



The values of value chains: Putting responsibility into action

Allison Marie Loonto

► To cite this version:

Allison Marie Loonto. The values of value chains: Putting responsibility into action. De-facto Responsible Innovation : Governance at Stake, Edward Edgar, 2017. hal-01765433

HAL Id: hal-01765433

<https://hal.science/hal-01765433>

Submitted on 12 Apr 2018

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.

Copyright

Citation: Loconto, Allison (2016). "The values of value chains: Putting responsibility into action" in *De facto Responsible Innovation: Governance at Stake*. Eds. Sally Randles and Philippe Laredo. Cheltenham, UK: Edward Elgar Pub.

The values of value chains: Putting responsibility into action

Allison Loconto^{1,2}

Who is responsible for sustainable agri-food systems? In global discourse, the need to feed a growing population in a world of diminishing resources, is quickly becoming consolidated as a core societal challenge (Conway, 2012; FAO, 2012). But who is responsible for achieving this? Is this the mandate of producers, who are tilling the earth with machines of variable complexity and who are responsible for what toxins are entering the soil and water? Or are the companies who make the chemicals and machines responsible for the effects of their products on the environment? What about the processors who purchase the produce from the farms and turn these into products that can be consumed by people, animals and machines? What then is the responsibility of aggregators and distributors, who collect, pack and transport the produce and the products? Where is the responsibility of retailers and brands, which turn fresh and transformed products into consumables that are easily recognized by consumers? Finally, what role do consumers play when they decide to purchase something that has, through all of these steps, become a 'sustainable' product? Is sustainability only about the environmental aspects of production, or must we take into account all of these steps in order to evaluate the sustainability of the agri-food system? In other words, must we begin to speak in terms of 'sustainable food value chains' (FAO, 2014b) as an organizing mechanism for innovation in sustainable agri-food systems (FAO, 2014a).

These questions frame the account that is found in this chapter, which is precisely about *how responsibility is framed and performed in an innovative approach to food system organization*. In this chapter I explore this concept of responsibility by focusing on innovations in value chains that are designed to link sustainable production practices with sustainability-conscious consumers in Bolivia. Specifically, I focus on an innovative approach to certification – a participatory guarantee system (PGS) – that redistributes responsibilities within short value chains and refocuses actors' attention towards the value of food sovereignty.

Values in value chains

We situate the value chain within the socio-economic landscape and work from the interpretation of global value chains (GVC) as: "the full range of activities which are required to bring a product or service from conception, through the different phases of production (involving a combination of physical transformation and the input of various producer services), delivery to final consumers, and final disposal after use" (Kaplinsky and Morris 2002). This implies that the chain is not only a logistical structure, but rather a chain of relationships where different actors along the chain are adding value as the product moves from one actor to the next. Value chain analysis has become a popular tool that can help firms, researchers and policy-advisors to visualize the many linkages between the different actors who are involved in adding value to products. This provides a roadmap from which to trace the actors who, through different nodes of negotiation, are involved in creating value(s) throughout the chain (Gereffi and Korzeniewicz 1994; Ponte and Gibbon 2005). Over the past 20 years, the most important value beyond monetary value that scholars and practitioners have focused on is sustainability. Value chain sustainability is defined as covering economic, social and environmental dimensions. "On the

¹ Université Paris-Est, LISIS, Institut National de la Recherche Agronomique (INRA), F 77454 Marne-La-Vallée, France
INRA, UMR 1326, F 77454 Marne-La-Vallée, France

² The author acknowledges the work done by Alejandra Jimenez to collect the second set of data and Hugo Chambilla Silva and Eduardo López for their inputs to the authors' first round of data collection.

economic dimension, an existing or proposed upgraded VC is considered sustainable if the required activities at the level of each actor or support provider are commercially viable (profitable for commercial services) or fiscally viable (for public services). On the social dimension, sustainability refers to socially and culturally acceptable outcomes in terms of the distribution of the benefits and costs associated with the increased value creation. On the environmental dimension, sustainability is determined largely by the ability of VC actors to show little or no negative impact on the natural environment from their value-adding activities; where possible, they should show a positive impact” (FAO, 2014a).

This commitment to sustainability within the value chain has also been adopted by the private sector as the vanguard of corporate social responsibility (CSR) programs or strategies (Griffin and Prakash, 2013). In this sense, taking responsibility in value chains centres on minimizing negative environmental impact (or at best having positive environmental impact) and maximizing positive social impact (Özçağlar-Toulouse et al., 2009). What this translates to in practice is an increasingly popular approach to ‘sustainable sourcing’ whereby lead buyers in GVCs are able to make claims of responsibility based on the certification of the sustainable agriculture practices of their suppliers (Busch, 2007; Cooper et al., 1997; Seuring and Mueller, 2008; Loconto; Friedrich et al., 2012). Relying on social and environmental standards provides buyers with both the assurance that their raw materials are being produced sustainably and the external recognition by the NGOs who develop these standards that they are acting both responsibly and sustainably in their supply chains (Islam, 2008). However, much of the ‘win-win’ style discourse around the possibility of CSR to deliver social, economic and environmental benefits (the triple bottom line or ‘shared value’) (Norman and MacDonald, 2004; Porter and Kramer, 2011) fails to address the structural and organizational nature of how value chains are organized and managed within local and national institutions (Fleming et al., 2013).

In this chapter, I explore how the framing of responsibility in international and national institutions influences the structure and activities of value chains (Gee and McMeekin 2011) that use PGS and how responsibility is enacted (Loconto and Simbua, *forthcoming* 2014). It is clear that economic transactions and the value of profit link actors together, but I also focus on the ethical ‘value’ of responsibility that the value chain is simultaneously creating in the production of ‘value-added’ products (cf. Loconto 2010). Therefore, the analytical approach used to describe this case draws from the recent theoretical advances in economic sociology that focus on performativity, valuation and economization (Beckert and Aspers; Çalışkan and Callon; Çalışkan and Callon; MacKenzie et al., 2007). My framework focuses on those actors and activities that frame actions as responsible and can be located within specific *agencements* or institutional arrangements (Loconto, 2015; Vandergeest et al., 2015). An *agencement* is a socio-technical arrangement that consists of actors, schemas, norms, regulations and material objects that enable action for individuals and organizations (cf. Loconto, 2014; Callon et al., 2002). Without the convergence of actors and intermediaries within *agencements*, we cannot see how value chains work or how they create value. This approach does not take the value chain as a given market configuration interfering with actors’ marketing strategies, but rather it focuses on how this market configuration is actively constructed by its actors through their strategies and mistakes (Callon and Law, 2005).

To study an *agencement*, one must identify who the different actors are, what their roles and responsibilities are within the value chain and how each group contributes to an overarching frame of responsibility. The data used in this case study was collected in 2014 and 2015. Key informant interviews (10) were conducted in Bolivia in 2014 (La Paz and Oruro) and a structured questionnaire was administered to key informants (22) in 2015 (La Paz and Tarija). Qualitative analysis of the interview transcripts and official documents was conducted to identify the actors’ interpretations of responsibility. Field observations were used to understand the value chain dynamics and practices. In sum, this chapter

asks the question: *how do the actors understand the concept of responsibility and how do they frame that responsibility within their innovation processes?*

Participatory Guarantee Systems (PGS): An internationally recognized governance arrangement

PGS are part of the innovations that are emerging in standards systems, specifically for organic agriculture. A PGS focuses on a democratization of knowledge whereby the oversight systems for compliance with standards are created by producers, experts and consumers who collectively ensure that the techniques are adopted (IFOAM 2008). PGS both ensure the diffusion of the innovation, but they are also the means through which the research and innovation processes are governed. Specifically, PGS are networks created within local communities and consist of farmers, experts, public sector officials, food service agents, and consumers. “They certify producers based on active participation of stakeholders and are built on a foundation of trust, social networks and knowledge exchange.”³ The role of this type of network is to create a local system of production and consumption whereby multiple stakeholders experiment with sustainable agriculture technologies on farms,⁴ but also collectively ensure that the techniques are adopted by setting standards and verifying their compliance (i.e., the *agencements*) (IFOAM, 2008).⁵ PGS serve to provide a direct guarantee, through the formation of a local market, for sustainably produced food and agriculture products.

The purpose of the PGS as a governance arrangement can be characterized as particular vision of responsibility for producing food organically. This purpose dates back to the experiments in organic agriculture in the 1970s in the US, France, Japan and Brazil and were one of the original ways in which organic agriculture techniques were controlled before the third-party certification (3PC) model became dominant. These pioneers felt that in order to be in line with the environmental ethics of organic farming, the way in which practices were controlled needed also to trust the expertise of the farmer (cf. Freyer and Bingen, 2014). This approach to certification began to erode in the 1980s as organic farming became integrated into national legislations and international trade systems (Fouilleux and Loconto, forthcoming). However, beginning in the 2000s, PGS began to see resurgence. As of 2015, PGS are under development or operational in 54 countries around the world. The majority of these are developing countries. In these contexts, PGS arose in response to protestations against the dominant paradigm of standard-setting by corporate and Northern NGO and corporate actors who use third-party certification systems that were seen as too costly for many small-scale producers and not applicable to local agro-ecological and socio-technical conditions.

The PGS governance framework that is currently in use was first established in a workshop in Latin America in 2004, where international non-governmental actors (e.g. IFOAM,⁶ the Latin American Organic Agriculture Movement, Centro Ecológico in Torres, Rio Grande do Sul in Brazil) convened to develop a “Shared Vision and Shared Ideals” for PGS around the world. This shared vision focuses on the development of organic agriculture technologies and commitment to developing a local economy and community. PGS are meant to be used by small and medium sized farmers and not by large agri-

³ Official IFOAM PGS Definition, accessed 15 February 2014, <http://www.ifoam.org/en/value-chain/participatory-guarantee-systems-pgs>

⁴ Rosegrant, Mark W, Jawoo Koo, Nicola Cenacchi, Claudia Ringler, Richard Robertson, Myles Fisher, Cindy Cox, Karen Garrett, Nicostrato D Perez, and Pascale Sabbagh. 2014. *Food security in a world of natural resource scarcity : the role of agricultural technologies*. Washington, DC: International Food Policy Research Institute.

⁵ IFOAM. 2008. *Participatory Guarantee Systems: Case studies from BRAZIL, INDIA, NEW ZEALAND, USA and FRANCE*. Bonn, Germany: International Forum for Organic Agriculture Movements (IFOAM).

⁶ International Federation of Organic Agriculture Movements.

businesses. Farmers sign a pledge when they join a PGS. In this shared vision the differentiation of PGS from the 3PC model is clear:

In stark contrast to existing certification programs that start with the idea that farmers must prove they are in compliance to be certified, PGS programs use an integrity based approach that starts with a foundation of trust. It builds from there with an unparalleled transparency and openness, maintained in an environment that minimizes hierarchies and administrative levels.⁷

The guidelines published by IFOAM explain what values should be at the core to PGS. 1) A *shared vision* among all actors in the group. 2) *Participation* in the certification process by all of those parties who are interested in the production and consumption of the products. 3) *Transparency* of information about the production practices. There is respect for privacy and commercially sensitive information, but access to information is a priority. 4) *Trust*, PGS is an “integrity based approach.” 5) The PGS is a *Learning Process*, therefore the purpose is not only to gain access to a certificate, but to contribute to “the construction of knowledge nets that are built by all the actors involved in the production and consumption.” 6) The governance structure of a PGS should promote *Horizontality*, which means sharing power (IFOAM, 2007). These values are captured into a governance arrangement through a variety of instruments, including: 1) norms or standards, 2) grassroots organization, 3) statements of principles and values that are specific to the group, 4) documented management systems and procedures, 5) verification mechanisms that can verify, stimulate participation, organization and allow for learning, 6) a farmer’s pledge, 7) seals or labels, 8) clear and previously defined consequences (sanctions).

These international principles, standardized by IFOAM, are a result of international collaboration among numerous local PGS working in a bottom-up innovation process. They are based on multiple levels of interaction between value chain actors, public actors and civil society organizations who have steadily worked together to promote and standardize the value of PGS. However, we also see a top-down diffusion of innovation approach being used to replicate PGS from the international level back down to the local level. For example, in Bolivia, national legislation authorizes the use of participatory guarantee systems and there is an active approach by the government to use public procurement as a way to promote the adoption of agro-ecological practices that are certified using PGS. The next section explains this case in more detail.

Acting responsibly in the Bolivian PGS

Legal and institutional context

In Bolivia, an Andean country, organic agriculture that is based on mixed cereal and potato systems dates from the pre-Hispanic civilizations. The 1970s were a vibrant time for farmers’ organizations in the form of associations, cooperatives and smallholder agricultural corporations (CORACAs) that sold their products directly to domestic and international markets. In the 1990s, products such as coffee, quinoa, cocoa and chestnut began to be exported to organic and Fairtrade markets. Today, organic quinoa is the largest export crop from Bolivia (Willer and Lernoud, 2015). This production required third-party certified compliance to international standards. In 1991, the Bolivian Association of Organic Farmers’ Organizations (AOPEB) was established as a national body providing technical and business services to the organic sector. In 1996, AOPEB promoted the establishment of Bolivia’s international organic certification body, BOLICERT, in order to facilitate farmer access to certification and certified markets. AOPEB was strongly engaged in both service provision and advocacy during this period. In 2003, they

⁷ Inger Källander 2008. *Participatory Guarantee Systems – PGS*. Stockholm: Swedish Society for Nature Conservation. (p. 7)

contributed to a bill on the regulation and promotion of agro-ecological agricultural and non-timber forest production that was submitted to the legislature. The same year marked the opening of the *Super Ecológico* chain of organic grocery stores, which was the first significant effort to encourage the creation of a domestic market for agro-ecological products (Chambilla and López, 2015).

Following three years of consultations guided by the Ministry of Rural Development, Agriculture and the Environment – with the participation of AOPEB and other national organization and United Nations Development Programme, Food and Agriculture Organization of the United Nations, United Nations Industrial Development Organization, United Nations Children's Fund, World Food Programme and International Labour Organization - the Ecological Law 3525 was passed in 2006 and the public agency CNAPE was established to administer and promote the law and with the National Food Safety Authority (SENASA) as the national competent authority over the systems of control. The law also creates a way to integrate agro-ecology into its institutions by requiring municipal level governments to incorporate programs and/or projects for training, technology diffusion, promotion, research and/or development of ecological production into their municipal development plans based on the need or production potential. There is also the requirement that the Ministry of Education incorporate pertinent information about the environmental, nutritional, economic and cultural benefits of ecological production into their academic curricula. CNAPE is also given the mandate to create and strengthen specialized research and technological innovation centers for ecological production and provide incentives for increasing research and innovation in this area.

Within this law, agro-ecology is established as “the science and the art used with sovereignty during the process of agricultural, livestock, apicultural and silvicultural production and the obtainment of food (healthy, nutritious, safe for human health, of high quality and easy access to the population, coming from domesticated species and their wild relatives), including its processing, industrialization and commercialization.” This definition highlights a number of unique features about the Bolivian concept of ecological agriculture, such as the recognition of both agricultural and wild or collected products, the recognition of the importance ancestral and traditional community knowledge, practices and values, the need for different transition periods for different crops and that there is no possibility for farmers to do ‘parallel production’ in space and time (i.e., agro-ecological and conventional crops cannot coexist on the same farm).

There are two types of certifications allowed by the law: 1) ISO 65 accredited third-party certification bodies for international trade or export and 2) alternative quality guarantee systems evaluated and control by CNAPE (i.e., PGS) for domestic and local trade. This clear separation between the two systems of guarantee in the law is replicated in practice and is represented by the debates around the differences between ‘organic’ and ‘agro-ecological’ production that were observed during the field visits. Organic is seen as the ‘export’ production and is considered to be a weaker version of the technology. The actors are seen as not being as committed to the core principles of the Ecological law and the guarantees that are provided are discussed as being foreign and competitive. This is due to the fact that the history of organic in the country dates back to 1991 where the EU Organic Directive has been the main standard followed by tropical commodity producers (e.g., coffee, cocoa and quinoa). Also, the main 3PCs working in the country are branches of European and Latin American certifiers – not wholly domestic companies. In this model of certification, responsibility for ensuring sustainable practices is delegated to the 3PC and there is a detached ‘impersonal’ relationship between the producers, the certifiers and the final end consumers in foreign countries.

How the PGS works

The national PGS, which has harmonized at least 6 existing private PGS in the country, is focused exclusively on the domestic and local markets. It sets out the minimum requirements for the structure

and the procedures of the PGS. PGS supporters claim that the PGS is more economically viable and culturally appropriate than the 'organic' model as it ensures that 'agro-ecology' is a balanced use of the technology and not only a substitution of synthetic inputs. Here the productive technology is balanced by environmental, social/cultural, economic and political dimensions of practice. The national PGS system uses the IFOAM promise as the guiding international framework for the principles of their PGS and how it should function. The principles of the PGS are: a shared vision, continuous learning, horizontal relationships, trust, transparency, and participation. Each of these dimensions have been defined in terms of progress criteria where what the producers must demonstrate in order to be in compliance varies across 3 stages of development that are linked to the length of time a producer has been part of the PGS.

The actors in the articulation of the PGS are fundamental. They are producers, processors and traders (individual, families or farmer groups, indigenous, ordinary or peasant), consumers (individual, families or groups), evaluators, the Guarantee Committee and the PGS agent. The process and the activities for the PGS certification follow the below steps that are outlined in CNAPE's guide (Guía práctica para la Implementación de los Sistemas Participativos de Garantías (SPGs)):

Once the necessary information is obtained and the community is willing to become certified, the three key groups of actors are democratically selected by the community: the evaluators, the Guarantee Committee and the PGS agent (who represents the PGS in their relationship with the State).

- The evaluators (3-10 depending on the group) must have experience in ecological production. They take the responsibility to organize and facilitate meetings with producers and processor, draw the maps of the farm location and crop inventories, and they plan production improvement. The core activity, however, is to organize and supervise evaluation and auto-evaluation processes on the farms, evaluate new producers who want to be part of the PGS and elaborate a general producers and processors list for the group. Finally, evaluator presents all of the necessary documents to Guarantee Committee.
- The Guarantee Committee is located at a municipal level and is composed of local producers, consumers and a local/national institutional agent (Evaluators cannot participate in the Guarantee Committee). The Committee verifies the documents presented by the Evaluators and verifies ecological production and processes on farms. In this process the producers are qualified in phases: ecological or in transition (depending on the least advanced stage of the 5 dimensions technological/productive, environmental, socio/cultural, economic or political). The Guarantee Committee writes-up a report that includes observations and recommendations and final producers and processors list for their PGS. The documents from the Evaluator and the Guarantee Committee are presented to PGS Agent.
- The PGS Agent is democratically elected by the members of the PGS (including producers, processors, consumers, agents, etc.) and can be a public authority, a support organization, a producer, etc., (Evaluators and Guarantee Committee members cannot participate as PGS Agent). PGS Agent registers the farmer and processor list with SENASAG (who is the national food safety authority and is in charge of the monitoring of the PGS guarantee and controls finished products for food safety standards). The PGS is the contact point between SENASAG, the Guarantee Committee, the PGS members and CNAPE. With the documents the PGS Agent receives from SENASAG, she can request the authorization to use the label from CNAPE.
- The labels are authorized to be used in advertising and on the packaging of ecological products. The registration has a validity of one year.

Enactment of the governance arrangement

The governance arrangement that operationalizes the PGS as a governance instrument is a division of responsibilities between four groups: 1) producers who take an oath to practice agro-ecology and participate fully in the PGS; 2) evaluators, who are a group of 3 farmers within each farmer group (about 20 farmers) that visit the others' farms to control the practices. This is a rotating responsibility among all farmers; 3) the Guarantee Committee, which is composed of producers, consumers and representatives of local and/or national institutions. There must be a minimum of 3 people and the total number of people must be an odd number so that decisions can always be made through a vote. Neither the evaluators nor the representative can be part of the committee, and vice versa. The guarantee committee evaluates the farmers' self-evaluation and the audit report and take a decision about whether or not the farm should be certified; 4) the Representative, who is democratically elected by the members of the PGS, is the administrator for the PGS and the contact person for registering the PGS with SENASAG. The law allows any level/ kind of PGS (composed of just farmers, community level or municipal level), but CNAPE is promoting the establishment of Municipal PGS because doing so they have access to a technical officer who can provide training/advice, offices, and public legitimacy for the PGS.

In the case of Bolivia, we see that the governance dynamics are the result of attempts to create competing systems of governance for controlling research, innovation and market dynamics for organic agriculture. In this way, they are restricting organic value chains – which were focused on export commodity production – into agro-ecological value chains that are focused on local food production and consumption. In the market data that we collected, we were able to identify a few trends in how the value chains of farmers who use PGS are set up. Agroecological producers produce principally for own consumption, commercialization and/or exchange for others products and services in markets. There is a diversity of products and market channels through which PGS certified products meet consumers. The first channel relies upon on-farm sales or direct markets, which are considered to be traditional markets in the Bolivian context. Second, there are direct sales in farmer's markets with the initiative from the Bolivian Ministry of Agriculture, who has promoted and financially supported these monthly *bioferias* throughout the country. Third, PGS farmers sell through intermediaries in specialty shops, which are run by commercial shopkeepers and through public or civil society initiatives. Fourth, there is a new publicly supported the School Feeding Program that is being used by the Government (through their public procurement policy) to favor purchases of the locally produced organic food to cover school feeding (breakfast and lunch) in all the elementary and secondary schools across the country. This program is working to change the public procurement system to favor family farmers and is relying significantly on the PGS mechanism as a guarantee for production. Furthermore, the program is focusing on traditional food, such as quinoa and llama meat, which are part of the local diet. Finally, PGS farmers also sell through conventional channels (traders or open-air markets) when they have excess production (Jimenez, 2015). These market channels are typical of short food value chains and the implementation of PGS is important as mechanism that generates trust and qualifies products (Chiffolleau, 2012; Chiffolleau and Prevost, 2012).

Given the history and dominance of third-party certification within international trade for organic products, there is still a need for PGS to be recognized as legitimate and effective instruments of control. In the case of Bolivia, the actors claim that legitimacy exists when the municipal government accepts and support what they are doing: "They need to make these agro-ecology committees legitimate, how do they do this? By including the public institutions"⁸ This shows that the actors are focusing their efforts towards the state. This can be explained because of the contemporary socio-political environment where there is a strong socialist state that has invested in agro-ecology through legislation and by investing in

⁸ UC-CNAPE extension officer, 17 March 2014.

creating linkages between a new government agency, municipal level government and the educational institutions. However, some PGS leaders expressed frustration by long waiting times associated with passing through the municipality for the renewal of their certificates. In this case, we find that the national label/certificate is also important in gaining legitimacy as it is used to create trust in the commercial relationship – even in a direct marketing relationship. In this sense, it seems that the label is legitimizing not only the practices, but also the actors as being dedicated to the systems of social control. Expired certificates were a point of contestation as they provided legitimacy for the farmers in the form of commercial reputation and recognition. Thus, the public legitimacy that PGS receive through their approval by the public institutions is also at risk if the governance arrangements are not efficiently managed (in terms of certificate renewal and the technical support for farmers). As a result, we might characterize the effectiveness of the PGS in terms of the ability of the different actors to turn this PGS into a political and market instrument – i.e., the extent to which producers are able to keep their markets and whether they are able to use the PGS to lobby for support of agro-ecology at the municipal level.

The framing of responsibility in the value chain

The purpose of the governance arrangement can be identified through the framing process, which calls attention to the creation and manipulation of the meanings and issues at stake in the innovation process, as well as how a technology or a set of sustainable agriculture technologies is positioned within the dominant socio-technical regime. In other words, this framing process is proposed as a way to understand who the responsibility for sustainable agriculture is being defined by the actors.

In terms of a definitional frame, which establishes the core identity for the actors, we find that there are contestations over what organic agriculture means. In Bolivia, the actors insist on a notion of agro-ecology, which includes a concept of food sovereignty and the promotion of a local economy. In the Bolivian case, it is defined as encapsulating the following principles:

- reciprocity and respect for mother earth;
- Solidarity towards a collective improvement of wellbeing;
- Responsibility for: the promotion and production of healthy and safe products; the promotion of responsible and appropriate use of the soil, air and water and their sources; the production and transformation of ecological products by using renewable resources and taking into consideration their social and environmental impacts; collective production that consists of ecological management of natural resources that is reciprocal with mother earth.
- A holistic approach that as having the following dimensions that are given equal importance: 1) technological or productive, 2) social/cultural, 3) environmental, 4) economic and 5) political. (Norma Técnica Nacional Sistemas Participativos de Garantía (NTN-SPG), 2012)

In contrast, organic is used to refer to a weaker form of agro-ecology that is focused on the export markets and international organic standards. There is no direct definition of responsibility for organic producers beyond the technical requirements of the production practices. Therefore, the PGS has embedded a holistic, reciprocal and solidarity based notion of responsibility squarely within its rules of operation. During the interviews, the actors made constant reference to the differences between themselves as 'ecological' farmers and the 'organic' farmers who were doing large-scale quinoa production down the road.

This definitional frame is accompanied by declared ‘purposes’ for a transition to a sustainable future. We can characterise these frames in terms of how actors explained the goals of their activities. The most prominent theme relates to health and safety, specifically in terms of safe food, consumer health and nutrition, and producer/worker health and safety. In Bolivia, safety was expressed in terms of ‘safe food’ but also in terms of the safety of the farmers who must handle synthetic inputs (Figure 1). Concerns for farmers’ health were linked with consumer interest in nutrition. Here, consumers seek organic food also because the organic farmers are growing difficult to find varieties of fruits and vegetables that are known to have nutritional benefits.

Figure 1 : Bolivian actors’ definition of agroecology (n=19)



Source: Jimenez 2015

In this system, the responsibilities are shared between the different actors and are embedded in the instrument and governance arrangement itself. The responsibilities are constructed as collective responsibilities that are enforced through mechanisms of social control. The producers discussed how the PGS audit is not the same experience as a third-party audit, which is seen as a form of a test. The PGS audit is seen more as a learning exercise where the evaluators highlight where the farmer is not fully complying with the principles, but also takes the time to point out how the farmer can change her practices to improve her production. A representative of CNAPE noted that “PGS is also a way to create a consumer.” This can be understood in two ways, the first is that the focus on food sovereignty is taken up by farmers who are the first consumers of their own production (farmer-consumers) and are thus very concerned about the health and safety of what they produce. During a meeting of municipal ecological councils, CNAPE described the feeling of the group as follows:

“ecological producers demonstrated their pride in producing healthily without degrading the soil for future generation because food sovereignty means respect for mother earth and a love for life.”⁹

Second, consumers who are not producers are increasingly becoming involved through the guarantee committees (consumer-citizens) and in the traditional fairs/markets where there is direct interaction between PGS farmers who are selling their products with the PGS label and consumers. In an interview, a lead farmer argued that the label and the certificates that they receive from CNAPE are very important for creating trust with first time consumers in the marketplace. She shows consumers the certificate and explains how the system works. This geographic proximity thus is very important for ensuring effective implementation of the governance instrument. Most of the mobilization of actors in these PGS is through capacity building projects and agenda setting at the municipal level due to the need to include agro-ecology into the municipal development plans.

Conclusions

Standards embody specified values and their enactment can work to either reinforce or conceal alternative dimensions and interpretations of these values. In this chapter I have focused on how the responsibility for sustainable agriculture is being reframed and reallocated through the participatory guarantee system in Bolivia. By looking at how ‘values chains’ are enacted within specific *agencements*, I identified who the different actors are, what their roles and responsibilities are within the context and

⁹ CNAPE. Encuentro de Comités Ecológicos Municipales (CEMs), 6-7 October 2011. Accessed, 29 May 2014. https://www.youtube.com/watch?v=4HRChs_FepM

how each group contributes to an overarching frame of responsibility. The PGS governance arrangement is a reaction to national and international controversies around food sovereignty and external expert control over practices. All of the actors in this case contest the 'detached' compliance approach of third-party certification and focus their governance efforts on mechanisms of 'social control'. The notion of responsibility is found in the development of 'horizontal' systems based on 'peer-review', sharing and rotating responsibility, and transparent, participatory, decision-making processes. All participants have the same level of responsibility and capacity to establish the organic quality of a product or a process. In other words, the responsibility for sustainable agriculture is collective and the actors have put into place an innovative institutional mechanism that enables them to move from discourse to practice.

The second component of this responsibility moves beyond duties towards a fundamental principle about the role of producers, consumers and food in society. The PGS system in Bolivia has the objective of food sovereignty. The fact that the first consumers of PGS controlled food are the producers themselves and their surrounding communities reinforces this vision. Moreover, food sovereignty is part of the public debate, where it is enshrined in the Bolivian constitution, and thus the promotion of a PGS model within the national law and by the multiple stakeholders at the local and national levels is also a means to achieve official policy – beyond community wellbeing.

References

- Beckert J and Aspers P. (2011) *The worth of goods : valuation and pricing in the economy*, New York: Oxford University Press.
- Busch L. (2007) Performing the economy, performing science: from neoclassical to supply chain models in the agrifood sector. *Economy and Society* 36: 437-466.
- Çalışkan K and Callon M. (2009) Economization, part 1: shifting attention from the economy towards processes of economization. *Economy and Society* 38: 369-398.
- Çalışkan K and Callon M. (2010) Economization, part 2: a research programme for the study of markets. *Economy and Society* 39: 1-32.
- Callon M and Law J. (2005) On qualculation, agency, and otherness. *Environment and Planning D: Society and Space* 23: 717-733.
- Callon M, Méadel C and Rabeharisoa V. (2002) The Economy of Qualities. *Economy and Society* 31: 194-217.
- Chambilla H and López E. (2015) Connecting Producers and Consumers through Innovation Mechanisms: Short Value Chains and Participatory Guarantee Systems. In: Loconto A, Poisot A-S and Santacoloma P (eds) *Sustainable practices and sustainable markets? Exploring institutional innovations that link sustainable agricultural practices with markets in developing countries*. Rome: Food and Agriculture Organization of the United Nations.
- Chiffolleau Y. (2012) Circuits courts alimentaires, dynamiques relationnelles et lutte contre l'exclusion en agriculture. *Économie rurale* 332: 88-101.
- Chiffolleau Y and Prevost B. (2012) Les circuits courts, des innovations sociales pour une alimentation durable dans les territoires. *Noréis* 224: 7-20.
- Conway G. (2012) *One Billion Hungry: Can We Feed the World?*, Ithaca, NY: Cornell University Press.
- Cooper MC, Lambert DM and Pagh JD. (1997) Supply Chain Management: More Than a New Name for Logistics. *International Journal of Logistics Management, The* 8: 1-14.
- FAO. (2012) World agriculture towards 2030/2050: the 2012 revision. In: Alexandratos N and Bruinsma J (eds) *ESA Working Paper*. Rome: Food and Agriculture Organization of the United Nations.
- FAO. (2014a) *Building a common vision for sustainable food and agriculture. Principles and Approaches*, Rome: Food and Agriculture Organization of the United Nations.
- FAO. (2014b) *Developing sustainable food value chains. Guiding principles*, Rome: Food and Agriculture Organization of the United Nations.

- Fleming P, Roberts J and Garsten C. (2013) In search of corporate social responsibility: Introduction to special issue. *Organization* 20: 337-348.
- Fouilleux E and Loconto A. (forthcoming) Voluntary standards, certification and accreditation in the global organic agriculture field. A tripartite model of techno-politics. *Agriculture and Human Values*.
- Freyer B and Bingen J. (2014) *Re-Thinking Organic Food and Farming in a Changing World*, Dordrecht, Netherlands: Springer.
- Friedrich N, Heyder M and Theuvsen L. (2012) Sustainability Management in Agribusiness: Challenges, Concepts, Responsibilities and Performance. *International Journal on Food System Dynamics* 3.
- Griffin JJ and Prakash A. (2013) Corporate Responsibility: Initiatives and Mechanisms. *Business & Society*.
- IFOAM. (2007) Participatory Guarantee Systems: Shared Vision, Shared Ideals.
- IFOAM. (2008) Participatory Guarantee Systems: Case studies from BRAZIL, INDIA, NEW ZEALAND, USA and FRANCE. Bonn, Germany: International Forum for Organic Agriculture Movements (IFOAM).
- Islam MS. (2008) From pond to plate: Towards a twin-driven commodity chain in Bangladesh shrimp aquaculture. *Food Policy* 33: 209-223.
- Jimenez A. (2015) Agroecological quality construction: How to value agroecological products? Experiences from Bolivia and Colombia. *Master Recherche 2 – Agriculture, Alimentation et Développement Durable (A2D2)*. Montpellier, France: Montpellier SupAgro et Université de Montpellier 1, 91.
- Loconto A. (2010) Sustainably Performed: Reconciling Global Value Chain Governance and Performativity. *Journal of Rural Social Science* 25: 193–225.
- Loconto A. (2014) Assembling governance: the role of standards in the Tanzanian tea industry. *Journal of Cleaner Production*.
- Loconto A. (2015) Assembling governance: the role of standards in the Tanzanian tea industry. *Journal of Cleaner Production* 107: 64-73.
- Loconto A and Simbua EF. (forthcoming 2014) Tinkering around Tea: Science, Technology and Innovation Policies in Tanzania's Agricultural Research System. In: Kuhlmann S and Ordóñez-Matamoros G (eds) *International Research Handbook on Science, Technology and Innovation Policy in Developing Countries: Rationales and Relevance*. Cheltenham, UK: Edward Edgar.
- MacKenzie DA, Muniesa F and Siu L. (2007) *Do economists make markets? : on the performativity of economics*, Princeton, NJ: Princeton University Press.
- Norman W and MacDonald C. (2004) Getting to the Bottom of "Triple Bottom Line". *Business Ethics Quarterly* 14: 243-263.
- Özçağlar-Toulouse N, Béji-Bécheur A and Murphy P. (2009) Fair Trade in France: From Individual Innovators to Contemporary Networks. *Journal of Business Ethics* 90: 589-606.
- Porter ME and Kramer MR. (2011) Creating Shared Value. *Harvard Business Review* 89: 62-77.
- Seuring S and Mueller M. (2008) From a literature review to a conceptual framework for sustainable supply chain management. *Journal of Cleaner Production* 16: 1699-1710.
- Vandergeest P, Ponte S and Bush S. (2015) Assembling sustainable territories: space, subjects, objects, and expertise in seafood certification. *Environment and Planning A*.
- Willer H and Lernoud J. (2015) *The World of Organic Agriculture - Statistics and Emerging Trends 2015*. Bonn, Germany and Frick, Switzerland: IFOAM, FiBL.