Actually, good land and consistent rainfall provide a naturally favourable place to produce milk, or Southland's climate serves as an attractor for dairy. From the 1950s, high prices for meat and wool resulted in numerous conversions out of dairy into sheep and beef farming. Local, small-scale, dairy plants shuttered and Southland became sheep country; more so with the encouragement of state subsidies. As said, the difference in standing circa 1984 allowed for different trajectories for each sector in the wake of deregulation. Dairy, as primarily a regional supplier at the time, was already subject to the open market without the insulation of either preferred-nation trading status or per animal subsidies. Given the policies in place at the time, one could argue that the resurgence of dairy farming was, partly, a logical outcome of the removal of state intervention or the change in policy helped prompt a shift back into a dairy (albeit changed) basin. In the early 1990s, North Island dairy farmers found new opportunities in Southland to develop farming activities. There (and in South Canterbury), they found good land and suitable weather and were able to purchase farms at reasonable prices. The traditional dairy regions (Taranaki and Waikato) suffered from smaller farms that left farm prices steep and rarely available. Southland's branding as a new dairy region helped the dairy industry actively recruit North Island farmers to convert farms in the region. The personal attention also helped many to overcome hesitations to go to the coldest region of New Zealand (Stock and Peoples, 2012). In the 1980s very few local farmers had chosen to convert their farm. Conversion to dairy

farming was seen as an imported practice and a challenge to 'traditional' sheep and beef farming and related community life (*ibid.*). Slowly, however, more and more local sheep farmers made the decision to convert to dairy. If sheep farming remains the dominant activity in the hill country, the lowland grass has turned to dairy.

At the national level, the creation of Fonterra, the giant dairy cooperative, in 2001, consolidated the dairy industry by merging the principal actors of the trading and marketing sides (New Zealand Dairy Board) with the two major processors (New Zealand Dairy Group and Kiwi Co-operative Dairies). The meat and wool industry, on the other hand, continue to struggle without a single umbrella entity that drives prices down and leaves many in the industry embittered. At the end of the turmoil, the dairy sector emerged stronger both at the farm and the industry level. The contrast in fortune' between the two sectors (Le Heron, 2011) is quite strong and partially explains the continuous conversion of sheep and beef farms into dairy farms. Today, the dairy turn continues in Southland. The combination of Fonterra's emergence as a global dairy titan and the growth of infrastructure in Southland (the regional dairy factory in Edendale became one of the largest in the world) put Southland at the centre of global dairy commodity production. As a result, dairy organizations plan to double the number of cows in Southland in the future ((DairyNZ representative, pers. comm., 5 July 2011).

Looking at the farm level, the evolution of Southland agriculture has been characterized by a succession of shifts from one industry to the other. Drawing on Walker et al. (2004), sheep and dairy farming can be understood as two attractors forming two neighbouring 'basins of attraction'. Farms shifted from one system to the other, mainly because of exogenous drivers (policy change, economic markets, and limitations in other regions). Given several negative factors, the sheep basins lost resistance – the bowl became flatter – while the dairy bowl got more attractive, making it easier to cross the threshold. The turn back to dairying does not equal jumping back to the former system, as the new dairy basin differs a lot from both former sheep and dairy systems. The scale of today's operations makes the new dairy system far different in many respects. Milk is still a biological product of cows; however, the cows, the grass, the labour arrangements, and the financial instruments – just about every aspect of the farm system – are significantly different.

The agricultural crisis resulting from the deregulation in the 1980s shaped the evolution of rural communities that were relying on farming as their dominant economic motor. In response, farmers generally cut spending on farm inputs, labour and investments. This 'belt tightening' tactic carried over to the local economy exacerbating the general rural downturn (Wilson, 1995). As an example, farmers' spending on 'repairs and maintenance' decreased by nearly 60% (Campbell, 1994). Farmers' conservative fiscal attitude forced many agribusiness companies to rationalize. At the same time, many public sector agencies that played a key role in the rural economy were privatized or restructured. Taken together, the 1980s reforms put the rural areas under immense pressure and contracted the local and regional economy. Southland, in particular, serves as a great geographic place to explore the deep sociological changes in rural communities subject to economic challenges (Liepins, 2000).

At the community and region scales, the increasing number of converted farms is an important factor of transformation. The rural downturn brought Southland close to the threshold of economic and social collapse. With Southland's economy in 'bad shape' and in 'decline', conversion to dairy served as a major answer to difficult

pressures. In this article, we will explore the nature and quality of the change at both farm and community scales.

### *Research Questions*

These dramatic challenges in Southland highlight a few issues that can speak to agricultural change as related to community resilience and adaptation. Specifically, our article asks how has farming in Southland changed since 1984? What were, in the view of the farmers, the main changes related to the dairy turn at the individual, family, farm and community levels? Have the motivations for farming changed with a change in the kind of farming? How have these changes affected succession planning and farmers' identity? How has Southland, as a community, changed as a result in the shift from a sheep region to a dairy region? What can we learn about the relationship between agricultural changes – at the farm(er) and regional levels – and community resilience? These are vital questions in a time of climatic and economic disruption.

### **Methods and Analysis**

Based on 31 qualitative interviews with farmers and people involved in dairy farming in the Southland region of New Zealand in 2010 and 2011, we examine the impact of major economic changes to the rural community.

Participants were selected through a 'snowballing' process, with multiple entries in order to overcome the boundaries of individual networks. Two-thirds (19) of the interviewees had converted their own farm from sheep (or sheep and beef) to dairy. The conversions occurred between 1992 and 2011 and allow us to explore the changing impact of deregulation over time as well as compare similar conversions to one another. These interviews revolved around the story of the conversion, from the initial decision to the current situation. In addition, a few sheep farmers (5) and immigrant dairy farmers (3) have been interviewed to broaden the scope of research. Sheep farmers' interviews explore the alternative of non-conversion of the family farm in an emergent dairy area. When possible, both partners – husband and wife – were interviewed. Thus, the male farmer is often the main interviewee for each farm. The participation of the wife in the discussion fluctuated, from absence to equal involvement. Two interviews were made with women only, who were not considered (by themselves or their partner) the official head of the farm.

Besides the qualitative interviews, participants completed a questionnaire providing data on the farm structures and history. The remaining interviews (4) were carried out with professionals involved in Southland farming (including a stock agent, farm consultant, dairy extension officer and a representative with Environment Southland, the regional agency for environmental regulation). The latter interviews provided useful insights and comments on the broader trend of conversions in Southland.

The farmers are all owner-operators: they own the farm assets and manage the farm business. This precision is of importance in the New Zealand context where the owner and the operator of a farm business are sometimes different, especially in dairy farming. Dairy ownership in New Zealand is complicated by the unique system of share-milking. The share milker (often couples) generally owns the herd,

but not the farm or equipment to milk. The milk payout is shared between the share milker and the farm owner, generally 50:50. Share-milking is considered part of the so-called 'dairy ladder' that allows young farmers to enrich their careers, progressively accumulating capital, assets and responsibilities (Blunden et al., 1997). This scale includes a wide range of possibilities (for acquisition of capital and responsibility) in dividing ownership, farm management, and farm labour. Historically, farm ownership is the presumed top of the ladder.

All the interviews were fully transcribed and analysed using software for qualitative data (NVivo). In the analysis, the following questions were specifically addressed: What are the motivations to convert (or not) the farm to dairy? What is the history of the farm? How was the conversion process? Who was involved in the conversion? What are the differences between managing a sheep farm and a dairy farm? How did the conversions affect the local community and region?

### **Conversion and On-farm Change**

The growth of dairy in Southland since the mid-1980s upset not just the kind of agriculture (sheep/beef to dairy), but how agriculture existed in and continued in Southland. The structural differences in how to be a farm(er) of sheep or dairy cattle upended the infrastructure of agriculture. We examine these changes through the financial-capital differences and the changes in on-farm labour needs.

#### *Financial Differences*

Converting a sheep farm to dairy production requires millions of dollars in capital investment. A newly constructed dairy shed involves expensive and highly technical systems. The farm has to be totally reshaped and reorganized. The converting farmer has to build a herd (initially through purchases, later through reproduction), rearrange the paddocks, adapt the fencing, build lanes that lead the herd to the milking unit, and, sometimes, cut down trees and hedges. Even the grass is progressively replanted with varieties better suited for dairying. Furthermore, the conversion often requires further land acquisition. Everything costs money. Sheep farmers used to complain about debt. Contemporary dairy farmers' debts overshadow those complaints, as this older farmer, a former accountant, reports:

'I spent half of my time at that table doing book work. It's horrendous the amount of accounts that come in. It's big money, I've never, in all the time that I was an accountant, ever had mortgages. Any client I had had the mortgage now and the banker tells us that our mortgage is a minor compared with some, so it's just mind boggling in that respect' (male, 67).

Compared to sheep farming, dairy involves far larger start-up capital. Despite these debts, the average dairy farm has a cash flow per hectare five times higher than the average intensive sheep and beef farm (MAF, 2009a, 2009b). The odds of making money in dairy rather than sheep (meat or wool) are far greater these days.

Skills and aptitudes in dealing with debt, money and banks are often said to be a condition to enter dairying. Many farmers speak about the difficulties they have with banks. No farmer can afford a dairy farm investment out-of-pocket. Thus, the rates of conversion parallel increased rates of borrowing from banks and high debt

levels. Several converted farmers unsurprisingly mention their banker as one of the main contacts during the conversion process. The elimination of the rural bank often meant a change in the main banker a farmer dealt with in the immediate aftermath of deregulation. Later, a farmer had to demonstrate confidence and ability to convince banks to extend credit. In order to convert a farm, farmers had to manage not only a new style of farming, but new lines of defense of their farming practices – even if in theory only. Invariably, the bank's underwriting is referred to as the moment when the conversion turned from a potential project into a real process. This is not always an easy step to pass through.

Once the money is spent and the conversion completed, the family business has grown. In order to secure ownership and organize the management of the business, it is then common to find legal and financial structures such as trusts and companies, or what Pritchard et al. (2007) have described as a 'an accommodating modus operandi for farm units within neo-liberal agricultural governance' (p. 85). As Australian tomato growers described in their work, many family dairy farms in Southland 'relate to their land-based assets through legal and financial structures characteristic of the wider economy' (ibid.). The boundaries between corporate and family farming are blurred and have no clear definition. More and more, dairy farming in Southland is 'neither strictly family-farm based, nor corporate', but led by 'family farm entrepreneurs' (Pritchard et al., 2007). One of the largest hurdles in shifting from being a family farm into family farm entrepreneurs is balancing labour outside of the family.

### *Labour*

Dairy and sheep farming utilize labour quite differently. These differences help illustrate financial realities, personal feelings about acting as an employer and the wider context of farming in New Zealand. Sheep farming is often based on family labour. Workers or companies are contracted for specific tasks, such as shearing, but the day-to-day work is the responsibility of the farmer, with the help of family members. On the other hand, dairy farming often involves waged labour, especially on large-scale farms such as the ones found in Southland. All the converted farms in our sample included hired staff. The role and position of the waged employees vary, with very different levels of responsibilities ranging from simple workers, often foreigners, milking in the shed ('cupslingers'), to herd managers (Tipples, 2011). Managers are always connected with the milking and the herd, while the owner generally focuses on office and management work, including long-range planning, as well as the overall maintenance of the farm and the pastures.

The transition to business and staff manager generally follows the development and growth of the farm business. During the initial stages of the conversion, most of the farmers are involved in the milking and assume a large part of the work on the farm. The more the farm grows, sometimes including several dairy units, the more the farmer adapts his role. As time passes, they tend to step back from the day-to-day farm work. This farmer, head of a large farm, explains this change:

'We added on to this place one, two, three times, four times to the home farm, so we own about 12 houses now and we have about nine, 10 full-time staff. So, one day you wake up and you realize that you can't do all the work, that if something goes wrong today you can't do it, you have to have other people to do the work so you go from owner operator, totally in con-



trol, to working with people to do the work for the day, and that is quite a difference just to do that. And you realize that you have got all these houses you have got to maintain, you know 12 houses... And then you realize that the people you employ, this is their solid income. You are it, when they take their pay each week, that is the money they have to raise their family to do the things they want to do (male, 52).

Similarly, when asked about what changed with the conversion, most farmers speak about becoming an employer. Beforehand, they were used to doing most of the work on the farm by themselves, and thus they had control of every aspect of their farm. With a new dairy operation, family labour was insufficient to handle the increasing workload. Regular staff becomes a necessity and forces the farmer to delegate work and to entrust others with some responsibilities. Following the interviewees, this has generally been a hard transition. Furthermore, they had to learn how to manage people. For the ones who developed their farms into several dairy units, some with more than 10 people involved on the farm, these skills become central. As said by one farmer: 'It's not just about the cows, it's about being able to manage your staff' (male, 48).

On first impression, looking at a converted farm, we might assume that the amount of family labour would decrease. The integration of sons and daughters in two farms challenge this assessment. Further analysis of the role played by female partners/farmers also shows no indication of decline in their participation with the conversion. On the contrary, some interviewees claimed that women tend to be more involved in dairy farming than in sheep farming:

'I would say that one of the big differences for women, they didn't have a strong role in sheep farms at all. It was very stereotypical: the husband would be out on the farm, women would be at home and cooking all the meals and doing all the beautiful food for them, but with dairy farming both doing everything together. Like you'll see young couples and they're both working on the dairy farm, but you just don't see that with sheep farming at all. That is a major difference' (female, 36).

Women in sheep farming are described mostly as mothers and housekeepers, with very little involvement in the farm work or management. Sheep farming followed and encouraged traditional masculine definitions of farming (Campbell et al., 2006). While more women seem to be actively participating in dairy farming (in the office and bookkeeping work), whether or not it is more egalitarian work is less clear as the volume of that work increases annually with auditing and other related paperwork. This is clearly illustrated by this woman, when she addresses the development of the farm over the years:

'From my point of view, I do all the accounts, order books and things. And it's gone from like one GST [tax] return to seven... It's a full time job really for me to do the books' (female, 48).

While more involved, wives seem confined to a subordinated position regarding the farm business. While the housekeeper on a sheep farm, women often remain the bookkeeper on dairy farms and remain in the gendered role of 'helper or assistant' (Brandth, 2002; Peoples, 2010).

Nevertheless, a few cases indicate farms where both men and women are more equally involved in the farm management. This is exemplified by this female farmer

who was working in town before the conversion. On the sheep farm, her husband was in charge of all the work and management. The switch to a new farm system offered challenges, but created new spaces for the woman to invest:

'I see now with the conversion, probably having a lot more say, not probably on the little day to day where does this mob go; it might be more on the bigger things, maybe like purchasing capital items or employing staff, things like that, some of the bigger stuff, you don't care what paddocks they go into, you know' (female, 44).

In addition to increased decision-making capacity, female farmers or the wives are often in charge of calving. There is strong evidence that conversions to dairy farming impact the gender division of labour, even if not always in a more egalitarian way. Further, and unexplored in these case studies, is the use and employment of foreign labour with specific manipulation of work visa programmes to facilitate lower labour costs for the dairy industry. However, farm development and the contracting of waged workers did not lead to a lower involvement of family members in the farm work, at least in the cases analysed here. The inclusion of share milkers, managers and wage labourers can tell a more complete story of the conversion process and the impact on regional finances and labour organization. Our concern remains on the farmers' experiences, motivations and identity connected to conversion.

### **Beyond Money: Motivations and Identity**

The success of Fonterra, good milk payouts, and a struggling meat industry created an economic incentive to convert to dairy over the last few decades. The interviewed farmers never hid the role of money in their decision-making. As one stated clearly: 'whether we like it or not, it's all to do with money' (male, 36). Money provides a means to an end. The financial rationale for conversion resonates as a default assumption – no one farms to lose money. That being said, these farmers referred to other goals for farming that will be addressed here. After all, if it were only about profit, most of them would have sold the farm asset and could retire as millionaires. The farming lifestyle is often mentioned as something that has more value than money. A female sheep farmer, referring to their choice not to sell the farm, put it this way:

'When the prices were really high a couple of years back it was worth about seven million dollars. And that is what people said – you are crazy, you are crazy [not to sell] . So you can see the lifestyle thing to us is fairly important more than money and now and again you go "am I crazy?"' (female, 46).

Most refer to their option beyond simply selling the asset. The conversion is sometimes described as a matter of 'survival' – not just financial survival, but maintenance of the farming lifestyle:

'We went [to dairy] because of survival. It was farm survival: family farm, you were tied to it. And we thought: "No we don't want to lose this thing. It has treated us pretty well, we know the farm and this is the lifestyle, etc." So we converted. Yeah, 225 cows' (male, 52).

In fact, few farmers faced such an extreme situation. Most of them could have kept on with sheep, at least for a while. But all of them speak about conversion to dairy

as a way to maintain what they cared about – farming. This continuity – to be able to keep farming, for Southland to stay a farming region – was predicated on conversion. To stay fundamentally the same – and be resilient – major changes had to be made. This narrative of continuity echoes the interrelation between resilience, adaptability and transformability and the tensions between persistence and change described by Folke et al. (2010). What is more, it contradicts the narrative surrounding dairy's growth in New Zealand as an economic boom and justification for deregulation and productivism. Thus conversion, for farmers, has been guided more for a concern about continuity in lifestyle, than excitement about riding a cresting dairy wave. Yes, financial stability plays a role but is not the only reason. We explore this tension through two connected issues: farm succession and 'good farming'.

### *Succession and Farm Ownership*

When located in an area where dairy farming is possible, sheep farms suffer the most pressure from skyrocketing land prices. The development of dairy farming resulted in a dramatic increase in the market value of convertible land. Real estate values are predicated on potential dairy productivity that is significantly higher per hectare than sheep farming or non-agricultural use. Dairy farmers are thus better positioned to buy land, because they can afford to invest more money and are seen as a less risky investment than sheep farmers. This puts strong limitations on the possible development of sheep farms. This farmer illustrates the unenviable position of sheep farmers when discussing the possibility of financing the purchase of neighbouring land:

'And when that [piece of land] came up here, the only way for us to fund it was to milk cows off it, we couldn't buy it and put sheep on it and fund it... Well the banks, it wouldn't have stacked up with the bank, the only way to actually cash flow it was with dairying and the banks would lend the money. They wouldn't lend you money if it was with sheep because the income from sheep wouldn't have covered the mortgage, you see' (male, 37).

As long as a farmer does not seek to develop the farm by purchasing new land, the issue of land price has a rather positive side, for it increases the value of the existing farm. Yet this very process can become problematic when the time comes for the next generation to take over the farm.

The importance of succession is a classic feature in the studies on family farming and has proved central in the understanding of farm decision-making in modern and industrialized agriculture (Ward and Lowe, 1994; McCrostie Little and Taylor, 1998; Burton and Walford, 2005; Inwood and Sharp, 2012). In the process of farm conversions in Southland, the issue of succession plays a key role. In the interviews, most of the farmers describe the conversion as a means to allow the next generation to take over the farm. Because of a combination of laws and tax regulations, the successor has to buy his parents' farm at the market price. In a place like the lowland of Southland, this means a price based on (potential) dairy productivity. For many farmers, there was no way they could maintain sheep production. Thus the choice was to convert to dairy or to sell the farm to someone who would convert it. Almost all the farmers said succession was their first and major motivator to convert, as exemplified by this farmer:

'I was given the opportunity to take over the home here and so maybe, you know, we want to perhaps try and do the same for our kids. Or one of them, you know, and pay others out a bit or whatever you can do. And we weren't going to be able to do it the way we were sheep farming, like we were, just sort of, you know, we're the bank, the bank was on our backside all the time, not all the time but we were 'at risk' customers to the bank' (male, 46).

As suggested here, farm succession is not a unidirectional process. In this sense, the farmers see themselves both as successors and as predecessors. When current farmers refer to succession and its importance in the decision to convert, it is often out of a sense of duty and fidelity to the family history in farming. Rather than risk losing the family farming legacy completely by staying in sheep, farm conversion insulated them from losing their inheritance. In their understanding of farm continuity, the inheritance and legacy were more important than the kind of farming.

Traditional succession anticipates that the successor would take over the ownership of the farm and become a farmer. However, when asked about the actual succession prospects on their farm, farmers deviate from those classical presumptions. Talking about the future, several farmers outlined the new possibilities offered by the conversion, primarily the fact that their children might take over the ownership of the farm business without having to work on the farm. The different options presented by a New Zealand dairy farm would allow them to choose their level of commitment in the farm business. They could run the farm themselves, enter the share-milking system, or delegate to a farm manager. The conversion to dairy multiplies the possibilities of succession based on a malleable relationship between ownership, management and work. While this leads to a major change compared to the interviewees' own experience of taking over the family sheep farm, they still refer to it as a way to maintain the family dimension of the farm: 'it's still family interest but it doesn't have to be physically hands on milking cows' (male, 48). In this understanding of the farm succession, the ownership of the farm business can obliterate the transmission of a professional status or identity. Some interviewees go even further, describing options where the 'farm' is described merely as capital that would allow the children to grow their own projects or businesses in any economic sector they like. Conversion as a way to build capital could be described as a strategy to enhance capacities for 'deliberate transformational change' (Folke et al., 2010) at the scale of the family.

Entering the dairy work system is said to give more opportunities to the children to step into the profession. On a sheep farm, there is little place for the next generation as long as the parents stay. The potential successor has to work elsewhere and to build capital on his own, waiting for the time when the parents will retire. The so-called 'dairy ladder' – the succession of positions a person might assume on a farm, progressively gaining capital and responsibilities – facilitates the integration of the successor at an earlier stage. He/she might work for the parents for a few years until accumulating enough capital and experience to run a farm independently or take over the family business. In our sample, two farms perfectly illustrate this process. Both are large-scale farms including several dairy units. In both cases, at least two sons and/or daughters work full-time on the farm, some as contract workers, and some managing one of the units on their own. Besides these examples, farmers offer multiple references to future or potential involvement of the children in the farm business, according to the farm life cycle. Increasing the size of the farm can then

be seen as one option to set up one or several successors into farming (Marsden, 1984; Burton and Walford, 2005). In this sense, and following Pritchard et al.'s (2007) analysis of large-scale tomato farms in Australia, conversions to dairy farming challenge the common idea that the capitalization and scaling up will necessarily lead to a weakening of the family dimension of the farm business. The emergence of modern dairy in New Zealand presents a contradictory story. On one hand, dairy offers a great opportunity for family farm survival (the continuity argument). On the other hand, dairy farming becomes a means to an end: gaining financial freedom to transform ones' situation. These two sentiments often coexist and a related issue involves the farmer's interpretation of what it means to be a farmer.

#### Neo-productivism and Good Farming

Deregulation resulted in a general intensification in the New Zealand agricultural sector (MacLeod and Moller, 2006). As an example, the lambs per ewe ratio (i.e. the average number of lambs a ewe gives birth to for one lambing season) increased by 19% between 1985 and 2009, while the weight of lamb carcass gained 39% (Institut de l'Élevage, 2010a). Dairy farming productivity grew even faster with average dry matter production per ha gaining 70% since 1980 (Institut de l'Élevage, 2010b). The intensification of farm practices (to ensure economic success) has challenged former definitions of stockmanship (Johnsen, 2003; Haggerty et al., 2009). However, the valorization of maximized production is a common and stable feature among farmers in industrialized countries, as shown by a wide literature addressing the development and evolution of productivist attitudes and behaviours (Evans et al., 2002; Burton, 2004; Ward et al., 2008). Those appear to be quite strong in New Zealand dairying, both in farm practices and in the industry (Jay, 2007; Burton and Wilson, 2012).

Though mainly pasture based, with little added fodder in international comparison, New Zealand dairy farming relies on the intensive use of fertilizer and a high stocking rate. The rotational pasture system helps maintain maximal grass production, both in quantity and quality. This increase in productivity and production is well perceived generally by farmers, as put simply by this female dairy farmer:

'Probably the other things would be just the productivity nature, like dairy farming is so much productive like you grow more grass. Just you're sending out more out the gate' (female, 34).

In other words, to go dairying, is to become a 'better farmer', according to productivist standards (Rosin, 2013). Converted farmers generally agree. Furthermore, some of the farmers added their frustration of getting no real reward for the effort they were putting into sheep farming because of the ineffective meat industry.

Many converted farmers were generally very successful sheep farmers beforehand. This identity of top farmer was under threat because of, among other reasons, the difficulties in the organization of the meat industry. If a sheep farmer had once been the top of the rural social hierarchy, this status was gradually eroded by the economic and productive success of dairy farmers. Conversion, then, has partly been an attempt to maintain an identity as a top farmer. At the same time, to forego an excellent sheep farm was a risk and comes with added pressure to succeed in dairy. As this young farmer suggests:

'It was a very good sheep farm and my parents had won sheep farming, South Island Sheep Farmer of the Year... awards... And so they were very good sheep farmers as well and so suddenly converting to dairying, it's like all these relatives and neighbours are thinking: 'What are you doing to that



good farm?’ So now we are trying to make it a good dairy farm because we took a good sheep farm and we want to make it into a really good dairy farm. So there’s a lot of pressure’ (male, 37).

‘Good farming’ and identity are important motivators in farm-level decision-making (Stock, 2007; Sutherland and Burton, 2011). The same holds true around decisions about farm conversion. For sheep farmers who were not particularly successful, conversion provided a way to stay in farming, a way to maintain a professional identity and a specific life style. Not to convert could have resulted, in the long term, in selling the farm or in taking an off-farm job to compensate the low profitability of the farm. Pluriactivity, while a successful survival strategy for family farms following deregulations, does not fit well with a general definition of successful farming in New Zealand (Johnsen, 2004). To become a part-time farmer compromises one’s identity as a ‘real farmer’. Conversion allowed them to confirm and reformulate a professional ethos inspired by productivist values and attachment to a farming life style and identity. Again, the continuity argument appears to be as important as the changing aspects of the conversion.

But those life styles and identities are shaped within communities. Deregulation affected both the farm(er) and the community.

## **Communities and the Dairy Turn**

### *Economic Revival of Southland*

Contemporary dairy farming offers substantial financial opportunity and security for farms, farmers and rural communities. The first dairy boom (initiated by two firms, Tasman Agriculture and Applefields) played a key role in the recovery of the regional economy (Wilson, 1995). Investments made in converting farms to dairy counterbalanced the ‘belt-tightening’ in sheep farming. To use the image of the basin, the marble went down again, going away from the threshold. This economic development has, however, led to a dramatic reorganization of the regional networks and ways of doing business. As said by this farm consultant, conversions have led to a process of learning at the regional scale:

‘So that was a learning thing as well, just trying to create that infrastructure because, like with the dairy industry, if a pump breaks down in the dairy shed, you need somebody there to fix it now... And the farmer would ring up somebody to come and fix it and they’d say, Oh we’ll be there on Monday and it was Friday... And the dairy farmer was saying: Hang on a minute, how am I gonna milk my cows? So that was hard. So it was just creating that infrastructure to actually make the industry work’ (male, 55).

As another example, local builders had to learn how to make a dairy shed and, at the beginning of the dairy boom, dairy farmers had to contract builders from North who were used to this kind of work. Despite a historical dairy tradition, as a community Southland was not a fully formed dairy option – it had to be built. Resilience of the dairy system had to be co-constructed with farmers’ and farm families’ willingness to move to dairy, which then had to help mobilize the resources dairy had in place in other parts of the country (Lawrence and Campbell, 2014). Builders were contracted to build dairy sheds, lanes and houses; mechanic workshops found new customers ready to invest in machinery; and retailers could increase sales of nutrients, ferti-

lizer, and petrol. Conversions revived local businesses and regional economic cycles by bringing investments and employment. These comments by the Environment Southland representative demonstrate the importance of the economic revival:

‘for the income, the money that is generated by the dairy farming activity. And you only had to be in here in the eighties and see engineering firms disappearing and builders with not enough work and all this kind of thing. And then through the nineties they all took off, I mean the number of engineering firms in small towns like Winton and that... just escalated. So that whole, and just car sales, property sales, building activity, all that sort of thing. The whole money go around thing, just took off’ (male, 55).

Sheep farmers could also benefit from new financial opportunities connected to dairy. Some sheep farmers host (also known as grazing or wintering) dairy cattle on their farm during the winter; others take in additional income from selling fodder (silage). Adaptations and learning processes are central to the (social) resilience of communities (Falk and Kilpatrick, 2000; Wilson, 2012, 2013). The adaptability displayed by sheep and dairy farmers, local builders and all the actors created new possibilities and made dairy farming a viable option again. The dairy basin grew wider and deeper, which means its latitude (the maximum amount the system can be changed) and resistance increased (Walker et al., 2004).

In his work on community, Wilkinson (1991) insists on the importance of the economy: jobs and income are key to community survival and that economic development and social life cannot be separated. This might seem straightforward and logical, but in Southland the connections between economic and community revival are both obvious and ambiguous.

### *Population and Community Life*

The (re-)emergence of dairy in Southland has not only changed the economic foundations of the region, but also its demographics. For Southland, deregulation coincided with population decline, at least since the census of 1991. Invercargill, the main town of the region, lost almost 5% of its population between 1991 and 1996, and was the only New Zealand urban area to lose population (Statistics-New Zealand, 1997). In this context, the arrival of new inhabitants engaged in the first wave of dairy conversions has been perceived ambivalently. On the one hand, there is a cultural clash between the two ways of farming; on the other, increased population can lead to community revival. This female farmer – an early dairy convert in the 1990s – refers to the contradictory views of the new population growth:

‘I think it was a shock to them [local people] because the local farms were selling to dairying, which they didn’t know the people coming in; it was a whole different thing... a culture thing... But it’s quite neat that all the houses around the farms they’re all full again. Because they were all empty for years, because no one could afford to have farm workers’ (female, 48).

Most of the interviewees refer to difficulties in dairy farmers’ integration in community life. For a time, dairy farmers were branded as being ‘antisocial’, caring only about their work and their farm, because they were not involved in community activities. According to our interviews, there have been two major reasons for the lack of involvement. The first is the dairy workload and milking time, which was an

obstacle to assist with school and community events that were planned according to sheep farmers' schedules and habits. The second was the temporary dimension of dairy farmers' employment. Indeed, the presence of staff on dairy farms, together with the traditional share-milking system, result in a fluid labour market with frequent staff changes and moves. As individuals and families clamber up the 'dairy ladder' (often starting as simple 'milkers') they move quite often from one farm to another, depending on the latest contract. Several interviews underline the difficulties that temporary staff creates for small communities: unstable employment often leads to the loss of a sense of community and can even attract troublesome people. This sheep farmer refers to this loss, linking it to the ever-moving dairy people:

'It affects the communities and the schools and, when we first moved here, the neighbours. This is back in 1990, it might have been the same year we had a district farewell because they were leaving and that was the last district farewell. There has never been one since, because people since then have been coming and going. I mean we get to the point where we can't be bothered meeting any new neighbours because they will be gone next year. What is the point, unless you actually bump into them it really changes the flavour of... it used to be quite a community here, and since we came and the dairy farmers came it is gone' (female, 46).

Converted farmers seem to care about this issue for various reasons, notably because stability is better for the farm business. But at the same time, they refer to morality and social values such as the maintenance of community: to hire staff is to bring new community members and new children for the local school. It is the farmer's responsibility to look after their staff's behaviour and well-being. This dairy farmer describes it thus:

'A lot of owners aren't very good at employing staff, so staffs aren't always very happy with conditions they're working under... Perhaps they need to step up and actually say, or be told, guys you need to straighten this out because it's having not only an effect on your business or the business that you're trying to manage but on the local communities as well. So you know that's a big part of it because if you create the right environment and you've got the right people, then those people will stay. Because no-one likes moving on and on and on and on. It's pretty unsettling for children; it's pretty unsettling for adults' (male, 48).

The fact that the interviews focus on local farmers who converted to dairy rather than dairy farmers who in-migrated may present a rosier picture than is warranted. However, according to interviews, farmers' attitudes toward community and local life can be said to be evolving too. While initial converts to dairy or share-milking often sought the best financial arrangement that often included moving quite a bit or employing mobile staff, our interviewees are observing some semblance of stability emerging. Dairy farmers now make 'the shift to stay'. This allows a retired farmer to have quite an optimistic view:

'It's amazing the number of young share-milkers that have managed to get their own property... The kids gets involved in the schools, they get involved in the school and it's sort of got a flow-on effect. Years ago I thought our camaraderie within country districts would disappear entirely. Because, when I was a kid, everybody went to the dances together, everybody

was involved in everything, and everybody in the district would go. And if someone didn't turn up, you know you'd get a phone call the next day: Are you alright?... So I suppose every district's different, but I do think it'll come back as people become more settled' (male, 67).

While this farmer parrots the expectation of the agrarian question literature that family farms and rural communities would disappear, his optimism and observations of Southland also parallel recent trends in rural sociology around community resilience. If conversions in the 1990s were mostly the result of immigration, today local farmers are the one to convert. This change is another argument indicating that social boundaries between locals (sheep) and outsiders (dairy) are of less importance in the 2010s. The dynamic dimension of the 'community field' (Wilkinson, 1970, 1991) allowed adaptation of the social structure, pacifying the tensions between the two 'cultures'. The contributions of dairy farms to Southland's social revival mitigate the initially 'bad' reputation of dairy farmers. Conversion has progressively become something acceptable and even desirable by locals. These shifts modified the relations between the two basins and probably eased the shift from sheep to dairy. The sheep basin got less resistant, shallower, making it easier to cross the threshold to dairy. In the meanwhile, the dairy basin acquired more latitude and attractiveness.

Problems of resentment, misunderstanding and integration are more often than not referred to in the past tense. They were, however, replaced by concerns around environmental issues and the dependence on foreign capital, as developed below.

### **Uneasy Reality: The Community in Flux**

While both converted farms and Southland enjoy the new stability provided by dairy's rise and Fonterra's strength, many remain wary of the success. These concerns revolve around the influence of external (outside the region) finances and the impact of dairy on the environment. These concerns represent either ongoing disturbances or potentially bigger shocks in the future, and question the actual resilience of the dairy system and, by extension, of the whole region of Southland. The quest for continuity in farming might bring unwanted outcomes that undermine individual and collective capacity of adapting and transforming the system in an always evolving context.

#### *Ownership and Financial Dependence*

While long-term Southlanders were wary of North Islanders, direct foreign investments in dairy farms provide a different source of concern connected with the economic success of dairy farming. As developed above, New Zealand dairy farming is based on large financial investments and produces, so far, interesting incomes. This situation opened the sector to external investments, some of them from abroad. The result is an emerging process of financialization of New Zealand dairy farming, even if weaker than in other neo-liberal countries as the US or Australia. According to Lawrence and Campbell (2014), New Zealand seems to be somehow resistant to the development of big corporate farming, despite an hegemonic neo-liberal paradigm, notably because of its particular, variegated, landscape of farming. Nevertheless, the turmoil around the possible selling of the giant Crafar farm group to a Chinese in-

vestor is a paradigmatic example of how dairy farming in New Zealand can become a financial investment at the global level (Le Heron, 2011), while participating in the global capitalization of farming (McMichael, 2011). The strong public reaction and the hesitation of the Overseas Investment Office to approve the sale or not (Bennett, 2012) testify of the growing concerns about land acquisition by foreign investors. However, Fonterra develops the same kind of investment strategies in other countries and, in New Zealand itself, capital investment in dairy farming is already common. The 'traditional' system of share-milking – utilized on 38% of New Zealand dairy farms (DairyNZ, 2010) – simplifies this process: it is common to have two different people owning and actually managing the dairy farm. However, for the cases used in this research, land is primarily owned by families, sometimes including two generations. What is more, the converted farmers position themselves in a strong opposition to the financialization of farming, insisting on the family dimension of their business. They despise the attitude that one can simply invest in farming solely for financial interests. A newly converted farmer refers to the consequences for the local community in his criticism of syndicate ownership:

'They don't live here, they don't care about here. They don't give anything to the district. They almost, not rape, they take, don't they? And they take all their money back to Auckland or wherever and, they would never live here they would just invest money in here' (male, 39).

Another farmer follows the same logic to explain his choice in converting his family farm to dairy:

'I certainly don't want everything going corporate owned and Aucklanders owning... people not actually living on the land, just lawyers in Auckland and different equity owners and absentee owners, putting managers on. I don't think it's the best way to go really. So that's one of the main reasons we converted' (male, 50).

Attachment to family ownership and concerns for the community are other important factors, according to the interviews, that prevent a widespread financialization of dairy farming, which still relies largely on family farms. However, the scaling-up in dairy farming automatically means that family farms rely increasingly on bank investments. The regional economy is, therefore, thoroughly dependent on external capital while farmers pay interest out of the region. Thus, the community's resilience is dependent upon external forces or fields. This strong dependency on exogenous elements leads to questions about endogenous resilience and adaptability, as the capacity to avoid falling into undesirable systems.

In addition, to convert to dairy means to build a specific and long-term relationship with Fonterra – an organization based out of the North Island. Producers have to buy shares that allow them to deliver a given amount of milk. This represents a huge investment that cannot easily be recouped. Farm businesses are tied to their industry. The exclusive partnership with Fonterra is reproduced at the national and regional scales. Today, Fonterra manufactures and markets more than 90% of the milk produced in New Zealand and creates 7% of the national GDP on its own. It has become so important in the national economy that 'thinking about New Zealand is to think about Fonterra; thinking about Fonterra is to think about New Zealand' (Gray and Le Heron, 2010, p. 1). This is increasingly true at the regional level too: Fonterra becomes the pillar of the Southland economy. So far, conversions have in-



creased diversity within the regional agriculture that was mainly sheep for more than 40 years. However, if the trend continues, it will lead to more regional specialization in dairy. Consequently, the regional economy will depend largely on one company for its economic stability. Such consolidation could be seen as a risk factor: if Fonterra gets into trouble, Southland (and New Zealand as a whole) might also. Is Fonterra too big to fail?

#### *Fonterra and the Environment in Southland*

The intensification of farming practices, particularly the development of dairy farms, resulted in important concerns about the decreasing water quality in New Zealand (Barnett and Pauling, 2005). Tensions about environmental impact were expressed at the national level, notably when the Fish and Game Council initiated the so-called 'dirty dairying' campaign. This campaign built a negative image of dairy farming as a greedy and damaging activity. According to the Resource Management Act 1991, regional councils are in charge of regulating and controlling these issues. Fonterra, on its side, has developed the 'Clean Streams Accord' (soon-to-be replaced with the 'Sustainable Dairying Accord'), which should improve on-farm environmental practices (Blackett and Le Heron, 2008). If the company has the 'stated aspiration of being the "world's most sustainable supply chain for dairy", and a world leader in sustainable and profitable farming systems' (Gray and Le Heron, 2010), water quality remains one of the hottest issues in public debates about dairy farming in New Zealand.

Furthermore, Burton and Wilson (2012, p. 62) suggest that Fonterra, 'rather than being a "top-down" regime implemented through state involvement in markets and subsidised productions' (as in classical productivism), is a paradigmatic figure of a new kind of productivism, promoted by farmers' cooperatives. The monolithic nature of Fonterra, while partially explaining its economic success, is problematic though. The pseudo-monopoly structure limits any counterpositioning from a structural, financial or environmental standpoint.

From the farmers' point of view, environmental preoccupations are globally accepted, but the inclination to productivist attitudes seduces them and is identified as one of the motivations to convert from sheep to dairy. Many farmers enjoy Fonterra's narrative and feel a strong attachment to being a part of something bigger. The tendency, then, is to moderate environmental questions with three different arguments. First, they tend to accuse a few 'bad farmers' whose carelessness damages the image of the entire industry. Second, they emphasize the fact that every farmer cares for the environment he's working with, because he wants to transmit it to the next generation. And third, they use the productivist 'feeding the world' argument (Horlings and Marsden, 2011; Rosin, 2013): 'We have to produce more to feed the growing and hungry population.'

But as Wilkinson (1991, p. 68) argued, 'It is not accurate or appropriate to treat the environment as though it were somehow separate from the social life it supports.' Thus, dairy, in Southland and wider New Zealand, while reinvigorating rural communities economically and demographically via the allowance of widespread ecological degradation may yet deem these successes merely temporary. Wilson (2010) addresses the connection between agricultural and community resilience. Following Wilson's and Wilkinson's arguments, rural communities within a super-productivist farming system present a low level of resilience. Resilience is stronger within sys-

tems based on multifunctional models, which are characterized by a balanced development of economic, social and environmental 'capitals'. The growing influence of neo-productivism through Fonterra's monopolistic position, both in economy and ideology, potentially undermines the future well-being of New Zealand communities.

Thinking about resilience, social and environmental issues should not be treated as separated fields (Wilkinson, 1991, p. 68). Super-productivist farming systems – with negative impacts on the environment – are then likely to produce low levels of resilience for rural communities (Wilson, 2010). Following these statements, the growing influences of a neo-productivist hegemony through Fonterra's monopolistic position, both in economy and ideology, potentially undermines the future well-being of New Zealand communities because of consequent environmental losses. Further, it produces specialization and uniformity, as opposed to multifunctionality (Wilson, 2010) and diversity that is crucial in building capacity for transformability (Walker et al., 2004).

## **Conclusion**

The combined historical events laid out above exposed Southland more to the international market, thus reshaping the community. The exposure has encouraged adaptations such as the conversion of sheep farms to dairy farms and, more significantly, family sheep farms into family dairy farms, but also more corporate-looking farms. The entrepreneurial family farm exemplified in Australian tomato farming looks a lot like a New Zealand dairy operation. Those changes in agriculture have changed the region and encouraged the growth of certain businesses (and discouraged others). At this point Southland is still an agricultural community. It's just a dairy region now. While some are heartbroken, others celebrate. Many are filled with personal and community-level ambivalence trying to come to grips with relatively swift changes. Many are happy to still be farming and this continuity gives them hope and encouragement to make Southland the best community they can because it's theirs.

Despite the apparently incontestable success of New Zealand dairy farming, environmental concerns and the complex legal and social structure around farm real estate offer a contrasting image of an unsettled agriculture. Campbell and Lawrence (2003) suggested that the 'conjunctural crisis' created by the deregulation led to a 'structural crisis' involving broad social and cultural transformations in New Zealand. As the authors note in a new examination of Antipodean agriculture (Lawrence and Campbell, 2014), these concerns are still actual and have been reformulated with the recent development of agricultural financialization. It is in Southland that we still see these dynamics at play almost 10 years later.

Following McManus et al. (2012), how farmers care and are concerned by community can change a community's resilience. While the authors argue that, 'It is our contention that "rural resilience" has become popular in recent times, largely as a reaction to the notions of rural decline' (p. 21), the dairy turn in Southland flips the question on its head and asks: is it possible to be resilient to rural economic revival? Conversions to dairy have played a crucial role in the recovery of the Southland region after the shock of deregulation. It is becoming more and more central to the economy of Southland and New Zealand, like sheep before – maybe more so. At the farm level, the conversion process results in a further dependency to external capital

and to the industry while also improving the chance of succession and continued involvement of family members. At the regional scale, economic revival involves an increasing dependency on external investments. Bringing Walker et al.'s (2004) 'basin of attraction' concept to bear, these statements can be interpreted as a narrowing and deepening of the 'dairy basin', making it harder to get out of it. If dairy continues to grow, Southland could turn into a kind of agricultural 'monoculture'. What would happen if dairy (or Fonterra) gets in trouble? Will there be a new alternative for Southland rural communities? Will it be possible for farmers to step back from dairy, when they invested so much in the conversion? The situation may turn into a 'lock-in trap' (Allison and Hobbs, 2004) characterized by a low potential for change, disturbing capacity for adaptability and transformability. This loss of capacity to manage and arrange the system would affect both the farm and the community levels. Using Folke et al.'s (2010) words, deliberate transformational change toward a new system would become harder. In consequence, exogenous shocks or change will probably lead to 'forced transformation'. In the conversion from sheep to dairy farming, the shift to a new system has been made through rather 'deliberate transformability'. This allowed the farmers and the communities to preserve what was the most important to them. Conversion as continuity. Forced transformations might not give the same opportunities and the change might bring higher social and environmental costs.

Could the dairy boom lead to a 'global aftershock' at the social and environmental level? At the environmental level, the impact of Fonterra's neo-productivist ideology on farmers' perceptions will continue to have important consequences. At the social level, foreign investments and uncaring management undermine community life and well-being. But these concerns can be checked by active maintenance of community and ecological concerns. The maintenance of family involvement might be of great importance in the future of Southland and similar communities. Families and family farms not only transmit property and livelihoods, but community cultural capital. In many cases the conversion of family farms to dairy has led to more family and more corporate forms of farming, at least so far. Questions about future developments remain open, however. The future of dairy farming in New Zealand might then follow very different pathways depending on the ability of farmers to reproduce an 'ethos of farming' (Marsden, 1984; Ward and Lowe, 1994), where farm succession is more than capital inheritance. Nevertheless, Southland's ability to weather such disruptive times offers hope to other communities concerned about the vagaries of contemporary agriculture. Southland's resilience emerges from its maintenance of family farming and actively incorporating – economically and socially (and, hopefully, environmentally) – major changes since the 1980s.

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# Governing Australia's Dairy Farm Workforce: A New Terrain for Negotiating Rural Community Sustainability

MICHAEL SANTHANAM-MARTIN AND RUTH NETTLE

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**Abstract.** Amidst heightened policy interest in the future of agriculture, there is an emerging new focus on the topic of the farm workforce in Australia. Will agricultural industries have the people – both farm business owners and employees – that they need? While government and industry are focused on the sustainability of production, farm workforce dynamics also intersect with wider economic and social processes in rural communities, an issue of ongoing concern for rural studies scholars. Here we examine currently emerging policy and action on farm workforce issues from a governance perspective, using the dairy industry in the Australian state of Victoria as a case study. Drawing on both governmentality and political science approaches, we explore workforce governance through three overlapping studies: policy-making, farmers' lived experiences and industry-led collective action. Across the three studies we ask, first, what is revealed about neo-liberal agricultural industry governance and, second, what possibilities the new focus on workforce creates for rural communities concerned about social and economic sustainability. We argue that the farm workforce as a policy object crystallizes the tension between the strongly individualizing discourse of neo-liberalism and the pursuit of public policy objectives framed at the collective scale. If the neo-liberalizing project is understood as a work in progress, then the issue of the farm workforce can be seen as another dilemma to be worked through. In this the roles of collective agents and spaces in both agricultural industries and in communities are critical, making the farm workforce a terrain for innovation in which rural communities can negotiate their interests afresh.

## Introduction

Agricultural policy in Australia has been on a neo-liberalizing trajectory for more than 30 years (Pritchard, 2005a, 2005b; Lawrence et al., 2012), and is cited as an example of the advanced liberal shift in modes of governing: from *government* to *governance* (Cheshire and Lawrence, 2005b). The shift to governance denotes a reallocation of roles and responsibilities, and a blurring of boundaries, between state

Michael Santhanam-Martin is a Ph.D. Candidate in the Rural Innovation Research Group, Melbourne School of Land and Environment, University of Melbourne, Melbourne, VIC, 3010 Australia; email: <martinmp@student.unimelb.edu.au>. Ruth Nettle is Associate Professor in the Rural Innovation Research Group, Melbourne School of Land and Environment, University of Melbourne, Melbourne, Australia. The authors would like to thank three anonymous reviewers for helpful comments received.

actors, private sector actors, communities and citizens (Goodwin, 1998; Stoker, 1998; Higgins and Lawrence, 2005). Agricultural industries in Australia comprise a complex institutional architecture and governance practice, involving farmer-governed research and development corporations (jointly funded by farmer levies and government), continued government activity in research, regulation and some service delivery, agri-political groups at various scales, and largely unsubsidized, globally engaged supply chains (Dibden and Cocklin, 2010).

In Australia, as in many other countries, there has been a renewed interest in the fortunes of agriculture as a result of the 2008 world food price crisis (Cribb, 2010; Rosin et al., 2012; Farmar-Bowers et al., 2013). While some see great opportunities for Australia's technologically-advanced, export-oriented agriculture to be the 'food bowl' for the growing, increasingly affluent and increasingly urbanized populations of Asia and the Middle East (Linehan et al., 2012), others point to constraints and vulnerabilities such as declining research and development investment, declining rates of productivity growth, finite resources of land, water, energy and nutrients, vulnerability to climate change and ongoing negative environmental impacts (Beilin et al., 2011; Lawrence et al., 2012; Hochman et al., 2013).

A further area of concern relates to the human-resource needs of agriculture. Confronting evidence of an ageing farm workforce and low rates of recruitment of young people into farm careers (Barr, 2004; Barr et al., 2005), policymakers and agricultural industries are concerned about the ability of agricultural industries to attract the people they need to sustain themselves (Stehlik, 2009), a concern shared in most other industrialized nations (AFI, 2005). Ageing of the Australian farm workforce has been noted for some time (Garnaut and Lim-Applegate, 1998) and census data indicate that between 1976 and 2001 the proportion of Australian farmers (inclusive of owner-operators and employees) aged in their 20s declined by 60% (Barr, 2004, p. 1), while in Victoria over the period 1976–2006 the average age of farmers increased from 45 to 52 years (Victorian Government, 2011, p. 15). While these trends are less pronounced in the dairy industry than in some others (Barr, 2004) nevertheless they are still present, with the median age range for Australian dairy farmers rising from 30–34 to 40–44 between 1981 and 2006, and with half of dairy farm owners now aged 51 or over (Dairy Australia, 2011, p. 42).<sup>1</sup>

A range of interrelated dynamics is involved in these changes, including structural ageing of the Australian population at large, structural change in agriculture leading to an ongoing decline in the number of farm businesses, the relative attractiveness of agriculture in comparison to other careers, a weakening of the tradition of family succession and higher entry costs into farming due to high land values (Alston, 2004; Nettle et al., 2008; Barr, 2009; Cuervo and Wyn, 2012; Wheeler et al., 2012). The Australian experience also has parallels internationally (Oldrup, 1999; Auclair and Vanoni, 2003; Parent, 2012; Terrier et al., 2012).

These issues have attracted the attention of both government and industry (Commonwealth of Australia, 2007; Dairy Australia, 2011; RRC, 2012), who view them predominantly as a matter of *workforce*. While the trends have been observable for some time, this level of policy engagement is new. At the scale of the farm, the term workforce is used to refer to farm labour (employees or contributing family workers) and a shortage of suitably skilled people is certainly a concern in many industries. At the scale of an industry or region, however, the term has a broader scope and includes farm owners and managers as well as contributing workers. Our focus is on workforce in this broader sense.

The implications of agricultural restructuring for rural communities have long been an issue of concern in Australia (e.g. Lawrence, 1987; Stayner and Reeve, 1990; Gray and Lawrence, 2001; Alston, 2004; Cocklin and Dibden, 2005), and internationally (e.g. Van der Ploeg, 2008), but have not been approached previously through the lens of workforce policy and action. Changes in farm ownership and business models, and in employment practices, all directly influence social and economic processes in communities (e.g. Santhanam-Martin and Nettle, 2012), thus it is important to examine what the implications are for rural communities of this new policy turn. Is it simply 'competitive productivism' reasserted (Dibden et al., 2009), or is a new policy space for communities created? Here we report on a study carried out in the Australian state of Victoria, with a specific focus on the dairy industry.

### **Governing the Farm Workforce: Theoretical Perspective**

Scholarly interest in the concept of governance has exploded in recent decades. Goodwin (1998) identifies separate literatures in the disciplines of institutional economics, international relations, organizational studies, sociology, public administration and political science and argues that what is shared across disciplines is a 'concern with identifying and analysing a wide range of modes and mechanisms of co-ordination' (Goodwin, 1998, p. 8). Scholars of governance are interested in how steering or coordination occurs within social collectives, at scales ranging from the local (e.g. Smyth et al., 2005) to the global (e.g. Peine and McMichael, 2005).

A particular focus has been the observation that the way societies are governed appears to have changed, often characterized as a shift from *government* to *governance*, denoting that under the influence of globalizing processes and neo-liberal inspired restructuring, governments have both a reduced desire and a reduced capacity to act autonomously to achieve public policy objectives. Rather, effective action depends on the cooperation of a range of other actors in the private and not-for-profit sectors, and in communities. 'Network governance' and 'differentiated polity' (Rhodes, 1997, 2007) have emerged as popular (but contested) descriptors of this mode of action. An approach to the study of the public realm that takes this observation as its starting point has been described as a 'governance perspective' (Stoker, 1998); however, Griffin (2012) cautions that different scholars and disciplines currently approach governance from quite different theoretical perspectives.

The *governmentality* approach has been used most commonly in critical agri-food and rural studies. This approach builds on Foucault (1991) and Rose and Miller (1992) to argue that the governing of rural areas and industries under advanced liberalism happens through 'action at a distance' (Cheshire and Lawrence, 2005b; Cheshire, 2006; Cheshire et al., 2007). Through creating and steering networks of actors, including communities and citizens, government is able to create self-managing collectives all enrolled more or less in the goal of entrepreneurial self-responsibility. Cheshire (2006) uses this approach to unpack the operation, through particular practices, of the discourse of self-help in Australian rural development. She highlights the modes of agency that remain available for communities and citizens, but concludes that these do not fundamentally challenge the overall neo-liberalizing project.

A further development of the governmentality approach has been to incorporate insights from actor-network theory (see e.g. Law and Hassard, 1999) regarding the agency of non-human actants. Higgins (2002, 2005), for example, posits particular business management practices ('calculation'), embedded in technological devices,

as an example of social technology used to govern farmer behaviour 'at a distance'. An extensive literature on agri-environmental governance explores an even larger range of mechanisms whereby agricultural industries and farming practices are governed, including market instruments, standards and international treaties (e.g. Tilzey, 2006; Lockie and Higgins, 2007; Higgins et al., 2008; Lockie, 2009). The governmentality perspective thus alerts us to the subtle and multiple ways in which steering and coordination occur under governance.

Farm workforce as an object of governance has not been studied or theorized extensively in this way. It could perhaps be argued that farm workforce change is simply an aspect of the broader and well-theorized process of agricultural restructuring, and thus not worthy of further study. We reject this argument on two counts. First, we note that in Australia it is governments and industry that have asserted workforce as a new policy focus and this move itself needs to be understood, as part of the scholarly project of understanding agricultural governance. Second, we observe that workforce as a policy object has conceptual currency both within and beyond the agricultural policy domain, and, as we will argue below, this makes it inherently interesting when considering implications for rural communities.

Noting the novelty of the topic area, we explore it initially from a public policy perspective, focusing on institutional arrangements, roles and responsibilities, and how they play out in practice. Rhodes (2007) has surmised that governing as it occurs in practice is more fluid and uncertain than is suggested by a static view of institutional arrangements, and posits the importance of beliefs, practices, traditions and dilemmas in conditioning actors' interactions. He calls for a 'relational' view of governance and recommends ethnography as an appropriate methodology for investigating governance in practice. It is a broadly ethnographic approach to the study of governance of the farm workforce that we adopt here, while remaining cognizant of the insights of governmentality theorists. We will argue that framing agricultural industry development as an issue of workforce in fact highlights a policy dilemma for neo-liberalism.

### **Background: Victoria's Dairy Industry**

The study is concerned with Australian agriculture, with a specific focus on the Australian state of Victoria.<sup>2</sup> We focus on Victoria's dairy industry because it is the state's most valuable agricultural industry in terms of farm-gate value of production, and as such the farm workforce issues associated with it have attracted significant policy and implementation attention (see e.g. Nettle and Johnson, 2006; Nettle et al., 2008, 2010; Dairy Australia, 2011).

Victoria is home to the largest portion of the Australian dairy industry, with 4,200 dairy farms producing around 6 billion litres of milk annually: 60% of Australia's total production. The average size of Victorian dairy herds is around 280 cows (Dairy Australia, 2013a; State of Victoria, 2013). Around 12,000 people work on Victorian dairy farms of whom two-thirds are owner managers, and a quarter employees, with the balance being contributing family workers (Dairy Australia, 2011). Data reported here come from studies conducted in the north-east and south-west regions of the State, shown in Figure 1.

Neo-liberal inspired restructuring of the Australian and Victorian dairy industries culminated with the end of government involvement in price setting for fresh drinking milk in 2000 (Cocklin and Dibden, 2002); the evolution of industry gov-



ernance arrangements since that time has been examined by Dibden and Cocklin (2010). Other than state government, the key actors involved in workforce issues are the milk processing companies and Dairy Australia – the industry's research and development corporation. It is noteworthy that the largest of the milk processing companies, processing about one third of Australia's milk, is a farmer-owned cooperative, Murray Goulburn Co-operative. Dairy Australia is funded by a compulsory production-based levy on dairy farmers, which is then matched dollar for dollar by the federal government. It has been proactive in developing collaborative approaches to innovation (Nettle et al., 2013), in the context of ongoing change in state government service provision (Hunt et al., 2012). As part of a decentralized approach to service delivery, Dairy Australia has established legally separate entities known as regional development programs (RDPs) in each of Australia's dairy production regions, three of which are in Victoria. One of these RDPs, WestVic Dairy, is significant in the research reported here.

Both prior to, but especially since deregulation, the trajectory of change in dairy farming has been in the direction of fewer, larger farms, as a response to the cost-price squeeze on profitability (Dibden and Cocklin, 2010). Although farm-gate prices have trended up over the last 10 years they have also become far more variable, and input costs have also been increasing steadily, creating very challenging operating conditions for farmers (Dairy Australia, 2013b), particularly in the context of the long drought that affected all of Victoria's dairy regions from 2000 to 2008. Since 2011, a particular feature of the environment in which farm-gate milk prices are set has been the so-called 'milk wars', fought between Australia's dominant food retailers (Scopelianos, 2013), part of the noted shift of power in the global agri-food system from processors to retailers (Burch and Lawrence, 2005; Hattersley et al., 2013). The impact is less pronounced in Victoria, where the majority of dairy product is destined for export and where the export price is therefore a more important influence on farm-gate price (Dairy Australia, 2013a); nevertheless, pressure on farm



**Figure 1.** Locations of study sites in the state of Victoria, Australia.

profitability remains an important feature of the operating environment for dairy farmers, and thus important context for this study.

### **Study Aims and Research Method**

This study aims to examine emerging policy and action on the farm workforce in Australia in order 1. to contribute to an overall understanding of agricultural industry governance under neo-liberalism, and 2. to identify resulting implications and opportunities for rural communities. Noting Rhodes' (2007) call for ethnographic approaches to studying governance, we adopted a qualitative methodology consisting of three study components exploring: 1. policymakers' perspectives (RRC, 2012); 2. the lived experience of dairy farmers; 3. a case study of 'governance in action' (In2Dairy; Dairy Australia, 2010). Across the three components our analysis focused particularly on the roles of government, industry, communities and individuals: as they are put forward in policy, as they are experienced by farmers and as they play out in practice.

#### *The Policy Perspective*

In February 2011 Victoria's State Parliament resolved to conduct an Inquiry into the Capacity of the Farming Sector to Attract and Retain Young Farmers and Respond to an Ageing Workforce. The Rural and Regional Committee of the Parliament, which was tasked with carrying out this inquiry, tabled its final report in May 2012 (RRC, 2012), and the Victorian government tabled its response six months later (Victorian Government, 2012). We will refer to these two documents as the RRC Report and Response. Their significance as objects of study stems first from the diverse and voluminous nature of the evidence canvassed. The inquiry received 71 written submissions from farmers and other individuals, local governments, farmer associations, community groups, educational and research institutions, government departments and private sector organizations, and held 19 public hearings around the state, over a six-month period. Second, the committee involves state-level parliamentarians from both sides of Australian politics, who in this instance tabled a consensus report, indicating a degree of bipartisanship in the way the farm workforce issues is being approached. A thematic analysis of the reports' contents is provided, focusing in particular on how farm workforce issues are understood, on what actions are proposed, and by whom.

#### *The Lived Experience*

Between August and October 2012, we conducted in-depth interviews on 18 dairy farms within a single geographically discrete river valley in north-east Victoria. The valley contains 28 dairy farms in total, and dairy farming is both a significant contributor to overall economic activity and a significant feature of local communities' self-identity. Our respondents were recruited by snowball sampling, beginning with introductions provided by two key informants. The recruitment process also generated basic information about the remaining 10 farms where interviews were not conducted, and our sample is inclusive of the major dimensions of diversity in the valley's dairy farms as a whole. Interviewees ranged in age from mid-20s to late-70s,

with the largest group in their 40s. Farm size ranged from a milking herd of 150–450 cows, with the largest group in the range 200–250 cows. The sample includes farms owned and managed by a single nuclear family and by extended family partnerships, farms largely operated by share-farmers, one farm operated by lessees, and one farm managed by an employed professional manager. Ten of the farms employ non-family workers on an ongoing basis.

Twenty-three men and eight women participated in the 18 interviews. Interviews lasted between 30 minutes and two hours, and were semi-structured with the main areas covered being personal histories, farm business trajectory, local dairy industry trajectory, perceptions and experiences of the local community and perceptions and experiences of the roles of dairy industry governance actors. Interviews were transcribed in full and then analysed thematically.

### *Governance in Action*

In south-west Victoria in 2010–2011 a collection of stakeholders undertook a collaborative project aimed at creating a pathway for entry by unemployed people into the dairy industry, via training as assistant farmhands. The project was called In2Dairy Assistant Farm-hand Training Project and is referred to as In2Dairy in this article. Here we draw on data we collected as part of a formal evaluation of the project. Data include transcriptions of audio-recorded steering committee meetings (eight meetings through 2010–2011), semi-structured interviews with a sample of farm employers regarding their motivations for being involved in the project (n=7) and feedback from participating jobseekers concerning their experiences, through a brief written survey (n=12). We draw also on project documents, including the project design document and business plan, and research journal entries stemming from researcher involvement as a participant observer in an action research process that included facilitating reflection by steering committee members.

### **The Policy Perspective**

The establishment by the Victorian Parliament of an 'Inquiry into the Capacity of the Farm Sector to Attract and Retain Young Farmers and Respond to an Ageing Workforce' is evidence of recognition by government of a public policy problem. In the context of having already set a strategic policy goal of doubling agricultural production by 2030 (Gray, 2012), the Parliament tasked the committee to:

1. examine the benefits to the agriculture sector of attracting more young farmers;
2. examine the factors that affect the ability of the agriculture sector to attract and retain young farmers; and
3. provide strategies and recommendations that will promote the realization of the benefits identified above (RRC, 2012, p. iii).

### *Commitment to Neo-liberalism Remains*

The resulting RRC Report takes as given Australia's commitment to a deregulated, and free-trade aligned agricultural policy stance, according to which Victorian farmers must compete in globalized markets. Global commodity prices are grouped with

input prices and the weather as 'uncontrollable variables' (RRC, 2012, p. 131), which contribute to an inherently uncertain operating environment for farmers. The long-term decline in farmers' terms of trade is noted, and credited as an important driver of the ongoing trend towards fewer, larger farms: 'Declining terms of trade, as input costs increase annually while returns trend flat or downwards, means productivity must increase for a business to remain viable. One of the simplest ways to achieve this is through increasing the size of the farm' (RRC, 2012, p. 8). Young people, the report argues, will only be attracted to and retained in a farming livelihood when it can offer them an acceptable standard of living and opportunity to generate wealth.

While thus clearly acknowledging the very challenging operating conditions that confront many Victorian farmers, the report focuses on conveying a sense of great opportunity: 'Global economic trends, whether it be our proximity to the Asian powerhouses or the growing value of protein-based products, mean Australian farmers should look to the future with confidence. The challenge for agriculture is to help young Victorians understand their role in this positive future' (RRC, 2012, p. 15).

#### *Further Restructuring Required*

The report emphasizes that some Victorian farmers (and especially younger ones) are succeeding in agriculture. These are the larger farms, managed with business principles, often still family owned but employing non-family labour, using modern technology and best practices (including employment practices) to produce profitably. The challenge therefore is how to transform Victorian agriculture such that this model becomes the dominant one, and this necessarily involves letting go of old mindsets: 'The farming sector itself will only be threatened if it does not adapt and provide the professional workplace environments that young people are attracted to and are readily available in other professions. The evidence at this stage suggests agriculture is changing too slowly' (RRC, 2012, p. 9).

Thus the social reproduction of farming is seen to be conditional on farms being economically viable, and there is a need for both productivity improvements and scale expansion of farms to be encouraged and facilitated, to enable the creation of farms that are viable in these terms. With reference to productivity improvement, the government's Response notes its ongoing investment and effort in 'targeted research and development, improved biosecurity and improving market access [to] support the ability of industry to increase profits and attract increasingly skilled entrants' (Victorian Government, 2012, p. 5).

With reference to farm scale, the RRC Report notes that the capital value of viable-scale enterprises often puts them beyond the financial reach of most young people, and that therefore that there is a need to create and promote new models of what it is to be a farmer, or to have a career in agriculture, such that outright ownership of land is no longer an assumed goal: 'The Committee believes that the result of this will be fewer farm owners but increased opportunities for farm management positions and contracting', labelling this 'a substantial intergenerational shift in ownership structure and workforce participation' (RRC, 2012, p. 8).

#### *Agricultural Industries to Take the Lead*

The report is emphatic that in most cases agricultural industries carry the main responsibility for enabling this change: 'Evidence that the Committee heard through-

out this Inquiry overwhelmingly supports the idea that the main responsibility for – and knowledge about – attracting and retaining young people lies with the farming sector itself... The issues... need to be tackled first and foremost by industry' (RRC, 2012, p. 13).

From the examples of specific initiatives that are cited it is clear that government's use of the term 'industry' in this context refers primarily to the industry peak bodies and research and development corporations, rather than to individual farm businesses. The report countenances a much more circumscribed role for government: 'Governments need to know both what they cannot do as well as what they can... It is the Committee's view that the state government can work in partnership with industry... but government cannot do that without industry making the first move' (RRC, 2012, p. 14).

Nevertheless the report makes 373 specific recommendations for action on the part of government. Almost half of them relate to improving the reach and quality of agriculture-related education at secondary and post-secondary levels, which is a domain where the state government retains clear responsibility. Another large group of recommendations are concerned with promotion of the opportunities available in agriculture, to counter what the report considers to be an 'image problem'. Most of the recommendations are for the state to support (in an unspecified way), encourage, partner with, collaborate or coordinate with other actors, particularly agricultural industries, but also education providers and departments in the state bureaucracy.

### *Communities of Choice*

The report devotes one chapter to the issue of farms and farmers' relationships with the communities in which farming takes place, and notes their mutual dependence: infrastructure and services can only be maintained when there is a population there to be served, while conversely people are attracted to live in places where adequate services and facilities are available. The report's recommendation on this issue is vague: 'That the state government work with rural communities and other levels of government to support the development of appropriate infrastructure and services' (RRC, 2012, p. 290), and the report posits that rural communities themselves must take responsibility for securing the services they need, and for doing what it takes to be 'communities of choice' that young people will want to move to or return to (RRC, 2012., p. 283). This theme is taken up in greater detail in the government's Response, under the heading of 'importance of regional liveability'. A specific government programme in another portfolio area is identified, which focuses on 'empowering communities to make decisions', positing that 'local people have a role to play in addressing the challenges faced by their communities', and that 'regional development requires strong leadership at the local and regional level' (Victorian Government, 2012, p. 7).

The desired roles for government, industry, communities and individual farm-business owners emerge clearly in the discussion above. We now turn our attention to a specific group of farmers in a community of place, to explore how this allocation of roles maps onto the lived experience of agricultural change.

### **The Lived Experience**

Reflecting on the trajectory of change in dairy farming in their locality, interviewees spoke of the underlying suitability of the environment for dairy production, and yet



of the steady decline in the number of dairy farms. They ascribe this to a combination of the cost-price squeeze on farm profitability, an ageing population of farmers and low recruitment of young people as ‘successors’ on family farms:

Bruce: ‘It’s the ideal place. But yeah, there’s less and less, each year..’

Sue: ‘More work but less money.’

Bruce: ‘Yeah, but what I’m sort of getting at, every year there’s one dairy farm that drops off. So that makes it sort of hard’ (Interview 25A, couple, 50s).

‘Because like [my brother] and myself, we’re the only ones that stayed here. Everyone, all our mates, all went west and mining’ (Interview 29A, male, 20s).

At the same time the average size of farms has been increasing steadily, generation by generation. The farmers who spoke most positively about the dairy industry were generally the larger operators – with over 350 milking cows. Most farmers operating at this scale were in the 40–49 year age group or younger. Farm managers still work long hours, but they judge the rewards to be worth the effort:

‘It was eight, nine, 10 years of pretty hard seasons. But we’ve still grown, from an equity point of view, really well... If I was to go back to [his previous skilled trade profession], I think dairying’s probably a lot better, as far as that you can grow your assets fairly quickly’ (Interview 13A, male, 40s).

### *Importance of Milk Price*

Farm-gate milk price clearly emerges as a centrally importance governance mechanism:

‘I think the valley is definitely suitable for dairy farming. There’s no worries about doubling production, we just need the price. We can grow the grass and feed the cows to do it but unless there’s a decent milk price it’s not going to happen. That’s about my bottom line’ (Interview 10A, male, 40s).

A higher milk price is needed to make the industry more attractive to new entrants (and to children of farm families making career decisions), and to make the investment entailed in enterprise expansion attractive. Farmers therefore identify their milk company as the most important player in industry governance. In this particular Valley all farmers supply their milk to Murray Goulburn Co-operative, in which they are also shareholders; however, despite this enhanced structural position in the value chain they still consider themselves to be ‘price takers’ with their milk price ultimately set by the global dairy market.

### *Farming as a Business*

Many interviewees spoke of the importance of taking a business management approach to farming:

‘I couldn’t run a dairy business without knowing its bottom line each year’ (Interview 18A, female, 40s).

'Farming's a business now so the lifestyle, family tradition, I mean that's basically ending' (Interview 10A, male, 40s).

The extent to which interviewees incorporate formal business management practices and techniques in their farming varied significantly, but a number expressed the view that it is this business lens on farming that is the key to managing pressure on profitability:

'People don't look in their own back pocket and think how can they fix the problem or how can they make it better. It's easier for them to say 'Well, if the milk prices were better' (Interview 14A, female, 40s).

### *Ongoing Government Withdrawal*

Concerning the role of government, people access the state government's Department of Environment and Primary Industries (DEPI) for particular specialist technical advice, or for guidance on regulations, but indicate that it does not project a generalized stewardship or proactive development responsibility towards the industry. The DEPI was undergoing a process of restructuring and job shedding as part of a wider state government austerity drive during the period that our interviews took place, yet no interviewees raised this as a point of concern. Dairy Australia by contrast is experienced by farmers as being very active in the provision of information and learning opportunities.

### *Family Land Use and Business Decisions Are Not in the Community Domain*

Our interviews also explored the role of the local community as a governance actor. In discussing community sustainability, interviewees spoke about the fundamental importance of maintaining population, which they see as critical to maintaining services such as schools and to the viability of community organizations such as sporting clubs and volunteer-run emergency services. Younger families with school-age children are considered particularly desirable. In this view the value to communities of dairy farms is their affinity to younger families, which arises from their relative profitability (compared to other locally established agricultural land uses) and their strenuous workload, and also the additional employment that they generate. Our dairy farmer interviewees were overwhelmingly of the view that maintaining land in dairy production is positive for their community, and conversely are aware of the potential negative implications at the collective scale of multiple individual family land-use decisions that result in farms ceasing dairying. Nevertheless, without exception our interviewees agreed that landholders are entitled to make land-use and business decisions based on their own and their immediate families' interests, and should not be expected to make these decisions with community interests in mind:

'You could say it might be a little bit selfish, but... I don't think anyone would. You've got to think of your own situation in my eyes' (Interview 20A, male, 60s).

'If someone decides to retire from dairy and go into beef we say "Well, good on you, that's fine. You've milked cows for 25 years, 30 years, you've still

got plenty of life left in you and you don't want to get up at 4:30, 5:00 in the morning anymore, I don't blame you'" (Interview 15A, male, 40s).

For a dairy industry, or a community, interested in maintaining or expanding dairy farming the crucial question is what happens to dairy land when the current operators are ready to retire, and when there is no family 'successor'. At present transition into beef grazing, with its much lower management demands, is a common option. A small number of landholders are using other business models that maintain land in dairy production, while not requiring the sale of the land, including farm leasing, share-farming and employed farm managers; however, there is a common view that such models are prone to difficulties:

'I've known people who have leased out land and it can be a headache. If you get the right person on they're good as gold, but if you get someone that's, you know... I've seen farms run into the ground, and then the next person that comes to lease it, it's not worth the money that it was before. So there are pitfalls' (Interview 25A, male, 50s).

Our interviews suggest that milk price – the ability to generate a return on investment – is a necessary component of an enabling environment in which options for maintaining land in dairy production appear feasible and desirable. Other enabling factors include provision of information and advisory services to assist with the mechanics of farm business transitions, and brokering or matching services to bring land, people and investment together in workable combinations. Our interviewees identified industry organizations and milk factories as the actors best placed to provide services like these.

We now examine an example of industry-brokered collaboration on workforce issues, to examine how some of these roles play out in practice.

### **Governance in Action**

The Australian dairy industry has recognized farmers' access to suitably skilled employees as an issue of concern for some years, and has been involved in many initiatives that have attempted to bring new people into the industry, particularly at the lower-skilled or 'entry' level (Nettle and Johnson, 2006). In this context, in mid-2006 Dairy Australia was approached by the Brotherhood of St Laurence (BSL), a large social justice-focused non-governmental organization, who wished to explore a possible fit between the dairy industry's need for workers and social welfare outcomes from getting unemployed people into interesting and supportive work. These tentative discussions led to a period of more than two years of planning of what would be required to create a pathway for disadvantaged job seekers into potentially ongoing employment in dairy farming. Late in this planning process the Victorian state government funded a feasibility study, which enabled this work to be captured in a project design document (Nettle et al., 2008). The rationale for government involvement included both the potential economic contribution of a more robust dairy industry, and the social welfare outcomes of placing unemployed people in work.

In early 2010 the western Victoria dairy region emerged as a suitable pilot site, and funding was secured from the Victorian government and a private philanthropic fund to trial the approach. The project was given the name 'In2Dairy'. In addition to the national-level partners Dairy Australia and the BSL, the local-level implement-

ing partners included WestVic Dairy (one of dairy Australia's regional development programmes), WestVic Staffing Solutions (a non-government provider of job market services), the National Centre for Dairy Education Australia (NCDEA – a specialist provider of vocational training for the dairy industry), and the University of Melbourne in an action research and evaluation role.

### *The Workforce Issue Bridges the Interests of Farmers, Industry and Government*

The objectives of the project included: meeting real needs of farm employers for workers; placing disadvantaged jobseekers in potentially ongoing work; delivering accredited training to both employees and employers; being able to demonstrate impact and benefit at larger (both regional industry and local community) scale; and creating a model that could be replicated and financially sustained. The delivery of the project involved a complex array of activities on the part particularly of the local-level implementing partners. These included work associated with identifying and recruiting potential participants (both employers and employees), assessing training needs, delivering training, and pastoral care of employees throughout the process. Meanwhile the national partners focused on overall project design and monitoring, sourcing and acquitting funding and evaluation. Some of the work involved was performed as part of people and organizations' core funded activities, while other aspects were funded specifically by the In2Dairy pilot (Dairy Australia, 2010).

By May 2011, 42 participants had completed the pre-employment training, through three separate intakes, and three additional late recruits were placed without pre-employment training. From this pool, 26 trainees were placed in employment, and concurrently enrolled in accredited vocational training. Eighteen of these trainees attained the project goal of 16 weeks in employment, and 11 completed their vocational qualification. Four moved out of the industry on completion and one took up a share farming contract before completion and is now himself employing an assistant farmhand. Seven are still in employment on farms, and undertaking ongoing training. Social policy practitioners and researchers consider these rates of completion and retention to be higher than that achieved by many similar employment programmes (Perkins, 2008; Williamson, 2011).

### *Success Flowed from Complex Organizational Arrangements*

Elsewhere we have argued that the success of the project resulted in part from the underlying ethical commitments of the collaborating partners (Nettle et al., 2010). Additionally, the combined national–local design in project implementation created a strong commitment to success, drawing on different expertise of organizations, and broad experience and wisdom:

'We were hoping the filtering [of entrants] and relationship building built in the design would mean most would stay once they went on farm' (National Dairy programme leader).

'Probably about 75% will stay' (National welfare agency).

In local delivery, different parts of the project provided validation and support to each others' efforts:

'Individual feedback from the course has been very positive' (Job services provider).

'[The effort trainers put in] lifts it to another level. When [participants] see you in the street they welcome you as a long-lost friend' (Trainer).

Central to the project delivery was the WestVic Dairy project manager who provided a 'go to' place that helped pull local activity together, and also sought new relationships to link the project to other dairy workforce and community needs. This included raising awareness amongst local government elected representatives about dairy industry workforce needs and opportunities, communicating about dairy farming careers to school students, and applying In2Dairy design features that had been developed for disadvantaged worker entrants to other potential 'career change' entrants, to meet industry needs for farm managers.

Success also depended on the willingness of farm employers to be involved. Some reported being motivated by desires to 'give back to the industry', or 'give people a chance in life', motivations that go beyond narrowly defined individual business goals (Nettle et al., 2010). The project steering committee took the view that if employers were willing to take the risk of employing previously unemployed, disadvantaged workers then industry partners should share this risk, hence the role of the project in providing pastoral care to employees. Subsequent developments indicate that industry and local community partners may need to do more to nurture and maintain the commitment of employers to social welfare, community and industry outcomes. A new source of employees became available in the form of young international travellers (backpackers) and some employers decided that this was a simpler and lower-risk short-term solution to their workforce needs than participating in collective workforce development initiatives.

The formal programme evaluation concluded that it is possible to operate a regional-scale farm workforce intervention that meets the needs of both jobseekers and employers, and that such programmes have the potential to create pathways into long-term careers in agriculture. The capacity to bring partners together largely rested in the national partner organizations – both operationally independent of government. They remained engaged in working in this area without specific funding to do so and it was ongoing conversations between two strategy-focused organizations that continued to refine ideas, bring together different groups from their respective domains and bring potential funding partners to the table. Action took place at the regional scale, requiring detailed local knowledge and relationships, thus demonstrating the importance of cross-scale linkages in governance arrangements.

Despite the project having met government expectations for 'job outcomes' in full, a change of state government in 2011 and different priorities meant that further government funding was not forthcoming. The steering committee looked at ways they could fund the In2Dairy approach without state funding and eventually were able to source dairy industry funds to initiate additional trainee intakes, but the specific targeting of socially disadvantaged jobseekers was not maintained. All the participating organizations maintain communication, and remain involved in dairy industry workforce development in the region, indicating the one-off investment by government has generated some sustained change in the institutional relationships connecting the dairy industry to the social welfare and employment services sectors.

The In2Dairy project focused on the supply of entry-level workers to the dairy industry, clearly only a small component of the overall farm workforce challenge.



Nevertheless the ability of the industry to design and deliver a successful response involving complex collaboration across policy domains and spatial scales demonstrates the potential for collaboration and innovation that exists in complex governance arrangements such as those that exist in Australian agriculture.

## Discussion

The results of our three study components highlight some key features of agricultural industry governance in Australia, as they play out in the farm workforce area. The Victorian government's treatment of the issue, as revealed in the RRC Report and Response, remains firmly grounded in neo-liberalism. Farms are to be understood as businesses, and farmers are expected to deploy business management skills to maintain profitability. This is a strongly individualizing policy discourse (Cheshire and Lawrence, 2005a), which, while acknowledging the structural causes of many of the pressures on farm viability, maintains that they are simply part of the operating context that farmers must learn to manage. The propensity of this discourse to blame farmers for circumstances that are beyond their control has been noted by others (Halpin and Guifoyle, 2004; Gill, 2011). Nevertheless the 'farming as a business' framing is embraced by many of the farmers we interviewed. On this basis, some farm families are concluding apparently that if farming is a business, then it is not one that is sufficiently rewarding to justify further investment. The slow decline in the number of dairy farms in the valley we studied can thus be seen as a logical outcome of market-led industry governance intersecting with individualist economic rationality.

By asking the question 'why would people choose a career in agriculture', the farm workforce lens thus reveals that neo-liberal governmentality creates vulnerability for government too. The new focus on farm workforce can be seen as a recognition by government that the existence of agricultural industries cannot be taken entirely for granted. This is framed by government as an innovation challenge, and the emerging policy and action around farm workforce can be seen as the latest iteration of government and industry mobilization around the 'get big or get out' imperative that has informed agricultural policy design for several decades (Higgins and Lockie, 2001). The workforce lens highlights aspects of this challenge in greater detail: new business models are needed, farmers need to become better employers, new types of mentoring, networking and opportunity brokering are required, and government positions agricultural industries as the lead actor to drive this innovation. The RRC inquiry is itself an activity of governing through governance: of mobilizing networks, particularly across the government–industry boundary. The role government sees for itself emerges clearly as 'identifying stakeholders and then developing the relevant opportunities and linkages for them to be brought together to act for themselves' (Goodwin, 1998, p. 9).

We have presented evidence that the dairy industry possesses the institutional capacity to engage in complex collaboration for innovation of the type envisaged by government. Dairy Australia is positioned exactly in the zone of 'blurred boundaries' (Stoker, 1998) between government, private industry and individual farm businesses, and this positioning has enabled it to develop practices that reach into each of these domains to create practical responses to issues (Nettle et al., 2013). We note here that the dairy industry has a long history of working cooperatively (Paine and Nettle, 2008), and partly as a consequence of this has a relatively well-resourced

industry research and development corporation. It cannot be assumed that our findings about the capacity of the dairy industry to engage in complex innovation processes hold for all agricultural industries in Australia. However, the broader finding, about the potential of diffused governance arrangements to create such capacity, is still sound.

In keeping with the theme of this special issue, our particular concern though is with how the interests of rural communities are accounted for. Our study supports other findings that farmers value their local communities highly, and understand their role in local economies (Pritchard et al., 2011; McManus et al., 2012). Yet we found a clear delineation between the sphere of individual family decision-making about land use and livelihood, and the sphere of community. While this is not a point that we explored specifically, we suspect that this is not a recent phenomenon that can be attributed to neo-liberal governmentality, but likely has much deeper roots in Australia's private property system and European settlement history. This delineation is significant in the context of the continued assertion by government of the responsibility of rural communities to plan and act for their own future (Cheshire, 2006), suggesting that planning and action on the part of communities has a limited ability to reach into farm family decision-making, and thus that 'community' cannot be relied upon as a governance actor to take primary stewardship of agricultural industries.

Conversely, it seems ill-advised to expect agricultural industries to take responsibility for rural communities' economic and social sustainability, since such a role takes them beyond their proximate interests. Given government interest in agricultural industry growth, and its recognition of the importance of 'regional liveability' as an enabling context for such growth, we argue that the farm workforce issue is one of clearly shared interest between government, industry and communities, and this represents an opportunity for collaboration. The particular resonance of farm workforce within a neo-liberal policy discourse is its individualistic character. A focus on farm workforce makes it clear that the persistence of agricultural industries in the end depends on individuals' willingness to choose it as a career, and to invest.

## **Conclusion**

The cost-price squeeze on farm profitability looks set to continue, and will continue to provide impetus towards both expansion and intensification of farm businesses. The new policy focus on farm workforce in Australia is clearly framed within the existing neo-liberal policy commitment, and offers no new remedy for these pressures, or their flow-on effects for rural communities. However, following Lockie and Higgins (2007) and Dibden and Cocklin (2010), we argue that neo-liberalism is a work in progress, subject to adjustment and negotiation, and that farm workforce presents itself as a new dilemma, opening new terrain on which such negotiation can occur. As we have shown it is terrain that can accommodate particular types of action on the part of collective actors in agricultural industries, communities and governments, which offer scope to assist communities in their ongoing efforts to sustain themselves in a competitive world. Capitalizing on this scope may require new mechanisms whereby farmers and communities can explore and act on their entwined interests. It will certainly require greater recognition from government and industry of the essential role of community as a stakeholder in agricultural industry development, with needs that are distinct from those of individual farm businesses.

## Notes

1. Census statistics on the age of farm owners can be misleading; however, as intergenerational transfer of operational responsibility for the farm may take place some time before legal ownership is transferred.
2. Australia's federal system involves three tiers of government: federal, state and local. While the federal government is a major investor in agricultural research and development, it is state governments that have primary responsibility for service delivery.
3. There are 39 recommendations in total, but two relate specifically to the marine fishing industry and are not considered here.

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# **Crisis? What Crisis? Marginal Farming, Rural Communities and Climate Robustness: The Case of Northern Norway**

HILDE BJØRKHAUG AND KATRINA RØNNINGEN

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**Abstract.** Does it make sense to talk about a crisis in agriculture in one of the world's wealthiest economies when significant quantities of public money are invested in the agricultural sector? Moreover, should one worry about the robustness of food production if it takes place at the margins of economic efficiency and where, consequently, importing food seems the simpler and cheaper option? Should agriculture in marginal areas have any role whatsoever in food production? Against the backdrop of national and international discourses on the need for increasing food production, this article analyses developments in Northern Norway in the aftermath of a year of major production crisis. The analysis uses large statistical data sets combined with qualitative information to draw a picture of agriculture in this region. We contend that marginal areas are important for maintaining agricultural production capacity but are unlikely to play a significant role in any potential increase in productivity unless new pathways are chosen for agricultural policies and production. However, the ability to maintain agricultural production systems and levels is being threatened by both economic and structural changes in agriculture and decreasing skills and knowledge of how to maintain and develop robust farming systems in these regions.

## **Introduction**

Norway's agricultural policies have, like the EUs, been characterized by substantial levels of farm support. The model of agriculture (see Almås, 2004; Rønningen et al., 2012) has been based on arguments surrounding food security, rural employment and settlement, and, increasingly during the last 20 years, the multifunctionality of agriculture (Wilson, 2001, 2008; Bjørkhaug and Richards, 2008; Marsden and Sonnino, 2008; Rønningen et al., 2012). Major agricultural exporting countries such as New Zealand, Australia and Canada see subsidies of this kind as merely hidden production subsidies (see Bills and Gross, 2005; Potter, 2006; Dibden et al., 2009). Ac-

Hilde Bjørkhaug and Katrina Rønningen are Senior Researchers at the Centre for Rural Research, NO-7491 Trondheim, Norway; email <katrina.ronningen@rural.no>, <hilde.bjorkhaug@bygdeforskning.no>. We would like to acknowledge Troms County Authority for funding empirical studies of the Troms case and the Research Council of Norway for funding the projects Structures (project no. 199349) and Forfood (220691) that has enabled developing the arguments in the article. We will also acknowledge the reviewers for constructive critique and comments that have helped strengthening the arguments in the article.

ording to Almås and Campbell (2012a, p. 297) a primary critique of multifunctionality as a policy platform for a more resilient agriculture is that it is too often targeted selectively toward supporting European agriculture. McMichael (2012), however, states that Europe has provided agricultural models that are not found in settler agriculture regimes of the US, Australia or New Zealand or Brazil. This implies a very different approach to agricultural support, and a different understanding of the role of agriculture and rural areas in society. In an increasingly market-oriented agri-food system, it appears doubtful that the approach that has supported Norway and the EU for so long is politically sustainable in the long term. Indeed, in Norway, the election of a new government in 2013 has seen renewed calls for dramatic reductions in the regulation of and payments to agriculture (Government Declaration, 2013).

The question of what kind of an agricultural system will emerge in their stead is one that politicians and researchers are currently grappling with. New concepts emerging in the debate include the notion of an agriculturally based bio-economy with two competing visions for the future (Levidow, et al., 2012). The first is the conventional view where life-science based technological solutions provide a common thread to address the problems facing humankind (Arancibia, 2013). This offers a vision of enhanced productivity and competitive advantage through global value chains that operate at global corporate economic levels (Kitchen and Marsden, 2009). The other, however, suggests that a sustainable bio-economy (or 'eco-economy' as per e.g. Kitchen and Marsden, 2009, 2011; Marsden, 2012) can only be achieved via the 'recalibration of micro-economic behaviour and practices that, added together, can potentially realign production–consumption chains and capture local and regional value between rural and urban spaces' (Kitchen and Marsden, 2009, p. 275).

Another emerging concept is that of neo-productivism. This postulates that a new 'productivist' era is emerging where the key driver is not government production subsidies but rather economic forces and markets driving ever increasing economies of scale, technologies and intensive forms of production (cf. Almås and Campbell, 2012b; Burton and Wilson, 2012). However, this is not thought to emerge in a geographically uniform way. Rather, as Wilson (2001) observes, the likelihood of a territorialization of agriculture is emerging – where productivist and non-productivist forms are spatially defined with productivist areas dominating the most valuable agricultural land.

These debates raise interesting issues for rural regions across Europe. In Norway, recent policy documents have emphasized the need to increase agricultural output – in part to feed predicted growth of its own population but also as a means of increasing overall food security (Ministry of Agriculture and Food, 2011). Likewise, EU discussions on the future of the CAP have outlined that market instabilities, 'often exacerbated by climate change', highlight the need for food security for European citizens (Martens and Zuleeg, 2010). However, while intensive productive agriculture is expanding in some regions, increasing reliance on the market system and change in rural communities means that less-commercially viable agriculture is under severe pressure in others (Shucksmith and Rønningen, 2011).

The post-2008 jump in the FAO food-price index emphasized both internationally and in Norway a need for increasing food production in order to meet climate change conditions, increased demand for food, and more variable food prices (Brobakk and Almås, 2011). Issues such as food security and food sovereignty have also been brought to the front in the national and international debate (McIntyre et al., 2009; Ministry of Agriculture and Food, 2011). Where and how this increased pro-

duction is to take place is a crucial issue that we cannot find addressed adequately either politically or within research. The main question put forward in this article is whether or what role farming in relatively marginal or peripheral areas ought to have in this new context for global food production. UN Special Rapporteur on the Right to Food Olivier De Schutter (2013) claims that when addressing climate change and global hunger, governments cannot focus solely on increasing food production but must also consider how to ensure sustainability and productivity on family farms. Whether Northern Norwegian family farms ought to have a role in this in the future is an underlying issue for this study.

In this article we investigate this issue in the context of Northern Norway – an area at risk from changes to the current highly subsidized and regulated agricultural regime in Norway. In 2010 agriculture in this region experienced a major crisis in production due to extreme weather conditions. We ask: Is this region equipped to meet both challenges associated with climate change and the demand for increased food production? What factors are likely to inhibit its continued production? What is required to ensure that gains in productivity in the core agricultural regions are not simply offset by losses in productivity through land abandonment outside of the central core?

### **Agriculture's Role in Norway**

Norwegian agriculture can be described as overwhelmingly peripheral and marginal in an international context. Only about 3% of Norway's land area is used for agricultural production. Employing the previously existing European Union definition of Less Favoured Area (LFA), Norway's agricultural land would have been classified almost entirely as 'less favoured' (compared with 57% of the overall utilized agricultural area in the European Union in 2007) (see e.g. Arnesen et al., 2010; Van Orshoven et al., 2012). Natural conditions are harsh, characterized by thin and stony soils, short seasons and low average temperatures. Furthermore, a substantial proportion of agricultural land is situated in mountainous and Arctic areas, thus further reducing productivity. On the other hand, top soils remain fertile due to relatively low-intensity farming practices. Recent studies also show that the grasslands in many areas are highly nutritious (Sickel et al., 2012). Further, water supplies remain sufficient. Those conditions make most areas suitable to grass-based production systems such as dairy, cattle and sheep. However, the need to house animals indoors during more than half the year in many places adds substantially to already high costs.

The 'Norwegian model of agriculture' (Almås, 2004; Rønningen et al., 2012; Almås et al., 2013) is strongly regulated, low levels of export; agricultural policy legitimacy has, as mentioned above, been closely linked to a notion of multifunctionality. Since World War II the model has been linked to five main objectives: 1. increasing food production and productivity and food security, 2. rural settlement and employment, 3. preparedness in relation to risk (with an eye to the then Soviet neighbour in the east), 4. maintaining farmers' incomes equal to that of industrial workers (introduced in the 1970s), and 5. environmental objectives (introduced in the 1970s). A number of legislative and regulatory measures concerned with subsidies, trade tariffs, border controls, veterinary issues, as well as policies designed to avoid overt farmland concentration and to restrict the use of farmland to food production (Flemsæter,

2009; Shucksmith and Rønningen, 2011) have come under considerable pressure to be reformed along free-market lines.

A national identity, which formed at a time of owner-occupied farms and dispersed rural settlements sustained largely by pluriactive farming as the norm, forms the background for and upholding of the Norwegian model of agriculture. However, this model stands against the universal logic of the agricultural threadmill of modernization (Cochrane, 1958), which suggests rationalization and structural change is required. Norwegian agriculture is highly politicized, through a system of subsidies and a cooperative arrangement of annual negotiations between the state authorities and the two farmers' organizations over major goals, price levels and technicalities. Almås (2004) describes this as a 'societal contract', in which the state provides a certain income to farmers in order to maintain 'viable agriculture' all over Norway and, in turn, farmers fulfill the five main objectives for Norwegian agriculture outlined above. These values have been important also for the diversification strategies encouraged by the authorities, towards tourism, green care and other types of new rural business developments.

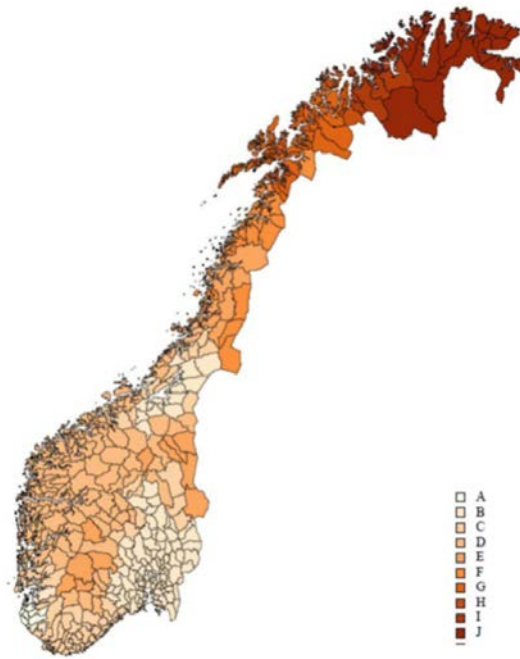
Norway turned down EU membership in two referendums, and rural and agricultural issues are relevant in understanding these outcomes. In the 1980s, Norway began orientating its policies towards EU developments and responding to WTO negotiations on the liberalization of global agricultural trade, overproduction, and loss of environmental and landscape values. Multifunctionality objectives were geared towards cultural landscape preservation and the viability of rural communities. Area and cultural landscape payments partly replaced previous production-related subsidies and, parallel to CAP reforms, agri-environmental schemes were introduced (see Daugstad et al., 2006).

Dairy production has clearly been the most important type of agricultural production in Norway's remote regions, and has been extensively supported by family farm policies, which can be partly attributed to it being a labour-intensive sector. The dairy sector has been based on the creation and the widespread use of the Norwegian Red Cattle (NRF), a modern breed combining good dairy and meat production characteristics. The breed has been a symbol of good resource utilization, based on extensive grazing systems, of which home-produced rough fodder was the basis (Veie and Værdal, 2013). The ratio between home-produced grass and grain and imported feed concentrates is a central issue in considering the sustainability of these farming systems. Developments within dairy are thus crucial to understanding and analysing agricultural and land-use development (see e.g. Muirhead and Almås, 2012).

At the core of Norwegian agricultural policy mechanisms has been a policy of a geographical canalization of production based on 'relative comparative advantages'. This contends that 'good' areas should concentrate upon grain production while the uplands, the coast and Northern Norway ought to do what they are best suited to: grass-based dairy and beef production. Rich outfield pastures were important feed resources, but a certain share of nationally produced grain for feed was also an important element in this delicate balance of production and zoning of differentiated payments. At the political level, Norway uses the geographical and physical criteria as the basis for defining its agricultural land into zones. Based on this, differentiated support levels are available for various crops within different regions.

Various challenges to agricultural production are reflected in the zoning of agricultural policy measures into geographical regions; for example, in terms of moun-





**Figure 1.** Zones for regional payments for milk.

*Source:* Ministry of Agriculture and Food, 2013a, p. 157.

tains, valleys, coastal regions and Northern Norway (see Figure 1). The darker fields receive more subsidies for being disadvantaged due to natural conditions. However, some have called for more regionally targeted support policies to meet local challenges, such as those of mountain and Arctic agriculture (e.g. Rønningen et al., 2011; Shucksmith and Rønningen, 2011), an issue that has been addressed more recently within policy papers and projects (Ministry of Agriculture and Food, 2011, 2013b).

### **Crisis in Troms Agriculture**

The year 2010 was extremely cold for agricultural production in parts of Northern Norway, in particular the county of Troms. A bad winter and a disastrously wet and cold summer caused widespread crop failure, with up to 100% crop losses on some farms. The severe economic losses associated with the weather conditions meant that an unusually high number of farmers in the region left farming. This revealed two major issues. First, agricultural policy measures and compensations are inadequate both in general and in relation to crop damages. Second, agricultural production systems in the region lack economic robustness.

A regional analysis carried out in 2011 identified a number of major challenges to Troms agriculture. These include a lack of profitability of farming, barriers to financing necessary investment, recruitment challenges, low levels of (formal) agronomic and business competence, and high sheep losses as a result of carnivore predation. On the other hand, the potential for high-quality food production in the region can be considered a competitive advantage (Rønningen et al., 2011).

Climate change is relevant as 'crisis years' associated with climatic events are expected to occur more frequently in the future. In several Norwegian regions since 2010, summers have been characterized by unusual and extreme weather conditions, such as floods or draughts, resulting in high crop losses and economic losses. In general, greater variations in yields are to be expected in the future (Vagstad, 2013), including higher yields due to potentially warmer climate (Hakala et al., 2005). In this article, we discuss whether there is a place for peripheral, marginal agriculture against the backdrop of climate change and a globally heightened focus on increasing food production.

One question relevant to understanding the situation in Norway is to what extent it is possible to talk about a crisis in agriculture in a country with a prosperous, politically stable economy and a relatively equal distribution of wealth. Should food production be a priority in a country that, in many respects, cannot compete in terms of economically efficient food production and where, therefore, the import of food seems to be the obvious way to ensure food security?

The 2009 White Paper 'Climate Change: Agriculture as Part of the Solution' (Ministry of Agriculture and Food, 2009) responded to FAO estimates that the world needs to double its food production by the middle of this century by arguing that it would require Norway to continue 'to manage land well' in order to secure domestic demand – especially considering the predicted increase in population by about one million by 2030.

This article analyses the developments within the northernmost agricultural region in the world, Northern Norway, and within the context of national and international discourses on the need for increasing food production. Analyses are based on national and regional statistics of agriculture in Troms county and a regional analysis of quantitative as well as qualitative data (cf. Rønningen et al., 2011). To start with an observation: stakeholders were surprised at how critical the situation has become in Northern Norway. Later feedback on these analyses (Rønningen et al., 2011) indicated strongly that the Troms situation could be extrapolated to represent agriculture in many rural areas in Norway. This feeds into a discussion regarding food security and food sovereignty at the level of the nation state, and what role national and regional food production should have in a context of climate change and increased demand for food. A reminder of the fragility of food production is the fact that several areas in Norway, including Troms, until 2013 have been facing radiation effects of the Chernobyl disaster in April 1986, having to let sheep and reindeer graze in the lowlands for several weeks to lower becquerel levels before slaughter, adding to uncertainty and costs.

## **Data**

The analysis in this article is based on several different data sources: public documents, reports, the agricultural register, surveys, recordings from meetings and interviews. With regard to secondary statistical data, we use statistical information and reports gathered by Statistics Norway, such as data sets on structural distribution (Statistics Norway, 2009, 2010, 2012). Furthermore, we use reports on applications for production subsidies (the Norwegian direct payment database) and data on milk quotas, all of which are publicly available on the Norwegian Agricultural Authority web pages (<<http://www.slf.dep.no>>). Data gathered from the county

governor of Troms and TINE Nord (TINE dairy cooperative's office in Northern Norway) are also publically available.

We also base the analysis on recordings from a stakeholder meeting in which representatives from relevant organizations, institutions and other stakeholders of Troms's agriculture participated (Rønningen et al., 2011). Eleven prepared presentations addressed relevant issues related to the current situation for Troms's agriculture, followed by stakeholder discussions on the situation of Troms's agriculture. The attending delegates also answered a semi-structured questionnaire on challenges and opportunities for Troms's agriculture. Some interviews were carried out to follow up on topics that emerged at the meeting.

In terms of primary data, we analyse survey data from Norwegian farmers collected every second year since 2002–2012 (trend data). The six samples have been merged into one file that consists of 9,899 individual Norwegian farmers' replies that are identified by county. In Troms county 238 farmers are represented, accounting for 2.4% of farmers in the area. This is close to real figures of active farms (that is, farms with a certain minimum of agricultural output, making them eligible for production subsidies) as noted in the agricultural register. In 2010 Troms farmers accounted for 2.47% of Norwegian farm units (Statistics Norway, 2010).

The trend-data survey provides a general base of knowledge on the socio-cultural factors in Norwegian agriculture.<sup>1</sup> The sample consists of the main operators of active farms (see above). Simple comparative statistical methods such as cross tabulation and compared means are used to show similarities and differences between the Norwegian sample and the Troms county subsample. We are looking at the farms' production bases (main production types), farmer demographics (age and gender) and education, and motivation for farming and future plans. The purpose of these analyses is to create a basis for discussing future robustness in marginal agricultural areas of Norway. Further analysis in the article presents the similarities and differences in terms of production characteristics and motivational aspects between farmers in Norway as a whole and farmers in the Troms region.

## Analysis

### *Is the Norwegian Model Being Challenged as a Result of Structural Change?*

There have been significant structural changes in Norwegian agriculture (Bjørkhaug, 2012; Forbord et al., 2014). In 1949, 213 000 farms were defined as 'active', whereas only 44 770 farms remained in this category in 2012. The most obvious change is one towards fewer and bigger farms. Nevertheless, with an average farm size of 10–20 hectares of productive farmland, farms sizes have remained comparatively small compared to international standards and most farms depend on a pluriactive model with additional income from other resource-based activities or off-farm employment (Almås, 2004; Bjørkhaug, 2008)

Between 2008 and 2011, the number of eligible farms in Troms county that applied for support for agricultural activities dropped by 11% (1,065 applications in 2011). While the reduction of farm units in Norway averaged 3% in the 2000s, it increased to 5% in Troms in the period from 2010 to 2011.

According to the county governor of Troms (2011), agriculture in Troms accounted for 1,783 full-time employment positions in 2008 (calculated in terms of working hours, not employees). This represents around 2% of the total employment in the

county and reflects the relatively small importance of agricultural employment in Norway as a whole. However, when industries that are horizontally and vertically associated with agricultural production are included, the contribution to employment and settlement becomes much more significant.

Only 1.5% – compared to an average Norwegian 3% – of the Troms land area is farmland. While the area of productive agricultural land remained stable in Norway irrespective of changes in farm numbers, this began to change in the previous decade. Since 2005 the average reduction in agricultural land in Norway has been 2.65%. However, in the Troms region this figure was substantially higher at 5.66%.

Norway is witnessing increasing levels of land leasing (Forbord et al., 2014). When a farm closes down production the land is normally let out. The national average of rented land is 40%, while Troms farmers have among the highest proportion of rented land per unit, 58% (Statistics Norway, 2011a). Families often stay on agricultural properties, utilizing houses and farm resources while leasing out productive land and ending conventional farming. While 44770 Norwegian farms are active, 121 080 of the 185 000 registered agricultural properties are inhabited (Statistics Norway, 2011b). For Troms the proportion of uninhabited agricultural properties is also higher than the overall average of Norway (36% against 21%). This means that the Troms countryside is witnessing increasing numbers of empty farms with ‘no lights in the windows’, while the remaining farms utilize the available land within a reasonable distance from the home farm. The general pattern in Norway is low frequency of farm sales. This is caused by a combination of price regulation on farm property sales and, more importantly, families’ reluctance to sell their properties outside of the family. Owners are inclined to keep farms as holiday homes and to uphold traditions and home feelings as farms may have been in the family for generations – sometimes hundreds of years (see e.g. Flemsæter, 2009). A relatively lower price on agricultural properties in Northern Norway might also explain some of the reluctance to sell properties (Statistics Norway, 2011c).

Several potential issues arise from this structural change. One is the potentially higher costs of farming due to added management costs on leased land, lack of land maintenance, transport costs due to more dispersed farm businesses, a greater dispersion of the population and, associated with this, potential skill shortages. In short, is a threshold in terms of the minimum number and size of farms required to maintain sustainable rural agricultural communities?

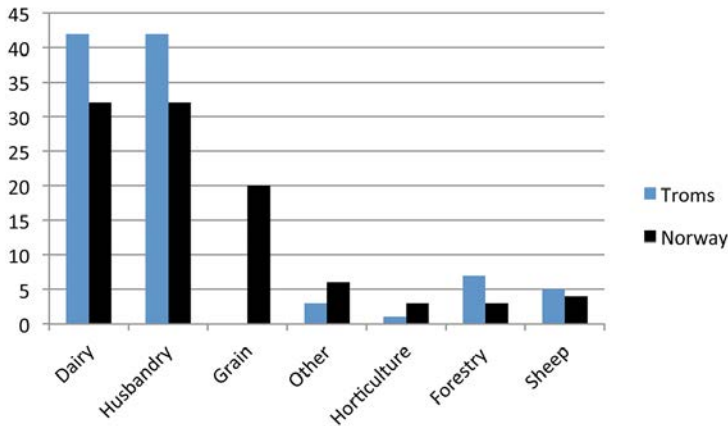
### **Agricultural and Socio-cultural Status of Troms Farms**

Further analysis in the article presents the similarities and differences in terms of production characteristics and motivational aspects between farmers in Norway as a whole and farmers in the Troms region.

#### *Types of Agricultural Production*

Dairy and animal husbandry are the dominant forms of agricultural production in the Troms region (Figure 2). These are mostly grass-based and utilize local grass and grazing resources. The rich outfield grazing resources are important.

Troms farmers have lower quotas than national average, fewer dairy cows (18.1 versus 22.1), lower suckler cows stocks (10.7 versus 14). Average farm unit size for sheep is above national average (81 versus 63.2) while goat numbers are about the



**Figure 2.** Main agricultural productions (Troms and Norway).

national average (95.6 versus 92.6) (Statistics Norway, 2011d). Troms farmers keep 2% of Norway's dairy cows, 5% of ewes and 26% of milking goats, which represents a decline in both cow and goat production (see Kleiven, 2011).

Figures from SLF (2010) show that the proportion of dairy farms has also declined while the proportion of other types of animal husbandry systems have increased. There is also a widespread change in farming systems in order to reduce labour input, for example, a move from dairying to suckler cow and breeding systems. Another typical route is to switch from dairy to sheep farming, and to gain additional income from off-farm employment. This development has meant that while the proportion of animal farming systems overall remains relatively stable, the proportion of dairy units in the Troms region has dropped by about 4%. However, if compared to an average drop of 21% nationwide, this strongly indicates that Troms farmers still are occupied with 'conventional' or 'traditional' farming systems, also reflecting fewer possibilities for pluriactive strategies.

According to TINE Nord et al. (2011), 40% of the Troms dairy producers will have closed down their operations by 2015 and production will, in the same period, have decreased by 25%. While annual production used to be around 34 million tons (up to 2007), this is expected to drop to around 25 million tons by 2015, representing a 25% decline (TINE Nord et al., 2011). This development is likely to be problematic not just for the dairy farmers but for dairy processing businesses in Northern Norway. The trend is very disturbing with respect to sustainability and cannot be explained by the 2010 crop disaster only. Even though quota prices in Troms have remained very low, in 2010 not all available quotas were sold (TINE Nord et al., 2011). The estimated future decline of producers by about 40% between now and 2015 means that the remaining producers cannot maintain the current production volume in the future.

#### *Farmer Demographics and Properties*

Farmers in Troms do not differ significantly from the Norwegian average on gender composition or age. The average age of farmers is around 50. In the combined dataset from 2002 and 2012, there are slightly more women in the Troms sample (17%) than in the nationwide sample (12%). Trend-data analysis further shows that farmers



in Northern Norway have less formal education than average Norwegian farmers. Only four out of 10 have formal agricultural training. The overall lower educational level within Troms agriculture suggests challenges in terms of meeting increasingly specialized production systems, stricter demands of animal welfare regulations and climate changes. A TINE report shows that the two northernmost counties of Norway – Troms and Finnmark – have lower enrolment in quality systems among dairy farmers, and have lower slaughter weights and higher infection levels than average, while few deliver elite-quality milk (TINE Nord, 2010).

Although there may have been a number of factors leading to the peak situation in 2010, these findings still indicate a correlation between education level and production and quality. Previous studies have shown a relatively passive attitude to introducing formal competence requirements within agriculture. Forbord and Bjørkhaug (2009) found that among central actors (Ministry of Agriculture and Food, the Farmers Union and the Smallholders' Association) the dominant belief was that best competence is acquired through experience, i.e. through socialization on the farm, and later through practice (also see Ellingsen et al., 2004).

Agricultural competence was also an issue that arose during stakeholder meetings. A need for professional advice and temporary staff/holiday assistance was called for across municipalities and farming communities. Lack of formal competence was also noticed within the farming community. There is a strong culture of acknowledging (only) tacit and on-farm learned skills. With changing needs of agronomic, economic and technological skills, socialization on farm might not be sufficient for a future sustainable Norwegian farming. These concerns are also related to future recruitment to Troms agriculture.

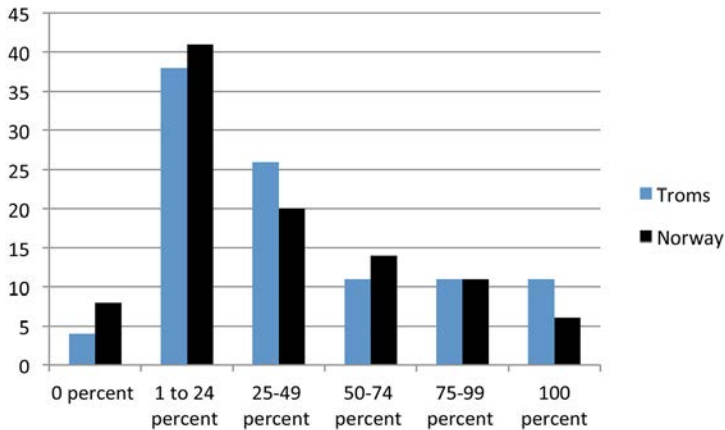
### *Strong Farmer Identity*

In the 2002–2012 data set, 67% of the farmers state that their main affiliation of employment is being a farmer, compared to the Norwegian average of 57%. Furthermore, three out of four Troms farmers have a preference for full-time farming, more than the national average of 60%, and fewer have a preference for part-time strategies (8% of Troms farmers prefer part-time compared to 30% nationally) while 12% have a preference for only off-farm work (compared to 6% in the Norwegian sample).

Farm households in Norway increasingly depend on off-farm income for survival (Bjørkhaug, 2012). In the Troms data set we find that slightly more farm households depend on farming as a substantial part of their household income. Twenty-two per cent of farming households receive more than 75% of their household income from farming (national average is 17%), while for the average Norwegian farm household (including Troms) off-farm income counts for half of household income in 70% of households (Figure 3).

### *Individual Farming Motivation*

While evaluating several motivations for farming, the trend-data survey (2002–2012) shows that the top 'motivations' to farm of Troms farmers are an interest in agriculture and interest in a rural lifestyle, and that they express this more strongly than the average Norwegian farmer. Being self-employed is third on the motivation list.



**Figure 3.** Share of household income from farming (2002–2012 trend-data combined).

Another interesting feature is that fewer Troms farmers state duty or need as motivation for taking over farms than the national average. Lack of other job opportunities was the least important motivation factor for farming. This is true for the average Norwegian farmer and also the Troms farmers.

Another feature is the low level of participation in joint farming enterprises (*samdrift*) in Troms; 3% of the dairy farms are joint farms, while the national average is 14% (SLF, 2011). Joint farming has been seen as a strategy for future expansion, helping small farms to make more efficient investments and sharing labour in a socially acceptable way (Stræte and Almås, 2007).

### *Planning for the Future of Troms Agriculture*

Motivation to take over a farm can be linked both to region and type of production. Former analyses of farmers (Bjørkhaug and Wiborg, 2010) and of individuals entitled to farms (Andgard et al., 2009) have shown that taking over a farm is less attractive in Northern Norway than in the rest of the country. Further, dairy farms and other farms with animal husbandry have been found to be less attractive than crop-based productions. Uncertainty regarding economy, lack of agricultural competence and interests in other professions are major factors. Access to a job market outside of farming, for both farmer and partner, is another critical factor, as is access to a social and professional community. With a declining population in the rural areas, the latter two criteria are increasingly not met, and represent a crucial issue in terms of structural development towards fewer and larger farms in already sparsely populated regions.

New mandatory requirements for open dairy solutions by 2024 for older barns (built or renewed earlier than 1995) and 2034 for newer barns (Mattilsynet, 2013) means that a large number of farmers are now facing the decision of whether to make substantial investments in new buildings and technology or to quit. With the current pace of units closing down in the county, there will be a great need for investment in the remaining units if even part of the decline in production is to be halted.

Public funding is available for investment support through the Rural Development Fund as a share of investment costs; however, the need is far greater than currently available funds and loans would allow (Gjengedal, 2011). An interesting aspect is that loans for investments in farming in Troms are mainly provided by Innovation Norway (a public body) and not through private banks.

Trend data (2002–2012) further showed that 37% of Troms farmers would recommend family succession (against 55% nationally), while 27% would not (against 16% nationally). The rest do not know. Figures 4 and 5 show farmers' plans in a five-year and twenty-year perspective.

In the short term (five-year perspective) more Troms farmers than the Norwegian average are determined in regard to either increasing or downscaling production. Fifty-six per cent of farmers plan to increase production. Also more Troms farmers see closing down as an option, which suggests a polarization process is going on.

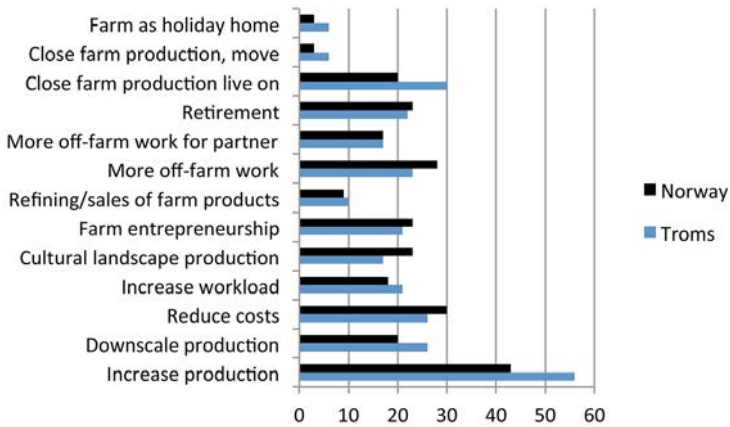


Figure 4. Plans in five years (2002–2012 trend data combined – percentages).

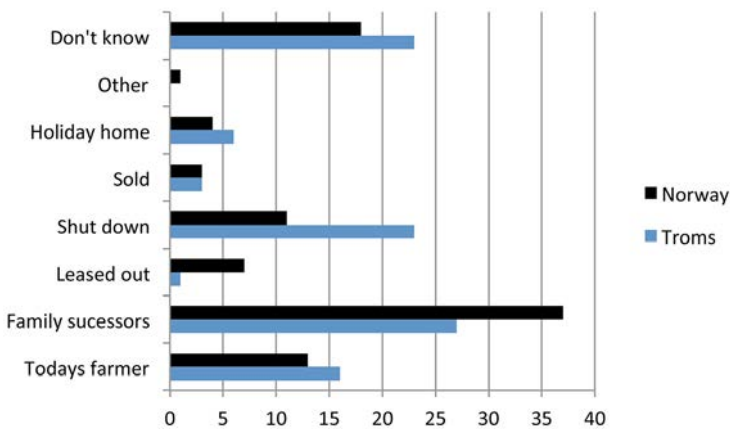


Figure 5. Plans for the farm in 20 years (2002–2012 trend data combined – percentages).

In the longer term, nearly one out of four farms plan to close down production. A little less than half of farmers (43%) believe the farm will still be in business (managed either by today's farmer or family successor) in 20 years (against 50% nationally), 23% believe the farm will shut down in 20 years (against 11% nationally); however, few will sell the farm property within 20 years (3%), meaning that others will not continue agricultural production on these units except possibly by leasing the land.

The stakeholder meeting revealed some interesting controversies and dilemmas in the current policy framework for Norwegian agriculture as well as how policy and diverging interests are dealt with by farmers' own institutions. Norwegian farmers' organizations meet with the government for yearly negotiations on agricultural subsidies. The need for a united and coherent voice on a national basis does make it difficult to negotiate for special regional or production needs – and also particular needs and compensation in time of crisis, as they might affect the total national agricultural budget. A harmonic strategy of equality, implying the same production should lead to the same income levels everywhere, has been a tradition in negotiations between state and farmers. This makes market-oriented or regionally based strategies, such as developing 'Arctic', 'fjord' or 'mountain' agriculture, a difficult policy strategy. However, we do find new political strategies for Arctic agriculture in national policy documents since 2010 crisis of Troms agriculture (Ministry of Agriculture and Food, 2011). Thus, research and development might focus on, for example, Arctic qualities in grass and vegetables, meat, and marketing potential for Northern Norway agriculture.

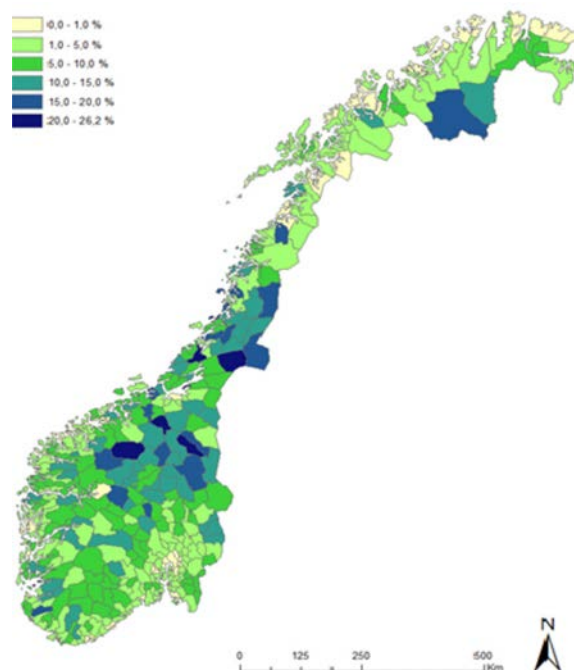
The Troms stakeholders also pointed to higher production costs in the north, such as transport costs for feed and fertilizers, technological investments, and also higher costs of farm investments due to low competition on professional competence. With this, increased access to private (local banks) and public (Innovation Norway funds) loans was called for.

The issue of carnivores was also raised. This is an issue of increasing concern not related to the crisis as such. Major parts of Troms farmers' and Sami grazing areas for sheep, cattle and reindeer are located in areas that have seen a strong increase in carnivore numbers, and high lamb and reindeer calf losses undermines motivation, breeding programmes and future planning. The monetary compensation does not compensate for the psychological strain or the economic losses linked to losing breeding animals.

The crisis was thought to have mobilized partnerships as well as local support for agriculture outside the agricultural community. It also enforced and enabled collaboration between farming communities and local and regional government bodies. Strengthened local or regional alliances were pointed out as a positive externality of crisis. Whether this is a short term or also a long term effect remains to be seen.

### *Agriculture's Role in Employment and Settlement*

As shown above, a large share of Troms farmers have shut down recently and many plan to shut down production in the near future. Patterns of decreasing land use are also emerging, which implies that remaining farmers are not able to utilize farmland on closed production units. Policies have stressed agriculture's important role for rural viability until now, and an objective is to develop Norwegian rural areas based on agriculture and the resources found in rural areas. Figure 6 illustrates that agri-



**Figure 6.** Agriculture's role in employment (2008).

culture is less important for employment within the best agricultural municipalities (lighter areas) (e.g. the counties surrounding the Oslo fjord) than in more marginal agricultural areas (darker areas), typically mountains, fjord areas and Northern Norway.

Structural development within agriculture has had significant influence on employment and settlement in the municipalities of Troms. Within the county, a centralization towards the more densely populated areas is taking place. There is a correlation between the closing down of active farms and declining population numbers in municipalities where the primary sector constitutes a major employer. In other words, the more important<sup>2</sup> agriculture is for employment and settlement, the worse the effects of farm closure.

### **Crisis? What crisis?**

Farmers in rural areas of Norway enjoy a general high standard of living and modern lifestyles. Although farm income is low, most Norwegian farm households supplement it with off-farm income or diversification, which means that average farm household income is relatively good but working hours are long.

Climate change might even be positive for parts of agriculture Norway and Northern Norway to some extent. For some a wetter, wilder climate with greater variations is forecasted, but also potentials for higher yields, and crops may be produced at higher altitudes and further north than previously, as average temperature increases. Yet, so far this does not seem to reduce what in agriculture internally is experienced as negative structural and economic conditions.



The crisis in 2010 revealed a lack of robustness of the farms, but also of the system of compensation. On paper, the Norwegian agricultural sector has a system that to some extent should take some of the economic burden of a failing season. However, design and format does not reflect the actual regional differences and challenges such as cost of long transport for supplementary feed, etc. Also, each farm holding needs to pay a certain minimum fee per property to release compensation for loss. When some farmers operate up to 10 leased farms this cost becomes significant (Gryteland, 2013).

Without better adjusted agricultural policies and measures, including investment and climate funds, the strong restructuring within agriculture in Troms will continue in its present form. This means that sustainable full-time farming will be impossible for most farmers, and many will have to diversify into a more differentiated agriculture in terms of modern pluriactivity if agriculture is to have an impact for employment and settlement in the future in Troms. However, long distances and peripherality are major handicaps in this respect, and these, in addition to a reluctance to diversify among Troms farmers, were probably some main factors contributing to low levels of pluriactivity.

'Viable agriculture all over the country' is still defined as a major objective for Norway's agricultural policies. Statistical analysis in this article shows that there is considerable restructuring going on in terms of the closing down of farm units, high share of land lease, and also land abandonment. The developments in Northern Norway are of utmost concern in terms of keeping up a sufficient level of food production, which in turn maintains the whole infrastructure of dairies, slaughterhouses, attached food and delivery industries, viable rural areas as well as cultural landscapes and biodiversity. Lost production and income due to the bad weather in crisis year 2010 has reinforced the situation, and may also be seen as a reminder of what may be expected in terms of climate change's influence on farming. While the situation in Troms to some extent has been seen as extreme, the analysis above illustrates the key developments that are occurring in many parts of rural Norway.

The European model of agriculture, and multifunctionality, provides, according to McMichael (2012), arguments for food sovereignty, self-sufficiency, and family farming that are also applicable to the developing world. They have the capacity to become part of a loose alliance of new (and recovered) approaches to agriculture around the world. Almås and Campbell (2012a) strongly endorse McMichael's argument that European multifunctional policy is important because it can align potentially with other ways of undertaking agriculture in other parts of the world. The year 2014 is the international year of family farming. From being seen as obstacles to modernization and development, there is an increasing acknowledgment, also within FAO, that these systems are the only ones so far that can ensure that large parts of the population in the developing world have an acceptable standard of nourishment, and that this ought to be secured (FAO, 2013). A multifunctional approach might be one model to follow.

Is agriculture in peripheral, marginal areas in the North relevant in a global context of climate change and focus on increasing food production? One criticism against the Norwegian multifunctional model is the moral question of whether a country like Norway can 'afford to have environmentally-oriented agricultural policies that potentially restrict supply at the same time as being concerned about the limited supplies of food' (Rønningen et al., 2012, p. 92). Another factor is the trade leakage of foodstuff from neighbouring Sweden, and declining consumer and voter

support of the model. While all surveys show high support and legitimacy of Norwegian agriculture (Norsk Monitor, 2011), the willingness to support Norwegian production must also be shown through real consumer behaviour.

The objectives of supporting (agri)cultural landscapes and viable agriculture all over the country are still evident in the recent White Paper on agriculture, but the direction of political signals under the previous 'red-green' coalition government shows that the neo-productivist path has strengthened (Rønningen et al., 2012). The new 'blue-blue' coalition has challenged the present agricultural system and might indicate that changes are in the making (Government Declaration, 2013). The strength of the post-World War II Norwegian agricultural model is yet to be tested and future directions to be outlined. However, fragility in the system did come to the fore with one year of 'bad weather'. From a food security perspective, it may be a risky strategy for Norway to let the extensive family farming systems go. Troms farmers, however, want to be full-time farmers, but based on analyses in this article, this might be economically unsustainable.

The future of Arctic and other marginal agricultural systems are to be negotiated among motivated producers, consumers and sufficient institutional and political support. Keeping up a critical mass of agricultural production to sustain production for a multitude of functions and industries might be less expensive than re-stabilizing a neglected agricultural system when food requirements or environmental values change. A renewal of multifunctional goals of agriculture might also be necessary in Norway.

## Notes

1. For trend-data details, see Rye and Storstad, 2002, 2004; Vik and Rye, 2006; Vik, 2008; Logstein, 2010, 2012.
2. Calculations are based on Statistic Norway work and demography register data and SLF statistics on production register data.

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## **The Rural under the Common Agricultural Policy of the European Union: Sustainable Rural Development aspects of Pillar II in Finland and Estonia**

MICHAEL KULL, OLLI VOUTILAINEN, STAMATIOS CHRISTOPOULOS  
AND RAMON REIMETS

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**Abstract.** National ministries of agriculture and competent EU authorities currently have the reforms of the EU's Common Agricultural Policy (CAP) high on their agendas in terms of planning and designing the upcoming programmatic period. Also subjected to this debate are the allocation of the budget to each pillar and their territorial impact.

The interest of this article lies with two interrelated aspects. The first comprises an overview of the Pillar II budget and how this is allocated within EU member states. The second considers how these measures relate and contribute to the improvement of the socio-economic situation and the state of the environment in rural areas of the EU in general, and in Estonia and Finland in particular. Seemingly, the way funding has been allocated thus far, with a heavy focus on agriculture and directly related activities, is not appropriately suited to facilitate a holistic improvement of the state of rural areas of the EU, while it does not reflect the contemporary economic transition processes in these areas. In terms of protection of the agri-environment, Finland exhibits an unprecedented coverage of areas under environmental support measures, as a Pillar II component, while implementation of the same policy in Estonia results currently in the coverage of less than half of the potential areas. The imbalances in the two countries in terms of actual financial support per hectare are also considerable.

To facilitate sustainable development in such areas as a whole, policy streamlining should not be broken down into objectives to be reached via broad actions that address particular sectors, and it should not attend to the satisfaction of sectoral interests. Rural areas and their economies, in terms of sustainable development, should be approached in an integrated manner, enabling this process to

Michael Kull is Principal Research Scientist at MTT Agrifood Research Finland, Latokartanonkaari 9, 00790, Helsinki, Finland; email: <michael.kull@mtt.fi>. Olli Voutilainen is Research Manager at the Levón Institute, University of Vaasa, Vaasa, Finland. Stamatios Christopoulos is Energy and Environment Programme Analyst at the United Nations Development Programme, Bratislava Regional Centre, Bratislava, Slovakia. Ramon Reimets is Ph.D. Candidate, Department of Geography, University of Tartu, Tartu, Estonia. The authors would like to thank three anonymous reviewers for their constructive comments on earlier drafts of the paper. Michael Kull's contribution to this article was funded partially by the Academy of Finland, grant no. 1134103, and by the Estonian Targeted Funding Scheme, grant no. 014006. These contributions are kindly acknowledged.

**advance in a holistic and territorial fashion, taking into account all the necessary dimensions of sustainability.**

## Introduction

It has been more than two decades since the Brundland Report (WCED, 1987) paved the way to the 1992 Rio Summit, defining sustainable development (SD) as development that can meet the needs of the present without compromising the ability of future generations to meet their own needs. Undoubtedly, agriculture as a 'generator' of food and income and a 'manager' of natural resources is connected to all three (economic, environmental and social) pillars of SD. Agriculture was put centre stage for the United Nations Conference on Sustainable Development (UNCSD) in 2012 or Rio+20. Agriculture, in years of famine and rising global food prices became a dominant concern in terms of SD. As argued by Rio+20 coordinator Brice Lalonde it is impossible to work on agriculture in isolation. According to Lalonde, work on agriculture should be done in conjunction with other goals: land use, biodiversity, water and women's empowerment, among others, in the context of SD (Goldenberg, 2011).

For Europe, agriculture has meant common and fruitful development for the better half of the last century through its Common Agricultural Policy (CAP), and reforming exercises have been common between what we now call 'programmatic periods' of a six-year cycle. Starting with the cautious mainstreaming of environmental concerns during the 1980s<sup>1</sup> into the CAP, its 'green' reformations and redesigning continue to be high on the agenda of national agricultural ministries and discussed in various EU institutions. The case of the reform for the upcoming programmatic period (2014–2020) is no different than the forethought proposals to make the CAP a more effective policy for more sustainable agriculture and vibrant rural areas.

Nevertheless, alignment with processes elevating business-as-usual rural development to sustainable rural development is moving slowly, since former Agricultural Commissioner Fischer Boel once more rejected the idea of integrating RDP into Regional Policy in 2009 – as this would endanger the 'truly rural focus' of Pillar II (Agra Europe, 2009). A strong counterargument has been made in the much-cited Barca Report. Barca (2009) is in favour of bringing 'the RD actions of the EAFRD [European Agricultural Fund for Rural Development], the territorial actions of the Fisheries Fund and any other Commission interventions to support territorial development under the umbrella policy heading of cohesion policy, as Structural Funds.'

Among the various issues on the reform menu, the ratio of the budget allocation under the CAP as well as the budget allocations within each pillar will be reviewed.<sup>2</sup> There are different scenarios that made it into the reform discourse:

- preserving the current structures;
- (re)integration of measures meant to enhance the quality of life in rural areas and to diversify the rural economy into cohesion policy and the Structural Funds (Committee of the Regions, 2010);
- a three-pillared CAP focusing on the viability of rural areas and on welfare and inhabitants in a holistic way (European Rural Alliance, 2010);
- including a new pillar on 'public goods' (Zahrnt, 2009);
- greening the CAP (Baldock and Hart, 2013; Hart and Menadue, 2013).

This article is meant to contribute to the reform debate. It sheds light on how public spending is targeted at socio-economic and environmental challenges in rural areas

during the funding period 2007–2013. The CAP measures in place and their socio-economic and environmental impacts are approached through a discussion of the changing meaning of agriculture in the EU. This is important for our understanding of the links between socio-economic trends in rural areas and the priorities set in rural policy, materialized in financial support provided for specific groups and measures. Furthermore, we analyse rural trends, the socio-economic situation in the EU's rural areas as well as in Estonia and Finland.

The first two sections of this article are meant to contextualize our empirical findings outlined in Sections 3 and 4.

The first section provides a synthesis of theoretical reflections on rural development policy (RDP), in particular as far as the territorial impact of RDP is concerned. We also discuss the changing meaning of agriculture in the EU and contrast this with central perceptions and expectations linked to the new rural paradigm.

In Section 2 we provide a short overview of the anatomy of the CAP and its pillar structure in the funding period 2007–2013 and show how RD funding was reduced over the past years.

In the third section we examine the funding streams that are meant to improve the socio-economic and environmental situation in rural Europe and decided upon by national authorities to be approved by the European Commission. Furthermore, we consider how the allocation of rural development funds reflects the socio-economic developments analysed in the fourth section and how these funds meet the needs of the rural population and rural enterprises. We have studied the budget allocation in the rural development (RD) pillar in all 27 EU member states and thus how the CAP in the funding period 2007–2013 was meant to contribute to RD in Europe's rural areas. We also discuss approaches meant to improve the state of the environment in Estonia and Finland.

In the fourth section we analyse and discuss rural trends and the socio-economic situation in the rural areas of the EU and the Organization for Economic Cooperation and Development (OECD) in general, and in Estonia and Finland in particular.

Overall, in this article, we analyse the changing meaning of agriculture and the socio-economic development in rural areas over the past two decades linked to the question of whether these developments are in line with the priorities set in rural policy/overall SD context and materialized in financial support provided for specific groups and measures under the rural development pillar of the CAP.

Our findings suggest that from a place-based perspective looking beyond sectoral borders, the current allocation of funds, heavily focused on agriculture, is ill-suited to boost SD in rural Europe. A move from 'agricultural' RD to a more holistic set of policies focusing on places and cohesion, such as suggested by researchers and practitioners favouring a new rural paradigm, has not taken place. Our argument is that the current design of the CAP fails to improve the socio-economic situation and environmental challenges in rural Europe. Our findings are also in line with earlier research by Dwyer et al. (2007) and their findings that the CAP is implemented in fairly conservative institutional structures.<sup>3</sup> The space given for multiple levels of government and various local stakeholders as envisaged under the new rural paradigm is restricted through marginal funding available to be implemented via new governance structures that emerged under the LEADER initiatives. Instead of targeting various sectors of rural economies at times when jobs are lost in the primary sector and outmigration continues, a considerable share of policy measures under

the CAP, lacking a social dimension, continues to be addressed at agriculture with a few recipients receiving the lion's share of funds.<sup>4</sup>

Our research data for Sections 3 and 4 stem from statistics made available by the European Commission's Directorate General for Agriculture and Rural Development (DG Agri), by Eurostat, by national and regional RD plans and public authorities, as well as by the OECD.

The first section is a synthesis of primary and secondary sources on RD, specifically on territorial and cohesive effects of funding measures. The new rural paradigm is part of the focus of our theoretical discussion too, particularly its link to the changing meaning of agriculture and the related ideational change in the objectives of agricultural policy, its key target sector, the main tools selected and the key actors in policymaking.

### **Theorizing Change in Rural Europe**

#### *Territory and Cohesion: The Neglected Dimensions in Rural Development*

The amount of economic analyses of the CAP and its implications on the implementation of or integration with wider SD concerns is considerable. As far as qualitative reviews of RD measures are concerned, many elements are available in the impact assessments of the European Commission and the member states. Broad comparative studies of the impacts of the RD measures in several member states have also been developed (e.g. Dwyer et al., 2002), focusing on budgetary studies, analyses of RD programmes and including interviews with policymakers and experts. The same methods have been implemented for the analysis of targeting of RD measures in the programmatic period 2007–2013 (e.g. Critica, 2007). Moreover, transnational views have been exchanged on RD policies for the programmatic period 2007–2013 and even beyond 2013 (Land Use Policy Group and Bundesamt für Naturschutz, 2007). A number of budget- and statistics-oriented reviews of RD measures try to understand geographical distribution and economic levers (e.g. Shucksmith et al., 2005).

Since the early 2000s, there has been a growing interest in the territorial or regional impacts of the CAP, such as in regional and distributional issues (Anders et al., 2004). Yet there are only a few studies on the territorial effects of the CAP. Theoretical and empirical evidence on regional redistributive effects of the CAP is still limited (Anders et al., 2004; Shucksmith et al., 2005). Whilst earlier analyses rarely focused on more than farming, some of the latest studies have approached the subject from a non-sectoral, territorial perspective.<sup>5</sup>

Several studies focusing on the CAP's impacts on cohesion have shown that Pillar I counteracts a balanced territorial development across the EU. This is mainly due to the fact that its distribution is inconsistent with the economic and social cohesion objectives of the EU. Whilst Pillar II measures are more suitable to contributing to territorial cohesion, its potentials are not fully utilized (Shucksmith et al., 2005). The major problem with the CAP is that most of the policy and support measures are restricted to farms and farmers only, while the proportion of rural inhabitants engaged in farming is decreasing in all member states (see below). This has led to a policy framework where the poor and the vulnerable are not really considered.

If it comes to the spatial allocation of agricultural and RD support, the most extensive study on the EU has been conducted by the European Spatial Observation Planning Observation Network (e.g. the 2004 ESPON Project 2.1.3; Shucksmith et al., 2005). Shucksmith et al. (2005) looked at the allocation of support provided by the

CAP at the regional level (NUTS 3) across the EU. The project was primarily focused on economic and social cohesion but also on competitiveness and, to a lesser degree, on SD.<sup>6</sup> The main conclusion of the ESPON project was that, in sum, the CAP has worked against the objectives of balanced territorial development and has not supported the objectives of economic and social cohesion.

Moreover, in terms of poly-centricity at the EU level, Pillar I favours core areas over Europe's periphery. At the local level, the CAP favours areas that are more easily accessible. According to the ESPON project, some of the recent CAP reforms have ameliorated these conflicts of objectives. Direct income payments, for instance, are distributed in a more consistent and cohesive way. This was not the case as far as market-price support is concerned. Furthermore, higher levels of Pillar II payments are associated with more peripheral regions than is the case with Pillar I support. According to Shucksmith et al. (2005) there is the scope to amend Pillar II to foster cohesion, but the potential is not sufficiently realized.

Whilst the CAP has extended its objectives beyond a sectoral policy to become increasingly concerned with spatial development, most of the subsidies are farm based. Regions have only limited power to affect the implementation of these policy measures. One reason and explanation for this is the nature of policy implementation, institutional legacies and path dependencies. Traditionally, agricultural policy has been exogenous development. One of the main elements of exogenous development is that RD is considered to be externally determined and implanted into particular regions (Terluin, 2003).

Endogenous development, in contrast, can be understood as local development, largely based on local resources and mainly triggered and propelled by local impulses. Many regional and RD studies concluded that policy measures focusing on endogenous development are more effective than exogenous development measures (Terluin, 2001, 2003). This goes hand in hand with the notion that SD should utilize endogenous knowledge (Ostrom et al., 1994).

In spite of notable socio-economic differences between regions within EU member countries, the weights of the separate CAP measures can be remarkably in the same direction between these regions. In addition, the regional differences between the relative weights of the measures cannot necessarily be explained by the differences between regional characteristics or by the regional differences between the needs for regional development (Terluin, 2003; Dwyer et al., 2007; Tietz and Grajewski, 2009).

While modelling the impacts of the CAP Pillar I and Pillar II measures on local economies in Europe, Psaltopoulos et al. (2011) showed that local economy linkages play a major role in the economic impacts of the CAP. These results are comparable with the study by Uthes et al. (2011), who analysed regional impacts of abolishing direct payments of the CAP. By combining participatory methods and farm-level modelling in four European regions, located in Germany, Denmark, Italy and Poland, they found that the initial characteristics of the regions, such as the historical farm structure and regional site conditions, have strong impacts on direct support elimination and cause regionally different development trends. Uthes et al. (2011) argue that an explicitly regional focus is crucial for future policy analysis.

### *The Changing Role of Agriculture in the EU and the New Rural Paradigm*

Agriculture, apart from its environmental meaning, has various socio-economic meanings, also linked to the type of rural area one looks at. Agriculture also has dif-



ferent meanings and allows for different interpretations if it comes to its function in the realm of RD. One important framework for structuring the relationships between agriculture and RD is the concept of the 'new rural paradigm' by Van der Ploeg and Marsden (2008). Those accepting the emergence and manifestation of this paradigm perceive RD as a largely autonomous, self-driven process. Agriculture will continue to play a key role in RD, although its role may well change. (Knickel and Renting, 2000; Van der Ploeg and Marsden, 2008). Whilst, according to this view, RD is, in many ways, based on agriculture, it is also perceived as being part of agricultural development. According to some, different levels of RD can be identified: farm, farm household, regional and global levels (Knickel and Renting, 2000). This is, however, a somewhat oversimplified view, especially as far as the multilevelled structures of policymaking are concerned. Village associations, local action groups, municipalities, and, last but not least, different actors from various EU institutions are becoming increasingly important. However, according to some research, particular sectoral interest groups enjoy easier access to the national and EU decision-making centres.<sup>7</sup> Concerning Finland, Uusitalo (2009) zooms in on politicians and civil servants and demonstrates how skilful social entrepreneurs can succeed in policy practice, but also how a few individuals or representatives of partial interest (e.g. food industry) were able to have a clear impact on, if not to dominate, fundamental decisions as to the overall policy framework.

Van der Ploeg and Marsden (2008) claim that the spatial role of agriculture in connection with social aspects and changing meanings of agricultural production is crucial in the development of rural areas. Thus, in their view, 'a new theory of RD that integrates social and spatial approaches; a theory that enables scholars, policymakers and practitioners to fully appreciate the rich and manifold expressions of differentiated RD' is needed (Van der Ploeg and Marsden, 2008).

Compared to Van der Ploeg and Marsden's paradigm, the new rural paradigm conceptualized by the OECD has its emphasis on non-agricultural activities, this means on the various sectors of rural economies (OECD, 2006, Table 1).

According to the new rural paradigm as visualized above, rural areas should be perceived and analysed in a holistic way, with agriculture being an 'equal' part. Whilst farm income and competitiveness are objectives of the 'old approach', the competitiveness of rural areas, the valorization of local assets and the exploitation of unused resources are the key objectives of the new approach, at least in theory.

**Table 1.** The new rural paradigm.

	Old approach	New approach
Objectives	Equalization, farm income, farm competitiveness	Competitiveness of rural areas, valorization of local assets, exploitation of unused resources
Key target sector	Agriculture	Various sectors of rural economies (rural tourism, manufacturing, ICT industry)
Main tools	Subsidies	Investments
Key actors	National governments, farmers	All levels of government (supranational, national, regional and local), various local stakeholders (public, private, NGOs)

Source: OECD, 2006.

Before we link socio-economic development, including the changing meaning of agriculture (Section 4), to the current funding streams and thus the priority of policy (Section 3), we show that already at the EU level, reduced funds for RD at the expense of more funding, made available for agriculture as a key targeted sector, do not speak for a favourable policy environment for the new rural paradigm to unfold. Especially not in the context of the Europe 2020 Strategy, which is advertised to offer a 'response to the new economic, social, environmental, climate-related and technological challenges facing our society', with a 'CAP that can contribute more to developing intelligent, sustainable and inclusive growth'.

### **The Common Agricultural Policy in the Funding Period 2007–2013**

The original objectives of the CAP were laid down in Article 39 of the Treaty of Rome. The objectives of Article 39, having been subject of reinterpretation thereafter, are:

1. increasing agricultural productivity;
2. ensuring a fair standard of living for farmers;
3. stabilizing markets;
4. guaranteeing food security; and
5. ensuring reasonable prices for consumers.

Environmental, territorial or regional (or for that matter integrated SD) aspects were not included in these original objectives. The CAP underwent a number of notable reforms or modifications, such as the 1992 MacSharry reform, Agenda 2000, the 2002–2003 Mid-Term Review, and the 2008 Health Check. This has also meant a cautious shift towards territorial considerations. The original ideational context that the initiatives for reorientation stem from stretches well beyond the discourse community in charge of CAP reforms. Overall, territorial considerations have also been strengthened in the wider EU policy environment during the last two decades. Since the turn of the millennium, several of the EU's public policies have essentially been dealing with three overarching objectives: economic competitiveness promoted by the Lisbon Strategy and the EU 2020 agenda, SD supported by the Gothenburg Strategy, and territorial cohesion.

CAP reforms and reviews put in place during the past two decades triggered restructurings of both the institutional and the budgetary anatomy of the CAP. The CAP in 2007–2013 is built on two pillars. Pillar I is concerned with the management and payment of direct aids and decoupled payments to farmers, subsidizes exports and provides market support. Pillar I continues to consume the lion's share of the CAP budget.<sup>8</sup> Pillar II, the RD pillar, is meant to enhance the quality of life in rural areas and boost the rural economies, to improve the state of the environment as well as to improve the competitiveness of the agricultural and forestry sector. Six strategic guidelines for RD were formulated to form the foundation of RD actions in 2007–2013:

1. improving the competitiveness of the agricultural and forestry sectors;
2. improving the environment and countryside;
3. improving the quality of life in rural areas and encouraging diversification;
4. building local capacity for employment and diversification;
5. translating priorities into programmes;

## 6. complementarity between community instruments.

Pillar II measures are implemented through national and regional RD programmes. To realize the objectives of the CAP's second pillar and to implement RD funds, four axes have been set up (Figure 1). Axis 1 is to improve the competitiveness of the agricultural and forestry sector. Axis 2 is to improve the environment and the countryside. Activities under Axis 3 are meant to enhance the quality of life in rural areas and to diversify the rural economy. In addition to these three thematic axes, the horizontal LEADER axis (Axis 4) is to contribute to the accomplishment of objectives under all previous axes, often focused on enhancing the quality of life in rural areas and the diversification of the rural economy. The basic rationale of the LEADER axis is area-based local development strategies to be implemented in a bottom-up fashion by local public-private partnerships, the so-called Local Action Groups (LAGs).

Overall, the ratio of budget allocation under the CAP has been changed from 9:1 in favour of Pillar I about 10 years ago to 3:1 in the current programmatic period. Nonetheless, during the last few years, spending on RD was reduced, albeit not as drastically as suggested by some of the member states such as the UK (Figure 2).

### **How Much 'Sustainability' Is Included in Rural Development: Is Structural Change in Agriculture Reflected in Policymaking?**

The overarching question we are going to deal with in this section is whether the funding streams decided upon by national authorities and approved by the European Commission meet the needs of the rural populations and rural enterprises. We analyse the budget proportions within all national and regional Pillar II programmes and in all 27 member states. Furthermore, we look at agri-environmental support (Axis 2) in Estonia and Finland. These analyses reveal important differences between the member states and also within them.

While the financial structure of the CAP (and the complementary national support) – i.e. the share of each policy measure in the budget – varies a great deal between EU countries, these variations do not necessarily correspond consistently to recognizable patterns of variability in economic, social and environmental factors. Rather, the differences can reflect a more complex combination of economic and political drivers within each country (see also Dwyer et al., 2007).

#### *Funding the Rural Development Pillar of the CAP*

EU member states are able to formulate and set their own priorities for RD. Yet, Article 17 of the Council Regulation (EC) No. 1698/2005 (OJ L 277, 21 October 2005, pp. 1–40) laid down that at least 10% of the budget proportions paid by the EAFRD must be used for improving the competitiveness of agriculture and forestry (Axis 1), at least 25% to improve the environment and the countryside (Axis 2) and at least 10% to diversify the rural economy (Axis 3). All member states must spend at least 5% of the EAFRD share on LEADER-type activities (Axis 4).

Throughout the EU different areas chose different priorities. While the share of total public funding<sup>9</sup> for Axis 3 ranges from 3% on the Åland islands (Finland) to 42% in Mecklenburg-Vorpommern (Germany), the share of EAFRD funds dedicated to Axis 2 ranges from over 80% in Finland and Ireland to 24.4% in Bulgaria.



Figure 1. Pillar II and its axes.

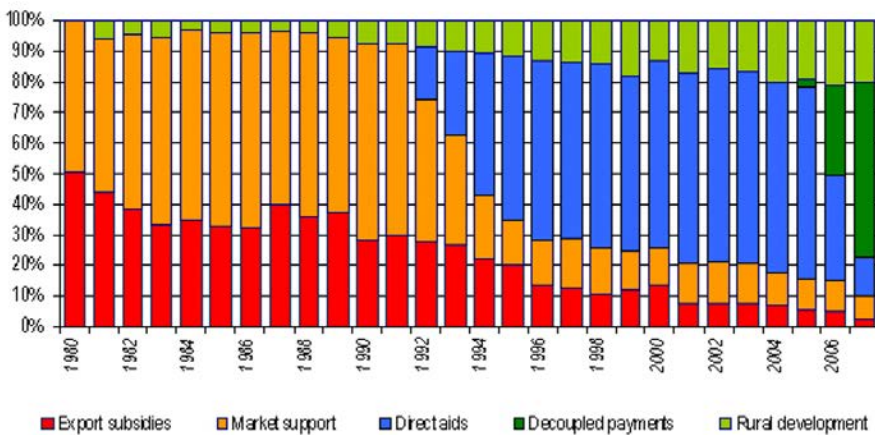


Figure 2. The development of CAP spending.

Source: <[http://ec.europa.eu/agriculture/external/dev/foodaid/index\\_en.htm](http://ec.europa.eu/agriculture/external/dev/foodaid/index_en.htm)>, accessed 1 August 2012.

In general terms, there is a clear preferential treatment of agriculture (Axis 1) and environment measures (Axis 2). Only two regions in the EU, Sachsen and Sachsen-Anhalt in Germany, seek to improve the economic situation in their rural areas through the diversification of the rural economy (Axis 3) without only focusing on the agricultural and forestry sectors. Our analysis of national and regional RD plans reveals that 24 out of 86 programmes failed to earmark at least 5% of total public funding for Axis 4. Figure 3 is meant to visualize the spending across axes. This overview of how Pillar II funds are allocated throughout the EU is also meant to visualize this ‘agricultural’ RD approach (Bryden, 2010).

This allocation of funds is noticeable if one considers the minimum requirements set by the EU and how the member states realized them. Table 2 visualizes and contrasts money earmarked by all 27 member states for all axes under Pillar II with the minimum requirements set by the EU.

Whilst the member states invested only slightly more money than was set as the minimum requirements into measures not solely focusing on agriculture (Axes 3 and 4), they chose to invest more than three times more money for improving the



**Figure 3.** Allocation of Pillar II Funds in the EU 27.  
*Source:* adapted from European Commission, 2009a.

**Table 2.** Pillar II and its axes 2007–2013: money earmarked and minimum requirements set by the EU (EU-27 level and in %).

Axis	Earmarked by member states*	Minimum requirement by EU
1	34%	10%
2	44%	25%
3	14%	10%
4	6%	5%

*Note:* \* 2% are earmarked for technical assistance.  
*Source:* adapted from European Commission, 2009a.

competitiveness of the agricultural and forestry sector and almost twice as much into environmental measures than was required by the EU.

In the case of Estonia and Finland the Table 3 shows that the selected financial structures of support payments between these axes are quite different in the 2007–2013 programmatic period.<sup>10</sup> In Finland, the heavy focus on Axis 2, known from previous programmatic periods, continues. Estonia chose to invest more than double the amount of funds into Axis 4 measures than Finland and also considerably more into measures under Axis 1 and Axis 3.

According to the Rural Development Programme for Mainland Finland (MMM, 2012) and as far as the regional rural development measures included in the pro-



**Table 3.** Distribution of axes under the CAP Pillar II (Rural Development Programmes) in the programming period 2007–2013, according to financial frameworks of the programmes in Estonia and Finland

Axis	Estonia	Finland
1	39.2%	7.8% (10.4%)
2	37.3%	81.7% (80.1%)
3	14.0%	8.9% (8.3%)
4	9.6%	3.7% (3.3%)
Total	100%	100% (100%)

Source: European Commission, 2009a.

gramme are considered, ‘the primary regional allocation criterion’ for these funds ‘was the population of sparsely populated rural areas and rural heartland areas, as well as 5% of the population of urban-adjacent rural areas’.<sup>11</sup> In the allocation of the funds, the major region of Eastern Finland was to receive at least 23% of the available funds.<sup>12</sup>

The former Employment and Economic Centres (TE-Keskus)<sup>13</sup> developed regional rural development plans with the aim of targeting specific local needs and in order to channel the funds accordingly. The Employment and Economic Centres were also asked to develop financial projections on their needs. Regional estimations were made of how much money was to be spent regionally and into which measures the money would flow. In other words, the regional priorities served as the basis for the Finnish national RDP. Pillar II is implemented by national and regional rural development programmes. Although Finland has regional rural development programmes, the regional authorities have rather modest input in the financing of RDP. In the programming period 2000–2006 as well as in the programming period 2007–2013, the share of ‘regional money’ (including the money admitted to local action groups) as part of total RDP support) was slightly over 10%.<sup>14</sup>

Estonia has a single RD programme for the entire country. The breakdown of funds between axes was based on a number of considerations. The minimum funding rates for all Axes 1–4 (10%, 25%, 10%, 5% respectively) was taken into account, as was the breakdown of resources during the 2004–2006 programming period (RDP and National Development Plan measures).

According to the Ministry of Agriculture, analyses of the socio-economic development and the state of the environment were of relevance, as well. Comparisons with similar areas in the EU and the chosen objectives were considered, too. For the fund contribution the maximum ceilings for EAFRD contribution as provided in Article 70 of Council Regulation (EC) No 1698/2005 (*OJ L 277*, 21 October 2005, pp. 1–40) were used.

As to the institutions to decide on the allocation of funds between the four axes, a Steering Committee for preparing the Estonian RDP 2007–2013 was consulted, which was also the basis for the Monitoring Committee set up later. In addition to several national ministries<sup>15</sup> this Monitoring Committee includes representatives from the national paying agency (ARIB), associations of agricultural producers and farmers, food quality and different associations and organizations based on the agricultural-production sector, associations of forest owners, educational and training institutions (agricultural sector), environmental protection organizations, associations of

rural tourism entrepreneurs, the village movement, youth and women associations and associations active in the field of social inclusion.

The government of Estonia was to finally approve both the National Strategy Plan and the Rural Development Plan. According to an official of the Estonian Ministry of Agriculture,<sup>16</sup> there still is potential in tackling the observed socio-economic and environmental challenges that rural areas are facing more strongly through the different axes of Pillar II. Agriculture, according to the official, remains an important part of rural development also in the future, but it,

‘cannot guarantee sustainability of rural areas on its own. There is a need for diversifying rural enterprises and to make rural areas more attractive as a working and living environment. Rural enterprises have to compensate for the jobs lost in agriculture due to structural adjustments of agriculture. In addition, there is a need to find a solution for out-migration of people and services from rural areas. As rural enterprises and quality of life are very strongly linked to agriculture, we think that these issues should remain as a part of CAP’ (Interviewee, Estonian Ministry of Agriculture, 28 December 2009).

The official storyline and reasoning for how the funds for RDP are supposed to be used is in some contrast to how the money is in fact used. Whilst according to information provided by the EU, funds might be used for ‘a potential extension of broadband coverage, helping small businesses, helping the food processing industry or extending childcare so that more mothers living in rural areas can return to work’ (<[http://ec.europa.eu/agriculture/faq/rurdev/index\\_en.htm](http://ec.europa.eu/agriculture/faq/rurdev/index_en.htm)>), in reality all those activities play only a relatively marginal role when it comes to the national implementation of funds. In addition to funding provided under Pillar I, a considerable amount of policy measures under Pillar II are – in some contrast to the new rural paradigm – used as farm income subsidies instead of fostering the various sectors of rural economies (rural tourism, manufacturing, ICT industry) through investments. Involving all levels of government in addition to various local stakeholders remains fairly marginal if looking at funding provided under Axis 4. Most member states chose to tackle socio-economic and environmental challenges in rural areas by improving the situation in the agricultural sector instead of using a balanced and holistic approach considering all three dimensions of SD.

### *The Disparity in Agri-environmental Support*

Within the framework of the CAP, and from a Finnish perspective, agri-environmental support is a very relevant area to look at. This is because approximately 80% of Pillar II support is allocated to environmental support and to support of less-favoured areas. Adding Estonia to the analysis, we are able to identify a disparity in support.

When one compares Finland and Estonia in an overall EU-27 context the first thing that probably comes to attention is size, as Finland is almost 30 times larger. Interestingly enough, however, as Finland is mainly a forest and lake country (with a significant land range around the Arctic Circle), in terms of UAA it is only about two times larger than Estonia. Looking more closely into the state of affairs of the agri-environmental scheme (AES) agreement there are several noteworthy issues.

Finland has been an EU member state since 1995 and through its whole country approach (and a holistic agri-environmental policy programme) has managed to include 87% (57 490) of its farms into payments for agri-environment, which accounts for 93% of the country's UAA (2 203 226 ha) according to 2011 data. In terms of funds, looking more closely into the central years of the current programmatic period, such as 2009–2010, we can see that Finland has managed to mobilize national and European resources reaching up to approx. €335 million annually, which were channelled to Finnish farms (Table 4).

Neighbouring Estonia was successfully brought to EU accession in 2004 in the framework of the enlargement, when it found itself in the middle of the previous (2000–2006) programmatic period. In terms of AES, immediately after becoming a new member state, Estonia developed a small agri-environmental programme, which is considered as a prelude to its current set of agri-environmental policy and AES. Interestingly, Estonia with a comprehensive set of AES, is, as of 2010, much more successful – in terms of policy uptake than what other EU counterparts were able to achieve in their respective first five years of membership – with 20% (4,492) of its farms under an AES regime, accounting for 46% of its UAA (1 180 100 ha). Nevertheless, the amount of financing that was channelled to Estonian farms for the protection of the agri-environment could not exceed five million Euros.

The comparison of the aspect of AES funding reaching Finnish and Estonian farms if disaggregated at the level of hectare results in a quite noteworthy figure. Per hectare, a Finnish farm seems to be receiving as much as 19 times more financial support under AES (approx. €163) than the respective unit of land on an Estonian farm (€9). This unexpected distortion for two national-level realities of the CAP is further deliberated upon in the discussion section.

## Analysing Change in Rural Europe

### *Rural Trends*

The reduced funding for rural development identified above is not in line with the socio-economic situation and the state of the environment in rural areas in the EU.

**Table 4.** Agri-environmental support (AES) regimes of Finland and Estonia in numbers.

	Estonia	% of total	Finland	% of total
Number of holdings under AES regime	4,492	19	57 490	87
Number of eligible holdings for AES contract	23 336	100	66 080	100
Total utilized agricultural area (UAA) (ha)	1 180 100	100	2 203 226	100
UAA under AES (ha)	545 371	46	2 049 000	93
Total support per AES (€)	4 866 543		335 000 000	
Ratio: UAA under AES	1.00		1.90	
Ratio: sums channelled to AES	1.00		18.30	
AES Payments (in €/ha)	8.92		163.49	

*Source:* Finland data adapted from Tike, 2011; Estonia data adapted from Estonian Ministry of Agriculture.

When it comes to the economic importance of agriculture in the regions, the socio-economic role of agriculture has diminished in all developed countries (Diakossavvas, 2006; OECD, 2008b). Table 5 demonstrates that in all OECD countries, on average, the share of agricultural employment during the period 1995–2005 decreased from 14.6% to 11% in predominantly rural areas and from 8.8% to 7% in intermediate rural areas. As far as Finland is concerned, the contribution of agriculture to employment in predominantly rural areas was 12.1% in 1995 and dropped to 8.3% in 2005. In Estonia, the contribution of agriculture to employment was 13% in predominantly rural areas and 4.8% at the national level in 2005.

Table 6 presents the declining socio-economic role of the primary sector and the increasing role of secondary and tertiary sectors at the EU27 level.

Bollman (2006) argues in this regard that the historically tight overlap between the ‘rural’ and ‘agriculture’ no longer exists, at least as far as demographic changes and labour-market transformations are concerned. Diakossavvas (2006) comes to the same conclusion, arguing that the importance of agriculture in terms of employment and income effects has decreased in all OECD countries. In addition, a notable part of primary production is situated in urban or adjacent rural areas. Agriculture is one but not the only economic activity in rural areas. The rural has changed from a sort of ‘national rural space’, based on agriculture as the central place in both spatial and political terms, to a ‘differentiated set of regional formations’, based on a range of functions and potentials, either within or outside the agricultural sector (Bremen et al., 2010). Terluin (2003) claims that the image of rural Europe – the scene of losses of

**Table 5.** Contribution of agriculture to employment by type of region, 1995 and 2005.

	Predominantly rural		Intermediate		Predominantly urban		National	
	1995	2005	1995	2005	1995	2005	1995	2005
EU 19	18.1	12.9	8.7	5.9	1.9	1.5	6.7	4.6
OECD	14.6	11.0	8.8	7.0	2.9	1.9	7.6	5.7
Estonia*		13		4		1		4.8**
Finland	12.1	8.3	7.1	4.2	1.0	0.6	7.9	5.1

Notes: \*rough estimates based on calculations adapted from European Commission, 2009b; \*\* 2006 data.

Source: OECD, 2008b; European Commission, 2009b.

**Table 6.** The socio-economic situation and development.

	Share of employment in 2006, % total employment	Share of GVA in 2006, % total GVA	Average annual growth rate of employment in 2000–2006 % per year	Average annual growth rate of GVA in 2000–2006 % per year
EU27 – primary sector (incl. agriculture and forestry)	5.9	1.7	–2.2	–0.1
EU27 – secondary and tertiary sector	94.0	98.2	1.0	2.1

Source: European Commission, 2009b.

population and jobs, largely associated with the idea of a rapid decline of employment in a supposedly dominant agricultural sector – needs to be rethought.

In this sense, new analyses highlighting the different connections between agriculture and RD and related policies and their implementation are needed (Dia-kossavvas, 2006; Van der Ploeg and Marsden, 2008). Breman et al. (2010), for instance, answer to this call by focusing on the relationship between agricultural and RD through the concept of marginalization. According to Breman et al. (2010), at times the EU's Lisbon strategy travels further into the rural, aspects of cohesion are given both growing importance and more awareness. Reform debates on the CAP, too, renew the concern with processes of marginalization in the more peripheral regions of Europe. It is being recognized gradually that these marginalization processes are multidimensional in nature, not only affecting the sphere of agriculture but also rural communities in the wider sense. Breman et al. (2010) conclude that 'the concern for marginalisation processes does not only relate to the future of agriculture itself in its production function but also to a much wider range of related issues such as the socio-economic dynamics of an area, the loss or simplification of cultural landscapes'. Similarly, as studies on Portugal and Finland have shown, the developments of agriculture and socio-economic development of other rural activities do not always interrelate (Breman and Pinto Correia, 2003; Vihinen et al., 2005; Voutilainen et al., 2009; Voutilainen, 2012).

As the socio-economic characteristics differ significantly both within the EU and, importantly, also within each member state, zooming in on a higher level of aggregation in order to look at the specific situation in rural regions is sensible.

#### *Socio-Economic Development and Structural Change in Agriculture in Estonian and Finnish Rural Areas*

Agriculture in both Finland and Estonia has witnessed notable structural changes during the last few decades. Productivity has grown. At the same time, the number of agricultural jobs and the number of farms have decreased rapidly. The share of primary production in many rural areas has become marginal.

The structural change of agriculture in Estonia took place later than in Finland. During the past decades there was one major abrupt structural transformation in Estonian agriculture. This occurred right after the collapse of the Soviet Union with the re-establishment of private property in Estonia. Large collective farms ceased to exist and were replaced by a large number of very small farms trying to produce goods for self-consumption and also for selling. After this abrupt change, we have been witnessing a contrary process that is scattered over a wider temporal period, with the total number of agricultural holdings decreasing. At the same time, the number of bigger agricultural holdings is rising, as is the utilized agricultural area (UAA). This process was also propelled by Estonia joining the EU (Table 7).

In Finland, the development in terms of annual change after joining the EU was not as dramatic and quick as in the case of Estonia. Looking at the change in the number of farms during the period 2003 to 2005 in Finland, the number of farms decreased from 74950 to 68230. According to Statistics Finland, approximately half of the Finnish farms are situated in core rural municipalities.<sup>17</sup> In addition, compared to the average, the farms are larger in core rural municipalities.

In 2007, 3% of all jobs in Finland were in agriculture. Whilst the share of the primary sector in all jobs was similar in Estonia and Finland at national average and in



**Table 7.** Structural transformation in Estonian Agriculture 2001–2010.

Year	Number of holdings	Agricultural land, ha	Standard gross margin, ESU*
2001	55748	871213	138856
2003	36859	795640	134713
2005	27747	828926	135381
2007	23336	906833	178297
2010	19460	940930	

Note: \* European size unit (ESU) is equal to the value of the standard gross margin of 1,200 euros (18768 kroons).

Source: Statistics Estonia.

predominantly rural areas, the countries differ as to intermediate rural areas. What is more, the significance of agriculture as a source of employment continues to diminish in all rural areas in both countries (Table 8).

The number of jobs in primary production has proportionally decreased in all Finnish rural areas and in Estonia as a whole. A major part of the farm household income comes from other sources than agriculture. In 2007, the share of agricultural holders with other gainful activity in Estonia was 44% (Eurostat; OECD, 2008b). In Finland, the share of agricultural holders with other gainful activity increased from 21% to 28% in 2000–2007.

In 2008, the average share of farm income of the total income of farms was 41%. At the same time, the service sector became the most important economic sector in all rural types. Job losses in the primary sector have been compensated by new jobs in the refinement sector<sup>18</sup> and especially in the service sector (Table 9).

Regional divisions of labour lead to strong diversification and polarization of areas as a whole as well as between different types of rural areas. Some studies (Katajamäki, 1991; Kuhmonen, 1996, 1998; Pyykkönen, 2001) have shown that the structural development of agriculture differs between regions and can have notable different regional effects depending on the type of the region. The most challenging situation seems to be in remote rural regions, where the role of agriculture as an employer, for instance, can still be crucial.

Overall, the structural changes in agriculture as discussed above had considerable impacts on the socio-economic situation and development in Finnish and Estonian rural areas (Table 10). In 2009, more than 40% of the Finnish population lived in predominantly rural areas, but the number was on the decline between 1995 and 2009 (–1.2% mean annual change). The figures in Estonia are even more dramatic with a mean annual population change of –10.4% in predominantly rural areas. Outmigration occurs into intermediate rural areas (Finland +3.2% annually; Estonia +1.3% annually) as well as into urban areas. In Finland, the mean annual change in these areas was about 11% between 1995 and 2009.

In Finland, socio-economic challenges are obviously the greatest in sparsely populated rural areas (Table 11). Urban–rural areas are more similar to urban areas than to core rural areas or sparsely populated rural areas.<sup>19</sup>

The differences in the trends between these areas are very clear, and the gap seems to be growing still. This means that the population of the core rural areas and sparsely populated rural areas will continue to decrease as, especially, young and working-age people move to population centres. The share of urban-adjacent and sparsely populated rural municipalities has grown, while the share of core rural municipali-

**Table 8.** Situation and development in Estonian and Finnish agriculture by type of region.

	Estonia				Finland			
	PU	IR	PR	Total	PU	IR	PR	Total
Share of primary sector in all jobs in 2007, %* (agricultural jobs in brackets)		1.4	9.0	4.6	0.6 (0.4)	4.5 (3.3)	8.6 (5.3)	4.9 (3.1)
Mean annual change in the number of jobs in the primary sector in % (EST 2004–2010, FIN 1995–2007)**				–5.7	–2.1	–3.1	–2.9	–2.9
Number of farms (in 2007; share of all farms in brackets)*		2,208 (9.5)	21 128 (90.5)	23 336 (100)	2,781 (4.2)	20 949 (31.3)	43 208 (63.4)	66 938 (100)
Change in the number of farms in % (EST 2003–2007, FIN 1995–2009) **		–45.9	–35.5	–36.7	–33.0	–33.1	–36.0	–35.8
Change in economic size of farms between 2003 and 2007, %*				108.8				56

Notes: PU = predominantly urban, IR = intermediate, PR = predominantly rural.

Source: \* adapted from European Commission, 2009b; Statistics Estonia; \*\* raw data adapted from Estonian national data, Statistics Estonia and Statistics Finland.

**Table 9.** Economic structure in 2007 according to Finnish rural typology (in 1995 in brackets), based on the number of jobs (Statistics Finland).

Type of municipality	Primary production	Refinement	Public services	Private services	Unknown	Total
Urban municipalities	1.2 (2.2)	23.4 (26.0)	32.5 (32.3)	42.1 (37.5)	0.9 (2.1)	100 (100)
Urban-adjacent rural municipalities	5.5 (9.5)	32.9 (33.2)	30.3 (29.3)	29.7 (24.9)	1.5 (3.1)	100 (100)
Core rural municipalities	12.9 (19.8)	30.8 (28.0)	30.0 (27.4)	24.9 (22.0)	1.3 (2.8)	100 (100)
Sparsely populated rural municipalities	16.5 (23.1)	23.5 (20.6)	31.8 (30.0)	26.6 (22.9)	1.7 (3.4)	100 (100)
Whole country	3.9 (6.9)	25.1 (26.5)	32.0 (31.2)	37.9 (33.1)	1.0 (2.4)	100 (100)

ties has decreased (Malinen et al., 2006). Because of net migration, many rural areas continue to lose population whilst the growth centres experience population growth in Finland. Urban-adjacent rural areas have mastered the challenges of structural change most successfully.

Finland and Estonia are countries that are remarkably rural. Agriculture plays different roles depending on the type of rural area. From the viewpoint of rural development, there is a need of differentiation in policy focus that should consider the differences between different rural types and the development trajectories in these areas. If the starting point of the policy is to decrease regional differences and

**Table 10.** Socio-economic situation and development in Estonia and Finland by type of region.

	Estonia				Finland			
	PU	IR	PR	Total	PU	IR	PR	Total
Population (EST 2007, FIN 2009; share of whole country, %, in brackets)*		703264 (53.0)	624220 (47.0)	1327484 (100)	1415798 (26.5)	1636028 (30.6)	2287045 (42.8)	5338871 (100)
Mean annual population change (FIN between 1995 and 2009, EST between 2004 and 2007 per mille)*		1.3	-10.4	-4.2	10.9	3.2	-1.2	3.2
Employed persons, share of primary sector in the region in 2007, %**		1.4	9.0	4.6	0.6	4.5	8.6	4.9
Employed persons, share of tertiary sector in the region in 2007, %**		64.6	56.2	61.0	80.4	65.1	63.6	69.3

Notes: PU = predominantly urban, IR = intermediate, PR = predominantly rural.

Source: \* adapted from the raw data: Estonian national data and Statistics Finland;

\*\* European Commission, 2009b.

to improve the socio-economic situation, the emphasis and focus of the CAP and its support measures should be on weaker regions. However, the problems with policy measures under the CAP regime already observed and discussed by Schmidt-Thomé and Vihinen (2006, p. 50) in their analysis of the previous programmatic period seems to continue. According to these scholars, these policy measures are used as farm income subsidies irrespective of their original purpose. Reflecting on these missed opportunities for reform, adjusting the balance between different types of support measures should be in the focus of reforms for the upcoming programmatic period 2014–2020.

### Concluding Remarks and Discussion

This article has tried to show the changing meaning of agriculture and that there is some evidence for agriculture playing different roles in different regions (see also Van der Ploeg and Marsden, 2008; Breman et al., 2010). If we understand Breman et al. (2010) correctly, the future of rural areas should be seen through post-productivist functions, no longer based on the production of agriculture. At the same time, agriculture has to be addressed in the context of SD, integrating what is necessary to the function of its three pillars. However, there are some regional variations as to how

**Table 11.** Socio-economic development of different rural types in Finland (based on municipal classification in 2010).

	Urban municipalities	Urban-adjacent rural municipalities	Core rural municipalities	Sparsely populated rural municipalities	Whole Finland
Population in 2009 (1995 in brackets), share of whole Finland, %	63.9 (61.4)	13.7 (12.6)	13.1 (14.4)	9.3 (11.7)	100 (100)
Mean annual population change 1995–2007, %	0.58	0.98	–0.39	–1.33	0.29
Population density, inhabitants per km <sup>2</sup> (land surface) in 2005 (1995 in brackets)	74.6 (70.5)	28.2 (25.7)	13.3 (13.9)	2.9 (3.3)	17.3 (16.8)
Unemployment rate in 2007 (1995 in brackets), %*	8.5 (19.6)	6.5 (17.9)	7.4 (18.2)	12.8 (25.4)	8.5 (19.8)
Mean annual change of the number of jobs between 1995 and 2007, %*	2.1	1.7	0.7	–0.3	1.7
Mean annual change of employees' aggregate income 1995–2007 in %, based on annual face values	5.0	5.8	4.2	3.2	4.8
Mean annual change of value added in the region 1995–2007 in %, based on annual current prices	5.7	5.1	4.6	3.8	5.4

Notes: \*Finland faced a severe economic depression in the early 1990s, which caused a strong decrease in jobs and an exceptionally high unemployment rate all over the country. This also partly explains the notable strong total development in the number of jobs in Finland between 1995 and 2007. \*\* For a further discussion, see Voutilainen, 2012.

these functions and potentials materialize and are exploited, with rural territories developing along diversifying trajectories.

Very few studies claim that the CAP has limited but positive cohesion effects. The general view is that the CAP is not an effective tool to promote SD through territorial cohesion. As, according to the Lisbon Treaty and the EU 2020 strategy, 'territorial cohesion' is one of the guiding principles of EU policy – in addition to economic and social cohesion – a reformed CAP must take the territorial dimension better into account. It is also important to consider different contextual starting conditions in the regions that should be approached through the utilization of endogenous knowledge. What is more, the CAP has been affecting Europe's regions in many and different ways.

Looking at the different stages of policymaking is essential for the understanding of how the European Commission, above all DG Agri, perceives rural areas as a recipient for CAP funding. At the policy-programming level, the thinking, dominated by agriculture – characterized by extensive land use and scarce and scattered human and economic activity – and regional notions based on regional economic development, have coexisted side by side. Yet, most of the concrete policy actions directed at the countryside originated from (reformulations of) agricultural policy. As a result, farming aspects are still looming large. Whilst the terminology rural regions or countryside is used more frequently by different EU institutions, the criteria, political foundations and money flows continue to be primarily linked to agriculture (see also Voutilainen, 2012). This does not mean that this space is uncontested or that

rural areas are becoming more vibrant, with sustainable and inclusive growth as per the announcements of the reformed CAP for the upcoming programmatic period.

On the EU political level, agricultural policy is to an increasing extent connected to other common policies and to the prioritized political projects of the EU. Pressure to define EU agricultural policy in decreasingly sectoral but increasingly territorial terms is growing, and its contribution to the competitiveness of the EU, as well as to its economic and social cohesion, facilitating SD, is among the emerging political issues (Lowe et al., 2010). The promotion of equal opportunities, improvement of incomes, support for diversification and the creation of new jobs (sustainable and inclusive growth) through area-based and local initiatives such as LEADER, are goals that are shared by the CAP and the EU 2020 strategy.

On the more practical policy level, EU budget constraints, the need to improve the efficiency and effectiveness of public policies and stronger accountability requirements all indicate that the future CAP policy design will consist of more targeted policy measures with specific objectives.

Currently and unlike in the EU on average, most of the subsidies paid in Finland are paid via Pillar II of the CAP. They are legitimized by their contribution to the viability of rural areas. However, a great majority of support, approximately 80% of the Pillar II support, is allocated to environmental aid and support for less-favoured areas, which are both farm-based subsidies and paid to nearly all active farms in the country. Pillar II support comprises the essential part of the Finnish farmers' income. Hence, it can be said that in Finland, environmental aid and support for less-favoured areas are one type of income support, too (Voutilainen, 2012).<sup>20</sup> According to Linden et al. (2008, pp. 30–31), the dominant role of Pillar II has led to a shrunken difference between Pillar I and Pillar II in Finland. This is because in Finland, LFA support is paid to every active farm and agri-environmental support is paid to a majority of farms. Furthermore, agri-environmental support is paid practically on the basis of surface area (*ibid.*). According to a study by the OECD (2008a, p. 138), 'the political priority in Finland appears to be to support farmers with subsidies rather than to produce public goods or to invest for the future'. Compared to earlier, subsidies now have to be couched in terms of 'green box', ecology, landscape and biodiversity (*ibid.*). Schmidt-Thomé and Vihinen (2006, p. 50) argue that the relative allocation of resources to agri-environmental support is highest in some of the countries with the least severe environmental problems, such as Finland.

In terms of AES payments, a difference in absolute values is expected throughout EU member states as the variations between farming systems, climatic conditions, environmental problems and socio-economic realities pose tremendous challenges. The comparison between financial supports for the agri-environment, reaching a Finnish hectare vs. an Estonian hectare, was expected to show a strong difference in absolute values. Nevertheless in an EU-27 context, although Finland and Estonia have a lot of socio-economic differences to exhibit, it would be rational to argue that the two countries are not very different when it comes to farming systems, agri-environment and overall climatic conditions (especially when compared to the European South). Moreover, it is understandable that the calculations made to estimate different parameters in the economic reality of Finnish and Estonian farms (e.g. income forgone, transaction costs, etc.) that serve as the baseline for the calculation of agri-environmental payments, must have been quite diverse, as action-oriented and not result-based approaches (Groth, 2009). Finland's exemplary and Estonia's considerable success during the first years of EU membership in terms of AES uptake



could also be considered an administration-organizational similarity that indicates towards the direction of the above argument. What is, however, not understandable here is the size of the difference, which is 19:1 (€163/ha vs. €9/ha) in favour of the Finnish farm hectare<sup>21</sup> and how this difference would be able to facilitate the promotion of equal opportunities as part of CAP's and Europe 2020 visions for responding to the current economic, social, environmental and climate-related challenges facing our society.

It seems that the CAP needs better means to realize its contribution to the SD of the EU's rural areas. SD of RD should be seen as a holistic, territorial process not as a goal to be achieved through actions addressed at specific sectors and to satisfy sectoral interests. Rural communities in the changing climatic conditions should be supported by policies that take into account SD as a whole. Addressing socio-economic affairs such as direct support income and the gender aspects of agriculture have been addressed to a certain extent by the CAP in different sub-manifestations (or some territories as discussed above). Mainstreaming environmental concerns in previous programmatic periods and the 'greening' of Pillar I for the next one (2012–2014), provide evidence that the CAP is moving, albeit slowly, into the right direction. However, that is at the local level. Aggregating these issues and transposing them as territorial concerns needs something beyond 'local', at least in terms of the environmental dimension of SD. Environmental impacts on water, soil, biodiversity, landscape do not recognize borders. The situation is similar when it comes to climate change from which vulnerable rural communities will, no doubt, suffer. The need to have a common European stand that aims at a territorial approach in climate mitigation and climate adaptation, which would facilitate equal opportunities for the rural populations, is factual and timely. One of the challenges here is monitoring the emissions, as the agricultural sector has been included in the international climate negotiations under the United Nations Framework Convention on Climate Change only in 2012. It was only that late that the EC has made a proposal to harmonize accounting rules for emissions from agriculture across the EU (<[http://ec.europa.eu/clima/policies/forests/lulucf/index\\_en.htm](http://ec.europa.eu/clima/policies/forests/lulucf/index_en.htm)>). A case in point is climate adaptation, where the territorial approach is imperative and the need is for cooperation between countries rather than sectors.

The current discussions concerning the CAP include the introduction of bringing an agri-environmental dimension to Pillar I, through (among others) better targeted income support, green payments for preserving long-term productivity and further encouragement of agri-environmental initiatives.

The questions that remain are 1. how will the CAP in the new programmatic period address climate issues to the benefit of the rural communities without current information and appropriate tools for accounting/monitoring, and 2. how can it facilitate rural areas' SD without enriching environmental mainstreaming with an equitable territorial approach.

Perhaps SD in the European countryside can start from examining the exact reasons behind such extreme distortions and focus on the equal and inclusive empowerment opportunities for the rural European citizenry in these times of declining trust to the EU as an institution.

## Notes

1. The start was Council Regulation (EEC) No 797/85 of 12 March 1985 on improving the efficiency of agricultural structures, which encouraged environmentally friendly farming practices.

2. The CAP in 2007–2013 is built on two pillars. Pillar I provides direct aid and payments to farmers, provides market support, and subsidizes exports. Pillar II is meant to enhance the quality of life and to improve the state of the environment in rural areas. See Section 2.
3. Analysing the design and implementation of RDP over the 2000–2006 period, Dwyer et al. (2007) observed that these two phases of the policy cycle fell into a context of deep-seated conservatism throughout the EU. This, according to Dwyer et al. (2007), can be observed both at national and sub-national levels, with those individuals being in charge not giving much room for innovative policies but maintaining strong clientelist links to producers.
4. According to Zahrt (2009, p. 6) one reason why the single farm payments (SFP) do not make sense as a social policy is that poor households benefit little when 20% of recipients reap roughly 80% of the SFP. Top recipient of the CAP is the Royal FrieslandCampina N.V., which has received €1 615 262 722 in payments from the EU since 1997. See <<http://www.farmsubsidies.org>>.
5. Regarding the spatial scale of these studies (usually conducted at the NUTS 2 or NUTS 3 levels), results of the SASSPO project (Agriculture for Sustainable Development: A Dialogue on Societal Demand, Pressures and Options for Policy) conclude that not enough data from the regional/sub-regional level are available on spatial allocation of the CAP. This made it difficult to carry out comparative research among the EU countries.
6. The analysis was based on the premise that the scope of the CAP and RDP are ‘taken to be the interventions in farming and farming-related activities undertaken by the DG Agri, for the purposes of pursuing Community objectives as set out in the various EU Treaties’. The CAP/RDP support flows were reflected in the light of the socio-economic performance of respective NUTS 3 regions. Register data of the support and several statistic data were analysed with various statistical and GIS (geographic information system) methods.
7. On the mechanisms determining access to decision-making centres, see Kauppi (2002).
8. Concretely, Pillar I comprises the following elements and aims: 1. commodity market support regimes with intervention buying or private storage aids; 2. ‘lightweight’ regimes with emergency buying and producer group support; 3. direct payments, often with quotas and/or reference yields and area ceilings to limit expenditure; 4. supply management tools such as quotas on milk supplies, maximum stocking densities and compulsory arable set-aside; 5. other elements such as environmental or animal welfare requirements, ‘outgoer’ (e.g. dairy) schemes and grubbing-up aid. There is no spatial dimension linked to these policies.
9. EU and national contributions combined. EU contributions are paid through the EAFRD.
10. The figures in brackets in Finland refer to the previous period 2000–2006. As the Pillar II axes were only established for the current programmatic period, we refer here to the measures that already existed in 2000–2006 and compare them to the current pillar structure.
11. For Lapland, however, the exceptionally sparse population of the area will be taken into consideration, so that the allocation criterion will be 25% of the population of urban-adjacent rural areas.
12. Measures concerned are 111, 123, 124, 311, 312, 313, 321 (except for the broadband infrastructure as separate regional quotas), 322, 323 and 331 without the financing for Leader action groups. See MMM, 2012, p. 81.
13. The 15 Employment and Economic Development Centres, created in 1997, were joint institutions set up by the ministries of trade and industry, agriculture and forestry, and labour. Besides their function in the fields of labour policy they were in a central position in the field of rural policy such as in the promotion of farming, fisheries and rural enterprises.
14. The figures are based on information from the Ministry of Agriculture and Forestry.
15. Ministries concerned were the Ministry of Finance, the Ministry of the Environment, the Ministry of Internal Affairs, and the Ministry of Economic Affairs and Communications.
16. As the interviewee stressed ‘this is a preliminary position possibly subject to change’ (28 December 2009).
17. The municipal-based typology of rural areas is used as an important tool of Finnish rural policy. It distinguishes between sparsely populated areas, core rural areas and urban-adjacent rural areas. See Malinen et al. (2006).
18. Here, the refinement sector includes mining and quarrying; manufacturing; electricity, gas and water supply, and construction.
19. Unfortunately, there is no such data available regarding Estonia.
20. For a further discussion see also Schmidt-Thomé and Vihinen (2006, p. 50) and OECD (2008a, p. 138).
21. This difference looks even more extreme if the fact the Finland and Estonia are currently both members of the Eurozone is taken into account. The standard of living and the cost of commodities in these two countries cannot justify a 19:1 difference.

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## Multifunctional Agricultural Policies: Pathways towards Sustainable Rural Development?

TANJA MÖLDERS

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**Abstract.** The article starts from two assumptions: it understands global shocks as both social-ecological crises and, as a way out of them, offering sustainable development. Sustainability in the area of agricultural policies and rural development is inherently connected to multifunctionality, a leading principle of the Common Agricultural Policy (CAP).

To make a real estimate of the contribution of multifunctional agricultural policies to sustainable rural development, this article argues that the possibilities need to be discussed of integrating different and partly contradictory rural development goals and objectives. An understanding of sustainable development is therefore developed whose purpose is not to unify the un-unifiable, but which asks for sustainable economies that preserve and regenerate society's ecological and social functions.

This is the heuristic background against which two CAP documents are analysed: the rural development regulation EFRAD, on the one hand, and the Community Strategic Guidelines for Rural Development on the other. The analysis demonstrates the multiple biases and internal contradictions proposed that make it hard to identify pathways towards sustainable development.

As a result, two interpretations of multifunctional agricultural policies are generated: *adaptation* sees multifunctional agricultural policies from a critical perspective, and argues that the economic mechanisms and strategies that have led to the crises in rural areas are reproduced rather than reflected upon. *Transformation* introduces a visionary perspective in its argument that multifunctional agricultural policies lead to a changed and extended perspective, so that (re)productive economies can be developed and established, and a transformation process initiated towards sustainable rural development.

Tanja Mölders Professor of Space and Gender at the Gottfried Wilhelm Leibniz University Hannover, Herrenhäuserstr. 8, 30419 Hannover, Germany; email: <t.moelders@archland.uni-hannover.de >. The paper is based on conceptual and empirical work for the research project 'PoNa – Shaping Nature: Rural Development and Agricultural Biotechnology between Criticism and Vision', funded by the German Federal Ministry for Education and Research, funding code 01UU0903, under the 'Social-ecological Research' priority. Special thanks to Anne-Marie Burandt and Anna Szumelda in co-preparing the presentation 'Multifunctionality in EU's Common Agricultural Policy between Competitiveness and Sustainability' for the XXIV European Society for Rural Sociology (ESRS) Congress in Chania, Crete, 2011. The presentation and our joint work was an essential basis for this article. I thank Michael Pätzold and three anonymous reviewers for valuable comments on the English version of this article.

'We have to open the conceptual door to find ways for more articulation of alternative and robust forms of sustainable adaptive capacity building, even when these tendencies are under attack from corporatized neo-liberalism, which attempts to marginalize and fragment their legitimacy' (Marsden, 2012, p. 258).

## Introduction

There can be no doubt that Europe's rural areas are facing multiple challenges, such as a structural change in farming, damage to the environment, the emergence of new consumer concerns, a decrease in population or the enlargement of the EU. These challenges raise the question of a 'new rural paradigm', which not only addresses agriculture in terms of primary production, but views rural areas as spaces for working and living (Van Huylenbroeck and Durand, 2003; Marsden, 2006; OECD, 2006; Van Huylenbroeck et al., 2007). Multifunctional agriculture, a new pattern for the EU's rural development, is supposed to be such a new paradigm. This is what the Organisation for Economic Co-Operation and Development (OECD) wrote in a seminal publication on multifunctionality in agriculture: 'Beyond its primary function of supplying food and fibre, agricultural activity can also shape the landscape, provide environmental benefits such as land conservation, the sustainable management of renewable natural resources and the preservation of biodiversity, and contribute to the socio-economic viability of many rural areas' (OECD, 2001, p. 9). Thus multifunctionality stresses the social and environmental significance of agriculture, and focuses on a broader economic basis for rural development by creating income opportunities in addition to primary production. As a leading principle of the Common Agricultural Policy (CAP) multifunctionality therefore aims to integrate the EU's priorities of competitiveness and sustainability.

Against this background, the key question discussed in the present article is whether multifunctional agricultural policies do indeed open up ideas, rationalities and options for action that seem to be pathways to sustainable rural development and help to overcome rural crises. This question offers a fairly new critical perspective on the debate on multifunctionality, which has so far mainly been criticized because of its protectionist character whereas its contribution towards sustainable development is rarely questioned. This article argues that in order to assess its real contribution, what is needed is a debate of the possibilities and limits of integrating different and partly contradictory rural development goals and objectives.

In the second section of this article, one of the main issues of this volume, global shocks, are conceptualized as social-ecological crises. Social ecology is connected inherently to sustainable development, which is also supposed to be a vision for rural development. In accordance with the social-ecological perspective, an understanding of sustainable development is therefore developed whose purpose is not to unify the un-unifiable, but which asks for sustainable economies that preserve and regenerate society's ecological and social functions. The theoretical orientations presented in the third section refer in particular to the (re)productivity concept as an interdisciplinary approach that brings together a critical analysis of social-ecological crises with the visionary perspective of sustainability as an integrative concept. As sustainability in the area of agricultural policies and rural development is inherently connected to multifunctionality, the fourth section introduces multifunctionality as a paradigm of the CAP and offers some insights into the theoretical, economic

and political aspects of this concept. This furnishes the theoretical and empirical background against which two CAP documents are scrutinized in the fifth section. The analysis of the rural development regulation EFRAD, on the one hand, and the Community Strategic Guidelines for Rural Development, on the other, demonstrates multiple biases and internal contradictions in the instruments and strategies proposed in these two documents, which make it hard to identify pathways towards sustainable development in accordance with the understanding of (re)productivity introduced earlier. The concluding remarks bring together critical and visionary arguments for multifunctional agriculture policies, arranged systematically in three groups, for the political, scientific and local levels.

### **Global Shocks as Social-ecological Crises**

Rural areas have always been confronting multiple crises, such as failures of crops, animal diseases or wars. Today's rural crises, however, have the character of 'global shocks'. This is so because there is, first, hardly any limitation of crisis phenomena regarding their geographical scope as well as the regulative level of policies: both are indeed characterized by globalization. Second, the intensity of crisis phenomena has changed dramatically. Not only has the depth of intervention increased but so has its duration. As a result the globalized rural crises have the nature of shocks.

Although there is no doubt about the existence of such crisis phenomena, there is no agreement on how to describe and interpret such crises. With regard to the German research programme Social-ecological Research,<sup>1</sup> which is linked to international sustainability and global change research (Becker and Jahn, 2003, p. 93), the argument of the present article is based on an interpretation of global shocks as social-ecological crises. This perspective is the first to allow an interdisciplinary conceptualization of crisis phenomena, which brings with it the need to relate to one another the description, interpretation and methodological approaches of the natural and social sciences. Second, the social-ecological perspective opens up a trans-disciplinary viewpoint by taking into account the empirical reality of local actors, as well as their experience and strategies in facing these crises. Third, research in agriculture and rural development can have recourse to a broader theoretical and empirical basis, such as the German research programme Social-ecological Research (Brand, 2006a, 2006b; Schäfer, 2007; Feindt et al., 2008) and the international debates on social ecology in the context of rural development (Marsden, 2003a, 2006). In summary, social ecology is about the diverse, mutual relationships between nature and society, the way science deals with these intertwined relationships and, finally, the question of how they are regulated by political decisions.

Among the various approaches dealing with these questions, Social-ecological Research opens up a unique theoretical framework, called 'societal relations to nature' (Jahn and Wehling, 1998; Becker and Jahn, 2006c). In concrete terms, the concept tries to avoid disciplinary reductionisms by considering the relationships between nature and society not only from a socially (sociocentric) or a naturally oriented (naturalistic) perspective but follows an approach that connects both to a so-called intermediary perspective (Kropp, 2002, p. 270). Thus the concept is defined by three axioms (Jahn and Wehling, 1998, p. 82): the idea of an irrevocable connection between nature and society, the acknowledgement of a difference between them, and the thesis that this difference is historically constituted. Although nature and society are connected materially and symbolically in reality, they are distinguished from each other for

analytical purposes. This differentiation seems to be necessary to understand how nature and society are contrasted in science, politics and everyday life and what the consequences of these differentiations are (Becker and Jahn, 2006a, pp. 87 ff., 2006b, pp. 164 ff.).

Against the background of this concept, social-ecological crises are interpreted as crises of societal relations to nature. Hence, there are no longer mainly isolated environmental problems that could be described by the natural sciences and resolved by technological means. The new forms of crisis endanger the reproduction of natural resources and the requirements of production and lifestyle for industrial societies. In order to solve these crises, the concept of 'societal relations to nature' gives a theoretical orientation to the understanding and analysis of nature–society relations both in general and also in empirical specifics (Jahn and Wehling, 1998, p. 93). Agriculture and rural development can be seen as one such empirical specification.

Thus, the complexity of rurality and its construction by means of everyday life, scientific analysis and political regulation (Woods, 2011) need to be understood as an expression of societal relations to nature. Obviously, living and working in rural areas has always been connected with specific material and symbolical relations to nature (Van Koppen, 1997, 2000; Milbourne, 2003; Castree and Braun, 2006; DuPuis, 2006). Agriculture especially addresses nature as two complementary ideas: first, as material condition and result of production processes; second, as diverse and even contradictory symbolical meanings, such as the idea of a rural idyll where nature and society are harmonically related to each other, or of a threatening nature that needs to be controlled. Finally, societal, political and technological transformations have led to historical changes in rural relations to nature.

As a result of those transformation processes, today's rural areas have to face multiple social-ecological crises. Feindt (2008, pp. 30–34) locates the reasons for these various social-ecological crises in the co-evolution of modern agriculture and agrarian policy as well as in distorted markets, overproduction and 'unintended side-effects' (Beck et al., 2003, p. 2), such as heavy ecological damage to the quality of water and soil, climate change, etc. In economic terms, agricultural production is not profitable and therefore needs to be supported by governments. And lastly in social terms, structural change leads to modified working conditions and property situations in rural areas, with negative effects on small-scale farming, whose farmers are often forced to give up agricultural production (Feindt, 2008, pp. 26, 34–36). It can be said, then, that these crises of societal relations to nature in rural areas are an expression of sustainability problems, for the developments mentioned can hardly be described as sustainable either with regard to nature or with regard to society. At the same time, however, sustainable development is supposed to be an answer to these crises and is therefore promoted by science (e.g. social ecology as a scientific approach) and politicians (e.g. rural development policies).

### **Is 'Sustainable Development' a Vision for Rural Development?**

Science and politics regard sustainable development as an answer to global shocks when seen as social-ecological crises. The idea of sustainable development does indeed address the crises of societal relations to nature and asks for socially and ecologically viable economic developments. The idea of sustainable development is a normative one, because the concept follows the two principles of, first, justice, and, second, the integration of different needs. The claim for justice addresses present as

well as future generations (intra- and intergenerational justice). The claim for the integration of different needs addresses different stakeholders and is often linked with the differentiation of ecological, economic and social needs, which are at the same time related to each other. Both principles were taken as a basis in the early publications on sustainable development – for example, in the so-called ‘Brundtland Report’ (WCED, 1987) – and run like a red thread through the discourse on sustainable development. Despite this lowest common denominator, neither science nor politics completely agree on what kinds of development qualify as sustainable and what do not.

It is for this lack of agreement that sustainability is characterized as a ‘controversially structured field of discourse’ (Brand and Fürst, 2002, p. 22). Within this heterogeneous field a distinction between at least three approaches can be established (Friedrich et al., 2010, pp. 12 f.). There are, first, those approaches that start from the assumption that different dimensions of sustainability can be integrated without any problems, with e.g. synergies being anticipated as a result of integration processes. This position is particularly dominant within the political mainstream of sustainable development and was strengthened in the Rio follow-up process.<sup>2</sup> What was a great success, under the heading of ‘Green Economy’, was the idea of improved human well-being and social equity with a simultaneous reduction of environmental risks and ecological scarcities (UNEP, 2011). Second, those approaches must be mentioned that regard the requirement for integration as challenging, because they have serious doubts that an unproblematic integration of different needs is possible. These approaches come in a positive and a critical variety. They can refer positively to the sustainability concept and participate in the normative specification of which developments might be regarded as sustainable. Current examples from Germany are the approach of the Helmholtz Association of German Research Centres (Kopfmüller et al., 2001; Kopfmüller, 2006), the theory of ‘strong sustainability’ (Ott and Döring, 2008; Egan-Krieger et al., 2009) or the concept of the ‘caring economy’ (Biesecker et al., 2000; Netzwerk Vorsorgendes Wirtschaften, 2013). Nevertheless these approaches can also have reservations concerning the sustainability approach or even reject the whole debate, in which case the argument is found that the whole discourse appears to be blind to issues of power and domination (Eblinghaus and Stickler, 1996). Further, sustainable development is not thought to be a vision to solve any global shocks, whether in rural development or any other policy field, but is held instead to be more than a way to continue in this critical manner. This article directly refers to these controversial understandings of sustainability and aims to develop a critical perspective on those approaches that tend to mask conflicting goals and interests by pretending to have achieved their integration.

This article is based on an understanding of sustainable development that does not set out to unify the un-unifiable, but asks for sustainable economies that preserve and regenerate society’s ecological and social functions. In referring to the research project ‘Blocked Transition? New Thinking and Action Spaces for Sustainable Regional Development’, I assume that to take the principle of integration seriously means to develop an integrative view of spheres that are usually thought of as separate. The integration of economic, ecological and social issues requires a reconceptualization of these spheres and a new definition of their specific qualities that takes into account their multiple interrelations (Behrendt et al., 2007, p. 85).

A sustainability approach that meets these requirements is the concept of (*re*) *productivity*, developed by the economist Adelheid Biesecker and the environmen-



tal scientist Sabine Hofmeister, who employ an interdisciplinary approach to combine economic and ecological views of societal relations to nature (Biesecker and Hofmeister, 2006, 2010). The concept serves two purposes, the first of which is to open a critical analytic perspective on the separation and the establishment of hierarchies between the spheres of 'reproductivity'<sup>3</sup> and productivity. Its second aim is to offer a visionary perspective: in the new category of (re)productivity the two spheres are no longer separated but become one.

The origin of this critical perspective is the so-called 'debate on housework' (Bock and Duden, 1977), in which feminists highlighted the untenability of the separation of female 'reproductive' work, which is mainly care work, and male productive labour, which is gainful employment. 'Reproductive' work, they argued, has to be understood as productive in itself. Consequently, such a critical perspective leads to criticisms of economic rationality: the separation of 'reproductive' from productive work is a result of the industrial era, during which only work that was of countable economic benefit was valued as real work. Interestingly, Biesecker and Hofmeister broaden this critical perspective by extending their approach to the sphere of nature, where the same problematic separation of production and 'reproduction' can be found. What both spheres share is economic externalization, whether of the productivity of women or nature, and the fact that both are at the same time an indispensable condition for production. Therefore they draw the conclusion that the crisis of 'reproductive' work and the ecological crisis have the same origin, namely an economic rationality that is neither able nor willing to acknowledge the productivity of 'reproductive' functions. The vision developed by Biesecker and Hofmeister does not constitute a commodification of 'reproductive' functions but defines a new kind of economic rationality. Within this new rationality the two categories of productivity and reproductivity have been collapsed and become one, which is signalled by the single label they attach to the new category, '(re)productivity'. There is no process of 'othering' any type of work or qualities as 'reproductive'. Rather, they ask for the 'productivity of the reproductive'. As a consequence of this new perspective, our understanding has changed of what the economy is about, of what is valuable and what is worth preserving. In summary, the (re)productivity concept provides an analytic framework for sustainability science and policies that is dedicated, first, to the critical analysis of social-ecological crises, and, second, to the visionary conceptualization of societal relations to nature that are able to solve or avoid global shocks.

Although the (re)productivity concept was not developed for rural studies or agrarian policy, it has nevertheless turned out to be a fruitful approach to the analysis of changes in rural development both at theoretical and empirical levels (Mölders, 2008, 2010). The central question whether a new economic rationality should be given scope for development is an issue controversially discussed in the rural development literature (Marsden, 2003a, 2003b, 2006; Perkins, 2006; Van Huylenbroeck et al., 2007). Marsden (2006, p. 202) in particular criticizes 'the maintenance of an agro-industrial model of agricultural development that continues to devalue and subsume the primary production sector through the adherence and propagation of liberalization and globalization logics', and demonstrates that sustainable rural development goes hand in hand with 'a complete rejection of the homogenizing tendencies of the neo-liberal, global modernization project' (Marsden, 2006, p. 207, with reference to Sevilla-Guzmán and Woodgate, 1999, p. 304). He therefore asks for 'new theoretical frameworks that go decisively beyond the postulates of the previously dominant approach of agricultural modernization and industrialization' (Marsden, 2006, p. 202),

and poses the question of a ‘new rural development paradigm’ (Marsden, 2006). An example of such a new paradigm is held to be multifunctionality. The crucial question, which is further discussed below, is therefore whether the conceptualization of multifunctionality in agrarian policies meets the stated demand for alternative economies or, to put it more succinctly, for (re)productive economies as pathways towards sustainable rural development.

**Multifunctionality as a Paradigm of the CAP**

Policy changes in agriculture are often discussed as paradigm shifts, which cause changes in the hierarchy of goals, types of instruments and instrument settings (Hall, 1993; Coleman, 1998; Josling, 2002; Moyer and Josling, 2002; Van Huylenbroeck et al., 2007). In general, three conflicting agricultural paradigms are distinguished: first, a ‘dependent agriculture’, which needs government support and is therefore also labelled as ‘state-assisted’ or ‘protectionist’; second, a ‘competitive agriculture’, which is able to compete for resources and follows the idea of market liberalization; third, a multifunctional agriculture, which combines the production of commodity and non-commodity outputs. Overall, different nations and supranational institutions (e.g. WTO, FAO, EU) pursue different paradigms due to different perceptions of problems as well as different strategies for resolving these problems. As a result, negotiations about agriculture and rural policies can be interpreted as discussions about different agrarian paradigms, which are at the same time negotiations about different societal relations to nature (Marsden, 2003a, 2006, pp. 203–205).

Within this conflict situation, the EU’s CAP puts a strong emphasis on multifunctionality (Van Huylenbroeck and Durand, 2003). Basically, agricultural production is a multifunctional economic activity per se, the reason being that agricultural production not only provides primary agricultural products (food and fibre) but causes multiple, interconnected outputs and effects (e.g. structuring the landscape, creating agrobiodiversity). The definition that follows is based on the OECD publication *Multifunctionality: Towards an Analytic Framework* (OECD, 2001), which provides a working definition of multifunctionality and a terminology in terms of the economy and politics that is used mainly in scientific and political contexts: ‘The multifunctionality of agriculture can be defined as the joint production of commodities and non-commodities by the agricultural sector’ (Durand and Van Huylenbroeck, 2003, p. 1; Table 1).

Whereas the OECD represents a positive concept of multifunctionality that stresses the multifunctional characteristics of economic activity as such, the EU refers to it as a normative concept that sees multifunctionality as something desirable. Fol-

**Table 1.** Outputs of a multifunctional agriculture.

Commodity outputs		Non-commodity outputs	
Food and fibre	Rural tourism	Food security / safety	Rural landscape
Transformation of products	Taking care of the elderly or disabled	Rural ways of living / traditions	Biological diversity
Other marketable products		Soil conservation	Health and other non-commodity products

Source: Durand and Van Huylenbroeck, 2003, p. 4.

lowing this understanding, multifunctionality 'takes on a value itself' (OECD, 2001, p. 14; Van Huylenbroeck et al., 2007, pp. 7–11) and is interpreted as an objective value worth supporting. Within this normative framework, the challenging question is therefore how to provide those non-commodity outputs of agriculture that, although they are socially desired (public) goods and services, are not or only poorly coordinated by markets. This is so for two reasons: following multifunctionality as a leading principle allows policies both to support agriculture and farmers in spite of the declining significance of agriculture as a productive space in rural areas, and to meet society's new demands for non-commodity outputs of agriculture and rural areas as a consumptive space (Durand and Van Huylenbroeck, 2003, p. 1). Whereas those nations that are in favour of a competitive agriculture (e.g. U.S., Australia, New Zealand) blame the EU for continuing a dependent agriculture under the shelter of multifunctionality and for using the new paradigm to legitimize subsidies, the EU argues that further liberalization will also cause further rural crises whereas a multifunctional agriculture opens up new perspectives in terms of a sustainable rural development (Durand and Van Huylenbroeck, 2003; Gallardo et al., 2003; Van Huylenbroeck et al., 2007). Thus, it would seem that it is above all the multifunctional and the competitive agricultural paradigms that are interpreted as conflicting within agricultural policies.

The EU started to develop and introduce the multifunctional paradigm in the 1990s, when it was an implicit part of various EU legal contracts. Although the term 'multifunctionality' itself is not used, the 1996 Cork Declaration is considered to be the starting point of the EU's multifunctional agricultural policies. It is in this document – an outcome of the European Conference on Rural Development held in Cork (Republic of Ireland) – that the participants both presented an analysis of the situation of the EU's rural areas and set up a 10-point rural development programme. The analysis points to substantial changes in the significance and public perception of agriculture, both of which have led to an understanding of agriculture as a multifunctional practice. Agriculture is characterized as 'a major interface between people and the environment' (European Commission, 1996). A case is made for agriculture because of its uniqueness and importance as well as its competitiveness. An argumentative framework is thus established that aims to realize an agriculture that meets new social and environmental demands and is competitive at the same time. This idea of multifunctionality is made concrete within a 10-point rural development programme. Here 'sustainable rural development' is introduced as a 'rural preference' (point 1). Point 4 offers a brief definition of sustainable rural development, 'which sustains the quality and amenity of Europe's rural landscape... so that their use by today's generations does not prejudice the options for future generations'. In addition to sustainability, the idea of multifunctionality is also connected with a call for 'integration' (point 2) and 'diversification' (point 3) (European Commission, 1996).

The conceptualization of rural development as an integrated approach takes into account that rural development is multi-sectoral, because rural development is influenced by various policies (regional planning, environmental policies, etc.) that need to be integrated in a multifunctional paradigm. This means that they need to be related to each other in terms of processes and contents in regional governance approaches (Marsden and Bristow, 2000). These multiple activities that contribute to the viability of rural areas are addressed by the idea of diversification. Indeed, many farmers enlarge their range of products and services produced and sold. Moreover,

diversification can be accomplished by the strategy of pluri-activity, which means the addition of non-agricultural activities (Durand and Van Huylenbroeck, 2003, p. 12; Van Huylenbroeck et al., 2007, p. 8). Both approaches are essential to the multifunctional paradigm because they draw attention to the various functions related to farms and farmers and their contributions to rural areas. In summary, it can be stated that with the Cork Declaration the need for a paradigm shift in agrarian policies was articulated and a rural development programme was drafted that defined the normative orientation of the new multifunctional paradigm as sustainable, integrated and diverse rural development.

Agenda 2000 (European Council, 1999) is usually considered a second milestone on the way to a European multifunctional agriculture. The reform of the CAP was indeed a main concern of the Agenda 2000 project, which was completed by the EU in 1999. The reform pursued a number of aims:

‘to increase the competitiveness of Community agricultural products on the domestic and world markets, to integrate environmental and structural considerations more into the implementation of the common agricultural policy, to ensure a fair income for farmers, to simplify agricultural legislation and decentralise its application, to improve food safety, to strengthen the Union’s position in the new round of WTO negotiations and to stabilise agricultural spending in real terms at its 1999 level’ (European Commission, 2013).

It was above all the objective of integrating environmental and structural considerations into the CAP that had an impact on rural development policies. Following the integrative approach as well as the idea of sustainability, environmental and social issues became more and more important for rural development policies under the shelter of the multifunctionality paradigm. As a result, the Agenda 2000 package for agriculture has been supplemented by a regulation on rural development. This Rural Development Regulation (RDR) (Council Regulation (EC) No. 1257/1999, *OJ L 160*, 26 June 1999, pp. 80–102) was the beginning of a genuine second pillar of the CAP, promoting rural development in contrast to the first pillar, which aims to realize a competitive European agriculture (Lapping, 2006, p. 118; Van Huylenbroeck et al., 2007, p. 24). In brief, the second pillar has since then been used as a synonym of multifunctionality, and aims to realize sustainable agricultural activities that effectively produce social and environmental values.

A somewhat more detailed definition of the two paradigms would be to say that although the first pillar is mainly characterized by the competitive paradigm, it also contains elements of a dependent agriculture as seen in policies like market interventions, coupled subsidies and direct income support. Moreover, such policy instruments as cross compliance or modulation need to be interpreted in the light of the multifunctionality paradigm (Gallardo et al., 2003, p. 173). Similarly, in the second pillar the multifunctionality paradigm appears to be the leading principle, but the realization of this principle by governmental support for non-commodity outputs connects it closely to the dependent agriculture paradigm. Finally, the idea of multifunctionality is also linked with the idea of competitiveness, for rural areas are expected to be competitive (Gallardo et al., 2003). In conclusion, European agricultural policy as realized within the CAP is characterized by a mix of paradigms with a strong tendency towards multifunctionality. This orientation causes changes in the agricultural budget as well as in the use of policy instruments. In short, it is a matter

of providing incentives for the production of non-commodity outputs. In order to realize a multifunctional agriculture the EU refers to different policy instruments: voluntary policy instruments, incentive-oriented policy instruments, and regulatory policy instruments (Van Huylenbroeck et al., 2007, pp. 25–28; Wüstemann et al., 2008, p. 104).

This brief summary of the EU's multifunctionality policy illustrates that multifunctionality is conceptualized as a strategic goal for rural crises in terms of social-ecological crises, and therefore for the integration of social and environmental needs in agrarian policies. Against this background, multifunctionality and sustainability are often used interchangeably in scientific and political contexts. When referring to the possibilities and limits of integrating different and partly contradictory rural development goals and objectives, what is needed is a deeper insight into the policies and instruments in the multifunctionality paradigm.

### **Multifunctionality between Competitiveness and Sustainable Development**

During the current funding period (2007–2013), the EU's rural policies are framed by the rural development regulation of 20 September 2005 on support for rural development by the European Agricultural Fund for Rural Development (EFRAD) (Council Regulation (EC) No. 1698/2005, *OJ L 277*, 21 October 2005, pp. 1–40). Besides containing a set of measures directed to the three axes of 'improving the competitiveness of the agricultural and forestry sector' (axis 1), 'improving the environment and the countryside' (axis 2), and 'the quality of life in rural areas and diversification of the rural economy' (axis 3), the regulation includes also what is called 'Leader' (axis 4) and the Community Strategic Guidelines for Rural Development that prioritize rural development policies (Council Decision 2006/144/EC, *OJ L 55*, 25 February 2006, pp. 20–29). The last two documents together form the second pillar of the CAP and thereby the programmatic and strategic elaboration of a multifunctional agriculture. Against the background of the issues of sustainable development and multifunctionality discussed so far, the pivotal question is how societal relations to nature are shaped through these multifunctional agricultural policies and in how far these societal relations to nature can be qualified as sustainable in accordance with the understanding of (re)productive economies elaborated above.

The results presented here are based on a detailed document analysis of the EFRAD and the Community Strategic Guidelines for Rural Development. Within this qualitative approach it is assumed that even policy documents represent convictions and interests of a strategic content. The heuristic background of the document analysis is formed by the theoretical considerations regarding the sustainability discourse, in particular the conflicting goals and interests that might be masked by the appeal of integration.

EFRAD as well as the Community Strategic Guidelines for Rural Development follow two EU priorities, competitiveness and sustainable development. EFRAD states this orientation in its first recital: 'Rural development policy should [integrate] other major policy priorities as spelled out in the conclusions of the Lisbon and Göteborg European Councils for competitiveness and sustainable development' (Council Regulation (EC) No. 1698/2005, *OJ L 255*, 21 October 2005, rec. 1). Thus, rural policies explicitly refer to sustainable development, and substantiate their understanding of sustainable development with reference to the Göteborg Strategy. The mention of the Lisbon Strategy refers to the priority of competitiveness, which



represents a further development goal that needs to be harmonized with the aim of sustainable development. In the next sections of this article, I will therefore discuss in greater detail the ways in which sustainable development and competitiveness are conceptualized and related to each other under the umbrella of a multifunctional agriculture paradigm.

### *What Kind of Sustainable Development?*

Since the late 1990s, the EU has tried to implement in its policies the idea of a better quality of life for everyone, now and for future generations. In June 2001 the EU launched the first EU sustainable development strategy (SDS), known as the Göteborg Strategy 2001 (European Council, 2001). Although the thematic background to this strategy was the European environmental policy, the 14 sections of the Göteborg Strategy go beyond environmental aspects, which are nevertheless the focal point of the strategy (Gottschlich, 2014). Above all, the Göteborg Strategy completed the Lisbon Strategy: it added a third, environmental dimension to economic and social renewal. This means that the environmental aspects of the Göteborg Strategy first became part of the Lisbon Strategy, while the whole of the Göteborg Strategy was next supposed to bring sustainability into the mainstream of the EU's policies. In the terms of the three approaches of sustainability distinguished in the third section of this article, the European sustainability strategy can clearly be classified as an approach that starts from the assumption of unproblematic options for the integration of different needs and even expects synergy effects. It is these assumptions and expectations as reflected in the policy documents analysed that I will turn to now.

Most obviously, the idea of sustainability is addressed generally in terms of sustainable economies. According to EFRAD, these sustainable economies mainly try to achieve environmental goals. At first glance it would seem that the idea of integrating economic and environmental objectives is realized. However, a closer look shows that such sustainable economies are proposed specifically for those areas that are not as competitive as others. Thus, it says in recital 33 of EFRAD: 'Natural handicap payments in mountain areas and payments in other areas with handicaps should contribute, through continued use of agricultural land, to maintaining the countryside, as well as to maintaining and promoting sustainable farming systems' (Council Regulation (EC) No. 1698/2005, *OJ L 255*, 21 October 2005, rec. 33). Hence, an area is either competitive or – if this primary development goal cannot be reached – an area for the realization of sustainable development.

In the context of the question whether the integration of economic and environmental goals has been achieved, even agri-environment payments need to be discussed as they frequently serve as an example of successful sustainable agriculture. This is what recital 35 has to say on the matter 'They [agri-environment payments] should further encourage farmers and other land managers to serve society as a whole by introducing or continuing to apply agricultural production methods compatible with the protection and improvement of the environment, the landscape and its features, natural resources, the soil and genetic diversity' (Council Regulation (EC) No. 1698/2005, *OJ L 255*, 21 October 2005, rec. 35). From this it appears that agri-environment payments are part of axis 2, 'improving the environment and the countryside', and not of axis 1 'improving the competitiveness of the agricultural and forestry sector'. By characterizing environmentally friendly agriculture as commitments that cause 'additional costs and income foregone' (Council Regulation

(EC) No 1698/2005, *OJ L 255*, 21 October 2005, art. 39, cl. 4), the separation of competitiveness from environmental protection is reinforced rather treated as an issue that remains open to debate. In short, it is assumed that environmentally friendly agriculture cannot be part of a competitive agriculture because it works against this economic goal. This is the reason why it needs additional remuneration.

In summary, it can be stated that the EFRAD regulation as well as the Community Strategic Guidelines Concerning Rural Sustainable Development shape societal relations to nature that conceptualize nature primarily as a precondition for competitive production. Sustainable agriculture is supposed to be realized where this condition is either not fulfilled (natural handicap areas) or the protection of nature is preferred to its use (agri-environment payments).

### *What Kind of Competitiveness?*

The use of the term competitiveness within EFRAD and the Community Strategic Guidelines refers to the Lisbon Strategy as passed by the European Council in March 2000 (European Council, 2000). As an action and development plan for the EU economy for the period 2000–2010, the Lisbon Strategy aimed to make the EU ‘the most competitive and dynamic knowledge-based economy in the world capable of sustainable economic growth with more and better jobs and greater social cohesion’ (European Council, 2000). As stated above, economic, social and environmental renewal as well as sustainability was to be integrated into this strategic goal, because the idea of a ‘green and innovative economy’ works on the assumption that economic growth goes hand in hand with promoting social and environmental objectives. Again, this orientation is reflected within the two policy documents.

The competitiveness of rural areas is obviously a key category of the second pillar. Thus axis 1 of EFRAD, ‘improving the competitiveness of the agricultural and forestry sector’, is dedicated explicitly to this development goal. In addition, numerous measures of axes 2 and 3 (e.g. the diversification of the rural economy) as well as most of the basic assumptions (e.g. ‘a context of increased competition’ (Council Regulation (EC) No 1698/2005, *OJ L 255*, 21 October 2005, rec. 24)) focus on a liberalized market economy.

Following the Lisbon strategy, competitiveness is interconnected with modernization and innovation as a driver of economic development. However, in combination with the Leader approach (axis 4), an alternative understanding of innovation is presented that aims to strengthen local initiatives and local governance. Another constitutive element of competitiveness is efficiency: first, the rural development programmes are expected to be efficient; second, all production processes in agriculture and forestry are measured by their efficiency.

A striking example of this market-oriented understanding of competitiveness, and indeed all categories related to this development goal, can be found in section 3.3 of the Community Strategic Guidelines, ‘improving the quality of life in rural areas and encouraging diversification of the rural economy’. This refers to axis 3 and proposes that, ‘the resources devoted to the fields of diversification of the rural economy and quality of life in rural areas under axis 3 should contribute to the overarching priority of the creation of employment opportunities and conditions for growth’ (Council Decision 2006/144/EC, *OJ L 55*, 25 February 2006, p. 26). The exclusive reference to ‘employment opportunities’ and ‘conditions for growth’ demonstrates a narrowness of approach regarding the quality of life, which is reduced to participating in gain-

ful employment and rising financial prosperity. Thus the variety of work in rural areas in the form of housework, care and voluntary work, etc. is excluded from this strategic approach, as are all alternative economic movements that stress the significance of those activities for the quality of life of a community whose value cannot be expressed in monetary terms (e.g. local currencies, exchange rings or neighbourly help).

To recap, concerning rural competitiveness the EFRAD regulation as well as the Community Strategic Guidelines shape societal relations to nature that conceptualize the economy as a liberalized market economy in accordance with too narrow an understanding of innovation, work, and the quality of life, etc.

This critical analysis of rural policy documents allows at least three interim conclusions. First, framing multifunctional agriculture by means of the two priorities of sustainable development and competitiveness creates a field of tension that hovers between possibilities of integrating ecological, economic and social needs within rural areas and the limits to these opportunities. Second, sustainable development tends to be reduced to environmental issues. The protection and improvement of the environment is linked to economic losses, which need to be compensated. Third, the priority of competitiveness dominates not only the first pillar of the CAP but also multifunctional agriculture as the paradigm of the second pillar. The consequence is the dominance of a neo-liberal economy, which is characterized by hierarchies, the separation of economic spheres (between e.g. production and reproduction), and an exclusive focus on monetary values.

#### *Multifunctionality between Adaptation and Transformation*

For the question of how far societal relations to nature shaped by multifunctional agricultural policies can be qualified as sustainable in accordance with the understanding of (re)productive economies introduced above, two interpretations can be generated that also reflect the ongoing debate about sustainable rural development.

The first is the interpretation of multifunctional agricultural policies as *adaptation*. This reading focuses on the adaptation of the supposedly 'new' paradigm to the 'old' understandings, rationalities, valuation patterns, etc. concerning the categories of nature and (rural) society. As Marsden (2003b, p. 22) puts it: 'The recent policy reforms under Agenda 2000, in addition to the new rural development regulation, expose a policy framework which will do little to shift the basic philosophy beyond its bias towards the industrial model.' The problematic separation of a productive from a reproductive sphere seems to be reproduced by the current rural development policies rather than critically reflected upon. The persistence of this separation also becomes obvious in the language used in political as well as in scientific debates, when, for example, productive and non-productive activities and investments are distinguished. Gallardo et al. (2003) make explicit reference to the differences between 'competitiveness and the productive function of agriculture' and 'non-competitiveness and the non-productive functions of agriculture'. Hence the authors suggest the support of a 'dual agriculture' (Gallardo et al., 2003, p. 174) with measures dedicated explicitly to a competitive *or* a multifunctional type of agriculture. Although their approach is meant to be a contribution to strengthen the social and environmental aspects of farming in terms of sustainability, it still remains in a dichotomic, non-integrative pattern. Following the proposed interpretation of adaptation, the distinction of productive and non-productive functions seems to be in

agreement with the incompatibility of competitiveness and sustainability. The idea to commodify the non-commodity outputs and to remunerate non-productive functions of agriculture by monetary means could be seen as an attempt to take over the 'reproductive' sphere by the productive sphere rather than the establishment of a new economic rationality that asks for (re)productive qualities. In short, multifunctionality appears as an adaptation to traditional and mainly unsustainable agricultural policies because of its maintenance of an unquestioned neo-liberal economy.

The second interpretation of multifunctional agricultural policies sees them in terms of a *transformation*. Despite the mainly critical results of the document analysis, this reading opens up a visionary perspective on multifunctional agricultural policies in as much as it understands multifunctionality as an idea for the realization of a new rural development paradigm that offers pathways to sustainability, which is the way that e.g. Van Huylenbroeck et al. (2007) interpret multifunctionality. Although the authors also remain committed to the distinction between the productive and non-productive functions of agriculture, they argue that multifunctionality offers 'some grounded conceptions to encompass ideas on the restructuring of the farming sector' (Van Huylenbroeck et al., 2007, p. 24). They explicitly refer this restructuring process to economic rationality and demonstrate, for instance, that multifunctionality does not reject efficiency completely, but only suggests measuring efficiency not exclusively in profit terms but also in terms of socially desired outcomes (Van Huylenbroeck et al., 2007, p. 24). Furthermore, they discuss the extension of the definition of competitiveness with regard to multifunctional agricultural policies, by taking environmental and social functions of agriculture are taken (Van Huylenbroeck et al., 2007, p. 29). This new economic rationality embodies the concept of (re)productivity in that it follows the idea of bringing together the spheres of production and 'reproduction'. Policy measures that help to provide alternative ways of production and marketing (e.g. regional marketing or farm shops that both support the protection of traditional livestock and guarantee the maintenance of farmers) might be interpreted as attempts to enlarge the view of what is 'productive nature' and what is 'productive labour'. Following this interpretation, it could be argued that within multifunctional agriculture those products, services and qualities are considered and valued that are not valued in a competitive agriculture, which exclusively follows the liberalized agro-industrial model. In making visible the 'productivity of the reproductive', multifunctionality thus would appear to involve a transformation process towards sustainable development.

### Concluding Remarks

Within the controversial debate about rural sustainable development this article puts forward the argument that rural development policies are not only contradictory with regard to the different agricultural paradigms, which become apparent in the two pillars of the CAP, but also with regard to multifunctional agricultural policies themselves. It was shown that the attempt to integrate the EU priorities of competitiveness and sustainable development causes multiple biases and internal contradictions that make it hard to identify pathways towards sustainable development in accordance with the understanding of (re)productive economies.

Adaptation, the first of the two interpretations generated on the basis of this analysis, reflects these critical assumptions and doubts that global shocks in terms of social-ecological crises might be solved against the background of current policies.

Transformation, on the other hand, the second interpretation, opens up an optimistic reading of rural development policies by identifying a visionary potential, which might bring about transformation processes that point a way out of rural crises towards sustainable development.

The question is neither which of these interpretations is more appropriate than the other nor one of taking an either/or decision. Rather, what can be observed is a juxtaposition of both tendencies, towards adaptation as well as transformation. Current developments in rural policies as the new trends towards 'neo-productivism' (Almås and Campbell, 2012) influence this debate as well as the CAP in the next budgetary period. The latter requires an orientation towards the Europe 2020 strategy, which is the EU's growth strategy for the coming decade. Within this strategy the contradictory development goals discussed in this article become virulent once again: EU's economy should be smart, sustainable and inclusive. Moreover, the second pillar of the CAP seems to be rather weakened than strengthened. For these reasons it will be more and more difficult to implement sustainable rural development.

Which direction the future development of rural areas will take depends on the different actors on different levels, on their decisions, ideas, beliefs, rationalities, etc., as well as on the structures in which their actions are embedded. At least three levels may be distinguished:

1. Policies: to overcome global shocks is a primary task of policies. If policies devote themselves to sustainable development – as the EU's CAP has done – they will have to meet the challenge of how to realize this policy goal without any bias or contradiction. The multifunctionality paradigm, as discussed in this article, could be a step in this direction, but needs to be watched critically lest it be dominated by a neo-liberal rationality.
2. Science: those disciplines that aim to contribute to a new science according to sustainability sciences have to establish the nexus between different aspects of global shocks. For this, they need to overcome disciplinary boundaries and contribute to critical research that asks for a new space for thinking and action. Social ecology, as presented in this article, may well be seen as an attempt to realize such a kind of science.
3. Local level: in the last resort, it is local actors that have to deal with the conflicting goals and interests that are part of rural development politics. Despite these contradictions, local actors seem to be successful in realizing sustainable rural developments by establishing alternative ways of production and marketing. Those practices, which were only briefly sketched out in this article, need to be watched closely by politics and science in order to learn more about (re)productive economies.

These three groups are of the same importance when assessing global shocks in rural areas. With regard to problems, their analysis as well as their resolution, the three groups of scientists, politicians and local actors should question courageously traditional certainties, and work for the deconstruction of a destructive neo-liberal economy. With a view to the future, they should search for and practice alternatives in order to develop and to test pathways to sustainable rural development.

## Notes

1. Social ecology as a 'new science' has been set up by researchers of the Institute for Social-ecological Research (ISOE) since the 1980s (Becker and Jahn, 2003). In 1999 the Federal Ministry of Education and



- Research (BMBF) established Social-ecological Research as a funding programme with two objectives: first, the generation of transformation knowledge through the description of social transformations and the definition of options for future development: second, capacity building in an effort to produce bearers of theoretical and methodological knowledge (BMBF, 2009). This German approach needs to be distinguished from the international debates on 'social ecology' (Hunecke, 2006, pp. 19–22), particularly Murray Bookchin's ecological world view (Bookchin, 1990).
2. The United Nations Conference on Environment and Development (UNCED), held in Rio de Janeiro in 1992, has ensured that sustainable development is now part of international and national policy agendas and a development goal for the twenty-first century.
  3. The single quotation marks are to indicate the assumption that there is no 'reproductivity' besides productivity.

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## **Agricultural Policy in Russia: Global Challenges and the Viability of Rural Communities**

ZEMFIRA I. KALUGINA

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**Abstract.** The evolution of agricultural policy in Russia under the influence of external and internal challenges from the market reforms of the 1990s and ending with the entry of Russia into the WTO in 2012 has been a difficult one. The article presents an analysis of institutional traps, and of the measures and strategies that are employed to try to overcome them. The results of the market reforms of the Russian agricultural sector are assessed from an economic and social point of view, identifying the dominant survival strategies of rural communities in the diversification of the rural economy and rural employment. In conclusion, the author tries to answer the question why privatization and market reforms have not succeeded within the agricultural sector, and the reasons for the prevailing farming alternatives. The analysis and reflections are based on data from sociological surveys and government statistics as well as a number of research visits and interviews in rural regions of Russia over several decades.

### **Introduction**

In a rapidly changing world, the ability to determine the prospects for future development is the most important determining factor for achieving viability and sustainability (adaptability) of social systems. A better understanding of how and why the agri-food sector and rural areas are likely to develop in particular ways are important for a number of reasons, in particular a growing demand for foodstuffs, an increase in food prices and increasingly scarce water, energy and fertilizer supplies. Russia is rich in natural resources relevant to agricultural production, including arable land, and consequently it has the potential both to meet domestic needs and to make a significant contribution to achieving global food security. Yet, despite the fact that Russia has 9% of the productive arable land, 20% of fresh water reserves and 8.5% of mineral fertilizers worldwide available to agricultural production, it

Zemfira I. Kalugina is Chief Research Fellow at the Department of Sociology, Institute of Economics and Industrial Engineering, Russian Academy of Sciences, Siberian Branch, 17 Ac. Lavrentieva Ave., 630090 Novosibirsk, Russia; email: <zima@ieie.nsc.ru>. The author's studies were carried out with the support of reputable domestic and foreign research funds: the Russian Humanitarian Science Foundation, the Russian Foundation for Basic Research, Independent Institute of Social Policy, INTAS, the John and Catherine MacArthur Foundation and other. Field studies from which the bulk of the sociological data was collected were conducted with the financial support of the Presidium Siberian Branch of the Russian Academy of Sciences. The author expresses deep gratitude to everyone who supported my research.

currently produces only about 5% of dairy products, 3% of cereals and legumes and 2% of meat (Product.by, 2012)

Developments in the Russian agricultural sector at the turn of the millennium can be explained by both Russia's transition to a market economy during the 1990s and the global financial and economic crisis of the 2000s. The long-term development of Russia's agricultural sector is going to be influenced increasingly by global challenges and Russia's ability to address these with innovative agricultural policies and adaptation strategies for rural communities.

### **Methodology and Data Material**

This article is an opinion paper summing up some main experiences of the development within Russian agriculture from the market reforms of the 1990s up to the entry of Russia into the WTO in 2012. The analysis is based on a desk study of relevant documents: legislation, government regulations, national programmes relating to the development of the agri-food sector, and official statistics, as well as drawing on the authors' long-standing experience with research in rural Russia during the last 20 years. This includes studies in the Novosibirsk region and Siberian regions, with both qualitative interview data and quantitative data from surveys (cf. Kalugina et al., 1992; Kalugina, 2002a). These studies include a case study of four collective farms to investigate different adaptation patterns, with survey data including responses from enterprise managers, specialists and farm workers (employees). Further, a mail survey of farmers and members of land committees and commissions was conducted during 1991–1992 in Siberian regions, a study of rural employment across 43 rural districts of Siberia was conducted in summer 2002, and the most recent data drawn upon here stem from in-depth interviews with villagers, employers and local government representatives during two fieldwork periods in 2011 and 2012. The analysis of problems of deprivation amongst the rural population was based on research data on abandoned villages in post-reform Russia: including statistical data and in-depth interviews with residents of abandoned villages. While this altogether represents very rich and detailed material, this article will have to limit it to being background material for pointing out some main aspects of agrarian reforms in post-Soviet Russia.

### **Three Periods of Agrarian Policy in Post-Soviet Russia**

Three periods of agrarian policy in post-Soviet Russia can be identified, which are different in terms of scope, scale and type. The first was a period of market transformations during the 1990s. The second period was one characterized by comprehensive policy changes affecting both the agri-food sector and rural areas during the early 2000s. The third period is characterized by resistance to the effects of the global financial crisis during the late 2000s. These are discussed in the following sections.

### **Market-liberalization in the Agricultural Sector**

This period during the 1990s is characterized by active state intervention aimed at reorganizing the collectively owned agricultural sector and promoting a new institutional framework for the development of new forms of management. The eco-



conomic reforms during the 1990s were intended to radically transform Russia's agrarian sector. These included a reorganization of collectively owned farms (kolkhozes and sovkhozes), land reforms, and support for private-sector development in the agrarian economy. The reforms were aimed at increasing social and economic activity amongst the rural population. Labour collectives were given the right to determine how they would be managed and workers had the option to leave their collective farms. Land was divided amongst agricultural workers and a number of other groups. Land and property shares formed the basis of start-up capital for business development on a cooperative or individual basis.

In the course of this, new forms of management became increasingly institutionalized, resulting in a mixed agrarian economy (Kalugina, 2001, 2002a, 2002b; Nefedova, 2003; Patsiorkovski, 2003; Kalugina and Fadeeva, 2009; Nechiporenko, 2010; Manzanova, 2011; Velikii, 2012). These measures were supposed to foster the competition between producers in the agrarian market. The various types of management made it possible to take advantage of both large- and small-scale production, combining the capabilities of large-scale agricultural production and individual entrepreneurial initiative. These radical changes in ownership patterns were assumed to lead to an efficient allocation of land and other means of production, and which then consequently, would promote the development of private entrepreneurship in agriculture and in services. Administrative restrictions on developing household plots<sup>1</sup> were lifted. Relying on the 'invisible hand' of the market, the state significantly reduced agricultural subsidies, so that in 1999 agricultural subsidies amounted to only 0.17% of GDP, as compared with 0.52% in 1995 and 8.8% in 1990 (Rastyannikov and Deryugina, 2004, pp. 363, 386).

While the initial stages of reforms were intended to create the institutional and legal conditions that were believed to be necessary for a fair and effective development of land management, the results were unexpected to reformers. This was evident, for example, in the expansion of small-scale production, inefficient allocation of resources, decreasing motivation amongst farm workers, rural poverty, the degradation of social services in rural areas, and the emergence of what has been termed 'institutional traps' (Kalugina, 2007; Kalugina and Fadeeva, 2009, pp. 20–33), which are understood here as the way in which institutional innovations have led to inefficient behaviours, which in turn support the continued inefficiency of public institutions.

### *The Small Farm Trap*

The agrarian reform was assumed to contribute to the creation of an efficient private sector on the basis of peasant farms. One of the unexpected results was the growth of production on small household plots. Some consider this development as the Russian track to a bright, market-based future and as a transition from collectivized forms of agricultural production to a new type of peasant farming (O'Brien, 2002; Lerman, 2002; Yamamura, 2002; Patsiorkovskii, 2003). However, this could also be considered simply a survival strategy. Before the reorganization of collective farms, household farming was mainly a sphere of secondary family employment along with primary employment in collective agricultural enterprises. During the collapse of collective farming, subsistence farming becomes the only area of employment and a major source of income for many rural residents.

In 2000, 16 million families in Russia had household plots with a total area of 6.2 million ha, or 0.39 ha per family. Apart from that, 14.9 million families had plots in collective and individual gardens with a total area of 1.3 million ha, or 0.09 ha per household. Collective kitchen gardens with a total area of 0.4 million ha were used by 5.1 million families (0.1 ha per household). These household plots have become the leading sector in Russia's agrarian economy. During the reform period, the proportion of households being engaged in agricultural production has doubled, accounting for 51.6% of total agricultural production in 2000, as compared to 26.3% in 1990. In 2011, the share of household plots was 43.8% (Rosstat, 2012a, p. 425).

Thus, the reforms have not only failed to achieve what they intended, but have in some sense 'turned back the clock.' Instead of modernizing agricultural production through privatization, they have contributed to an increase in small-scale production relying heavily on manual family labour. Moreover, instead of eliminating collective farming, the reforms have strengthened a small commodity sector heavily reliant on agricultural collectives. In other words, the tandem consisting of household plots and agricultural collectives remains essentially preserved.

#### *Trapped in Permanent Unprofitability*

One adverse result from the reforms of the agrarian sector was the sharp deterioration in the economic situation of agricultural enterprises. The proportion of loss-making agricultural enterprises increased from 3% in 1990, to 57% in 1995, then was reduced to 51% in 2000 and down to 40% in 2005 (Rosstat, 2008, p. 444). The permanent unprofitability of the agricultural enterprises has become a significant issue and political measures have been introduced in response. They were aimed at the elimination of inefficient owners, and the forced conversion of hired workers in the shareholders.

However, these measures frequently lead to adverse results. First, bankruptcy procedures tend to have wider negative social effects associated with redundancies, wage losses, decreased social security, and the reduction in tax revenues fueling local budgets (Uzun, 2013). Second, bankruptcy procedures do not necessarily affect the most corrupt enterprises. They facilitate instead a problematic appropriation of assets in the form of land, buildings and agricultural equipment, which are subsequently sold off to powerful actors. Deprived of the means of production, the remaining owners of land shares are forced to lease them to new owners on onerous terms, or lose them altogether. Many rural residents end up selling their shares, especially those that are more profitable with regard to soil quality and location. It is no coincidence therefore that many of our country manager informants called the procedure of bankruptcy of agricultural enterprises 'internal sabotage'. Even if the arrival of new owners does not result in immediate closure of the business, it tends to be followed by radical reorganization processes and an erosion of employees' rights. In some cases, new owners, based on negative stereotypes of rural workers as e.g. heavy drinkers and inefficient, rural workers were dismissed and instead people from urban areas were hired (see also Utinova, 2003).

Consequently, the desire to increase productivity is associated with a significant social price paid by many living in rural communities. One of the negative results of the reforms in the agricultural sector is a major increase in rural outmigration. It is estimated that between 200 and 300 villages in the Novosibirsk region have been

affected by such changes and in another 100 villages enterprises are on the verge of being shut down while alternative employment opportunities are practically absent.

Frequently the only means of survival in such circumstances is the household plot. However, with the absence of large agricultural enterprises, operations on household plots are also noticeably reduced. Without assistance from their collective farms, which, in spite of difficult economic conditions, often continue to support their workers, households have to decrease agricultural production on their plots. This, however, further exacerbates the difficult economic situation of rural families for whom the household plot is often the basis for their livelihood.

Hence it can be argued that policies designed to restructure loss-making agricultural enterprises without providing assistance to redundant workers are a major cause for the deterioration in both living standards and the quality of life amongst the rural population. To improve this situation, a Federal Act no. 83-FZ on 'Financial Recovery of Farms' designed to assist the financial recovery of agricultural enterprises and other producers came into force in 2002. On the basis of the act regional programmes aimed at the restructuring and writing down of debts after bankruptcy procedures have been developed. Thus the state tried to get rid of inefficient owners. However, these policies also served to strengthen the position of rural producers' paternalistic attitudes because rural producers in the Soviet era always received a weighty public support in difficult situations

*Trap of Lowering Wages and Poverty amongst the Rural Population.*

As a result of the primary (first-stage) capital accumulation in Russia of the 1990s, the majority of those working in agricultural collectives lost their landownership rights, sold their share of land, or abandoned it, often due to lack of knowledge of their rights as shareholders. Similar to the situation during the establishment of capitalism when one of the main sources of wealth accumulation by the bourgeoisie was based on the downfall of small producers and the exploitation of hired workers, now capital was accumulated through a reduction of wages (e.g. Plyshevski, 2004, p. 28). Similar to Russians more generally, rural people have experienced a so-called 'privatization trauma'. As this respondent explains:

'All administration that was at the helm at the beginning of restructuring seized all good equipment for themselves. I'm sorry for people. All their life they have worked hard, and now those who are not well informed are left with nothing' (Rural respondent, Novosibirsk region).

Data from a survey of household budgets show deep rural–urban social inequalities in material well-being. The proportion of those considered poor was roughly one-and-a-half times greater in rural areas than it was in urban areas. In 2012, the proportion of those with incomes below the poverty level, i.e. less than RUB 6,500, was 56.3% in rural areas compared with 29.6% in urban areas (Rosstat, 2012b, pp. 14–15).

Wages (as opposed to income gained from other sources, i.e. capital) continue to be the main source of income for Russians although this proportion has decreased somewhat since the transformations began. Income gained from paid labour accounted on average for 62.8% of household income in 2000, compared to 76.4% in 1990 and 65.6% in 2011 (Rosstat, 2012a, p. 169).

Agricultural workers receive the lowest wages in the national economy. Of course, low wages keep production costs low. Yet, they also limit capital accumula-

tion as they reduce consumption levels. Further, they diminish economic incentives to work, as indicated in terms of both low levels of motivation to work in the first place and low productivity amongst rural workers. The agrarian sector thus experiences pressure due to both low opportunity costs of rural work and low effective demand of the rest of the population. This is another institutional trap.

Another potentially serious consequence of under-evaluation of work and irregular payment (long wage arrears, high share of payments in kind, lack of compensations for work under harmful working conditions, non-payment for annual leave, etc.) can be referred to in terms of a destructive adaptation (de-adaptation) of the rural population. It undermines the motivation to work and to work well, decreases the instrumental and terminal value of work, causes tolerance to poverty and low living standards, encourages an orientation towards survival as opposed to an increase of family assets, and, in general, contributes to the socio-economic marginalization of people living in rural areas.

Becker (1993, p. 34) states that 'unemployment in the legal sector increases the number of crimes against property not because it arouses in people unrest and cruelty, but because it reduces "benefit" from legal professions'. Policies and the particular social and economic institutions that are constructed based upon these cannot be described as effective if they motivate particular groups to behave in socially and economically undesirable ways. This process can be considered as another institutional trap.

Based on interviews and observations, this situation seems to remain aggravated. Surrogate forms of wages remain a common phenomenon. Instead of monetary remuneration, workers may receive grain, animal products, fodder, young animals to keep on household plots, wood, coal, alcohol and other goods or products. Wages also remain frequently unpaid, further causing people to rely on non-monetary resources to pay for goods and services. Overall, it can thus be argued that, since the 1990s, rural societies have begun to increasingly rely on a barter system.

A number of factors, in particular an ongoing cost-price squeeze, low demand in rural areas, and insufficient state assistance for rural producers, has resulted in a less efficient and less profitable agricultural sector. Thus, a high rate of social taxes<sup>2</sup> provoked farm managers to divert part of the wages in the shade and use a surrogate forms of wages. The result is a loss in tax revenue assigned and the associated reduced functioning of the social infrastructure. This, in turn, further disadvantages the situation of rural workers. The situation can be described as a vicious cycle. The government increases taxes in order to trying to tackle the most urgent social problems, while farm businesses attempt to avoid taxation in order to survive. As a result, social problems remain unsolved or deteriorate further.

Another issue is that some employers fail to pay wages in spite of being able to do so. Workers remain unpaid, sometimes for years, and when they receive payments, many use them in unproductive or undesirable ways. According to a theory put forward by Zelizer (2004) people perceive unexpected and regular income in different ways. Applied to this context, this means that occasional, "unexpected" payments (casual earnings) are less likely to be spent on, for example, general, immediate family needs but instead on things that are perceived as more rewarding, with alcohol being a typical example.

The absence of a regular wage is further integral to the barter phenomenon discussed earlier, in that rural families may expand their farming activities not with the overall, long-term goal of capital accumulation but with a specific purpose in mind.

They may, for example, fatten a young bull in order to pay for their children's educational fees, another to equip them with school material, and a third as a present for a wedding party.

Overall, it can be argued that during a period of radical changes during the 1990s, money ceased to be the common currency for labour, expenditures, savings and capital accumulation. The emergence of ineffective social and economic practices due to poor performance by public institutions can be termed an institutional trap.

### Assessing the Success of Market Liberalization

Russian reformers' expectations associated with the invisible hand of the market have failed to materialize. The emergence of numerous institutional traps, due to inconsistent and contradictory reforms has resulted in a number of negative developments in the agricultural sector. Negative effects are in particular reduced overall productivity, a drastic reduction of agricultural output, and, correspondingly, a significant increase in imports of agricultural products.

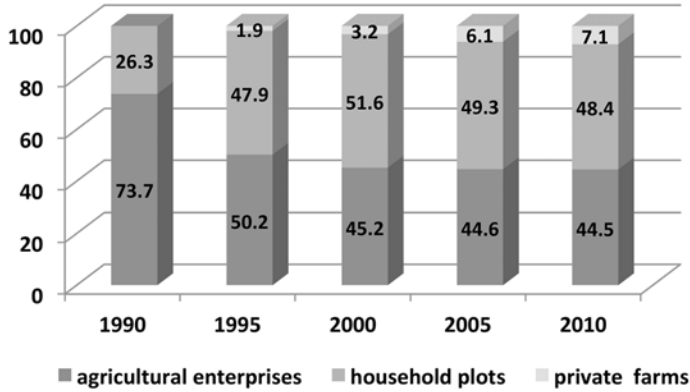
For example, total grain output was reduced from 104.3 million tons during the 1986–1990 period to 65.1 million tons during the following four years (average per year). The situation improved somewhat during the following decade. Total grain yield increased to 78.8 million tons during the period between 2001 and 2005 and to 85.2 million tons during the following four years. A similar picture emerges with the production of meat. Meat production decreased from 10.1 million tons in 1990 to 4.4 million tons in 2000 and increased again somewhat to 7.2 million tons in 2010 (Rosstat, 2011, pp. 418, 428). Despite these more recent positive developments, agricultural production has not yet reached pre-reform levels.

Domestic production declined so rapidly that the government was forced to begin importing agricultural products. The proportion of imports for basic foodstuffs has doubled since reforms began. It even went beyond 30% for some products, thus exceeding maximum allowable import limits and creating potentially domestic food shortages (Rosstat, 2011, p. 435).

The changes in the structure of farm categories confirm that the private farming sector has not become the dominant one (Figure 1). For instance, in 2010 the share of private farms was only 7.1% of total agricultural units. On the other hand, private farms produced more than 22% of grain, 10.9% of sugarbeet, around 26% of sunflower seeds, and 26% of wool (Rosstat, 2011, pp. 411, 414). A sharp drop in the output and profitability of reorganized collective farms during the 1990s was followed by a period of stabilization during following decade. However, the former collective farming sector has not regained its previously dominant position.

Thus, a paradoxical result of the market reforms was that small-scale household plots have become the leading sector within the agrarian economy. Yet, a major argument made here is that its increased relevance is not the consequence of peasants' free choice. Smallholdings were instead the only way to survive for the majority of people living in rural areas. In a Federal Law on Personal Subsidiary Farming, which came into force in July 2003, this type of agricultural production is subject to the same measures of state support that large and medium-sized farms receive. These measures prevented a significant reduction in production from household plots (Figure 1). In 2011, 84% of potatoes, 71.5% of vegetables, 82.8% of fruits and berries, 36.5% meat, 50.4% milk, 22.1% of eggs were produced on household farms (Rosstat, 2011, p. 414). Part of this production is consumed by rural families and their





**Figure 1.** Structure of Russian agriculture by farm categories, in percentages of total (100).

Source: Rosstat, 2011, p. 411.

relatives in urban areas. Another part, however, is sold on the market. According to various estimates, these sales contribute to 10–30% of rural families' incomes.

### **The Tentative Steps towards Integrated Rural Development and Improving the Living Standards of the Rural Population**

Since 2000, Russia's agricultural policies were aimed at reducing the institutional traps discussed earlier. In the early 2000s, changes were made to the financial and institutional support given to rural producers, such as improving access to financial loans. The core national project for the development of the agricultural sector consisted of three main areas: an increase in livestock production, the promotion of small-scale farming (household plots and private farms), and realization of a programme for the building of affordable housing for rural professionals (doctors, teachers, agronomists, etc.), which are sorely lacking in rural areas (Priority national project, 2002). While these measures had a positive impact on the activities of the agricultural sector, they were unable to solve all its problems.

Agricultural policies during this period were aimed at achieving a sustainable development of the agricultural sector and in rural areas more generally. The main aims were: a sustainable socio-economic development in rural areas, an increase in agricultural output, more efficient agricultural production systems, sustainable land use, and improving rural livelihoods. The policies succeeded in terms of increasing agricultural output, reducing the number of unprofitable agricultural enterprises, increasing profitability and reducing the share of private households in agricultural production. However, the measures were not a holistic approach to agribusiness development and were insufficient. In 2002, Russia passed a law allowing the free sale of land. Agricultural businesses thus became a potentially attractive investment. The state encouraged the arrival of large-scale investors in the agricultural sector and the subsidy system favoured large-scale enterprises. According to Uzun (2005), in the early 2000s, 1.4% of the largest farms received 22.5% of all subsidies.

Western observers often characterize government intervention in the Russian agricultural sector as a legacy or a return to the Soviet past. However, it can be argued that government support to agriculture is consistent with approaches employed in other countries with the aim to encourage the development of agriculture (Visser et al., 2012).

### **State Agricultural Policy during the Global Financial Crisis**

The global financial and economic crisis of 2008–2009 initiated further political reforms directed at the agri-food complex. Russia's grain production increased dynamically. Gross grain output increased from 65.5 million tons to 108.2 million tons between 2000 and 2008, with an average annual growth of 3.8%. This, in turn, made cereals an important export, increasing from 1.3 million tons in 2000 (2% of the gross grain harvest) to 18.2 million tons in 2008 (16.8% gross yield), making Russia the third biggest exporter of cereals after the United States and the European Union (Deryugina, 2010). Overall, agricultural output grew 10.8% between 2008 and 2009, which is especially relevant considering the 1.2% decline in other sectors (Rosstat, 2009, pp. 412, 418).

During this period, the state monopolized the export of grain, creating a 'United Grain Company' (UGC), which brought 31 of 41 existing companies under federal ownership. This company was given authority by the state to make interventions in order to maintain stability in the grain market. However, the experience of 2009 showed that the UGC acted not as a regulator, but as a punter seeking to maximize profit through price manipulation (Deryugina, 2010, pp. 67–69). The state's failure to stabilize market prices has had obvious adverse effects on thousands of rural producers.

Russia's accession to the WTO in 2012 is likely to affect rural development in Russia. Russia's obligations under the WTO include a phased reduction of 2011 average tariffs from 10% to 7.8% and from 13.2% to 10.8% for agricultural products, with variations in the timing and the extent of reductions depending on product type (Abdullin, 2012). There is widespread consensus amongst experts that Russia's accession to the WTO will negatively impact domestic agriculture. Some suggest that these changes could lead to a total loss of 4 billion US dollars annually. This could lead to a reduction in Russia's contribution to global food exports to 1% and, at the same time, increase Russian food imports by 2.3%, resulting in a negative trade balance of USD 7.3 billion (Sergeyev, 2012).

According to Babkin et al. (2012), the combined losses of agricultural production could amount to around RUB 3.3 trillion, which represents 35% of foregone growth, due to the increase in imports of animal products to 25–40% and lower demand for feed grain. This may lead to the bankruptcy of one-third of agricultural producers in Russia and the loss of up to 1.7 million jobs. But, according to WTO rules, Russia could increase support for small and medium-sized agricultural enterprises; however, the Russian agricultural policy regimes has not shown willingness to use this possibility sufficiently. Also, a further increase in food imports may increase the incidence of bankruptcies amongst larger businesses and, altogether, this gives a pessimistic outlook for Russian agriculture and production.

There are a number of reasons for such pessimism. First, the agricultural sector in Russia has not yet recovered from the shock of the market reforms. Second, government investments in agricultural production are lagging behind other developed

countries. Third, while Russian legislations are not yet in full compliance with WTO requirements, there is a shortage of experts in Russia capable of resolving disputes with other WTO countries. However, the greatest concern is the expected increases in domestic energy prices, potentially increasing agricultural input prices.

The ability of the state to support Russia's agricultural sector is also associated with the so-called 'green box' of the WTO. This refers to non-production related agricultural subsidies, such as payments for environmental and landscape measures. Other aspects include measures targeted at the improvement of infrastructure, research, education, information and consulting services, veterinary and phytosanitary measures, market information, content of strategic food reserves, regional development programmes, crop insurance, and the restructuring of agriculture. As evident from other developed nations, the 'green box' is not associated with commitments to reducing subsidy levels. For example, between 1995 and 2001, support available through 'green box' measures increased by 56% in the European Community, 26% in the United States – and 53% in Australia. This is in stark contrast with Russia, where such payments were reduced by more than half during the same period (Scheglov, 2012).

One argument is that the most positive step that could be taken by the Russian government in the current situation is a major review of measures to support domestic producers. The development of modern infrastructure aiding agricultural production and training and qualification measures relevant to the agricultural sector would be particularly effective (Agropraktik, 2012).

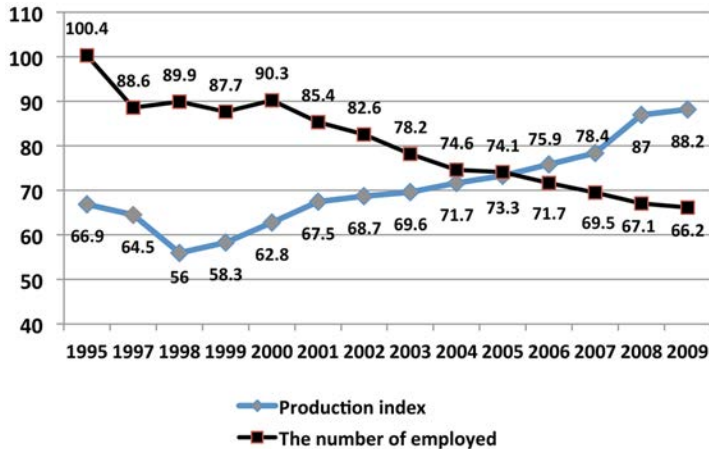
### **Rural Communities' Survival Strategies**

The financial crisis has aggravated the situation in the rural labour market since 2008. This is evident in the increased average extent and duration of unemployment and the diversification of rural employment (moving from the formal to the informal employment sector, an increase in non-agricultural labour employment, 'freelance', etc.).

Further, as Figure 2 illustrates, widespread unemployment in the agricultural sector continued to worsen even after production levels began to increase. 2005 marks the beginning of fundamental changes in the rural labour market due to technological and organizational innovations. Agricultural production (in current prices) was 3.4% greater in 2009 than in 2003, while the number of people employed in agriculture fell by 2.416 million (a 27% decrease) during the same period.

However, the effects of the global economic crisis as well as a severe drought in south-western Russia and other changes in weather patterns also negatively affected agricultural production. Agricultural production fell by around 11% between 2008 and 2009 and employment in the agricultural sector decreased by 1.2% during the same period (Rosstat, 2011, pp. 124, 411).

The release of a surplus labour force is a progressive phenomenon and in line with developments in other countries. However, cross-country comparisons show that currently the proportion of employment in agriculture of overall employment remains higher in Russia than other developed countries (8.3% as opposed to 1.5–4%). It is, however, likely that in the longer term capital-labour substitution and other types of efficiency gains will contribute to the continuation of this trend in line with what happened elsewhere. With regard to the overall rural economy, it is likely



**Figure 2.** Dynamics of production and the average number of employees in Agriculture of the Russian Federation in 1995–2009 (1990 = 100).

Source: Rosstat, 2010a, pp. 138, 425.

that certain professions and types of work are becoming decreasingly relevant. The current economic growth is likely to remain decoupled from a growth in jobs.

Reductions in the number of people employed in agriculture are accompanied by reductions in average working hours. According to the 2008 sample survey on employment, one in four agricultural workers worked less than 30 hours a week, and 10% worked less than 16 hours a week. The average workweek of agricultural workers was 4.3 hours less compared to the average. (Figure 3).

The observed reduction in working hours due to technological and organizational innovation is rational from an economic point of view. However, this phenomenon is associated with a decline in incomes and a worsening of the quality of life.

The scale of rural unemployment has increased significantly during the period of market reforms. According to employment surveys, the number of those unemployed in rural areas increased rapidly since the mid-1990s. In 2006, it exceeded 2 million and has since then continued to increase (Figure 4). During the period from 1992 to 2009, the total number of rural unemployed tripled, and the number of registered unemployed increased eight times. The share of agricultural workers losing their job was higher than the overall average (Rosstat, 2009, p. 282). Overall, rural unemployment is significantly higher than in the overall economy (10.5% versus 6.3%).

Moreover, long-term unemployment is a particular problem in rural areas. About half a million of those unemployed in rural areas have been seeking work long enough to warrant being classified under the category 'economically inactive'. The reduced possibilities of finding a job once unemployed are reasoned mainly with an underdeveloped productive and social infrastructure, a lowly diversified agricultural economy, and the fact that rural labour markets remain isolated. Low job and territorial mobility exacerbate these problems.

Currently, many villages have no major employer capable of providing sufficient numbers of permanent jobs and regular pay. Unable to find paid work in the legal economy and to receive social benefits, many rely solely on their subsidiary farms to survive, and, in some cases, resort to non-traditional income sources, including

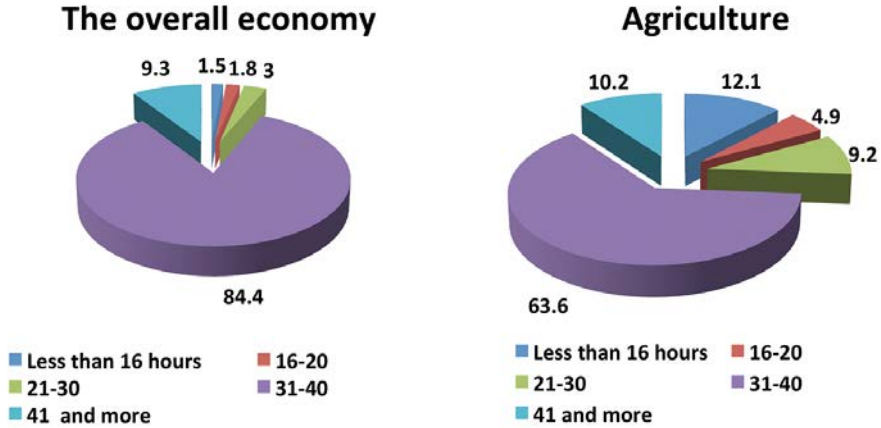


Figure 3. The structure of employment in the economy of the Russian Federation based on the duration of the working week in 2008, percentages.

Source: Rosstat, 2009, p. 94.

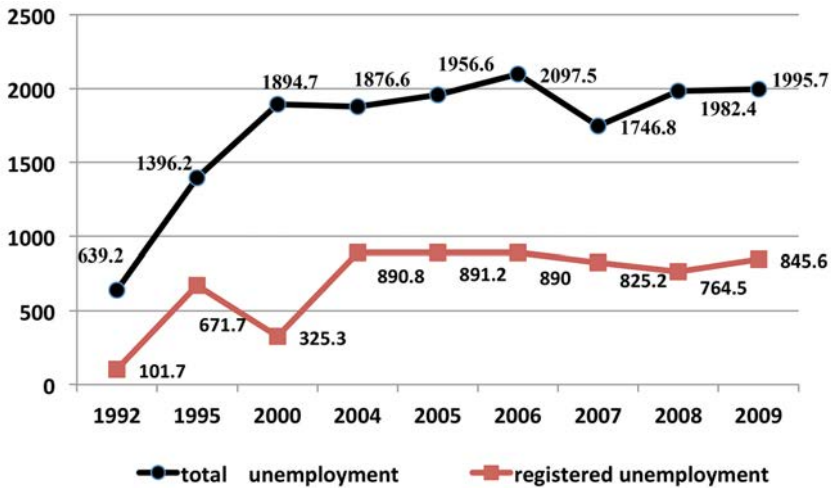


Figure 4. Dynamics of rural unemployment in Russia, thousands of people, 1992–2009.

Source: Rosstat, 2010b, p. 101.

criminal activities. Poorly developed local economies and, at the same time, lack of sufficient transport to and from rural communities, mean that those living in such areas are gradually becoming disadvantaged social enclaves.

The mid-2000s are characterized by further erosion of opportunities for secure, full-time employment, leaving often even those who are employed in a socially and economically insecure position. Many are thus forced to show personal initiative and ingenuity in order to survive. The analysis reveals that, survival strategies in the form of informal employment on household plots, seasonal work (in urban and



industrial areas), and freelancing during the period of market reforms became widespread.

### **Informal Employment as a Means of Survival**

A large sector of informal employment (self-employment) developed as a result of a sharp deterioration in rural employment opportunities, difficulties of being registered as 'unemployed', and limited social assistance offered to people who have lost their main source of income.

The most common form of self-employment of the rural population is subsistence farming. 22.8 million private subsidiary farms existed in 2006 according to the Russian Census of Agriculture. This category of farms now produces about half of Russia's agricultural produce. The vast majority of rural households (99.1%) consider food self-sufficiency to be the main purpose of their farming activities. Subsidiary farming is considered by 14.7% as an additional source of cash income. Yet only 0.7% of households consider it to be the main source of income (Rosstat, 2007). In comparison with the pre-reform period, the vast majority of rural families have either increased the size of their farm or not changed its size.

In 2010 (average for the period), the majority of those employed in agriculture were so on household plots (about 2.7 million). In addition, over 15.8 million people are employed in the production of goods for their own consumption (Rosstat, 2010b). The main sources of income for those considered to be unemployed on a long-term basis are derived from selling both produce from their household plots, mushrooms and berries, and, in addition, from social benefits. A widespread perception that rural residents receive large revenues from household plots seems unfounded when looking at calculations showing that rural areas suffer from a much greater concentration of poverty than urban areas. For example, for the first quarter of 2009 the proportion of families with incomes below the poverty line in rural areas is 2.5 times higher than the corresponding figure in urban areas. This indicates that income from subsidiary plots tends to be insufficient in overcoming poverty. In addition, working on smallholdings does not address problems associated with either an agrarian overpopulation or insufficient pension systems (since this type of work is not accounted for when calculating individual pensions or the accumulation of pensions' insurance components).

### *Seasonal Work in Cities*

It is common practice for those living in rural Siberia to engage in seasonal work in the oil and gas provinces. During fieldwork carried out in 2012 in the Novosibirsk region, according to experts in each rural municipality, approximately 20–25% of the employable men seek work outside of their local communities.

This is especially the case for those with relevant qualifications, i.e. tractor drivers, mechanics, welders, and so on. Industrial enterprises in urban areas are also actively seeking labour from rural areas. Some of them have signed up to agreements on training workers while guaranteeing their employment. Work tends to be on a rotational basis (a few weeks work, followed by time off) and women in these families usually do not work outside the home. While seasonal work enables rural families

to survive, it can have negative impacts on family relationships and contribute to the disintegration of families.

### *'Rural Freelancing'*

The transformation of agrarian relations has caused the bankruptcy of many agricultural enterprises. Agricultural workers, who have lost their jobs, either have to switch to subsidiary plots entirely or become engaged in enterprise activities, either alone or by creating a work portfolio and becoming rural 'freelancers' (see Handy, 2001). Rural freelancing can be described as a type of informal self-employment of rural residents who organize themselves into groups that provide various services to customers in accordance with the agreement entered into by the parties. Not only are these groups and the work they engage in segregated from the formal economy. It also means that those working in such groups can no longer receive unemployment benefits.

While rural freelancing provides enhanced employment opportunities for many in rural areas, it does not offer long-term security in the way other types of employment can. Freelancers are not entitled to social benefits (paid sick leave or holidays, among other things) and have very uncertain pension prospects.

Freelancing has become a significant phenomenon in rural Russia and is likely to remain one for two main reasons. First, there is a reliable pool of long-term unemployed people seeking work. Long-term unemployment figures were 35.6%, according to a sample survey from 2010 (Rosstat, 2010b). Second, farm work is frequently perceived as unattractive, making freelancing a more desirable option than the 'toil on the farm'.

The presented mosaic picture shows that there was a change pattern of employment of rural population shift from secure full-time employment to non-standard forms of fixed-term or temporary contracts or undocumented employment. In the agricultural sector, the transition occurred more acute and painful compared to other segments of the economy because of extremely narrow selection of spheres of employment in rural areas and specificity of the released workers. Reduction in hours worked, impressive scale and stagnant unemployment led to extremely high levels of rural poverty, deepening inequality and social disparities. The absence of a clear perspective of the villagers forced them to leave their homes in search of jobs in cities and other regions. Operational measures taken by the authorities have a positive role in mitigating the consequences of the prolonged economic crisis, but did not solve the problem of employment of the rural population drastically.

### **Conclusions**

The sharp turn from a planned economy to a market economy in Russia during the 1990s based on free-market ideology has produced adverse economic and social effects. Collective farms were destroyed, leaving a space that could not be filled successfully by small-scale, privatized farming. It can be argued that a major reason for this failure is that the model of agrarian relations imposed from above has taken into account neither traditions and historical experiences specific to rural Russia, nor the symbiotic relationship between collective and individual farming in Russia.

Collective farms were privatized and reorganized regardless of how successful they were in economic terms. Despite facing similar external conditions, agricultural enterprises have been following very different adaptation pathways. While the economic situation of agricultural enterprises in general deteriorated during this period, it appears that enterprises specializing in more profitable types of production found themselves to be in a relatively better financial position. Further, although the economic situation that an enterprise happened to be in at the beginning of the reforms impacted on its reorganization and adaptation path and, ultimately, its economic success, this was not necessarily the most important factor. Crucial factors were instead associated with diversification, innovation and upward integration (i.e. development of small processing facilities). The benefits of both diversification and innovation are somewhat obvious. Moreover, upward integration was associated with three potential benefits. First, it enabled enterprises to resist pressure of large processing monopolies dictating conditions while not always fulfilling their obligations. The second benefit was that it ensured a small but reliable source of income. The third benefit was that it helped improve profitability through the removal of middlemen.

One challenge that arose within the restructuring process was the vacuum left after the collapse of Soviet-era distribution and marketing structures, which meant that agricultural enterprises had to operate in a context of frequently unpredictable and, in some cases, criminally flawed distribution and marketing channels. Wholesale dealers, racketeers and criminals became a significant phenomenon. Barter transactions began to make up a significant proportion of transactions.

Another significant issue during the restructuring process is associated with the inability to obtain loans necessary to replace and maintain agricultural equipment and to purchase agricultural inputs and, in turn, to remain profitable.

Moreover, companies experienced increasing difficulties to find sufficiently skilled staff. One reason for this was that rising education and living costs made it increasingly difficult for young people in rural areas to attend secondary or tertiary education. This situation was exacerbated by the fact that professionals and skilled workers experienced decreasing opportunities to exchange their knowledge.

Profitability was decreasing due to an ongoing cost-price squeeze associated with increased disparity between the prices of agricultural products, on the one hand, and of input factor prices, on the other hand (industrial products in general and energy in particular). This, in turn, led to a contraction of companies' social welfare programmes and housing construction. Consequently, tensions and conflicts became a common issue in large agricultural enterprises. Nevertheless, many continued to provide some social services and to assist workers in their small-scale private farming activities, thereby helping to maintain their standard of living.

The particular adaptation strategies evident in agricultural enterprises have had a major impact on families' livelihoods and way of life. In economically strong enterprises, most families were oriented towards material affluence or towards maintaining the present standard of living. In contrast, families in economically weak enterprises were oriented towards subsistence. Survival became based on small-scale, part-time farming, secondary paid jobs, and illegal practices.

This situation was compounded by the emergence of a number of institutional traps: the concentration of more than half of agricultural production in small-scale and largely non-mechanized farming, the widespread lack of capital necessary in order to maintain and replace technical equipment, an impoverished population

constraining demand for agricultural products, and the widespread incidence of enterprises making long-term losses and thus relying on surrogate wages.

State agricultural policy during the 2000s advantaged large-scale agricultural enterprises, making investments into agriculture particularly attractive to large-scale investors. Contrary to what might be expected, this development did not lead to an improvement of technologies, techniques and managerial approaches and, ultimately, increased productivity in the agricultural sector. Instead, it resulted in a sharp increase in unemployment, thus contributing to increased economic inequality and social tensions in rural areas. Competition for land, skilled labour and state support increased.

Crucially, pre-reform levels of agricultural production were not reached. Lack of recovery after the restructuring process is, however, in part attributable to the financial and economic crisis, which contributed to a significant reduction in agricultural production and increased imports of food. Russia's accession to the WTO is associated with further potential new risks and threats mainly associated with food prices and the labour market. A more subtle and proactive political approach is required in order to harness the possibilities and, at the same time, respond to the limitations associated with WTO membership.

## Notes

1. Private households plots is a form of informal non-entrepreneurial activity for the production and processing of agricultural products.
2. Currently, the Russian social tax is 30.2% of the wage bill.

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## **A Twenty-first Century Socialist Agriculture? Land Reform, Food Sovereignty and Peasant–State Dynamics in Venezuela**

DANIEL LAVELLE

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**Abstract.** This article examines state–peasantry dynamics in Venezuela in regards to the formation, implementation and contestation of land reform and agricultural policy. As a self-proclaimed socialist state, the Chávez Government has framed its agrarian policies as a reordering of the food system that prioritizes land redistribution, smallholder agriculture, and sustainable forms of production. Yet, despite an apparently positive policy context, rural dynamics have been characterized by conflict over land and a geographically and temporally uneven process of policy implementation in rural areas.

This article examines how peasants have engaged with Venezuela’s land reform processes and their role in shaping the character and scope of state policy. In particular, it investigates the dynamics of technically illegal peasant occupation of estates in a seemingly ‘pro-peasant’ policy context. Peasant–state dynamics are analysed through the lens of food sovereignty, where land reform processes and struggles represent contestation over conceptions of what constitutes ‘appropriate’ production in a ‘socialist’ agricultural regime.

### **Introduction**

The election of Hugo Chávez Frias to the Venezuelan presidency in 1998 marked the end of an era in Venezuela. The old political regime that had provided stable and peaceful transfers of power for some 40 years had collapsed under its own weight. An oil economy that had once delivered the highest per capita income in Latin America was in crisis and had left almost 70% of the population in poverty (Márquez, 2003). Neo-liberal economic reforms introduced in the 1980s and 1990s had only heightened popular discontent and further emphasized the glaring gap

Daniel Lavelle is a Ph.D. candidate at the Department of Environmental Science, Policy, and Management, University of California, Berkeley, 130 Mulford Hall, Berkeley, CA 94720-3114, USA; email: <dlavelle@berkeley.edu>. I would like to thank the many individuals in Venezuela who agreed to be interviewed for this research, especially the numerous campesinos that opened their homes and provided their time in sometimes challenging circumstances. I would also like to thank Claudia Carr, Miguel Altieri and Laura Enríquez for their support and guidance at various stages of the research process. I would also like to thank the reviewers for their helpful comments throughout the article’s revisions. Finally, I would like to acknowledge the financial assistance received from a Tinker Grant from the Center for Latin American Studies at UC Berkeley that helped finance a portion of the fieldwork.

between Venezuela's haves and have-nots. Chávez swept into the presidency promising to completely overhaul the political system, turn the country away from neo-liberal economic policies, and use the country's oil wealth to benefit the vast numbers of the Venezuelan poor.

The Chávez Government's political programme is the Bolivarian Revolution, or socialism for the twenty-first century,<sup>1</sup> a process of social change that is, as government supporters put it, *pacífica pero armada* (peaceful, but armed), a democratic turn to the left. The Chávez Government has framed its policies as an explicit counter to neo-liberal development ideology and has reasserted a more activist role for the state in economic and social policy. In the agrarian realm the government has introduced policies aimed at, in words of officials, developing an agricultural regime that is tropical, sustainable, agro-ecological, and socialist, and that will guarantee national food sovereignty (Interview, 18 July 2011). A centrepiece of the government's agricultural policies is a land reform programme that purports to place smallholders at the core of this agrarian transformation. The reform redistributes both state land as well as, in what Chávez has declared as a 'war on the latifundio', estates from large landowners to the landless (Univision, 2005). Yet, a central problematic has emerged. Despite an apparently positive policy context, aggressive pro-campesino state rhetoric, popular support for Chávez in rural areas and oil wealth to fund agriculture development, rural dynamics have been characterized by conflict over land and geographically and temporally uneven processes of policy development in rural areas.

This article examines the Venezuelan agrarian reform process and relationships between the Chávez Government and campesinos (small farmers). Passed by presidential decree in 2001, the agrarian reform law (Ley de Tierras y Desarrollo Agrario [LTDA]) can largely be seen as a state-led process of agrarian change. This article, however, examines how campesinos have engaged with land reform processes and their role in shaping the character and scope of state policy. In particular, I investigate the dynamics of technically illegal peasant occupation of estates in a seemingly 'pro-peasant' context. Using the government's framing of agriculture and other policies as a direct challenge to neo-liberalism and US imperialism, I examine peasant-state dynamics through the lens of food sovereignty where land reform processes and struggles represent contestation over conceptions of what constitutes 'appropriate' production in 'socialist' agriculture policy. I argue that the occupations and campesino conflicts with the state grow out of the contradictions that occur in attempts to institute 'revolutionary' reform via an electoral road to change in combination with how peasants define their own roles within this process of change. In addition, I examine how campesino participants in Venezuela's agrarian reform employ government rhetoric of twenty-first century socialism and food sovereignty to define their roles as smallholder producers and actors central to the Chávez Government's project of broader social change.

### *Methodology*

This article is primarily based on ethnographic fieldwork performed in Venezuela with campesinos occupying land in the Venezuelan states of Cojedes and Yaracuy in April–August 2005, as well as additional field visits in 2006, 2009, 2011 and 2012. To examine state–peasant dynamics within the agrarian reform process, I interviewed

representatives of peasant organizations, campesinos involved in land petitions and occupations, as well as state- and national-level government officials in institutions involved with various facets of the reform. Interviewees were selected using key informant and snowballing sampling, in order to gather data from individuals familiar with key processes of the agrarian reform programme. In addition, I observed local and regional government and campesino meetings and forums. I also interviewed representatives of a number of farming associations, such as FEDEAGRO, who are critics of the Venezuelan government generally, and of the agrarian reform specifically.

## **Food Sovereignty and Agrarian Reform**

### *Agrarian Reform in Latin America*

In the twentieth century practically every Latin American country implemented a programme of state-led redistributive land reform. Agrarian reforms were implemented with a diverse and often contradictory set of goals, as reform was frequently seen as a panacea for a host of problems. Reform was to help modernize agriculture by breaking up inefficient colonial estates, increase agricultural production, reduce rural poverty, mobilize political support for governments, and undercut potential support for armed revolutionary groups. These diverse and often contradictory goals often meant that small producers, the sector that the reforms promised to aid, frequently received little long-term benefits from reforms.

Indeed, campesinos in the reform sector often became a class of minifundistas whose land parcels were not sufficiently large to fulfill subsistence needs. Forced to look for wage labour for supplemental income, reform beneficiaries served as seasonal, semi-proletarianized labour on new, capitalistic estates (De Janvry, 1981). Agrarian reforms often failed to directly challenge the power of the latifundio as large landowners were able to avoid expropriation by of estates (De Janvry et al., 1998; Kay 1998). Even when large estates were broken up, the highest quality lands often remained with estate owners who then incorporated them into modern farms (De Janvry et al., 1998, p. 7). The more marginal lands distributed to campesinos reinforced their inability to subsist from familial farming.

Additionally, while campesinos may have received land, a 'landlord bias' saw the majority of government support captured by larger farmers, whose favourable position also provided them with more access to technology and private credit (Kay, 1998, p. 12). In countries such as Venezuela, limited access to resources resulted in abandonment of parcels by reform beneficiaries and reconcentration of land (DeLahaye, 2003). Governments' increasing emphasis on export-crop production also undercut reform efforts, as capitalist estates monopolized the best lands and peasant producers were pushed farther into marginal areas. In addition, the 'urban bias' of cheap-food policies kept agricultural prices artificially low in order to stall upward pressures on wages and thus ease industrialization costs in urban centres (Thiesenhusen, 1995, pp. 176–177; Kay, 1998, p. 12). This wider economic policy made investment in agriculture less attractive in general and, as the majority of credit was monopolized by larger farmers, profitable production by small producers became increasingly difficult.

*Neo-liberal Agriculture and Land Reform*

In sum, state-led agrarian reform in its various manifestations primarily served to foment the establishment of capitalistic agriculture in the countryside (De Janvry, 1981; Bernstein, 2002, p. 433). While some campesinos benefited from reforms, complexities and contradictions in the process left the majority mired in poverty, stimulating migration to urban centres. As neo-liberal reforms gained prominence in the final decades of the twentieth century, state-led redistributive land reform became increasingly marginal. A neo-liberal perspective saw state-led land reform programmes as having created irregularities and inefficiencies in agricultural and land markets that hampered production and development (Borras, 2003). Agricultural policy increasingly shifted from a broad state-interventionist approach to one that was directed at selectively removing the hand of the state from the agriculture sector in order to better promote export production (Thiesenhusen, 1995). Neo-liberal reforms in Latin America overall functioned primarily to open up protected sectors of national economies to foreign investment by shifting the hand of the state in economic policy in order to strengthen a property rights regime that facilitated capital accumulation (Fourcade-Gourinchas and Babb, 2002; Harvey, 2005; Margheritis and Pereira, 2007; Potter, 2007). The World Trade Organization's Agreement on Agriculture that prohibited trade or production controls, pried open previously closed markets to an onrush of subsidized agricultural products, devastating small producers across the Global South and contributing to continued de-peasantization of the countryside and swelling of the ranks of the urban poor (McMichael, 2009b).

Yet, recognizing the volatility represented by continuing unrest over land issues, the World Bank and other lenders have promoted market-led agrarian reform (MLAR). MLAR's seek to liberalize land markets, clarify titling to improve tenure security, and to affect redistribution via non-coercive means (Bernstein, 2002; Borras, 2005). Market-friendly reforms, however, have largely not lived up to their proponents' promises, failing to alter the latifundio–minifunido character of the countryside, and even functioning as a barrier to change (Borras, 2003, 2005; Boucher et al., 2005; Rosset, 2006). At the heart of MLAR failures is that such programmes tend to remove land distribution issues from larger trading regime contexts, depoliticize processes that are fundamentally political in nature, and do not address the central question of power relations in the countryside. The food crisis of 2006–2008 further punctuated the failures of the current world food regime.<sup>2</sup> Yet despite acknowledgement from the World Bank that policies that dismantled government support programmes diminished the productive capacity of the agricultural sector, its solution for overcoming current problems has been a further corporatization of the agriculture sector (Bello and Baviera, 2009).

It is within this context that many new rural social movements have emerged, such as Via Campesina and the Landless Workers Movement (MST) in Brazil, which reassert redistributive land reform as central to supporting peasant agriculture. In one view, these movements can be seen as part of a Polanyian double movement that emerges in an attempt to counter the destructive effects of policy seeking to impose an idealized self-regulating market onto more areas of society (Polanyi, 2001). However, while emerging social movements can be seen, on the one hand, as new resistance growing out of the pains of neo-liberal globalization, it is more accurate to think about them as a new stage in continuous resistance against dispossession. In other words, responses to neo-liberal globalization is a framework more suited to describing the *forms* of current social resistance, rather than their origins (Yashar,

2005). Similarly, as shown above, neo-liberalism in the agricultural sector is not as a phenomenon *sui generis* but rather a form in a historical process of capitalist penetration into the rural sphere.

Given the failure of historical land reform process, the spread of neo-liberal structural adjustment, the opening of the rural sector to transnational capital, global land grabs and the resultant undermining of smallholder agriculture, peasant agriculture appears increasingly under threat. Yet the while relative numbers of peasants have dropped, absolute numbers are high, with 1.2 billion peasants worldwide (Van der Ploeg, 2008). The persistence of the peasantry as a political and productive force and current struggles over land and visions of agricultural and economic development reflect the continuing relevance of Kautsky's (1988) original agrarian question and its more contemporary formulations that seek to understand the nature and forms of capitalist transformation of agriculture and the role (potential and actual) of the peasantry in the political realm (see Bernstein, 1996). As explored in the next section, the concept of food sovereignty has brought the latter issue into sharp relief, placing *campesinos* as central actors in the reframing and creation of alternative agriculture regimes, as well as articulating a new ideological framework for agrarian reform.

### *The Enemy is the Model: Food Sovereignty and Agrarian Change*

Food sovereignty articulates an evolving rights-based ideology that seeks to lay out an alternative paradigm of agricultural development, production, and trade where *campesinos* form the basis of both national food self-sufficiency but also a challenge to the current neo-liberal global food regime. There is no singular definition for what food sovereignty means or what it looks like in terms of a policy package (Windfuhr and Jonsén, 2005; Patel, 2009). A thorough and nuanced exploration of the varied elements falling under the rubric of food sovereignty is beyond the scope of this article, yet a basic outline is useful for understanding food sovereignty as a general trend within agrarian reform movements and how the concept is employed by different actors in the Venezuela agrarian reform process.

First coined by the peasant organization *Via Campesina* in 1996 as 'the right of each nation to maintain and develop its own capacity to produce the staple foods of its peoples, respecting productive and cultural diversity' (*Via Campesina* in Menezes, 2001), the concept of food sovereignty has evolved to make stronger claims on trade policy, food as culture and an ecologically sustainable production system that privileges peasant over corporate-controlled agriculture. A more recent wording by *Via Campesina* states:

'Food sovereignty is the right of peoples to healthy and culturally appropriate food produced through ecologically sound and sustainable methods, and their right to define their own food and agriculture systems. It offers a strategy to resist and dismantle the current corporate trade and food regime, and directions for food, farming, pastoral and fisheries systems determined by local producers. Food sovereignty prioritizes local and national economies and markets and empowers peasant and family farmer-driven agriculture, artisanal – fishing, pastoralist-led grazing, and food production, distribution and consumption based on environmental, social and economic sustainability' (*Via Campesina*, 2007).



Food sovereignty emphasizes not just a right *to* food, but also a right of farmers to produce food locally and to do so in culturally relevant terms. Social movements and theorists have employed the concept of food sovereignty in attempts to articulate a model of agriculture production, policy and trade that directly challenges the dominant model of globalized agriculture. Again, food sovereignty is an evolving concept that can be conceptualized differently by various actors. However, most formulations retain common elements that emphasize:

- redistributive agrarian reform;
- local production of food stuffs by smallholder farmers aimed at supplying domestic markets;
- democratic control of agriculture policy;
- equitable and non-oppressive social relations;
- the exemption of the agricultural sector from trade agreements;
- the cessation of the 'dumping' of subsidized crops in South nations; and
- a sustainable production model based on agro-ecological farming techniques (see Windfuhr and Jonsén, 2005; Rosset, 2006; Via Campesina, 2007; Altieri, 2009; Isakson, 2009; Patel, 2009).

Food sovereignty's focus on trade and redistributive land reform contrasts with a food-security framework often employed by international institutions, such as the Food and Agriculture Organization (FAO), concerned with hunger and poverty in the Global South. Food security advocates often call for targeted investment in agriculture, including the peasant sector, to raise production, increase food supplies, and nutrition-rich crop availability, and counteract rising prices (see De Schutter, 2010; FAO, 2012, 2013; Gates Foundation, 2013). In addition, global and borderless food markets are seen as key to feeding the poor. Food security is by no means monolithic, and while some, such as the Gates Foundation via the Alliance for a Green Revolution in Africa, have argued for an extension of green revolution technologies in Africa to boost production, others have pointed to agro-ecology as a way to raise peasant production and address sustainability concerns (De Schutter, 2010).

Conspicuously absent from food-security frameworks, however, is any serious attention to trade policy or agrarian reform<sup>3</sup> that address structural inequalities in the food system. Food security does little to question the dominant model of capital-intensive agriculture, which, within a context of globalized neo-liberal trade policy, weakens the position of peasant farmers, foments rural poverty and outmigration, contributes to environmental degradation, and drives further displacement of peasant agriculture in favour of large-scale, industrial farms.

While food security and food sovereignty are not necessarily incompatible, as both call for increased resources for agriculture, sustainable production and increased food supplies, food sovereignty goes deeper to pull agricultural policy out of a technocratic, economic policy poverty framework. The emphasis on trade within food sovereignty ideology recognizes land redistribution in isolation does not address the livelihood crises in the rural sector fomented by a globalized food system increasingly dominated by transnational capital. In addition, calls for democratic and non-oppressive social and power relationships and a reordering of production priorities towards agro-ecological farming denotes an understanding that while liberalized trade and a diminished state role in the direct management of agriculture were central components of neo-liberal structural adjustment, reclaiming roles for the state in economic planning does not in itself address the underlying logic of

technocratic, top-down policy formation. If we understand neo-liberal globalization as not isolated economic policies but as a larger ideological project that is inherently exclusionary, undemocratic, and conflictive (Harvey, 2005; Margheritis, 2007, p. 42) then it is clear that alternatives to neo-liberalism require more than bringing the state back into the economic arena. Agrarian movements (and some national governments such as Venezuela) have used food sovereignty increasingly as a call for a new model of agriculture that is expressed as explicitly anti neo-liberal. As the MST has articulated, 'the enemy is the model' (Rosset, 2006), and food sovereignty rhetoric places small farmers in the Global South as central agents in a local, national and international struggle to upset the status quo of global capitalism.

### *Seeds of a New Model: Agrarian Reform in the Twenty-first Century*

Redistributive agrarian reform is one key to an alternative agriculture model that includes food sovereignty (Rosset, 2006; Altieri, 2009). Agrarian reform in the twenty-first century is often seen as a partial solution to both rural and urban poverty in the Global South. Small farms on expropriated farmland could reduce settlement pressures in ecologically fragile frontier areas, and the urban middle class may come to see deepening agrarian reform as one way to reduce social problems exacerbated by rural to urban migration (Thiesenhusen, 1995, pp. 180–181). De-peasantization is not the inevitable migration towards the pull of better job opportunities, but is a reflection of failed land reform, cheap food and industrialization policies and the transformation of the countryside into a space more appropriate for capital accumulation. Reforms aimed at re-peasantization of the countryside seek to undermine or reverse these rural-migration patterns by providing for more stable peasant livelihoods. It has been shown that in Cuba, government emphasis on the creation of a small-farm sector has contributed to re-peasantization (Enrriquez, 2003). In Brazil, urban members of the MST have moved into the countryside after successful land occupations. In Venezuela, the programme *Vuelta al Campo* seeks to revitalize the countryside and slow, if not reverse, migration trends by creating opportunities outside of the urban sector.

In addition, redistributive agrarian reform can potentially affect food production issues by supporting smaller producers. Small farms are argued to be more productive than large farms, the so-called inverse relationship (Thiesenhusen, 1989, p. 22; Griffin et al., 2002, pp. 286–287; Rosset, 2006). While output per worker may be higher on a larger, more capital-intensive farm, total productivity per unit of land is higher on smaller farms. As the above discussion of food sovereignty demonstrated, effective land redistribution must be accompanied by trade policies that support local production and insulate local markets from subsidized food grown in the North. Meaningful restructuring of trade policy and land redistribution to smaller producers could, therefore, raise total food production, address rural and urban poverty and provide for higher average income levels.

### **Agrarian Reform, Production and Twenty-first Century Socialism in Venezuela**

While grass-roots agrarian reform movements such as the MST have gained prominence in the last two decades, Venezuela is an example where a self-proclaimed 'socialist' government is taking the lead in redistributive land reform. As mentioned

above, the land reform process is linked with the broader vision of Socialism for the 21st Century, Venezuela's discursive and political response to disenchantment with the economic and political structures of neo-liberal globalization. As structural adjustment packages have diminished the institutional power of the state in the Global South, some analysts (see Smith, 2008) have focused their search for alternatives on other actors – social movements such as the MST, NGOs and indigenous movements, for example – that exist outside the sphere of the state. In Venezuela, however, it is the state that has taken centre stage in redefining priorities for development outside of the established trends of global capitalism. Apart from extensive spending on new social programmes, such as the missions,<sup>4</sup> the Chávez administration has created community councils aimed at decentralizing elements of political decision-making, and foreign and local capital has found itself under increasing state scrutiny and regulation or, in some sectors, nationalized by the Venezuelan government. In addition, the Chávez administration has spent much political energy promoting regional integration accords and institutions such as the Bolivarian Alternative for the America, (ALBA, envisioned as a regional alternative to the US-promoted Free Trade Act of the Americas), and the Bank of the South (as a counter to World Bank and IMF financing) in attempts to buttress Venezuela's geopolitical position vis-à-vis the United States.

It is within this context of an explicit attempt to upend the geopolitical status quo that Venezuela's agrarian reform is constructed. Tying the process to the greater framework of the Bolivarian Revolution, the agrarian reform fits into a larger scheme of re-peasantization, that seeks to revitalize the countryside. Through pro-peasant policies, the Venezuelan government states it hopes to reduce both urban and rural poverty, promote food sovereignty, and diversify the economy so that Venezuela's fate no longer marches lockstep with the price of petroleum. Chávez often emphasized the anti neo-liberal character of the government's agricultural policies. 'Under neo-liberalism everything that we are doing is inconceivable; we couldn't do it if we were tied to the neo-liberal model. All of this, the Plan de Siembra, Plan de Semilla, Plan de Tractores, would be impossible' (Castillo, 2005). Thus, food sovereignty's critique of a food system dominated by export imperatives and foreign capital is a natural discursive tool for proponents of the Venezuelan agrarian reform and helps distinguish policies from earlier land reform projects.

### *Venezuela's Land Question*

The landscape of land reform in Venezuela is complicated by structural constraints stemming from an economy dominated by oil development that displaced and marginalized agriculture. In the first half of the twentieth century, oil revenue quickly replaced plantation agriculture as the driver of the Venezuelan economy<sup>5</sup> and rural development largely began to follow a logic beneficial to the oil sector (Ríos and Carvallo, 1990). Oil-price booms have furthered agriculture's relative decline as petrodollars facilitate food imports that undercut domestic farmers who also face upward pressure on production costs via oil-driven currency appreciation.<sup>6</sup> In addition, oil-producing regions in Venezuela experience higher local wages, further eroding agriculture profitability (Page, 2010, p. 263). Such challenges to agricultural development have exacerbated rural to urban migration, and Venezuela is highly urbanized by Latin American standards, with 93% of the population living in cities in 2005 (World Bank, 2007, p. 321). While a weak agriculture sector potentially

diminishes the relative power of landed sectors to oppose land reform efforts, the peasant population is also smaller and more fractured in regards to peasant organizing than in many neighbouring countries, which hinders their ability to influence policy formation and implementation.

Although Venezuela implemented a land reform programme in the 1960s few lasting benefits reached small farmers. Delahaye (2001) and Soto (2003) argue that trends of land concentration during the reform period demonstrate that the small-farmer sector was not significantly affected by the reform. Between 1961 and 1997–1998 the acreage controlled by small producers rose only from 1% to just 6% of arable land, while 1% of landowners continued to control 46% of arable land at the end of the reform period (Soto, 2003) (see Table 1).

Additionally, land distributed to small farmers was often of low quality and in areas with little established infrastructure, and peasant abandonment of land was common and contributed to reconcentration (De Janvry, 1981, p. 217; Delahaye, 2001, p. 106). While agricultural production rose after the reforms, critics maintain the reform was largely a colonization project, and that production increases occurred primarily through the extension of the agricultural frontier rather than the break-up of large estates (De Janvry, 1981). Therefore, while official numbers for the reform cite that almost 14 000 000 hectares of land were distributed to 371 814 families from 1958 to 2000 (Delahaye, 2003, p. 244), the figures illuminate little about the reality of the reform's impact. Indeed, by the end of the century Venezuela's land distribution continued to be one of the most unequal in the world, with a Gini index for land distribution of 0.88 in 1997 (World Bank, 2007, p. 324).

### The Land Law

Passed by decree in 2001, the Ley de Tierras and Desarrollo Agrario (LTDA) calls for the elimination of Venezuela's latifundio and the establishment of 'integrated and sustainable' rural development. Under the law there are a number of mechanisms for distribution of land by the National Land Institute (INTI). Informal tenants on state land that have been farming for three years can have their status regularized.<sup>7</sup> The LTDA also allows for redistribution of land claimed by private actors. The state can 'recover' land (*rescate*) if owners cannot produce documentation demonstrating a chain of ownership dating back to 1848. According to government representatives, such a requirement comes from a philosophical decision to not recognize colonial land structures (Interview, 25 June 2005). Any gaps in documentation denote an illegal purchase, and the land, even if productive, belongs to the state.

In addition, Article 69 of the LTDA gives the Venezuelan state the right to expropriate land from latifundio in the countryside. Legal landowners, however, are

**Table 1.** Venezuela's first agrarian reform.

Farm size (ha)	Number of farms		Hectares controlled	
	1961	1997–1998	1961	1997–1998
1–20	72%	76%	1%	6%
20–1,000	27%	23%	10%	48%
>1,000	1%	1%	89%	46%

Source: Soto, 2003, pp. 28, 29.

eligible for compensation for seized lands. In its original form, the LTDA defined latifundio in terms of acreage and soil quality; estates of over 100 hectares on land with high quality soils and of over 5,000 hectares on lower quality land (sixth and seventh grade) were subject to expropriation. In 2005 the law was modified with a new definition based not on acreage but on productivity. According to Article 7 of the LTDA, latifundio are currently defined as estates whose land-use yields less than 80% of ideal production for the category of soils present. However, even lands deemed to be productive and legally owned, however, are not immune to seizure under the law. Article 68 of the LTDA states all agricultural land must serve a food security<sup>8</sup> function as defined by the central government or it can be declared as failing in its social function. In addition, Article 84 of the LTDA gives INTI the right to initiate expropriation on any estate if the state deems it necessary to implement social projects. Theoretically, this allows seizure of any estate, regardless of size or level of productivity.

Land redistribution requires that a group of campesinos make a formal request for a parcel of land they believe to be idle or technically state owned.<sup>9</sup> INTI inspects the disputed property and, if it rules in favour of the campesinos, it grants them a *carta agraria*, which gives usufruct rights to the parcel. Reform beneficiaries have three years in which to put the land into production, after which they can apply for a *carta de adjudicación* that allows for permanent residence on the land. Land can then be inherited by reform beneficiaries' families, but cannot be broken up or sold. All redistributed land ultimately remains property of the state.

Critics of the land law argue that the retention of ownership by the state reinforces paternalistic structures and can make reform beneficiaries worse off than before. Although the 1960s land reform also prohibited the sale of land, Delahaye (2002) has shown that plots were, nevertheless, sold by reform beneficiaries on the black market. Furthermore, their position outside of formal markets provided campesinos with less legal and market protections and they were, thus, disadvantaged in land sales (*ibid.*). The government argues that the prohibition of land sales is to avoid repurchase and reconcentration of land. While abandonment of land occurred during the 1960s-era reform, reform supporters argue that this was not a titling issue, but due rather to the failure of the central government to support reform beneficiaries with sufficient credit, technical assistance and market support.

Idle land on an estate, however, does not necessarily lead to expropriation. If a landowner's estate is declared unproductive an appeal can be made to an agrarian court and an additional inspection is made in 60 days, a time lapse that landowners can use to occupy previously idle land with cattle, infrastructure, or crops (Sanoja, 2005). Landowners can also submit a production plan and receive certification as a *finca mejorable* (an estate in the process of becoming productive). This gives landowners two years to establish production, after which it can be classified as a productive estate. While the LTDA still reserves the right to expropriate the land in order to establish special production projects or to distribute to the landless, productivity debates provide landowners with tools that can be used to stall the expropriation process and, thus, one important aspect of the agrarian reform in general.

The agriculture ministry has reported that between 2003 and 2011 the government recovered 5753264 hectares, and regularized 5859087 hectares (PROVEA, 2012).<sup>10</sup> However, a closer examination is warranted as, as seen in the first reform, the numbers illuminate little about how the reform is playing out on the ground for beneficiaries. Key to reform is the ability of the LTDA to challenge power structures



in the countryside through land redistribution. According to Griffin et al. (2002), the relative success of agrarian reforms in other contexts occurred only with significant confiscation of land. While it is true that the Venezuelan state owns large quantities of land for redistribution, high-quality land is often claimed by private interests and in many states conflicts centre on such parcels, not on government-owned properties. I argue, therefore, that understanding this conflict over land is central to understanding broader agrarian reform processes.

### *Peasant Occupation*

The occupation of property is not a phenomenon limited to agriculture, as witnessed by occupations of vacant housing and factories in countries in and outside of Venezuela. In terms of land reform, campesino pressure is vital for reform advancement (Barraclough, 1999, p. 26) and occupation is often an effective tool that campesinos have to put pressure on government institutions. In Brazil, the MST has used organized occupations with relative success to force the hand of the central government to decide land claims. Article 89 in the original form of the LTDA allowed for pre-emptive occupation (*ocupación previa*) of land by campesinos while INTI investigated the claim. However, the Venezuelan Supreme Court annulled Article 89 in 2002. Campesinos, thus, lost a vital tool for pushing the agrarian reform forward and the position of peasant groups that had occupied land was called into question. The LTDA states that those who occupy land after 2001 lose the right to adjudication under the law. Despite this, peasant occupations of land occurred after the court's decision and often came into conflict with government institutions overseeing the land reform.

In the following section, I examine land occupations in Yaracuy and Cojedes states and explore why campesinos moved into conflict with government institutions in the midst of a 'revolutionary' land reform process. I then examine the use of the Constitution and the food sovereignty and Bolivarian Socialism rhetoric of Chávez by campesinos to conceptualize and rationalize these technically illegal land occupations.

### *Occupations and Conflict*

This study component is based largely on peasant occupations occurring in the early agrarian reform period in Yaracuy and Cojedes states between 2002 and 2005 but also draws from more recent land occupations in Venezuela. Yaracuy and Cojedes represent two facets of the contention over land reform. In this time period Yaracuy occupations occurred primarily on sugar estates while in Cojedes disputed land was claimed by cattle ranchers. Yaracuy has been home to a long history of conflict over land, including in the second half of the twentieth century as campesinos attempted to use the first agrarian reform law to recover estates, while Cojedes has not seen the same degree of historical land struggles.

When decreed in 2001, the LTDA was immediately controversial. Its perceived attack on private property quickly became a rallying point for Venezuela's political opposition, and has been cited as one of the primary motivations for the April 2002 coup that briefly ousted Chávez (Wilpert, 2006, p. 254). Peasant occupations (*tomas*) are what critics of the agrarian reform are primarily referring to when they cite a state of 'anarchy' in the countryside. Critics claim that Chávez's inflamed rhetoric

against latifundio incites occupations or that *tomas* are often organized by urban groups and are used as political weapons against the political opposition (Hidalgo, 2005). However, rural organizing and occupations by peasants have placed them in danger of violence, both from *sicariato*, the Venezuelan term for hired assassins, and, at times, from state police forces and the National Guard.

Between 2003 and 2011, an estimated 256 campesinos were killed, likely by *sicariato* (PROVEA, 2011, p. 223). According to campesino groups, no one has been convicted of any of the killings (Suggett, 2010). In December 2010, a peasant leader was shot and killed in Cojedes (PROVEA, 2011, p. 222). In 2005, a well-known campesino leader and current National Assembly representative, Braulio Alvarez, was shot twice at close range, the third assassination attempt that Alvarez had survived since the 1980s (Interview, 24 July 2005). At the land reform settlement of Santa Lucía, in July 2003, two campesinos were assaulted by armed men and doused with gasoline; three months later a cooperative member was shot and killed while working in the fields (Quevedo, 2003; *Yaracuy al Día*, 2003).

The threat of violence from opponents to agrarian reform and the lack of prosecution of killings highlights the influence landowners held in some areas of government, especially in the court system. This contributed to a siege mentality on settlements. 'You don't sleep well out here because you know something can happen at anytime', an occupying campesino told me. 'This is part of how they beat you... They want to make it last as long as possible so that it gets more difficult to stay' (Interview, 12 July 2005). Weapons, however, were scarce at the occupations; most campesinos brought only their machetes to guard duty.

In addition to the risk of private violence, the illegality of land occupations also exposed occupiers to the threat of state violence, in the form of official *desalojos* (removals) by state police and the National Guard. *Desalojos* by government bodies were common in both Cojedes and Yaracuy in the earlier years of the reform. A campesino couple in Cojedes were moved off their occupation on three separate occasions by government officials, with bulldozers knocking down their *rancho* (shack) they had erected and uprooting their crops (Interview, 11 July 2005). In January 2000, firing tear gas and buckshot, the now-defunct Yaracuy state police *Pataneros* removed the cooperative Santa Lucía from a land reform settlement (Quevedo, 2000). In 2002, the Supreme Court's reversal of *ocupación previa*, led then governor Eduardo Lapi of Yaracuy to declare another occupation at Aracal estate as illegal and again used the *Pataneros* to clear the settlement, in what turned into a bloody confrontation (*Yaracuy al Día*, 2002). While Aracal and Santa Lucía each eventually obtained a *carta agraria* and successfully reoccupied the land, other land distributions by INTI have been overturned in Venezuelan courts (PROVEA, 2004, p. 227).

The fate of occupations in terms of state intervention highlights the role that state governors and local elites opposed to the reform have played in the agrarian reform. The governors of Cojedes and Yaracuy at the time of the removals were aligned with the political opposition to Chávez. When Chavista candidates took control of the governorships in both states, the threat of violent removal by local police largely dissipated, at least temporarily. However, the role of the National Guard (NG) was more uncertain. The NG warned campesinos occupying estates to stop felling sugar cane; the campesinos responded that they would continue. Unannounced visits by the NG were, thus, moments of uncertainty for occupiers. At one settlement, campesinos reported that the NG had arrived late at night, taken photos and left. In July 2005 an agrarian judge arrived at another occupation with the NG and lawyers of

the supposed owner to inspect claims of property damage. They were not allowed to enter and left without initiating further action (Arias, 2005).

Many campesino leaders wanted the NG to act as security for the occupations and, thus, support the agrarian reform process. 'The presence of the national guard would show that the government is not leaving us on our own and it's safe to have our wives and children here', a campesino leader said. 'It would bring more participation from the cooperatives' (Interview, 22 July 2005). However, the role of the NG and the police in dealing with occupations remains ambiguous at best. In 2011, the NG removed six peasants from an occupation in Yaracuy whom were then detained by the local police (PROVEA, 2011, p. 208). Thus, relations between occupiers and law and order state institutions and officials continue to be uncertain.

So without a right to pre-emptive occupation and the risks that *tomas* bring, why did campesinos choose to occupy contested land? For some, occupation of the estates was a continuation of decades-old struggles over land that had been begun in the era of the 1960s reform. With the promulgation of the LTDA in 2001, many campesino groups reinitiated old legal struggles for lands that had been unsuccessfully occupied decades earlier. This was the case with the land claimed by the cooperative Santa Lucía in Yaracuy, which had been occupied a number of times in the 1960s and 1980s, often by family members of the current cooperative members.

The largest driver for occupation, however, was the slow pace of land redistribution by INTI. While some requests for land eventually met with an initial measure of success, witnessed by the *cartas agrarias* received by the cooperatives of Santa Lucía and Aracal in 2003 and 2004, respectively, overall, in the eyes of the land hungry, progress was too slow. Recognizing the sluggish pace of reform in the state, a new Chavista governor elected in 2004, issued Decree 090, which created a technical commission to determine the status of the disputed *fundos* (estates) and to initiate their recovery by the state. The commission concluded that the *fundos* were indeed state land, although this was disputed by the supposed owners. Delays and lack of a right to *ocupación previa* meant that the cooperatives soliciting the parcels had no legal recourse but to wait until the appeal process available to the landowners was exhausted. In June 2005, the cooperatives, some having submitted the required paperwork six months earlier, were unwilling to continue waiting and occupied the *fundos*. Rather than risk reversals of land distributions, which had occurred earlier in the reform, Yaracuy's INTI office condemned the occupations and stated that campesinos must accept other, undefined, parcels until the courts made the final decision on disputed lands. For INTI, the tactic of occupation undermined reform processes regardless of the legitimacy of land claims. Commenting on an occupation in Yaracuy in 2005 the regional director of INTI declared, 'we know that this land is for the... cooperatives, but we do not support the seizure of the hectares in this way; they are making a grave mistake' (Espinoza, 2005a).

The wariness of INTI, however, was not shared by all local institutions involved with the land reform. The local branch of INCE (Institute for Educational Cooperation)<sup>11</sup> had supplied food, albeit unofficially, to help supply the *tomas*. The Office of the Secretary of Land and Food Security (STSA), a state institution unique to Yaracuy created by the new governor in 2004, also supported the occupations. The STSA's director lobbied the Caracas INTI on behalf of the occupiers and her support resulted in at least one attempt on her life (Field notes, 13 July 2005). Nevertheless, INTI is the principal actor in regards to land distribution and without some sort of document authorizing the *tomas* the occupiers had no access to credit. Even the *toma* at the

*fundo* Bella Vista, which was perpetrated by cooperatives trained by the government mission Vuelvan Caras and already had a MINEP (Ministry of the Popular Power for the Communal Economy) approved project and guaranteed credit, could not access funding until the occupation was given some right of permanence by INTI.

Thus, peasant groups have confronted a fragmented state in terms of reform implementation. At times, occupiers received support from some government institutions, even as others, including the key reform institute INTI, were perceived by campesinos as aligned with landowners. That peasants have faced forced removals from land settlements by police and the National Guard, as well as the lack of prosecution of killings in the justice system, demonstrate the influence and power landowners have continued to wield inside of a 'revolutionary' state.<sup>12</sup> The fact that state-level institutions and the political control of governorships have been key to reform progress highlights the centrality of local power structures in policy implementation. In addition, occupation dynamics are symptomatic of an attempt at structural reform via electoral means. The bureaucratic delays that stem from working within non-revolutionary structures (the rhetoric of revolution notwithstanding) have meant difficulties in challenging entrenched agrarian power structures via legal means and have pushed Venezuelan campesinos into oppositional roles vis-à-vis the ostensibly reform-friendly government. I now move to discuss how campesinos conceptualize this contestation with the state over the nature of policy implementation.

### **Conceptualizing Occupation: Twenty-first Century Socialism and the Politics of Production**

Government rhetoric of twenty-first century socialism, food sovereignty and evolving debates and policies over productive versus idle estates are central components in both how the Chávez government markets the shape and direction of reforms and how campesinos conceptualize and talk about both their identity as campesinos and rationalize land occupations that are illegal in the eyes of the state. Although occupations are aimed at latifundio interests, their illegality within the reform process make them indirect attacks on the reform-friendly state itself. Campesinos are also disputing the terms placed on them and their actions. In the local press the occupiers are often referred to as *invasores* (invaders) and to the occupations as *invasiones* (Carabali, 2003). Campesinos, however, disagree. 'We are not invaders, it's the latifundia that are the invaders. We are recovering this land for the state' (Interview, 13 July 2005).

In conceptualizing their roles as occupiers, campesinos largely used the ideological framework of the Constitution and the rhetoric of Chávez of the Bolivarian Revolution. The Constitution is heavily promoted by the Chávez Government; copies are widely distributed and its articles are reprinted on posters and even on packages of the subsidized food sold at government markets. Chávez, himself, who often pulled a pocket-sized version of the Constitution out during speeches to illustrate a particular point, became the Constitution's main spokesman and a primary shaper of how the public perceived and understood the rights and duties associated with it. And while campesinos in Cojedes and Yaracuy also justified the illegal occupations in a number of more conventional ways,<sup>13</sup> the primary emphasis lay elsewhere. While issues of individual social justice invariably arose when speaking with campesinos,

their rationalization of occupation reflected the context of Bolivarian Socialism as represented by the Constitution and Chávez's rhetoric.

### *Taking Chávez at His Word*

Campesinos involved in land occupations emphasized that the Constitution and President Chávez had given them the right to take direct action. Article 333 of the Constitution states that all citizens have a duty to defend the Constitution from attack from any source; Article 5 declares that the 'organs of the state emanate from and are subject to the sovereignty of the people'. Such articles are perhaps rhetorical flourishes, but campesinos interpreted them to mean that if the INTI was not functioning to fight latifundio, responsibility devolved to the citizenry. The Secretary of Land and Food Security of Yaracuy argued that this superseded any illegality of land occupation. 'The Constitution is very clear. And Chávez himself says that if things aren't getting done, that the people have to go to the streets and demand action' (Interview, 22 July 2005).

This last statement describes a central conceptualization around land occupations in Venezuela. The rank and file of occupying campesinos, invariably explained their actions in terms of Chávez's continual exhortation that in the Bolivarian Revolution, the people are the sovereign and that '*el pueblo manda*' (the people rule). 'Chávez has given us the power and even he has to respect what we say', a campesino told me (Interview, 7 July 2005). Campesinos were essentially taking Chávez at his word that Venezuela's masses are the protagonists of the Bolivarian process, and employed the rhetoric of anti-imperialism and national food sovereignty to conceptualize themselves as members of the vanguard of the revolution. In this way, when the local branch of INTI condemned the occupations, campesinos envisioned themselves as aligned against 'false revolutionaries' within the state, but in harmony with the greater ideals of the Bolivarian Revolution. Thus, many campesinos declared that occupations were not only justified, but were essential expressions of the direction of the Bolivarian Revolution. 'We campesinos are the true soldiers of the revolution', a campesino explained, 'because we are the only ones who are fighting our own government for it' (Interview, 12 July 2009).

Chávez, himself, however, was not questioned by campesinos in the occupations nor in the cooperatives that had already received land. Institutional problems were seen as products of bureaucrats with the mentality of the old political regime, and 'false' Chavistas in the government, those who 'put on a red t-shirt [the colour associated with the Chávez Government] but do the same things that they did in previous governments' (Interview, 11 July 2005). 'They have Chávez deceived', a campesino explained, 'Chávez is with the campesinos but he gives orders and many in the government do not follow through with them' (ibid.).

This palatable faith in the persona of Chávez was a further rationalization for pursuing occupations, based on the belief that if only the president were to find out what the actual situation was like, that he would order INTI to act on their claims. At a meeting in 2005, a peasant leader used this argument to propose a march to shut down the main transport artery between Caracas and western Venezuela. 'If we block the highway for eight hours with a peaceful march... they'll pay attention in Caracas and Chávez will find out' (Field notes, 24 July 2005). These beliefs were not always based on mere wishful thinking. After a January 2005 'Aló Presidente' programme that Chávez held in Yaracuy, problems brought to the president's atten-



tion often received quick attention. Machinery was repaired and tractors delivered, albeit without plow implements, to a cooperative soon after the requests were made to Chávez (Field notes, 27 July 2005).

But while Chávez's rhetoric provided a framework in which campesinos rationalized occupations, it would be inaccurate to say, as some critics maintained, that it *caused* them. The 2005 Yaracuy occupations took place only after waiting for up to six months for a reply from the land institute, not an insignificant time period, considering another state institution had declared the lands state owned in addition to the fact that members of the cooperative were unemployed. Indeed, Chávez had called for acceleration of the land reform in early 2005 and it was only after the newest phase of the reform appeared stalled that frustration led to occupation.<sup>14</sup> Along with the larger pressures faced by the land institute and others on a national level, local conditions and power structures continued to affect the implementation of reform and created the conditions that foment occupation. While the discourse of Chávez provided rationalization for occupations and fed the hope that they would be successful, it were these local conditions that lay at the foundation of occupations. But even as local dynamics created conflict, it is ironic that, inasmuch as Chávez's rhetoric could be considered the official discourse of the state, this discourse provided the primary rationalization for confrontations with the rules of the state.

#### *Food Sovereignty and the Politics of Production*

Government rhetoric of food sovereignty and evolving debates and policies over productive versus idle estates were also central components in how campesinos rationalized occupation of estates and how they conceptualized their identity as campesinos within Venezuela's Bolivarian Socialism. By rationalizing occupation in terms of what constituted 'appropriate' production within Venezuela's Bolivarian agricultural programme, campesinos contested the meaning of production within a project framed in terms of food sovereignty.

As Bobrow-Strain (2007) has argued, understandings of production are often a central component of cultural production of identity of those involved in agriculture and frames different claims to land. Ideas around production not only consider material levels of production or idleness but also center on what *should* be produced on land (ibid., p. 161). The replacement of sugar-cane or cattle pasture with food crops on occupations in Venezuela reflected a contestation of 'appropriate' productivity and was a central justification employed by campesinos occupying disputed parcels. Campesinos drew a strong distinction between latifundio uses of the land, and how the production that the occupiers would implement would serve the Bolivarian Revolution.

For Venezuela's campesinos production was not necessarily conceived in a fallow-versus-planted logic. Many of the estates occupied in Yaracuy between 2002 and 2005 were intensely cultivated with sugar cane at the time of occupation. Land-owners of sugar estates often claimed that the lands were productive, contributed to the national economy, and provided jobs to local families (Espinoza, 2005b). Others attempted to turn government discourse back on itself saying the sugar production on their estates fulfilled a vital part of the food security needs of Venezuela (Arias, 2005) and that campesinos would not be able to produce efficiently on the land. Campesinos, however, often claimed that much of the land was badly planted and crops were only there to occupy the land with a 'false' production in order to keep it

from being expropriated (Interview, 22 July 2005). Even if it were to be well planted, however, campesinos argued that the mere presence of sugar cane meant the land was underproductive. According to INTI officials, much of the disputed land at the Yaracuy occupations was of first or second quality and was apt for all types of food production, while sugar cane can be cultivated in lower quality soils (Interview, 27 July 2005). The occupying campesinos were well aware of this fact. 'These lands are first category', one campesino told me. 'This land could be growing food. Just the fact that there's sugar cane here is a crime against the Constitution' (Interview, 15 July 2005).

Campesinos had taken up the rhetoric of Bolivarian Socialism and food sovereignty to conceptualize their place within Venezuela as a nation, the Chavista political project, and in a broader global movement against globalization and US imperialism. When speaking to their future role as food producers, many emphasized production as an act of solidarity. 'We are going to produce for the country', a campesino at a land occupation explained, 'good quality food at low prices for the nation' (Interview, 14 July 2005). 'This is our [campesinos'] role in the revolution', another said, 'to produce food' (Interview, 17 July 2005). Agrarian production also fit into an international context where Venezuela was a potential food exporter that could supplant US influence. 'Chávez has talked about Africa', another occupier told me. 'We can produce enough food to send it to the hungry people over there as well' (Interview, 13 July 2005).

While campesinos initially occupied sugar estates without cutting the sugar cane, they eventually began to burn and strip the fields. This became both a symbolic and strategic act. Cutting the sugar cane removed the supposed owner's crops and, thus, his or her claims to productivity. Replacing the sugar cane with crops materially occupied the land on another level beyond the physical presence of the campesinos, and in addition, made a statement of 'appropriate' productivity on the land. The campesinos were, thus, challenging one of the fundamental ways that landowners laid claim to estates in the midst of a redistributive reform process.

It is noteworthy that, despite this contestation over production, the actual legal challenges were not based on the lack of productivity of disputed estates. The petitions for land were to be decided by INTI on the issue that the supposed landlords did not possess the necessary documentation to prove ownership of the *fundos* and, therefore, the land at the occupations belonged to the state. Campesino claims around productivity issues, however, further buttressed their argument for redistribution and also reflected a positioning of campesino production as central to food sovereignty and Bolivarian Socialism.

## Conclusion

The land reform process in Venezuela highlights important questions in regard to the roles that peasants play in agrarian struggles and food sovereignty movements. Although the agrarian reform in Venezuela is largely state led and implemented from above, campesino occupations have played a crucial role in pushing reforms forward and defining the scope and nature of the reform process. As noted by Barraclough (1999, p. 26) peasant pressure is central to the advancement of agrarian reform. That many twentieth century redistributive reforms left landowners in dominant economic positions (Thiesenhusen, 1995, p. 173) indicates that redistributive reform must confront power structures directly. Challenges and roadblocks to

reform emerging from the state and landowner class in Venezuela demonstrate that even in an ostensibly pro-peasant reform environment, the capacity of campesinos to influence policy implementation is vital.

I have argued that arguments around production as articulated by campesinos have been central to the justification of land occupation. Employing the government's food sovereignty discourse, campesinos have articulated their position as central actors in the advancement of a pro-peasant agricultural system and the Venezuelan government's larger political project of Bolivarian Socialism.

State and peasant engagement with the concept of food sovereignty has helped to shape the nature of the agrarian reform as well as the broader Venezuelan agricultural system. Within a food sovereignty framework, agrarian reform supports an agricultural system where peasant producers form the backbone of rural development. The fact that food sovereignty movements call for a pro-peasant model of agriculture that explicitly challenges the current global food regime (Patel, 2009) places Venezuela as an important case in terms of the shape of possible alternatives. Food sovereignty's emphasis on local and democratic control of food-systems (Rosset, 2006; Holt-Giménez, 2009) highlights the continuing importance of peasant-state dynamics, especially in a largely state-led agrarian-reform process.

Further research is warranted into the evolving position of the peasantry in Venezuela's agricultural system and process of food sovereignty. Key to the potential of the agrarian-reform sector moving forward is the question of what type of state policies receive the lion's share of government attention in attempts to increase agricultural production. While campesinos have used the politics of production historically to advance their interests, perceived production failures in the reform sector potentially weaken their position as the state looks to guarantee food supplies for political stability.

Tensions exist between social and economic goals of policy and the shape of agricultural production in most South nations as the state must negotiate the competing needs and influence of economic and social sectors. For example, even as the MST in Brazil is widely seen as a successful case of a 'new' land reform movement, a broader view of Brazilian land policy sees redistributive land reform functioning primarily as social policy to mitigate social unrest while agribusiness continues to capture the focus of economic development (Wright and Wolford, 2003). The agrarian reform process in Venezuela potentially faces a similar dynamic.

Food price inflation and shortages of some foodstuffs are increasingly problematic for the Venezuelan government and have contributed to agrarian policy becoming increasingly focused on spurring absolute production levels and intervention in input and distribution networks. Indicative of this trajectory is the establishment of the AgroVenezuela programme in early 2011. AgroVenezuela registers producers of all sizes and in all sectors, including commercial growers, to facilitate delivery of credit and inputs with the aim of augmenting production levels. Some promoters of agro-ecology in Venezuela have also suggested that state attention is increasingly oriented towards larger-scale agricultural development based on Green Revolution technologies (Griffon, 2011), including plans for large soy farms in the south-east (Field notes, 23 July 2011).

In addition, perceived failures of cooperatives have led the government to look elsewhere for organizing structures where new reform beneficiaries could be integrated as wage labourers on state or co-managed farms (Field notes, 27 July 2011). Combined with strategic interventions into other segments of the food system, in-

cluding distribution and agricultural input firms, signs point to an emerging model of agriculture where total production figures drive policy formation and implementation. The implication is that agrarian reform and the transformation of relations of production may become increasingly marginalized within agrarian development.

The closer than expected election of Nicolás Maduro following the death of President Chávez in 2013, likely reinforces this tendency, as a tightening electoral landscape increases the vulnerability of the government to food supply and price issues. Indeed, in response to shortages Maduro recently announced the importation of 700 000 tons of food (*Universal*, 2013) and the increase of oil for food deals with trading partners (*Nacional*, 2013).

If state-led agrarian development in Venezuela is trending towards a largely productionist model, where food production and supply concerns capture increasingly large shares of resources and policy attention, social goals of pro-poor agrarian policy and the transformation of rural productive relations, although still present, are relatively diminished. That is, while investment in agrarian reform and peasant production could remain part of the Venezuelan agrarian landscape, state-driven large-scale agriculture projects, green revolution research and development, and policies that bolster the commercial agriculture sector may be increasingly more central to agriculture policy. A more marginalized peasantry in terms of resource control and policy influence could see the potential for food sovereignty to devolve into food self-sufficiency. Therefore, the ability of campesinos to articulate and advance a pro-peasant framework of production in agriculture remains key to agrarian reform. The Venezuelan context highlights the need for research across countries to examine the position of the peasant sector in terms of its relationship with the broader agrarian system and the possibilities for peasant production and agrarian reform to form integral parts of food systems rather than being sidelined as rural social policy.

## Notes

1. In this paper I also use the term Bolivarian Socialism.
2. Following McMichael (2009a), I use food regime to mean a globalized system where agricultural production is seen as a strategic component in a globalized capitalist economy as opposed to isolated crop production and distribution networks.
3. Indeed, ensuring property rights has been cited as key to raising investment in agriculture (FAO, 2012), which redistributive agrarian reform potentially challenges.
4. To address the many social problems facing Venezuela, the Chávez Government created the missions, parallel government institutions that provide public services such as education, health care and subsidized food. While the missions themselves are not necessarily socialist, Harnecker has argued that their existence is indicative of attempts to develop structures that function outside of the logic of free-market capitalism (Fuentes, 2005).
5. From 1921 to 1939 coffee and cacao dropped from 63% to 6.7% of the value of total exports, while petroleum rose from 8.8% to 89% of exports over the same time period (Ríos and Carvallo, 1990, p. 204).
6. This describes what economists refer to as 'Dutch disease', an economic dynamic caused by resource booms where the national currency becomes overvalued, making imports cheaper and leading to local industries being unable to compete with cheaper foreign products (see Karl, 1997).
7. In addition, a 2010 reform to the LTDA established a 'land to the tiller' clause that provides for distribution of land to tenant farmers, although, to date, there is little evidence to suggest that this part of the reform law has advanced.
8. Article 305 of the Venezuelan Constitution defines food security as 'the sufficient and stable availability of food throughout the nation and the timely and permanent access to said food by the public' (República Bolivariana de Venezuela, 2000, p. 270). The Constitution was written before food sovereignty (*soberanía agroalimentaria*) became prevalent in government discourse.
9. Although individual campesinos can request land, priority is given to those organized into cooperatives of at least five heads of household (Ley de Tierras y Desarrollo Agrario). However, general per-

- ceived difficulties and failures of cooperatives have led the Venezuelan government to currently shift emphasize away from cooperative structures as a basis for agriculture.
10. PROVEA has, however, pointed out inconsistencies across government institutions in reporting of agrarian reform data. According to PROVEA, INTI has reported that by September 2012 it had regularized 8.1 million hectares and recovered more than 3 million hectares (PROVEA, 2012, p. 224).
  11. Now INCES (Instituto Nacional de Capacitación y Educación Socialista).
  12. In analysis of Venezuela's agrarian reform, Enríquez (2013) has used Trotsky's (1957) concept of 'dual power' to describe the incomplete control over the state a revolutionary government exerts vis-à-vis capitalist sectors. Thus, landowner power continues to manifest itself in Venezuelan government institutions, such as the justice system, to undermine reform processes.
  13. The standard issues of the agrarian problem, land concentration and the poverty associated with it, were referred to by campesinos at many of the occupations. 'I'm here', one campesino told me in Cojedes, 'because I'm very poor, too poor. With this land I can have a better life... it's unjust that all this land benefits just a few people when there are so many people who don't have anything' (Interview, 12 July 2005).
  14. On 10 January 2005, Chávez signed a decree aimed at speeding the agrarian reform's implementation. The decree gave the government the right to 'intervene' in estates, public or private, in order to investigate their ownership and productivity status (*Yaracuy al Día*, 2005).

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## **Peasant-managed Agricultural Growth in China: Mechanisms of Labour-driven Intensification**

JAN DOUWE VAN DER PLOEG, JINGZHONG YE, HUIFANG WU AND  
CHUNYU WANG

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**Abstract.** This article discusses the different mechanisms that sustain labour-driven intensification in contemporary Chinese agriculture. They include: labour investments directed at improving resources; the intensification of cropping schemes; fine-tuning production processes, resulting in yield increases; embedded specialization; the reorganization of space; and on-farm processing, which gives more value-added per unit of end product. These mechanisms help to enlarge the autonomy of peasant families and their units of production. They simultaneously help to improve incomes. The article pays special attention to migrant labour and the way it helps to enlarge investments and spur the intensification of agricultural production.

### **Introduction**

Over the last two decades much attention has been given to the processes of industrial development and urbanization taking place at a rapid, if not unprecedented, pace and thus radically transforming Chinese society. In this context, the agricultural sector is easily perceived as a ‘stagnating sector’ that urgently needs a shift towards large-scale, industrialized farming. The more since labour migration (from the countryside to industrial centres) seems to result in ‘empty nest villages’ or ‘hollow villages’ (Peng, 2007; Yang and Liu, 2009) where only women, the elderly and young children remain.<sup>1</sup> The urbanization and industrialization of a nation seems to provoke once again the ‘demise of the rural economy’ (Gudeman, 1978).

In this article we argue that such a representation of rural China is mistaken. Many rural villages in China have vibrant economies – not despite but due to (temporary) migration. This is because the structure of China’s rural economy is resulting in a process of agricultural growth<sup>2</sup> that is, from several points of view, as startling as the process of industrial growth.

Basically, Chinese agriculture is a peasant agriculture and its agricultural growth is a peasant-managed process: it is rooted in the decisions of 250 million peasant households on what to produce, by whom, how, and for what reasons. Such decisions are taken in a contextual setting in which markets, policies, technological op-

Jan Douwe van der Ploeg is Professor at the Rural Sociology Group, Wageningen University, P.O. Box: 8130, NL–6700 EW Wageningen, Netherlands; email: <jandouwe.vanderploeg@wur.nl>. Jingzhong Ye, Huifang Wu and Chunyu Wang are affiliated to the College of Humanities and Development Studies of the China Agricultural University, Beijing, China.

portunities, ecosystems, gender relations, local and regional power relations and cultural repertoires all play important (and sometimes contradictory) roles. However, these contextual elements do not intervene in the places of production in a deterministic and non-mediated way: they are always subject to peasants' decisions about what is relevant or not, and if deemed relevant they are actively interpreted and translated into specific courses of action.

Peasant-managed agricultural growth occurs mainly as labour-driven intensification. It is a process that results in steady increases in yields, i.e. the level of production realized per object of labour (land, animals, fruit trees, etc.) is augmented – the more value produced per object of labour, the more intensive production is. Labour-driven means that both quantity and quality of (peasant) labour are crucial in driving forward this process of intensification. It is the opposite of technology-driven intensification, which often translates into a considerable reduction of the quantity of labour applied and into deskilling when it comes to the quality of labour. Of course, both processes assume the presence of labour and of technology. In labour-driven intensification, however, skill-oriented technologies characterize the process of agricultural production. Technology-driven intensification production is characterized by mechanical technologies (Bray, 1986).

In this article we will discuss several mechanisms that play a role in, and explain, the remarkable growth of China's agriculture. The empirical data were gathered between 2008 and 2012, in two mountain villages (Sanggan and Yuangang) located in the south-western part of Hebei Province. The authors have thorough knowledge of these villages and the surrounding area through participation in a long-term research programme.

### **Labour Investments: Improving the Quality of Available Resources**

The image entailed in Figure 1 might be quite enigmatic for outsiders. In Sanggan village, though, it is a self-evident part of daily life. It shows two peasant farmers digging mud out of a drainage canal that crosses the village. At the bottom of this canal a lot of detritus has accumulated that washed from the streets during the rainy season. This highly fertile mud is loaded into a small three-wheeled truck and then brought to the fields in order to improve the structure and fertility of the soil. In more general terms, the picture shows the improvement of the resource base (i.e. the fields) through the investment of labour. The improvement is not acquired through the market – it is realized directly by way of the peasants' own labour.<sup>3</sup> An important consequence of this is that the improvement of the structure and fertility of the soil is not 'paid for', other than with the peasants' labour. It does not represent a financial burden that needs to be recouped later on, it has already been paid for: it is the result of the labour invested in it. It guarantees that benefits (a better harvest) are expected. The better harvest benefits the peasant family directly. There is no need to pay a bill.

The history of peasant agriculture is largely the history of labour investments. Through such investments (in improved soil fertility, terraces, buildings, fences, irrigation canals, drainage systems, anti-erosion protection, levelling, mills, greenhouses, improved breeds, enlarged herds, etc.) peasants enlarge the value of their resource base. This allows for the introduction of more intensive cropping schemes (see Table 1) as well as for increases in yields (see Table 2). Several studies have documented that the value per unit of land of such labour investments (when expressed in monetary terms) often greatly exceeds the corresponding value of capital



**Figure 1.** Labour investment.

investments of large agricultural enterprises (e.g. CIDA, 1973; Netting, 1993; Van der Ploeg, 2008).

The increased value of the resource base is often discussed as an increase in capital. Improving the land is thus presented as part of capital formation. As such this interpretation is not wrong; the value of the available agroecological capital is increased, as is the value of the available economic capital. However, it is important to specify that we are not talking here about capital in the Marxist sense. There is no capital here that needs to produce surplus value to accumulate in order to be invested again as capital. We are dealing here with other values. The mud, once taken out of the canal and loaded onto the truck, acquires value as a fertilizer. Once applied, this fertilizer increases the fertility, and thus the value of land. This allows for other values to emerge: a better harvest and more well-being for the peasant family. Mud is converted into fertilizer. This fertilizer is converted into more fertile land which then, in its turn, is converted into higher yields (and/or more intensive cropping schemes). These conversions are non-monetary; they do not pass through the markets. They depend on labour. They are not capital investments – they are *labour investments*. Consequently, the ‘return on investment’ is not an amount of money on top of the initial investment. The investment does not imply money, and the ‘return’ is not expressed in monetary terms. Both investment and return occur within and through non-commodity circuits.

### **Obtaining New Resources through Labour Investments**

Labour investments are not necessarily located within the farm. A decisive feature of current Chinese agriculture is that a considerable part of the labour investments takes place in economic activities (industry, construction, mining, trade, services) located *elsewhere*. These activities contribute to capital formation *within* the farm and thus to further intensification. The three-wheeled tractor in Figure 1 is a good illustration of this: it is present on the farm because it has been bought with earnings



obtained on a faraway construction site. Thus migrant labour is converted into a labour investment (at least partly) because it contributes to capital formation *within* the farm (Mohapatra et al., 2006; Zhang et al., 2006; Van der Ploeg and Ye, 2010).

The basic pattern is as follows. Young people leave the village and work for several years in industry or construction. This results in remittances and savings that are used in e.g. the building of a house (in rural villages the house is not only a place for living, it is also an important and indispensable resource for farming)<sup>4</sup> or the acquisition of a small three-wheeled vehicle. This vehicle is used not only for operations on the farm, but also for transporting stones from quarries (in neighbouring mountains) to the iron-ore factory in the village (Ye et al., 2009). The savings thus obtained might be used subsequently to acquire a larger lorry that allows for heavier transportation and increased earnings. These increased earnings are then used to pay for the construction of 'ditches' (discussed below) that will allow for the planting of walnut trees. In the meantime, it is quite probable that the wife of the owner of the lorry is cooking for the people who are working in the iron-ore factory. The cooking may provide an income of 700 yuan per month. It is used to buy a cow and to build, together with one of the neighbours, a small stable. Apart from the agricultural work in the fields and the cooking, the wife of the owner is now also alternating with her neighbour in herding their cows. The calves will be used to increase the small herd. This is the story behind Figure 2. The wife is herding the cows (along the small river), the husband passes on the road in his truck. The two are not engaged in meaningless routines: they are building a livelihood, in a knowledgeable and goal-oriented way. Resources are strategic in this livelihood (a house, the cows, the lorry, walnut trees) and *they are created through labour investments*.

The pattern clearly implies money, although it is not 'all-purpose money'. The major decisions are not driven by the search for the highest possible profit. The money is earned with a specific aim: it is to be converted into e.g. a three-wheeled tractor and nothing else. We are dealing here with *socially defined* conversion processes. The role of money is subordinated to the socially defined strategy. Non-commodity



**Figure 2.** Husband and wife involved in indirect labour investments.

considerations govern the use of this money. The operation of such strategies (and the resulting creation of 'capital goods') occurs, more often than not, through social networks (Yong and Van der Ploeg, 2009).

### **Intensifying Cropping Schemes**

Even though they only have access to very little arable land, which is scattered across many small plots, the peasant families of Sanggang village cultivate an extensive range of crops. These include cotton, soybeans, peanuts, maize, sweet potatoes, millet, cabbages, many different vegetables and herbs, sesame, tree seedlings, etc. Alongside these crops there are several different fruit trees and animals including hogs, cows, chickens, goats and sheep. This 'package' does not remain fixed over time. Some crops, such as wheat, have disappeared, while others, such as chestnut trees and prunes, have been introduced anew.

Crops differ in yield and price. Consequently, the gross value of production (GVP) per unit of land might differ considerably.<sup>5</sup> Maize, for instance, renders a GVP of 560–700 yuan per mu<sup>6</sup> and cotton (including the oil) might result in 1,870 yuan per mu (2010 prices). When different crops are compared, the ones rendering a high GVP per mu are referred to as 'intensive crops'. Crops with a low GVP per mu are defined as 'extensive crops'. Intensive crops normally require more resources: more labour input per unit of land, more mechanization, more inputs, more irrigation water, etc. For the extensive crops it works the other way around.

The notion of a cropping scheme describes the particular combination of crops within the farm. Cropping schemes might become more intensive, in which case the relative weight of intensive crops is high. When cropping schemes are moving towards more intensive crops we can talk about an intensification of the cropping scheme.

The intensification of cropping schemes can be attractive to farmers: it means that they obtain more money and improve their incomes. It will also be attractive for a country as a whole: the intensification of cropping schemes implies an increase in the total wealth produced. However, the crucial question is always whether farmers have the means and the space to intensify and whether there is an acceptable balance between the required means and the obtained benefits.<sup>7</sup> Intensification of cropping schemes can occur at different levels: within the fields, at the level of a farm unit as a whole, and at the level of a village as a whole.

Table 1 presents an overview of the main changes in the cropping patterns at village level. Relatively extensive crops (such as wheat) have been eliminated from the cropping scheme – in large part because it requires considerable amounts of irrigation water, which is becoming increasingly scarce in Sanggang. Villagers now obtain the wheat flour they need through barter: 72 jin of maize is exchanged for 50 jin of wheat flour.<sup>8</sup> Another highly important element has been the elimination of animal traction, which is replaced by mechanical traction. Thus fodder no longer needs to be produced for donkeys or oxen: this creates space for more intensive crops.<sup>9</sup>

### **Yield Increases: Producing More per Single Crop**

Once a cropping scheme is more or less defined, further intensification is possible through yield increases for each single crop. This implies that per crop more produc-

tion per unit of land is realized. Table 2 summarizes the impressive results that have been realized in Sanggang (as in the rest of the country). Maximum yield levels (here using maize as an illustration) are often considerably beyond the average levels. This points to room for further improvements.<sup>10</sup>

Intensification of this type is equally attractive to farmers; it implies that the available resources are used in a more efficient way, thus generating more wealth. But achieving yield increases requires considerable efforts. Soil fertility needs to be improved, more promising varieties must be selected, irrigation needs improving and cultivation fine-tuning. Development of the appropriate practical knowledge is an important prerequisite in achieving all this. Experimentation and the exchange of knowledge often play a strategic role in this respect.

Since the late 1970s Sanggang village has realized a process of intensification based fundamentally on the mechanisms discussed above. We refer to this process as peasant-managed agricultural development. Evidently, new varieties (often developed through scientific research), the availability of new technologies and increased input use also played important, sometimes even decisive roles. However, it is the peasants themselves who have acquired and combined these new artefacts to produce effectively (Ye et al., 2010).

The defining characteristic of peasant-driven intensification is its dependence on the quantity and quality of labour (as opposed to forms of intensification that depend on specific technologies and inputs). The labour input per unit of land is increased, whilst skills and knowledge (the 'quality of labour') are improved and increased. When skill-oriented technologies are central to the labour process (Bray, 1986), the development of skills and knowledge translates into higher yields. Fine-tuning is often a keyword here: through the meticulous coordination of a wide range of growth factors, higher levels of production are reached and sustained. Another defining characteristic of peasant-driven intensification is that it strengthens the relative autonomy of the farm (again this is different from technology-driven intensification, which tends to introduce and strengthen dependency relations).

**Table 1.** Main changes in cropping schemes in Sanggang village.

- 
- a. Elimination of wheat cultivation.
  - b. Introduction of fruit trees.
  - c. Elimination of animal traction.
  - d. Increase in vegetable production.
  - e. Increase in animal production (goats, chicken, hogs).
  - f. Forestation.
- 

*Note:* Behind these changes lie complex spatial reorganizations. Forestation takes place partly in the valley but mostly in the hills. The introduction of fruit trees is currently taking place in the hills. The increase of vegetable production implies that the ratio between gardens and fields has changed.

**Table 2.** Yield increases in Sanggang village over the last 40 years.

Crop	1966–1974	2007–2009	Growth	Maximum
Maize	300–400	800–1,000	+100%	1,200
Peanuts	200	200–300	+25%	
Wheat	200	n/a		
Sweet potatoes	2,000	3,000	+50%	
Soybeans	200	350–400	>75%	

Alongside the mechanisms discussed thus far, new mechanisms are taking shape. These will, we believe, help to further strengthen the process of labour-driven intensification and thus contribute to food security in China, whilst simultaneously changing the *form*, but not the *nature*, of this process.

### Embedded Specialization<sup>11</sup>

The Wu family (see Figure 3) currently works 10 mu of land, which is all planted with prunes. In total there are a little over 500 productive trees, which have already been producing for three to four years. Good trees might yield up to 100 jin of prunes. Last year's harvest totalled 50 000 jin (i.e. 25 000 kg of prunes). Prices fluctuate between 0.80 and 1.00 yuan per jin. This makes for a GVP/mu that fluctuates between 4,000 and 5,000 yuan/mu/year, far higher than the average yield of some 600 to 1,800 yuan/mu realized by the average peasant holding.<sup>12</sup> Thus, the Wu farm is a clear exponent of ongoing processes of intensification.<sup>13</sup>

At first sight this farm appears to be completely different from the average peasant holding in the valley, which is highly diversified and oriented to household consumption – only surpluses are sold on the market. Instead, this prune-producing farm is highly specialized and all its produce is marketed. A more careful look seems to affirm that the holding of the Wu family is indeed different – especially in as far as it goes beyond the limited scale of the average peasant holding. At the same time, though, it is still very much a peasant unit of production. It is managed according to the same strategic principles (and interrelations) that underlie the much smaller units:

- It has been constructed in a step-by-step way through labour investments, as discussed above.<sup>14</sup>
- It is combined with production for household consumption (located elsewhere).<sup>15</sup>



Figure 3. Specialization within the framework of the peasant farm.



- The direct producers are not aiming at further expansion, at accumulation; their productive activities are embedded in, and limited by, a wider socio-cultural framework.<sup>16</sup>
- Reciprocity is strategic in many respects.<sup>17</sup>
- Risk avoidance is considerable.<sup>18</sup>
- Employed labour is family labour (the main exception being the work done during the harvest).<sup>19</sup>

Taken together this implies that the plum orchard of the Wu family is based on a solid, autonomous and historical resource base. It gives them 'dignity and pride': it is an expression of the conversion (step by step) of the hard work into this orchard and its productive capacity. It does not represent dependency relations; it is, instead, a considerable asset that helps them to face and to overcome potential dependency relations. It is, in short, a vehicle for independence and autonomy.

This autonomy is, of course, a *relative* autonomy. It is an autonomous resource base, but in order to produce the Wus have to engage in more or less permanent commodity relations for the supply of some crucial inputs. Annually, they pay from 6,000 to 7,000 yuan for fertilizer, pesticides and electricity for operating the pump in their well. Compared to the overall sales of 40 000–50 000 yuan this is relatively modest (discussed in Yong and Van der Ploeg, 2009).

It is important here to note that there are other, more general conditions that have also been helpful in creating this intensive plum orchard.

- The availability of good access roads (without these the marketing of the prunes would be almost impossible) and the availability of electricity. Both these conditions highlight the role of the state in the overall process of ongoing agrarian development.
- The availability and communication of farmers' knowledge as well as scientific support.
- The possibility of travel, to meet other people involved in promising activities.
- The role of the Village Committee in the (re-)distribution of land.
- The existence of a strong social fabric in the village that allows for cooperation and reciprocity.

Another form of embedded specialization can be found with regard to livestock. Over the last three years we have witnessed a steady but ongoing growth of herds in Sanggang village. This applies to cows (for meat and calves) as well as to goats, sheep and to pigs and chickens that are held in stables located in the village. The development of these herds is also driven by labour investments. Herds are not bought (an initial animal or a sire being the exception); they are developed using the reproductive cycles of the animals, the leftovers of the harvest, and /or by increasing feed and fodder production within the farms. Herds have multiple functions. They represent a type of capital formation: they embody savings. They function as a security blanket, as a fund that might be used when unexpected events demand major spending. They produce manure. And they may sustain income flows (through the selling of new offspring or fattened animals), and they may enliven major events such the Spring Festival.

Households without cattle can obtain their first animals through the Poverty Alleviation Programme. In Sanggang village this programme operates in a peculiar way (as defined by the Village Committee). It was decided that 15 families could get one calf together, which, through breeding should allow each family to have, in the



end, their own animal. However, the villagers 'translated' this in their own way. One family in each beneficiary group 'bought' the calf by paying 100 yuan to each of the remaining 14 families. Ironically, this interpretation of the system means that it is not the poorest families that obtain the calf, although they do receive an extra 100 yuan.

In the early 2000s people like Wu were exceptions to the main social pattern. Most men continued with labour migration until reaching an age of between 50 and 60 years. At the level of the household economy it was necessary to combine agriculture with, as villagers say, 'an economic activity' located elsewhere. Agriculture alone did not provide enough income. Only when the main expenses associated with the children had been paid for (education, house and wedding), could the man retire and dedicate himself solely to farming (Van der Ploeg and Ye, 2010).

What we see at present is that migrant labourers increasingly return at a far younger age. Once they have enough savings, they return to the village *in order to turn farming itself into an 'economic activity'*. This is exemplified by the case of the Wu family, but in Sanggang village there are at the time of writing (2012) some 20 younger men (of between 25 and 50 years of age) who dedicate themselves to farming activities,<sup>20</sup> whilst simultaneously altering these activities. At the same time there are no young men of 25 years or less in the village. They are all engaged in labour migration or they are at university. Nearly all the men of over 50 years of age are back in the village again (or are working and living in nearby townships, allowing them to be frequently in the village). This is the 'standard' situation, which emerged from the 1980s onwards and became established in the 1990s and in the first decade of the new century. What is new, however, is that around 5% of men between 25 and 30 years old are back in the village. About 30% of those aged between 30 and 40 have returned, and even more of those between 40 and 50 years are returnees (40%). This suggests a barely noted but nonetheless undeniable acceleration of the return to the village. This earlier return is inspired, we argue, by the reinvention (and consequent restructuring) of farming as an 'economic activity' in everyday village life. It is an economic activity that provides an acceptable income as well as prospects for further development. By reinventing farming these villages are literally shifting part of the money-generating activities from the towns and industries back into the villages.<sup>21</sup>

### The Reorganization of Space

The geography of Sanggang village is typical of most mountain villages in rural China. A small river passes through a narrow valley lined with many small fields. The land is fertile and irrigation is nearly always possible. The valley is surrounded by hills. These have been deforested heavily in the past; until recently they were used exclusively for extensive pasturing (mainly goats and sheep). The village is located at the interface of valley and hills. Behind the hills lie the mountains where until recently much extractive mining took place.<sup>22</sup> Mining has extended into the valley: the soil contains layers with iron ore, and sand and stones are extracted for construction activities.

At present, the hills that surround the village are being transformed. The construction of 'ditches' (as they are locally called) is central to this process.<sup>23</sup> This involves creating strips of land along the contour lines. These strips of land are 2–4 metres wide and are separated from each other both in altitude and in distance (see Figure 4). These strips are constructed with mechanical diggers that not only level the land but also dig to a depth of 1.0–1.5 metres in order to loosen and mix the soil. Thus 'ditches' are created in the very hard and impermeable soils and these ditches



**Figure 4.** Specialization within the framework of the peasant farm.

are filled with churned and loosened soil. This technique has two enormous advantages. It greatly increases the water-retaining capacity of the soil (after the rains the ditches harvest the rain water) and it allows root systems to develop smoothly. An indirect longer-term effect is that this method probably also prevents soil erosion.

The construction of ditches, which is being organized and partially paid for by the Village Committee, allows for an expansion and redefinition of the agricultural frontier.<sup>24</sup> Extensive cattle breeding (based on grazing in the hills) is being reduced whilst fruit tree cultivation is made possible without having to convert the fertile fields in the valley. This coincides with some major macro trends that are increasingly visible in China and that are strongly supported by the state. This creates a paradoxical situation: on the one hand, some marginal lands are being taken out of production (in order to allow for afforestation or widespread anti-erosion measures) while, on the other hand, other parts are strongly upgraded to allow for further intensification. This explains the apparent paradox of decreasing agricultural surfaces and ongoing production increases (see Qu et al., 2009; Heerink et al., 2010).

The ditches are highly suitable for growing persimmon, chestnut and walnut trees. In the first years, when the trees are still young, the land surface might be used simultaneously for e.g. peanut production. This is a clear manifestation of the typical multi-floor farming practices that characterize peasant production all over the world: it allows for highly intensified, but sustainable use of the land.

In Sanggang village, walnut trees start to produce after about five years, with full production achieved after 10 years. At that point a tree will render a minimum of 2–2.5 kg of nuts per tree, but harvests as high as 5 kg per tree are possible. Prices vary for different varieties but are generally more than 30 yuan/kg<sup>25</sup> a tree might produce between 60 and 150 yuan (or far more). There might be up to 35 trees per mu. Hence total GVP per mu could range between 2,100 and 5,250 yuan/mu. This represents an impressive intensification – especially compared to the marginal benefits of grazing in these hills or the average GVP/mu in the valley.

Two hill areas are currently being reconstructed in Sanggang village. In the northern part some 5,000 metres of 'ditches' have been created. These benefit 17 households. They already had the possession rights in this particular part (on average 3 mu per person). Inclusion in the construction scheme is voluntary. The participants pay 3.5 yuan per metre and the Village Committee adds another yuan. For some households the total costs are considerable. These are often paid with money earned in mining, transport and processing of iron ore. Beyond that, most villagers argue that 'two years of peanut production [on the newly opened strips] will pay for the shovel'. The seedlings and the grafting that follows represent additional costs. The Village Committee obtains the seedlings and will sell them to the participants; if some help is obtained from the County, the seedlings might even be distributed for free. The southern part, which is currently being constructed, will benefit another 19 households.

The reorganization of space is an important element in the ongoing intensification of local agriculture.<sup>26</sup> Total production of the village as a whole, as well as the production per household, will increase considerably. Economic benefits are combined with ecological benefits. The erosion and degradation of the hills will be reversed, at least partly. Another effect might be, as villagers argue, that migrants (who will return anyway to the village when getting older) might now return *earlier*. 'Working elsewhere might give you between 10000 and 20000 yuan per year. The fruit trees can give you the same or even more. Hence, you might come back earlier. Here you have fresh air and you can be self-sufficient. It is safe, pleasant and your vegetables will not be contaminated.' More generally speaking, the construction of the new 'ditches' is a source of *pride* for all villagers. It is a material expression of an enlarged resource base and, above all, of the capacity to enlarge the resource base through one's own efforts (including cooperation with the Village Committee). It is, as one of the villagers told us, about 'developing new *land*'.

The last element refers to an intriguing feature of local and regional patterns of governance. Village Committees are locally elected (Howell, 1998). They have to prove, after being elected, that they can be useful to the village. The current committee invested first in paving all the roads in the village and then decided that 'something needed to be done for production'. Hence, the decision to construct ditches in the surrounding hills. This is important to the members of the Village Committee: it allows them 'to proudly present the project in Township and County meetings' (since the 1998 floods, central government has strongly encouraged afforestation and anti-erosion projects). The position of the President of the Village Committee is also important. Being the owner of the local iron ore processing unit, he is one of the richest people in the village. This allows him to anticipate (i.e. pre-finance) many of the support measures that will come later. Thus, local development is not stifled by bureaucratic delays elsewhere.

### **On-farm Processing: Adding More Value**

At the end of October or the beginning of November (i.e. *after* the harvest) the fields of Sanggang are again flocked with people. They are working together in teams of 12–15 people and they are engaged in processing sweet potatoes into glass noodles. Glass noodles are a highly valued, high-quality product. They are used in many villages during the Spring Festival to cook special dishes and are also a highly appreciated gift. It is pleasant to observe the making of these glass noodles. It is like theatre:

everyone knows his or her role and the dedicated players, and there is, especially in the beginning, a sense of mystery in the air. The observers do not know exactly what is happening, the involved players do not know, as yet, whether it will all unfold correctly. But you can feel the passion: the willingness to make the best out of it, to create a product that talks about the care and dedication with which it was made. Processing sweet potatoes into glass noodles involves more than 10 steps (every so many 'scenes'), it requires considerable skills and a lot of experience, and it extends over several weeks. Figure 5 provides an impression of one of the many scenes.

When sweet potatoes are sold directly, 1 mu of land might render 1,000–1,500 yuan. When processed into glass noodles (8 jin of very good sweet potatoes are needed to obtain 1 jin of glass noodles) the same mu of land with sweet potatoes might render 4,500–6,000 yuan. When conditions are very good, a plot of 2.6 mu may result in a gross income of 19500 yuan.

Enlarging the value added per unit of end product (through the production of specialties, on-farm processing, direct marketing, etc.) is not a new phenomenon in China. It could be argued that China's agriculture has always been multifunctional. We note, however, in the villages we are studying that the range and magnitude of such activities is expanding rapidly. At present it embraces activities such as agri-tourism, the cultivation of ornamental trees, free-range chickens, the creation of new market segments in Beijing, the production of walnuts for carving, etc. All these activities are located at a particular interface. On the one hand, there are farmers involved in 'reinventing' agriculture and who are looking eagerly for opportunities to earn more with their multifunctional farm units. On the other hand, there is a rapidly growing middle class looking for distinctive food products<sup>27</sup> and attractive rural services. At this interface new networks emerge, whilst other networks are acquiring new functions and values. The coming and going of migrant labourers, for instance, is used increasingly to transport the locally produced glass noodles to the urban centres and to commercialize them there, sending the earnings back to the



**Figure 5.** Processing sweet potatoes.



village. If consumers are satisfied they may even use the same network for ordering high-quality glass noodles again the following year.

## Conclusions

In this article we have discussed seven mechanisms for agricultural intensification – some are classical (but still highly valid) approaches, others are relatively new. All these mechanisms contribute to, and strengthen, peasant-driven intensification. In both the classical and the newly created mechanisms, *labour* plays a central role and the consolidation or even the enlargement of *autonomy* is strategically important. Labour investments (especially when they imply migration) might indicate difficult and burdensome dependency relations – *but these dependency relations are mostly located in the alien workplace*. Peasants (especially the young ones) engage in such dependency relations *in order to create and enlarge autonomy in the rural workplace to which they will return*. They enter the factory in order to save for their own tractor, which allows them to operate on their own farm or in the wider rural economy as a peasant with an expanded resource base. They do not then have to rent somebody else's tractor to do farm work. They can participate in the wider rural economy (e.g. in transport or trading) using their own means of production.

The same goes for the construction of a beautiful plum orchard or for making ditches. They help materialize autonomy. Involvement in these activities means that the farmers do not have to engage in wage-labour relations elsewhere. They can make their own living and their efforts might well result in increasing their (and/or their children's) wellbeing. Yet they can only do so because they *previously* entered into dependency relations – they did so in order to *actively create* their current autonomy.<sup>28</sup>

The peasant condition has been defined as 'an ongoing struggle for autonomy' (Van der Ploeg, 2008). This struggle can take many forms and it might occur at different levels and in different places. The examples of the Sanggang and Yuangang villages reveal intriguing spatial and temporal dimensions: young peasants enter into relations of dependency and face considerable hardship in faraway places in order to construct enlarged autonomy in their own place in the future. This struggle is one of the main drivers of agricultural intensification. Through the *previous* struggles in faraway places (i.e. through indirect labour investments) and the *current* struggles to get the most out of their land (whilst simultaneously maintaining if not enlarging the resource base through embedded specialization and the construction of ditches) peasants are realizing an ongoing process of intensification – a process of intensification that follows the logic and rationale of the peasantry.

One theoretically important point here is that the two basic elements identified by Chayanov (1966) – drudgery and utility, which together structure much of the dynamics of farming – do not enter into a balance here in one single cycle of agricultural production and at one particular place (the farm). Instead, they are separated geographically and temporally. The drudgery is located in faraway industries and construction sites and experienced when relatively young. Utility follows later and is located in the own village. But the two are neatly tied together. They are brought into equilibrium and balance is achieved. The former makes the latter possible, whilst the latter gives meaning to and justifies the former. Thus, farming, or more generally being *nong ming* (i.e. peasant), becomes an 'organized flow of activities through time' (Vincent, 1977), a flow that crosses time and space and bridges considerable



distances. Farming cannot be defined, nor understood, as an activity that is just located at one particular place and unfolds solely through an endless repetition of the same routines specified by the agricultural calendar. Instead, farming is increasingly a *network activity* that extends in time and space and that implies complex balances.

The villages that we discussed in this article are far from 'hollow'. Nor do they represent any 'demise of the rural economy'. One of the hidden strengths of the peasant economy of Sanggang and its neighbouring villages is precisely that nearly all peasant families<sup>29</sup> are involved in economic activities outside of the original unit of peasant production.<sup>30</sup> Many work elsewhere in order to be able to make indirect labour investments in farming. Others participate in the opening of 'ditches' in the hills in order to extend the original unit. Some create space for specialized fruit growing that is embedded in the socio-cultural framework of the typical peasant unit of production, and another group is developing herds. Thus, peasant existence increasingly emerges as a patchwork, as an amalgamation of sometimes strikingly different, but cleverly interrelated and mutually reinforcing activities. As argued by Akram-Lodhi and Kay:

'It is now more common for rural livelihoods to be constructed from a plethora of fragmentary and insecure sources: petty commodity production in farming, to be sure; but also the sale of temporary and casualized waged labour, both on and off-farm; as well as petty commodity handicraft manufacture, petty merchant trading, the provision of petty services, and a reliance on remittances arising from migration' (2010, p. 179).

It is this patchwork of activities and its associated creation of value added that strongly contributes to the dynamic nature of the 'rural non-farm economy' – it contributes to it and simultaneously shapes the local market that further strengthens the rural non-farm economy (Mohapatra et al., 2006; Zhang et al., 2006; more generally, Haggblade et al., 2007).

Involvement in a multiplicity of activities cannot be understood, as, for example, Kearney (1996) suggests, as the 'disappearance of the peasantry'. It is exactly the other way around (at least in the villages discussed here). Multiple involvement is used actively to *strengthen* the peasant unit. It helps to sustain the intensity of cropping schemes and the intensification of single crops. Multiple involvement equally helps to enlarge the resource base in which peasant farming is grounded. It contributes greatly to the creation of more autonomy (see Van der Ploeg, 2008, p. 23). Working elsewhere also generates the remittances and savings that are used for mechanization (thus allowing for more intensified cropping schemes) and for increased spending (in e.g. inputs such as fertilizer, which allow for a further intensification). It also translates into 'the availability of a lot of money in the village', which makes informal lending (based on reciprocity) far easier than in the past. In turn, the prospects of improved livelihood (related with e.g. walnut production, plum growing, larger herds) implies that migrants will probably return earlier to the villages than in the past (which is already happening to a limited extent), thus enhancing the dynamism of rural and village life.

## Notes

1. There often is a strong gender bias in the interpretation and analysis of this situation (see e.g. Gao, 2001; Huang, 2008; Zhou and Song, 2008).

2. Over the last four decades total agricultural production as well as land productivity and total factor productivity have been growing far more than elsewhere (Gulati and Fan, 2007).
3. Phrased differently, the improvement of soil fertility is, in this case, not created through the acquisition of fertilizer or dependent on a monetary transaction.
4. A typical expression of this is maize stored on the roofs of houses.
5. Furthermore, many crops render also non-monetary benefits, normally not calculated as part of GVP (e.g. stalks of maize production used as cattle feed or for heating houses).
6. One mu is 1/15 of a hectare. One yuan is more or less equivalent to € 0.10.
7. Here several other considerations play a contributory role: the maintenance or improvement of soil fertility (some crops are highly demanding, whilst others restore soil fertility), pest and disease suppression, the availability of water, labour, etc., and finally the consumption needs and preferences of the family.
8. A jin equals ½ kilogram.
9. Forestation only implies intensification when it occurs on marginal lands that were only used for extensive grazing or not used at all.
10. For 2012, yields as high as 1500 Jjin/mu were reported.
11. We use the adjective 'embedded' here to stress that specialization does not imply an adieu to peasant farming. It is, instead, embedded in it.
12. With maize a GVP of 560–700 yuan/mu is possible (in this village and with the price levels of 2009 and 2010). The GVP might fluctuate between 600 and 900 yuan per mu in the case of peanuts. If cotton is sown some 1870 yuan/mu (including oil) might be realized (using the 2009 price level).
13. Farmers often are explicit about this: 'Fruit trees provide more benefits than crop production.'
14. Mister Wu, who is now 56 years old, has travelled through large parts of China. He has had many different jobs, including trading. His wife (53) always stayed behind in the village taking care of the scattered plots with vegetable production, maize, etc. The land they are currently cultivating with prunes consists of two parts, each with its own history. The first part was rented some 8 years ago for 830 yuan/year. The Village Committee required an advancement payment for five years. This totalled 4,000 yuan. Another large investment was payment of 16,000 yuan to a specialist who did the grafting. Hence, the total investment was 20,000 yuan. This investment could be paid, according to Wu's calculations, by the first harvest. The second part could be obtained through an initial payment of 30,000 yuan, most of which could be paid with the savings obtained through work elsewhere. The remainder of the money was lent by friends and relatives. Mr. Wu works two months a year in tile making, which renders him 70 yuan/day. This money is earmarked for paying back the loans. All this implies that currently there are no financial costs pressing on the land.
15. Elsewhere, the Wu family has a range of scattered plots of 5–6 mu in total. Here they plant vegetables, soybeans, sweet potatoes, maize and millet. Part of the maize is sold to the 'hog factory' in the village (a plant for intensive pig breeding). The rest is for self-consumption. When asked why they do not plant prunes here as well, they explain that fruit trees bring more (monetary) benefit, and that wheat, rice, flour, or whatever you eat can indeed be bought. However, 'the products you produce yourself are green, they do not contain pesticides, and they are tastier.'
16. When asked about the possibility to further expand the number of fruit trees, the Wus give a straightforward answer: 'This is already sufficient, our daughter is already married and our son already acquired a house... so there is no need for more trees, this is enough.' More generally speaking, production is oriented at: (1) self-provisioning; (2) guaranteeing the required main investments in social life, e.g. weddings and the construction of houses for the next generation; and (3) the creation of reserves that might help to bridge difficult times (diseases, funerals, etc.). Other people, in similar circumstances, might argue: 'We do not prefer a larger land area [than the one available at the moment], because we have limited strength, we can work the land we have now but not more; and hiring people is not convenient because the wages are too high.'
17. A lot of labour is organized through *hu zhu* (mutual help), especially for products (such as sweet potatoes) that need to be planted in a short time period and/or with heavy jobs. 'Without mutual help a farm can hardly function', say the people in the villages. Mutual help is arranged through family bonds, friendship relations, between neighbours and between owners working on adjacent plots. Sometimes the work brigade (from earlier times) remains as the framework for labour exchange. Mutual help is, according to the villagers, especially important for the women. Equally there is considerable interchange of seed material. And finally, lending and borrowing between relatives and between friends also occurs very frequently. Generally, no interest is paid on these loans even though the amounts involved are often considerable. Loans up to 20,000 yuan are no exception. If larger amounts are needed they can be obtained by asking several households to lend money. This practice is explained as follows: 'People are getting rich nowadays, so they can easily lend to others.' Mutual trust and having a good reputation are, of course, essential in this respect.

18. One expression of this is that more than 45 different varieties are planted in this prune orchard alone. There is an ongoing search for the best and most resistant varieties. The family paid 700 yuan to obtain one variety from Japan.
19. Nowadays, all work throughout the year is done by the Wu couple themselves. This also includes difficult tasks such as pruning and grafting. They obtained these skills from the specialized worker who did the first grafting. In general terms the Wus explain that they 'prefer to be independent' (no loans, own savings; no salaried workers, mainly family labour). Being independent gives them 'a sense of dignity and pride'. Although borrowing is not losing face, they prefer to have their own money, rather than borrowing. The same applies to labour: 'We prefer a somewhat smaller piece of land, then we can do all the work ourselves. I myself know what I do; workers maybe don't know, then they do bad pruning, or bad pollination, which can cause considerable damage.' The only exception is the harvest period when they contract 25 workers for two days.
20. They also continue with other economic activities, but these are located within or near the village, allowing them to have a daily involvement in agricultural activities. The total population of Sanggang is 784 people.
21. Comparable data are mentioned in the Ph.D. thesis of Meng Xiandang: within the subgroup of couples in which both man and woman live in the village (as opposed to the subgroup of 'left behind women', whose husband is absent because he is involved in labour migration), 90% of the men is active, in one way or another, in farming and 14% is active solely in farming (Meng, 2014).
22. For environmental and security reasons the licenses for these mines have been cancelled.
23. These 'ditches' differ from terraces, which are locally referred to as 'ladder fields'. The latter are meant for crops (notably rice), the former for trees.
24. There are elements of rebelliousness and endurance to this. It is the second time that fruit trees have been planted here. Several years ago persimmon trees were planted (without preparing the land by digging ditches). At this time the peasants used a programme for forestation that was not intended for fruit trees (the main objective was giving the land back to nature in order to prevent erosion and flash flooding). While this programme was not meant for fruit trees, a translation occurred at the interface between the village and higher echelons. However, quite a few of these persimmon trees died due to drought or because the land could not hold sufficient water.
25. This depends on the variety. The larger nuts, used for handicrafts, command very good prices.
26. Investment in ditches triggered another collective investment, consisting of the construction of a large basin in the riverbed (always containing a lot of water), the installation of an electrical pump, and the construction of a pipeline that goes from the basin to the ditches higher up in the hills. It is to safeguard the newly planted trees in the occasional years when there is no (or far too little) rain and, consequently, no water harvesting in the ditches. This could lead to the destruction of all trees in the new ditches. Again, there is no direct financial return on this investment – however, its value and significance are evident.
27. Food safety being increasingly one of the distinctions they are looking for.
28. The theoretical complexity here is that being a worker or being a peasant are not separate or antagonistic categories. One role flows into the other in order to strengthen it. This condition is also widespread in large parts of the Latin American countryside and often reflected in the self-classification that was widely used in the 1970s and 1980s. People in the countryside then referred to themselves as *nosotros los pobres del campo* [we, the poor people of the countryside]. Tellingly, this was interchangeable with *campesino* [peasant].
29. The telling exceptions are peasant families that lost in one way or another the support of their children (or do not have children) or whose members are physically or mentally disabled.
30. We have described this in a previous article as multiple job holding (Van der Ploeg and Ye, 2010).

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## Sustainable Food Security: An Emerging Research and Policy Agenda

ROBERTA SONNINO, ANA MORAGUES FAUS AND ALBINO MAGGIO

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**Abstract.** As a response to emerging calls for the adoption of a systemic approach to food security, in this article we identify and discuss inextricably linked barriers to 'sustainable food security'. Based on an extensive analysis of recent academic and policy literatures on the economic, social and ecological effects of global environmental change at different stages of the food system, we highlight a series of cross-cutting issues and areas of disconnection between food production and consumption that call for a renovated focus on the different nodal points of the food system. As we suggest, a *sustainable food security framework* should move away from the conventional focus on individual components of the food system (e.g., supply and demand) and address more holistically the complex relationships between its different stages and actors.

### Introduction

For decades, food security and sustainability were treated as separate governance concerns. In essence, food security was confined to the challenge of tackling hunger in the Global South, whereas sustainability was addressed in relation to food safety and the environmental impacts of agriculture in the North.

Today, the emergence of a 'new food equation' (Morgan and Sonnino, 2010) is redefining the meanings of food security and sustainability – as well as their interrelationship. Since the spikes in fuel, food and energy prices of 2007–2008, the prevailing perception of a world of food surplus has shifted to one of food deficit. At the same time, the rapid growth of obesity and malnutrition in both developed and developing countries is redefining the geography of food insecurity, especially in the expanding urban areas (Ashe and Sonnino, 2013). To further complicate this scenario, the last years have also witnessed a financial crisis, the depletion of global food stocks as vast productive areas have been utilized to produce biofuels rather

Roberta Sonnino is a Reader in Environmental Policy and Planning, Cardiff School of Planning and Geography, Cardiff University, Glamorgan Building, King Edward VII Avenue, Cardiff, CF10 3WA, Wales, UK; email: <sonnino@cardiff.ac.uk>. Ana Moragues Faus is a Research Associate at the Cardiff School of Planning and Geography, Cardiff University, Cardiff, Wales, UK; email: <moraguesfausa1@cardiff.ac.uk>. Albino Maggio is at the DG Joint Research Centre Science Advice to Policy, European Commission, Brussels, Belgium; email: <albino.maggio@ec.europa.eu>. This work is part of the JRC Foresight Study on Global Food Security. The views expressed are purely those of the authors and may not in any circumstances be regarded as stating an official position of the European Commission.



than foods (Mol, 2007), and the proliferation of 'land grabbing' activities in the Global South.

In this context of urgency and uncertainty, the debate on food security has been enriched by different scenario analysis exercises that depict a range of plausible futures. Although they are highly heterogeneous in terms of scale, accounting methods and underlying conceptual frameworks and core questions (see Reilly and Willenbockel, 2010), these scenarios all suffer from two fundamental weaknesses in their conceptualizations of food security. First, they confine their analyses to the production side of the food system (i.e. yield and land use) and to market transactions (i.e. demand and supply) that translate into indicators such as food prices and calorie availability. In so doing, they address only two dimensions of food security: availability (i.e. the amount, type and quality of food that a certain unit has at its disposal) and access (i.e. the ability of a unit to obtain access to the type, quality and quantity of food that it requires) (Ericksen, 2008, p.238). Food utilization (i.e. the capacity to consume and benefit from food, which depends on its safety and nutritional value as well as on socio-cultural aspects of consumption) is neglected in these exercises. Second, these scenarios have explored inadequately the economic, ecological and political dimensions of sustainability (Swart et al., 2004; Reilly and Willenbockel, 2010) or, as Ericksen et al. (2009, p.376) state, 'the wider issues that underpin food security and the environmental consequences of different adaptation options'.

These weaknesses reflect an unwarranted polarization of the academic and policy debate, which has been dominated by a tension between two narratives: the first conceptualizes food security as a production issue, which should be addressed through intervention at the supply end of the food chain (e.g. by increasing the amount of food produced); the other, in contrast, consider it as a consumption matter, which calls into question the accessibility of nutritious food. By failing to extend their views and values beyond the two ends of the food system, these narratives have constrained the interpretation of (and policy intervention on) global food security.

Based on an extensive analysis of recent academic and policy literatures, this article responds to emerging calls for the adoption of a more systemic approach to food security that takes into account sustainability concerns (Lang and Barling, 2012) and bridges the gap between production-based and consumption-based narratives. By focusing on the multiplicity of economic, social and ecological outcomes of global environmental change at different stages of the food system, the article identifies the tangible (and often inextricably linked) barriers to 'sustainable food security' – a concept based on the fundamental assumption that the long-term capacity of the food system to provide an adequate amount of nutritious food will depend on its ability to respond to the environmental and socio-economic challenges that threaten its resilience and to minimize its impacts on human and environmental health. By joining the security and sustainability lenses, our sustainable food security framework proposes a long-term theoretical and policy approach that, as Carolan (2013, p. 7) convincingly argues, is becoming increasingly necessary to address a wide range of large ecological footprints that are threatening the resilience of the global food system.

### **Sustainability and Food Security: Two Competing Narratives**

The origins of the 'productivist' approach can be traced back to early FAO conceptualizations of food security, which 'focused on increasing food production, particular-

ly in the developing countries, stabilizing food supplies, using the food surpluses of developed countries constructively and creatively, creating world and national food reserves, stimulating world agricultural trade [and] negotiating international commodity agreements' (Shaw, 2007, p. 283). Under this approach, food is reduced to the quantity produced and it is valued according to the efficiency of the production process (Rosin, 2013). Today, central to this narrative is the concern over feeding nine billion people in a context of growing competition over land and other resources, which, for the proponents of this approach, requires an increase in food production and, by implication, a support for the status quo. For this reason, the productivist view of food insecurity tends to be supported by the most powerful actors in the food system – including the World Bank, the WTO and FAO (Mooney and Hunt, 2009; Holt Giménez and Shattuck, 2011).

Demand-led approaches, by contrast, view food insecurity as essentially a matter of lack of (physical, financial and cultural) access to food. As Sage (2013) summarizes, these approaches move three central criticisms to productivism. First, the emphasis on the supply side overrides questions of distribution and the ecological costs of production systems (Feldman and Biggs, 2012). Second, an approach that emphasizes agricultural output tends to regard food, feed and fuels as a set of tradable commodities for international markets, rather than as foundational elements for national food security. Third, a concern with food output alone neglects nutritional security – in other words, it assumes the continued expansion of the 'nutrition transition', an expression that refers to the increase in the amount of food consumed brought about by an increase in income (UNEP, 2012).

There are two main differences in the ways in which these two narratives interpret the relationship between food security and sustainability. First, productivism emphasizes the role of global governance through an emphasis on large-scale programmes to improve agricultural productivity, manage environmental resources and develop markets for small farmers (Jarosz, 2011). In this perspective, trade liberalization (as opposed to a drive towards self-sufficiency) is considered crucial to sustain food security (e.g. DEFRA, 2002). By contrast, demand-led approaches start from the assumption that, since the global food system is unlikely to be able to cope with long-term stress arising from climate change, the vital task is to enhance the adaptive capacity (i.e. resilience) of local and regional food systems (Marsden, 2012; Sage, 2013). Second, productivists emphasize the need for scientific and technological innovation to grow more productive or resilient food crops. In the UK, for example, a report by the Royal Society (2009) examined the potential range of technologies to enhance production (advanced biotechnology, improved conventional practices, low-input methods), concluding that there is a need for 'scientific solutions to mitigate potential food shortages' (p. 47). Proponents of demand-led approaches to food security criticize this tendency to privilege 'technological solutions over more place-based technologies and knowledge systems' (Marsden, 2012, p. 142; see also Hinrichs, 2013). The IAASTD's report on agricultural knowledge, science and technology (McIntyre et al., 2009), for example, advocates policies that support the revitalization of traditional knowledge and the democratization of technology (Kneafsey et al., 2013). This approach recognizes that precision agriculture, genetic engineering and nanotechnology have roles to play in the development of the food system (Beddington and Beddington, 2010; Gebbers and Adamchuk, 2010; Scrinis and Lyons, 2010). However, it is also emphasized that some technologies may not

address the needs of some users and may not necessarily enhance the human right to adequate food (De Schutter, 2011b; Sage, 2013).

In synthesis, then, the two approaches differ in the identification of the primary target for food security and sustainability policies. Productivists propose an economic-based (i.e. 'weak') interpretation of sustainability, which prioritizes the global food market. The underlying assumption here is that, once we manage to produce enough food, the global market itself will solve the distribution problem. In their view, wealthier countries need to produce more food not just for domestic consumption but also for supply through trade and aid to poorer countries. This ideology is very strong in countries such as Australia (Dibden et al., 2013), New Zealand (Rosin, 2013) and in the UK, where the government has suggested that 'one of the most important contributions that the UK can make to global, and our own, food security is having a thriving and productive agriculture sector' (DEFRA, 2008, p. 28) – that is, exploiting natural advantages in domestic food production to meet rising demand elsewhere. Access-based approaches, by contrast, criticize the emphasis on the economic dimension of sustainable development at the neglect of its social and environmental objectives (Yngve et al., 2009; Lang, 2010). Through notions of 'right-to-food' (MacMillan and Dowler, 2012) and 'food and nutrition security' (SCN, 2004), these approaches propose a 'strong' version of sustainability that embraces the entire ecology of the food system – or, as Lang (2010, p. 95) states, all 'factor[s] in all diet-related ill-health, not just hunger'. Implicit in this argument is the assumption that once we have addressed the distribution challenge, food producers and the industry will adjust to changes in demand. In the next sections, we will test the arguments (and proposed solutions) of these two main narratives against the tangible barriers to sustainable food security at different stages of the food system.

### **Sustainable Food Security: The Challenges for Food Production**

On the supply side, there are four main threats to sustainable food security: the degradation and loss of agricultural land; the loss of biodiversity; the pressure of agriculture on water resources; pollution and resource depletion – all issues that impact on, and at the same time are impacted by, the dynamics of climate change, which are bound to change the global geography of food production, as many have been arguing. Land degradation processes, which are related to inadequate use of soil conservation techniques (including slope and cover management, fallow, reincorporation and recycling of manure and crop residues into the soil), deforestation, pollution and overgrazing (Stocking and Murnaghan, 2001), are estimated to affect 16–40% of the land area (Chappell and LaValle, 2011) and a total of 1.5 billion people, especially in sub-Saharan Africa (where 13% of the degraded land is located) and South East Asia (6% of the degrading area) (UNEP, 2012). In recent years, the problem of soil degradation has been exacerbated by the emergence of competing pressures on land, linked to the search for alternative forms of energy (biofuels), urban expansion and the loss of biodiversity.

According to Aarnink et al. (1998), during the twentieth century 75% of the genetic diversity of agricultural crops went lost as a result of the Green Revolution, which has changed the pattern of intraspecific diversity in the fields. As stated in the Millennium Ecosystem Assessment (2005, p. 5), the problem (which has only partially been offset by the creation of seed banks) is one of resilience; indeed, the loss of genetic diversity 'reduces overall fitness and adaptive potential, and it limits

the prospects for recovery of species whose populations are reduced to low levels'. In 2008, for example, 81% of the marine fisheries were fully or over exploited, and a further 4% were depleted or recovering from depletion (FAO, 2010a). The loss of off-farm biodiversity also has negative impacts on the food system, since it implies losing 'services' (such as pollination by insects) provided by organisms that ensure a form of natural control on crop pests and diseases.

Irrigation for agriculture utilizes 70% of total water resources (FAO, 2011), and this figure is predicted to increase. By 2050, domestic water demand in sub-Saharan Africa will have doubled against the levels of 1997, whereas in Asia it will have increased by 20–90% (Millennium Ecosystem Assessment, 2005). In practice, this means that 90% of the three billion people who will add to the global population by 2050 will be located in water-stressed regions (WWAP, 2012). As a result, the competition between agriculture, industries and households for the available water resources will intensify.

More generally, it has been calculated that agriculture contributes by 92% to the human water footprint. Oil crops alone account for 43% of the global virtual water flow – i.e. the water footprint embedded in traded commodities (Hoekstra and Mekonnen, 2012). More than half of this amount relates to trade in cotton products; about one-fifth relates to trade in soybean. Other crops that have a large share in the global virtual water flow include cereals (17%), industrial foods (12%), coffee, tea and cocoa (8%) and beef (7%). When considering the rising demand for meat and cereals (Collette et al., 2011) and the fact that environmental externalities are not included in the price of water, it is easy to predict that water availability will become a major issue, especially in the regions affected by desertification processes.

Intensive agriculture's heavy reliance on fertilizers and pesticides has also had serious consequences for ecosystem health, especially in the Global North and in the emerging economies of the South. In some regions, fertilizers and pesticides have disrupted the natural nutrient cycle, causing eutrophication of surface water and contamination of groundwater. Fertilizers utilize non-renewable resources (especially phosphors), which continue to being depleted (Cordell et al., 2009). The same applies to fossil fuels, which have significant impacts in terms of climate change; it has been estimated that agricultural CH<sub>4</sub> and N<sub>2</sub>O emissions have increased by nearly 17% between 1990 and 2005 and that agriculture alone accounts for 10–12% of the total anthropogenic emissions of greenhouse gases (Smith et al., 2007).

Environmental degradation can displace people (Myers, 2002) and increase disparities between farming communities. Indeed, access to constantly depleting resources (land, fossil fuel, phosphors, water) is likely to become even more difficult for low-income smallholder farmers, who produce 80% of the food supply in developing countries (Collette et al., 2011). According to UNEP (2012), the declining quality of land and water resources has already resulted in global net losses of cropland productivity averaging 0.2% per year. In this context, 'climate smart' agriculture is gaining momentum as a tool to address the two main challenges that have emerged here – i.e. lowering the amount of emissions that agriculture produces while at the same time enhancing its resilience to climate change.

### *Addressing Food Production Challenges: Sustainable Intensification*

A growing awareness of the environmental impacts of food production and of the competing pressures over land has fuelled the emergence of sustainable intensifica-

tion (SI) as one of the most powerful productivist discourses in the food security debate. The main underlining principle of SI is that capacities for change should be harnessed through technological and scientific innovation (from improving the efficiencies of agro-ecological methods of food production to the experimentation in the utilization of modern genetics). Practically, as defined by the FAO (Collette et al., 2011), SI means producing more from the same area of land while reducing negative environmental impacts and increasing contributions to natural capital and the flow of environmental services (see also Pretty et al., 2011). Originally developed in the context of sub-Saharan Africa as a response to low yields and high environmental degradation (Reardon et al., 1995; Pretty, 1997), this concept has been popularized by the UK's Royal Society (2009) and Foresight reports (2011). The latter, in particular, stated: 'The global food supply will need to increase without the use of substantially more land and with diminishing impact on the environment: sustainable intensification is a necessity' (Foresight, 2011, p. 31).

There are three key elements that shape the SI agenda. First, SI promotes a systemic approach to natural resource management that uses inputs such as land, water, seeds and fertilizers to complement the natural processes that support plant growth (including pollination, natural predation for pest control, and the action of soil biota that allows plants to access nutrients) (FAO, 2010b). The basic features of this approach include improved soil and water management; an emphasis on soil fertility through the harnessing of agro-ecological processes such as nutrient cycling, biological nitrogen fixation, allelopathy, predation and parasitism; a moderate use of external inputs; the use of crop varieties and livestock breeds that are resistant to stress (e.g. drought, salinity, disease) and have a high productivity rate in response to the use of externally derived inputs, a reduced use of technologies and practices that have adverse impacts on the environment and human health, a productive use of human and social capital (in the form of knowledge and capacity for innovation), and the minimization of environmental externalities (Collette et al., 2011; IFAD, 2011; Pretty et al., 2011). These agro-ecological principles, which inform many of the existing examples of SI (Pretty and Hine, 2001), have the potential to address many of the environmental problems that affect food production, especially in relation to biodiversity conservation (Gibson et al., 2007) and the natural life cycle (De Backer et al., 2009), while also ensuring an adequate level of productivity (Badgley et al., 2007), especially for poor smallholders (McIntyre et al., 2009; De Schutter, 2011a).

The second key principle of SI raises the need to connect different types of knowledge to bridge the gap between agro-industrial/biotech and agro-ecological propositions (Dibden et al., 2013). As Jules Pretty, a member of the UK Foresight project's expert group, said, SI facilitates 'a move away from the "binary opposition" between high-tech and low-tech approaches' that often does not reflect the reality of contemporary agriculture, which mostly lies somewhere between conventional and agro-ecological practices (Tscharntke et al., 2012). In theory, then, SI promotes a new way of producing food (Godfray et al., 2010b) that can offer significant benefits to small farmers by enhancing their productivity, reducing costs, building resilience and strengthening their capacity to manage risk (Collette et al., 2011).

The importance of engaging with traditional and local knowledges is the third key principle of SI (Garnett and Godfray, 2012). As Pretty et al. (2011, p. 10) state, 'successful projects of sustainable intensification by definition fit solutions to local needs and contexts'. By acknowledging the uniqueness of different environmental and socio-economic conditions (e.g. different labour requirements and different ac-



cess to inputs and technologies), SI emphasizes the importance of involving local farmers in the process of innovation.

Despite the recognized potential of SI as a food security strategy, there are important criticisms of this concept. Garnett and Godfray (2012) have highlighted the tendency to associate SI with the goal of increasing the amount of food produced, rather than with the fundamental objective of increasing productivity while reducing the environmental impacts of production. For them, the main problem is that many have downplayed the original aspirational nature of this concept and use it to describe a certain type of agriculture – i.e. how food production should change now, as opposed to what different modes of food production can respond to the challenges raised by a resource-constrained world.

Other criticisms of SI call into question its one-dimensional focus on the supply side and on the environmental dimension of the food system, at the neglect of important ethical and political issues – especially the trade-offs that must be made in the decision-making process to ensure an equitable distribution of the burdens and benefits of SI in terms of market competition (FAO, 2004; Freibauer et al., 2011). For SI to realize its potential in terms of sustainable food security, it is crucial to overcome the limits imposed by specific production discourses and expand its argument to other stages of the food system.

### **Sustainable Food Security: The Consumption Challenges**

On the demand side of the food system, SI, like other productivist approaches, is criticized for neglecting issues related to the quality and nature of the food needed to sustain food security – as well as its accessibility. From this perspective, one of the phenomena that impinge mostly upon sustainable food security is the nutrition transition, which has been responsible for a dramatic global spread of diet-related diseases (Kearney, 2010). For example, in the USA the health-care costs of illnesses related to obesity and overweight are estimated to double each decade up to 2030, when they will reach a total of \$ 860–956 billion (Wang et al., 2008). There are important social justice issues to be considered. Indeed, higher-quality diets are more costly per kilocalorie and tend to be adopted by consumers of higher educational level (Monsivais and Drewnowski, 2009); as Mullie et al. (2010) have argued, citizens of lower socio-economic status tend to consume less fruit and vegetables.

Globally, there are many interrelated factors that hinder sustainable food security at the demand end of the food system. These include: a rise in global per capita income, which translates into increased consumption of animal-based and processed foods – hence, higher-fat diets; trade liberalization, which has reduced the price of unhealthy foods and increased their availability (Thow and Hawkes, 2009); and urbanization, which has caused negative changes in our dietary behaviour – linked to the wider availability of (often unhealthy) food choices, combined with lower-energy expenditure in urban jobs (Kearney, 2010). In sum, research shows that sustainable food security is seriously constrained by a widespread lack of access to healthy and nutritious food, which is affecting in particular urban residents (Son-nino, 2009). Significantly, it is also in cities that some of the environmental impacts of food production (such as water pollution and waste) are concentrated, with important implications for food safety. It has been reported that diarrhea contracted from consuming contaminated food and water causes 1.8 million deaths a year (Millstone

and Lang, 2008). Clearly, urban food systems are emerging as important (but still under-researched) units of analysis for sustainable food security.

Another barrier to sustainability that is widely discussed in the literature on food consumption has to do with the high levels of food losses (at the production, post-harvest and processing stages) and food waste (at the retail and consumption stages), which all together amount to 1.3 billion tonnes per year – that is, at least one third of the total amount of food produced (Gustavsson et al., 2011). In general, post-harvest losses are greatest in developing countries (where they have reached 16–49%) due to lack of agricultural technologies and infrastructure (Parfitt et al., 2010). Food waste, which is linked to over-purchasing and consumer/retailer behaviour, is especially a problem in the North: American consumers throw away 25% of the food they purchase; British consumers one third (UNEP, 2012). The magnitude of this problem, and its implications for the environment (i.e. wasting food means using resources such as energy and water in vain and producing additional GHG emissions), has led to widespread discussions about possible solutions and policy interventions (see, for example, Sonnino and McWilliam, 2011), which have been recently framed around the notion of sustainable diets (SDs).

#### *Addressing Consumption Challenges: The Concept of Sustainable Diets*

As described by the FAO and Biodiversity International (2010), SDs are ‘diets with low environmental impacts which contribute to food and nutrition security and to healthy life for present and future generations. Sustainable diets are protective and respectful of biodiversity and ecosystems, culturally acceptable, accessible, economically fair and affordable; nutritionally adequate, safe and healthy; while optimizing natural and human resources’ (p. 1). In practice, SDs are based on five key principles: reduced consumption of meat and dairy products and of food and drinks with low nutritional value; increased consumption of fruit and vegetables; respect for the variability and seasonality of food supply; and an emphasis on the purchasing of environmentally friendly products (UNEP, 2012). The literature on SDs is still in its infancy, and suffers from the limitations imposed by a largely behavioral approach that does not account for important structural issues such as fairness across different stages of the food system. Moreover, not much has been said about specific strategies that can support their development and implementation. Across a range of disparate literatures, there are two policy instruments that require attention in the light of their potential to promote SDs. First, the planning system can play a major role in preventing the loss of agricultural land in peri-urban areas (which, especially in developing countries, play an important role in terms of food security – see Lerner and Eakin, 2011), protecting healthy food retailers (Dixon et al., 2007; Morgan, 2009), and supporting urban agriculture, which lowers the ecological impacts of food production by eliminating transportation and reducing waste (Redwood, 2009). Second, innovative public procurement policies can create important markets for small producers, as happened in Brazil (Rocha et al., 2012), and improve consumer attitudes towards food (Morgan and Sonnino, 2008).

In sum, the focus on the supply and the demand sides of the food system has uncovered a range of significant barriers and threats to sustainable food security. Concepts such as SI and SDs are important attempts to devise solutions to the problems, but they both suffer from a fundamental inability to provide a comprehensive perspective on food security. In simple terms, the literature on SDs does not deal

with key questions about production – i.e. the methods and measures needed to deliver low-impact and healthy diets (Garnett, 2013). Research on SI, on its part, rarely accounts for rising concerns about global food demand – i.e. how to increase the accessibility of nutritious food and, at the same time, avoid overconsumption patterns that may further degrade the environment. When looking at the relationship between the two ends of the food system, it becomes clear that there are multiple and complex connections and disconnections between production and consumption that raise additional questions regarding the scope for achieving sustainable food security.

### **Sustainable Food Security at the Post-production Stages: Uncovering the 'Missing Links'**

Sustainability analyses at the post-production stages of the food system have been largely neglected in the literature, which has tended to focus on a number of isolated issues, often neglecting the interconnections (or lack thereof) between different stages. Most research has focused on GHG emissions, which tend to be much more significant in high-income countries (Vermeulen et al., 2012) such as the UK, where post-production emissions make up around 50% of total food system emissions (Garnett, 2011). GHG emissions also vary significantly depending on the level of processing, the method utilized and the technology adopted – factors that influence the energy inputs required for the life cycle of different food items (Carlsson-Kanyama et al., 2003). For example, in the USA the energy used by the processing industry for cooking, cooling and freezing contributes an average share of 15–20% of total food system energy use (Cuéllar and Webber, 2010).

Refrigeration along the different stages of the food chain has an important contribution to make to sustainable food security, given its role in preventing food losses. However, refrigeration, especially in developed countries, also constitutes a major source of emissions (Pelletier et al., 2011). Coulomb (2008) estimates that 15% of the electricity consumed worldwide is used for refrigeration, but with changes in ambient temperature its use is likely to increase globally (James and James, 2010). In this kind of assessment, it is crucial to consider also the issue of embedded energy; for instance, it has been estimated that in the UK 2.4% of total GHG emissions are due to food refrigeration, but 'embedded' refrigeration of imported foods increases this figure to 3–3.5% (Garnett, 2007).

Transportation is the post-production stage that has received most scientific and media attention, especially through the concept of food miles. Despite its usefulness for uncovering the convoluted nature of the global food system, food miles is an imperfect sustainability measurement tool, on various grounds: it does not account for the emissions produced at the manufacturing and packaging stages of the food chain, which are actually higher (12% vs 19%); it neglects issues related to the volume of the food transported as well as to the way in which consumers travel to purchase their food (Mariola, 2008); and it does not account for the environmental damage produced by foods that have been grown locally in glasshouses (Garnett, 2011). Clearly, a focus on transportation alone offers a very partial and limited assessment of the sustainability of a food supply chain.

Transportation and refrigeration of food, which are closely connected practices, bring to the forefront the debate on trade globalization, which raises a number of additional challenges for sustainable food security. Globally, food production can be

affected negatively by market intervention of developed countries, which can afford to subsidize their national agriculture and 'dump' its surplus products on developing countries, thereby displacing local producers (Friedmann, 1993; Herman et al., 2003). Second, trade globalization marginalizes poor farm households, which often lack appropriate transport routes and other market access mechanisms (Godfray et al., 2010a). This power imbalance has been widely acknowledged in discussions about the WTO negotiations (Pechlaner and Otero, 2010) and the recent food crisis, which has uncovered the vulnerability of food-import dependent countries at a time when 29 countries have already limited or banned food exports (Bradsher and Martin, 2008). Third, trade globalization has significant impact on biodiversity; according to Lenzen et al. (2012), 30% of global species are threatened by international trade, which always causes waste and losses. Indeed, when the food produced in a region is exported, the region loses the resources that have been utilized in the production process but still has to bear the costs of the waste produced during the production cycle. Research in this area has tried to capture the problem through the development of concepts such as 'virtual water trade' (Chapagain and Hoekstra, 2008).

Trade globalization, coupled with an improvement in logistics and the transportation system, has also facilitated a process of vertical and horizontal concentration at different stages of the food system – especially retailing (Hendrickson and Heffernan, 2002; Oosterver and Sonnenfeld, 2012). Supermarkets' share of food markets in developing countries has experienced a particularly steady increase – from 5–10% in 1990 to 50–60% in 2007 in South America and South Africa, and to 20–50% in Mexico, Central America and South East Asia (Reardon and Timmer, 2007). Although they play an important role in delivering good food at affordable prices (Lawrence and Burch, 2007), supermarkets often externalize the social, economic and environmental costs of the food system (Hattersley and Dixon, 2012) and resort to highly polluting practices such as packaging, an important but under-researched area that requires special attention from a sustainable food security perspective (Vermeulen et al., 2012). The most commonly used plastics in the packaging industry utilize petrochemical products that present risks for human and ecosystem health. These neither totally recyclable nor biodegradable products also increase the consumption of fossil fuels (over 99% of plastics are of fossil fuel origin), create environmental pollution, promote landfill depletion, require high energy levels for their manufacturing and contribute to the spread of polymers and additives (Mahalik and Nambiar, 2010). At the same time, however, packaging can have an important role to play in reducing food losses, especially in developing countries.

The concept of 'short food supply chains' (SFSCs) has emerged as a response to the different sustainability concerns that impinge upon food security at the post-production stages. Despite a widespread tendency in the literature to conflate them with local food chains (see Sonnino, 2010), SFSCs do not necessarily entail relocation. The term refers, more broadly, to 'simplified' modes of food provisioning that reconnect producers and consumers around sustainability values and objectives (see Hinrichs, 2000; Renting et al., 2003; Kanemasu and Sonnino, 2009). From an economic perspective, SFSCs redistribute value along the supply chain and articulate new forms of market governance (Moragues-Faus and Sonnino, 2012). Socially, they aim to establish more just relationships across the food chain and revalue the cultural attributes of food (Sonnino and Griggs-Trevarthen, 2013). Ecologically, they promote environmentally friendly practices through reduced packaging, waste and

food miles. In this sense, short supply chains can become an important conceptual tool to address the tension between the dynamics of the global ‘space of flows’ and the local ‘space of places’ – a tension that, as Oosterver and Sonnenfeld (2012, p. 13) argue, is responsible for the environmental problems related to food provisioning.

More generally, as a normative concept, short supply chains can become an important platform for an innovative research agenda that focuses on the scope for creating new connections between different stages and actors in the food system through, for example, better planning of logistic facilities (‘food hubs’) and the preservation of peri-urban agriculture (Mundler and Rumpus, 2012). To deliver sustainable food security goals, this agenda needs to consider also the role of global markets in feeding areas that are physically unable to produce enough food.

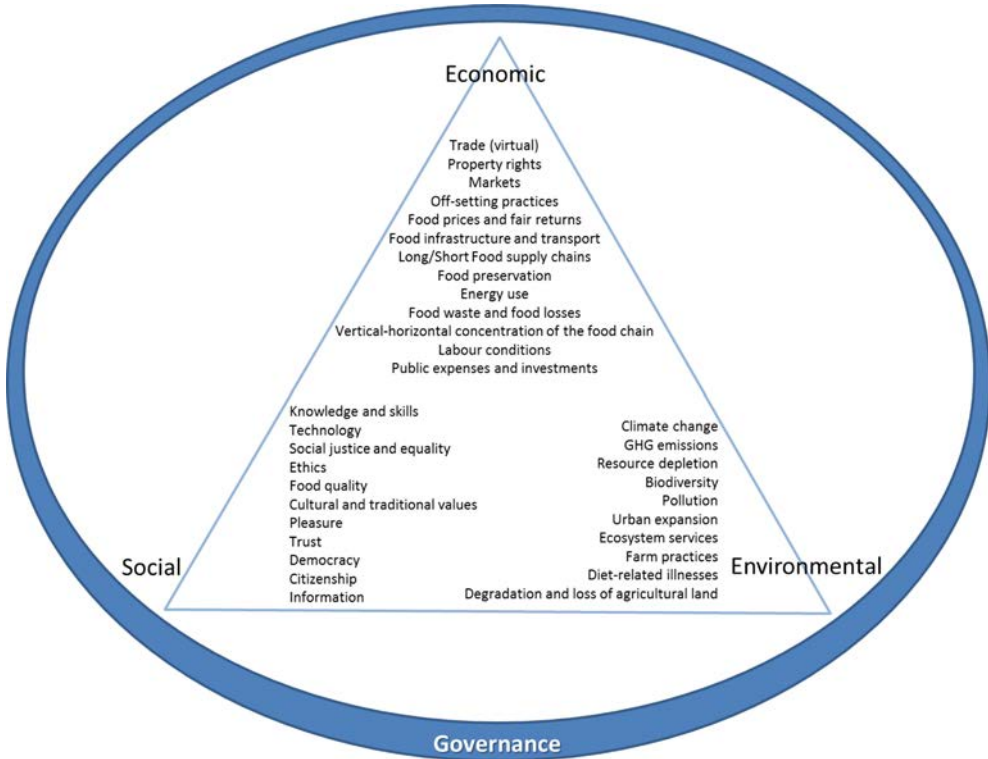
### **Reconnecting Food Producers and Consumers for Sustainable Food Security: Some Conclusions**

Traditional approaches to food security, we have argued, fall short on two accounts: first, they neglect the real and potential connections and disconnections that exist between the two ends of the food system; second, and as a result, they tend to ignore a wide range of sustainability issues that threaten the resilience of the food system, especially at post-production stages. Recent debates on SI and SDs are creating a promising ground for rethinking food security in sustainability terms – that is, for progressing a research and policy agenda that accounts for the ‘deeply inter-locking nature of economic, social and environmental systems’ (Misselhorn et al., 2012, p. 10). As Garnett and Godfray (2012, p. 49) state, ‘a system of food production that is socially, economically or ethically unacceptable to a large fraction of the population will lack “continuability”, or resilience, however ecologically attuned it may be.’ The same applies, we can add, to any socially just and acceptable food system that is rooted in processes of environmental degradation and resource depletion.

Our sustainable food security framework is an attempt to contribute to the development of a more systemic research and policy agenda that goes beyond the conventional focus on individual components of the food system (i.e. supply and demand) to address more holistically the complex relationships between its different stages and actors (see Figure 1). For instance, this framework challenges technological solutions to engage with their long-term socio-economic and environmental implications for different actors in the food system. At the same time, it has the potential to critically assess recommendations on changing consumer behaviour by taking into consideration wider structural and justice issues. More importantly perhaps, it offers a long-term perspective that responds to recent requests for a dynamic perspective that envisions food security as a process, rather than as an end in itself (Carolan, 2013).

The use of this kind of framework in our critical review of the available literature has identified two main research areas that may constitute the first steps in the development of the new agenda. First, it has uncovered the centrality of cross-cutting issues that affect the capacity of the food system to foster positive and synergistic connections between producers and consumers. There is a need for systemic research and intervention on the relationships between food and trade, energy and water use, among other issues, at different stages of the supply chains. Second, our approach has given prominence to other specific areas of disconnection between production and consumption (‘the missing links’) that emerge as an important fo-





**Figure 1.** Sustainability food security: key issues for a future research agenda.

cus for research that aims to overcome polarized narratives in the academic and policy domains. Appropriate forms of land-use planning, the creation of logistic facilities and the use of new policy instruments such as public procurement are areas that need much more scholarly attention as potentially powerful tools to reconnect producers and consumers around food security and sustainability values and outcomes. In more general terms, at a time when a 'new food equation' is creating a renewed responsibility for science to support food policy formation (Ericksen et al., 2009), a research agenda that joins the security and sustainability lenses has added benefits for its capacity to capture and tackle, in both theory and practice, the failures, vulnerabilities and potentialities that emerge at different nodal points of the food system.

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