Journal of Rural Social Sciences

Volume 25
Issue 3 *Volume 25, Issue 3*

Article 8

12-31-2010

Assessing Rule-based Governance Mechanisms in an Era of Scientism

Maki Hatanaka
Sam Houston State University

Journal of Rural Social Sciences, 25(3), 2010, pp. 141–159.

ASSESSING RULE-BASED GOVERNANCE MECHANISMS IN AN ERA OF SCIENTISM

MAKI HATANAKA

SAM HOUSTON STATE UNIVERSITY

ABSTRACT

With neoliberal reforms and economic globalization, much of the regulation of food and agriculture is shifting from the state to the private sphere. Building on Busch's work on science, the state, and the market, this paper examines the ways in which the governance of food and agriculture has become increasingly scientized with the use of third-party certification (TPC). TPC is a rule-based governance mechanism that consists of technical rules and procedures, which are based on scientific norms and practices. Using longitudinal research on an organic shrimp project in Indonesia, this paper examines the practices of TPC. Specifically, the focus is on the extent to which the practices of TPC correspond to its rules and thus, whether or not politics and interests are removed from governance. My findings indicate that the rules of TPC are not sufficient for the removal of politics and interests. Rather, they often push them backstage. In concluding, I contend that forms of rule-based scientific governance, such as TPC, separate the governance of food and agriculture from their production and consumption. The outcome is potentially a political, yet undemocratic, form of food and agricultural governance where science functions to mask politics.

In *The Eclipse of Morality*, Busch (2000) argued that society has become increasingly ordered and dominated by three Leviathans: science, the state, and the market. Using the foundational works of Bacon, Hobbes, and Smith, he suggested that underlying the establishment of each of these institutions was the belief that individuals could not maintain order in society and thus, an extra-human force – science, the state, or the market – was necessary. Busch contended that these largely undemocratic institutions have had mixed results for society. On the one hand, there have been tremendous increases in knowledge and technology, significant expansion of global wealth, and improvements in social welfare. On the other hand, science has often benefitted special interests and not the public good. Rising income inequality globally indicates that capitalist markets often benefit a small elite at the expense of the great majority, and states often do not represent all of their constituents equally.

In contemporary society, the three Leviathans have coalesced in a historically unique manner with the emergence of current forms of governance. With neoliberal reforms and economic globalization, much of the regulation is now shifting from the state to the private sphere, that is, from government to governance (Busch 2010; Hatanaka and Busch 2008; Higgins and Lawrence 2005; Jessop 2002; Marsden et al. 2010; Stoker 1998; Swyngedouw, Page, and Kaika 2002). This means that,

whereas the state used to establish and enforce laws regulating all sorts of practices, processes, and products, now non-state-centered governance approaches are increasingly used to develop standards to regulate nearly all aspects of society. The outcome is that, today, there is a proliferation of governance mechanisms characterized by "neo-corporatist regulatory frameworks involving non-binding standards and rules, public-private co-operation, self-regulation" (McCarthy and Prudham 2004:276). In such a framework, regulations are often market driven, standards development and enforcement are science based, and regulatory responsibility is shared between multiple actors (Cashore 2002; Loconto and Busch 2010).

Building on Busch's work on science, the state, and the market, this paper examines the ways in which the governance of food and agriculture has been increasingly transferred to one of the three Leviathans: science (Tanaka 2005). To date, the leading form that non-state governance has tended to take in food and agriculture is third-party certification (TPC) (Blowfield 1999; Hatanaka, Bain, and Busch 2005; Murray and Raynolds 2000; Mutersbaugh et al. 2005; Renard 2003). In brief, TPC is a governance mechanism whereby independent bodies oversee the implementation of standards, typically by using audits. TPC is often understood as a science-based governance mechanism, as it consists of technical rules and procedures, which are based on scientific norms and practices, such as disinterestedness, replicability, and validity (Dunn 2005; Konefal and Hatanaka Forthcoming; O'Rourke 2006; Power 1997; Tanner 2000). These rules and procedures are designed to prevent undue influence, unsupported arguments, and corrupt practices, and in doing so, remove politics and interests from the practices of TPC.

Using longitudinal research on an organic shrimp project in Indonesia, this paper examines the rules and practices of TPC. Specifically, the focus is on the standards-development and conformity-assessment processes and whether the rules function to make TPC a scientific and objective governance mechanism. My findings contest such an understanding of TPC. Rather, they indicate that rule-based forms of governance, such as TPC, are unable to remove politics and interests from governance. Instead, I argue that such forms of governance often push politics and interests backstage.

Data on the organic shrimp project were gathered using extensive field research in 2004 and 2008. In total, 118 interviews were conducted with a variety of actors involved in shrimp farming in the region, including certified and non-certified shrimp farmers, certified and non-certified warehouse owners, project managers and

organizers, hatchery owners, social movement organizations (SMOs), national and regional government officials, and aquaculture specialists. In 2004, data were collected on the origins of the organic shrimp project, views on certification, the potential implications of the project, and the relationship among different actors associated with the project. During follow-up research in 2008, key informants were re-interviewed to assess the ways in which the implementation of the project had progressed and changes in understanding of the project by various constituents. Both sets of interview data were also supplemented by participant observation whenever possible, which focused on the interactions among actors in the project. Lastly, content analysis of archival data on shrimp aquaculture and TPC from websites, newsletters, and reports by transnational organizations, such as the Food and Agriculture Organization, national and international non-governmental organizations (NGOs), and certification bodies was conducted.[1]

The remaining sections of the paper are organized as follows. First, I review the factors that lead to TPC being understood as a science-based governance mechanism. Specifically, how TPC is constructed on the notion of mechanical objectivity is examined. Second, I provide a brief overview of the organic shrimp project in Indonesia. Third, I examine whether the practices of TPC correspond to the rules of TPC. Specifically, the focus is on: (1) the use of expert knowledge in the standards-development process, (2) the independence of audits, and (3) the effectiveness of the conformity-assessment process. In concluding, I discuss the potential implications of transferring moral responsibility for food and agriculture from farmers and consumers to experts. In particular, I examine how TPC separates the governance of food and agriculture from those who produce and consume them. I argue that the outcome of such a separation may be a political, yet undemocratic, form of food and agricultural governance, where the use of science masks politics and interests.

GOVERNANCE AND SCIENCE

With the House of Salomon, Bacon ([1605/1626] 1974) proposed a society "based on what we now call the natural sciences, in which use of the proper methods would ensure the emergence of truth" (Busch 2000:3). For Bacon, a rule-based system of governance in which experts made decisions would result in a more ordered, efficient, and just society than democratic politics (Busch 1999). In short,

[1]To maintain confidentiality, the identities of the companies involved in the organic shrimp project, as well as the project location, have been changed.

technocracy had to supplant politics. While Bacon's vision of a science-based society has never been fully enacted, his idea of scientific governance has been highly influential in many industries, including food and agriculture (Jasanoff 1990; Tanaka 2005). For example, genetically-modified organisms are evaluated using a science-based framework in the United States, what counts as safe food is a scientific question, and even the notion of sustainability is scientifically decided (Hatanaka, Konefal, and Constance Forthcoming; Konefal and Busch 2010; Newell 2007). Furthermore, for regulations to be legitimate, the prevailing view is that they should be objective and based on science.

With the shift from government toward governance, science has become even more prominent in the regulation of food and agriculture (Marsden et al. 2010). In part, this is because whereas the political authority of the state functions to legitimate government regulations, private regulatory bodies must turn to other sources for legitimization. Primarily, such bodies have turned to science (i.e., the notions of objectivity and expertise) to legitimize their standards and enforcement mechanisms (see International Federation of Organic Agriculture Movements 2011; Marine Stewardship Council 2010; National Science Foundation International 2010). Thus, among other things, the shift toward governance has entailed the proliferation of expert and rules-based governance in food and agriculture. Put differently, the contemporary governance of food and agriculture is, at least, a partial manifestation of Bacon's argument in that technocracy is seemingly supplanting politics.

Generally, two processes characterize the governance of food and agriculture today: standards development and conformity assessment. Both processes are often part of TPC.[2] In the standards-development process, product or process standards are developed for a particular industry, product, or quality (e.g., safety, sustainability, organic, and fair-trade). The entity that undertakes this process varies, as it can be a single body, multiple bodies, or a collection of stakeholders (Hatanaka et al. 2005). Additionally, the standards-development process is often governed by rules, which, for example, stipulate criteria for participation, decision-making procedures, and supporting documentation requirements. Ideally, the standards-development process is structured in ways that seek to maximize stakeholder participation, balance interests, and require that positions be supported

[2] While this continues to be the case sometimes, increasingly they are separated, with different organizations undertaking standards development and overseeing conformity assessment.

by scientific evidence (Hatanaka et al. Forthcoming). Increasingly, the purported outcome is standards that are developed using inclusive and objective processes and are based on scientific evidence (Loconto and Busch 2010).

In the conformity-assessment process, independent and objective bodies (i.e., third-party certifiers) ensure the implementation of standards. Generally, third-party certifiers use audits to ensure standards compliance, as audits are considered as technical and objective conformity-assessment mechanism (Power 1997). Several qualities of audits are responsible for this understanding of them. First, those who conduct the audit are independent of those being audited. Second, to audit something, it needs to be capable of being measured; thus, audits are based on tangible evidence, which most is often technical in character. Third, that which is being audited must be clearly identifiable. That is, what is being audited must be objective in the sense that it is (at least in principle) independently verifiable (Power 1997). In short, audits represent compliance with impersonal rules and calculations that function to exclude bias and personal preferences (Courville, Parker, and Watchirs 2003; Pentland 2000).

Given the complex set of rules and procedures of the standards-development and conformity-assessment processes, TPC is congruent with Porter's (1995) notion of "mechanical objectivity." Simply stated, mechanical objectivity means "following the rules." According to Porter (1995:4), "rules are a check on subjectivity" in that they eliminate personal bias and preferences. From this perspective, TPC is objective because it has a complex set of rules and procedures designed to exclude biases from both standards development and conformity assessment. The purported outcome is standards that are based on sound science and not ideological positions, and a conformity-assessment mechanism that generates results that are objective, measurable, and replicable.

In the sections below, using a case study of an organic shrimp project in Indonesia, I examine the extent to which the practices of TPC correspond with its rules. Put differently, whether or not the standards-development and conformity-assessment processes indeed adhere to the rules in practice and thus, remove politics and interests from governance is analyzed.

THE ORGANIC SHRIMP PROJECT IN BOJOKULU, INDONESIA

The organic shrimp project was located on the eastern coast of the island of Java, Bojokulu. Bojokulu is an area that has long been nationally known as a milkfish and shrimp farming site. Farmers in Bojokulu have used extensive aquaculture practices for more than 300 years. However, similar to other

Indonesian shrimp pond communities, with the advent of Blue Revolution technologies, the Bojokulu Department of Marine Affairs and Fisheries began to push intensive shrimp farming through extension services in the late 1980s. Consequently, those local shrimp pond owners who could afford to implement intensive farming practices have largely switched to such practices.

Similar to other shrimp production sites throughout the world, while the quantity of shrimp produced has increased, a myriad of problems have also accompanied the intensification of shrimp farming in the region. These include the use of excessive chemical inputs, destruction of mangrove forests, loss of genetic diversity in shrimp populations, and uneven income distribution (Barbier 2003; Environmental Justice Foundation 2003; Goss, Burch, and Rickson 2000; Lebel et al. 2002; Quarto, Cissna, and Taylor 1996; Skladany and Harris 1995; Stonich and Bailey 2000).

It is against this backdrop that a few sustainable shrimp farmers in Bojokulu and a Japanese NGO, Sustainable Network, collaboratively developed an ecological shrimp project in 1992. Seeking to promote environmental sustainability and social justice, the project's aim was to preserve traditional shrimp farming practices in Bojokulu through linking shrimp farmers who use extensive practices with concerned co-op consumers in Japan. In the late 1990s, several potential European buyers, who were interested in sustainable shrimp, approached Sustainable Network. The European buyers were interested in purchasing shrimp from the project, but preferred the shrimp to be third-party certified. From their perspective, TPC was a more reliable regulatory mechanism than self-assessment by suppliers. Thus, TPC would provide greater guarantees to them and consumers that the shrimp were, in fact, produced sustainably.

Soon thereafter, Sustainable Network convened an open forum in Bojokulu to discuss the possibility of an organic shrimp project with the farming community. Local shrimp warehouse owners, pond owners, NGOs, and government officials were all invited. More than 100 people attended the meeting, and the overwhelming majority voiced enthusiasm for an organic project. With the support of the local pond community, Sustainable Network and a group of shrimp farmers, who were part of the original ecological project, applied for organic shrimp certification from a well-established third-party certifier in Europe, Green Soil, in 2001.

In establishing the organic project, Green Soil asked Sustainable Network to take an active role. This included being involved in the establishment of standards (this is discussed below) and setting up the internal control system (ICS). An ICS is an audit-based monitoring system designed to ensure compliance with the

standards at production sites. An independent organization, Perlindungan Alam (PA) was established to manage the ICS. While some farmers who were knowledgeable about "sustainable shrimp farming" were consultants to PA, to ensure the organization's independence, staff members of PA could not be involved in any part of the shrimp supply chain.

Organic certification was issued in July 2002. The organic standards included a requirement of documentation, no chemical inputs, the planting of mangrove trees around the ponds and their dikes (with maximum seven-meter distance between trees), specified stock density (maximum: three seedlings/m^2), and the use of polyculture with milkfish (ideally 50/50). To entice local farmers to join the project, a high base price was paid to producers and warehouses. Additionally, a one USD premium was paid for each kilogram of organic shrimp, which was divided between warehouses and shrimp farmers. The Bojokulu area has approximately 15,000 hectares (ha) of shrimp ponds, among which approximately 2,500 ha were certified organic by Green Soil. Organic pond sizes ranged from small to quite large, as there were no restrictions on pond size to join the organic project. The only membership requirements were that pond owners had a legal title to the land and that it was legally cleared.

As of November 2004, the organic shrimp project included: 3 organic warehouses, 120 pond owners, and 224 pond managers. The size of the project has fluctuated over the six years during which Green Soil certified the project as organic.[3] On average, 800 tons of organic shrimp were produced annually.[4] In May 2008, Sustainable Network and PA decided not to renew their organic certification due to internal conflicts. As a result, the organic certification was terminated.

ANALYSIS: RULES VS. PRACTICES OF THIRD-PARTY CERTIFICATION

The organic shrimp project in Bojokulu had the appearance of a stable project over the six years it was in existence. Organic certification was first issued in July 2002 and certification was continuously reissued by Green Soil based on its annual audits until May 2008 when Sustainable Network and PA decided not to extend

[3]This is largely because the European buyer ceased to purchase the shrimp due to a campaign by an environmental organization that targeted Green Soil's organic standards as insufficient. For a more detailed discussion, see Hatanaka (2010b).

[4]While the shrimp were certified organic by Green Soil, the shrimp were sold to Japanese co-op consumers as "ecological shrimp" after the European buyer stopped purchasing them. Partly, this is because Japanese co-op consumers valued second-party certification (i.e., certification conducted by themselves) more highly than TPC.

their application. According to Green Soil, having its organic certification indicates that, first, stringent and systematic organic standards are in place. Second, there is an impartial and expert oversight mechanism with clearly defined procedures that ensure compliance with the standards. Additionally, Green Soil highlights that its certification scheme is accredited by the International Federation of Organic Agriculture Movements (IFOAM). Such accreditation indicates that its standards-development and conformity-assessment processes are reliable and credible.[5] As the member farmers were passing both periodic audits by PA and annual audits by Green Soil, the project was fulfilling its objective of environmentally sustainable shrimp farming.

However, a different understanding of the organic shrimp project emerges when the actual workings of the project are examined. Specifically, the understanding that Green Soil's standards-development and conformity-assessment processes were based on expert knowledge and impartial rules and procedures (i.e., built on "mechanical objectivity") is contested. Rather, one finds that considerable politics and interests characterize the actual workings of TPC. In the following empirical sections, expert knowledge in the standards-development process, the impartiality of audits, and the ability of the conformity-assessment process to enforce standards are examined.

Expert Knowledge and Standards Development

As discussed above, the use of experts, along with the need for standards to be grounded in scientific knowledge, is a key characteristic of the standards-development process. Additionally, as the use of TPC has proliferated and spread globally, the need to allow for local specificities in standards has become increasingly recognized. Committed to these two positions, Green Soil used the following procedure in developing standards for the organic project: first, it shared the core principles of its organic standards with Sustainable Network and interested shrimp farmers; second, it proposed that Sustainable Network and interested shrimp farmers develop locally-appropriate organic standards based on Green Soil's core principles; and third, Green Soil would review and approve the standards. In this way, the organic standards would be based on expert knowledge on organic farming and also incorporate local knowledge on shrimp farming in Bojokulu.

[5] This information comes from Green Soil documents. Specific documents are not cited as this would reveal the identity of Green Soil.

As Sustainable Network believed that farmers understood shrimp farming best, they let them take the lead in developing the standards. A committee was then formed to develop the organic standards. The committee included an aquaculture specialist and four shrimp farmers who were members of the original ecological shrimp project. Although the committee and Green Soil jointly developed agreed upon standards for the organic project, generally, committee members felt that whenever a disagreement emerged, Green Soil's position was prioritized. Thus, committee members tended to feel that their local knowledge was often marginalized in the standards-development process.[6]

When the standards were introduced to potential member farmers, their reaction toward the organic standards was quite varied. Some agreed with the standards (or parts of them) while others disagreed with the standards (or parts of them). However, regardless of whether they agreed or disagreed with the standards, a common response by many farmers was confusion, and even upset feelings. Particularly troubling for many farmers was the requirement to plant mangrove trees around their ponds and dikes. In part, this is because this requirement conflicted with what experts had been telling them for quite sometime. With the push by the Indonesian government to adopt Blue Revolution technologies, shrimp farmers in Bojokulu had been educated and trained to believe that mangrove trees negatively affected shrimp farming. For example, they had been instructed by extension officials to remove all the mangrove trees to help maximize productivity.

In contrast to the information they had been receiving from extension officials since the late 1980s, the organic standards required farmers to replant mangrove trees. More generally, member farmers were now being instructed by project leaders that intensive farming was not the best way to farm shrimp. Rather, they were informed that some experts have found that intensive shrimp farming practices are responsible for significant environmental problems, and mangrove trees are actually a vital component of shrimp pond ecology.

Hence, in the case of the organic shrimp project in Bojokulu, there were two conflicting sets of expert knowledge. The first was expert knowledge that supports intensive shrimp farming. The second was expert knowledge that supports "sustainable" farming practices. On the one hand, proponents of intensive aquaculture have emphasized, and continue to emphasize, the benefits of Blue Revolution technologies. Consequently, they continue to argue that mangrove trees need to be cleared to maximize productivity. On the other hand, as the negative

[6]For more detailed discussion of this process, see Hatanaka 2010a.

impacts of the Blue Revolution have become increasingly documented, a counter-knowledge has emerged that argues that many intensive practices are problematic. Thus, there were competing expert knowledges for shrimp farming. The result was that farmers were receiving conflicting information on the best ways to farm shrimp, which left many of them quite confused. For example, one farmer commented, "one day we are told to cut mangrove trees as the best farming practice; and the other day we are told to plant mangrove trees. Give me a break. What do you expect us to do?"

The above findings indicate that the requirement that standards be based on expert knowledge does not make the standards-development process apolitical. As the case of the organic shrimp project illustrates, there can be multiple forms of expert knowledge, which may be conflicting. Thus, depending on which expert knowledge is used, what are considered to be appropriate standards may differ. This means that delineating what counts as expert knowledge and which expert knowledge is valid are crucial components of the standards-development process. As my case demonstrates, such decisions are not just scientific, but are also political and ethical.

Independence and Audits

The organic shrimp project entailed two sets of audits. One set of audits was external, conducted by Green Soil. Annually, a team of auditors from Green Soil visited Bojokulu and checked member farmers and PA documents, as well as conducting random pond visits and interviews with member farmers. The second set of audits was internal, and was conducted by PA. Since external auditors were only at the production site for a limited time, PA oversaw compliance with the standards regularly. This was done through audits and periodically announced and unannounced inspections of all member ponds.

As discussed above, a key component of the conformity-assessment process is the independence of auditors from supply chain actors.[7] In both sets of audits, measures were taken to ensure that auditors were organizationally independent from the supply chain. Green Soil is an independent third-party certifier with no direct interest in shrimp farming. Auditors for PA could not be involved in any

[7] For example, one of the ISO/IEC Guide 65 requirements states that a certification body, with its senior executive and staff, must be free from any commercial, financial, and other pressures that might influence the results of the certification process.

aspect of shrimp farming. Thus, in both instances, the conformity-assessment process exhibited organizational independence.

While the conformity-assessment process of the organic shrimp project was characterized by organizational independence, my findings indicate that it did not exhibit operational independence. Operational independence refers to the extent to which auditors exhibit independence in their actual practices. Hence, to assess the independence of auditors, both the structure and practices of the conformity-assessment process need to be examined (Hatanaka and Busch 2008). My findings show that neither PA nor Green Soil were fully independent in their practices. In the case of PA the lack of operational independence was straightforward. Most notably, some of PA's inspectors accepted bribes from farmers to accept non-organic shrimp as organic. This included both member farmers who were not fully compliant with the standards and non-member farmers who wanted to sell their shrimp as organic. Such practices indicate that the structure and organizational independence of PA were insufficient to prevent and, in most, detect fraud by some of its inspectors.

In the case of Green Soil, the ways in which audits were not always impartial were more complex. During my first field visit in 2004, a concern expressed by PA officials was that Green Soil was pushing its version of environmental sustainability too fast. In interviews, PA officials indicated that they thought Green Soil's time line for transitioning to full compliance with the organic standards was not feasible given the lack of necessary infrastructure, financial constraints, and generally lower educational levels of member farmers.[8] For example, a particularly contentious issue was the timeframe for member farmers to conform to the standards for mangrove reforestation. The standard stated that member farmers must plant a minimum of 50 percent of the required trees in the first year, 80 percent in the second year, and 100 percent by the end of third year.[9] PA officials predicted that the number of shrimp farmers who were part of the organic project would significantly decline in the future as many member farmers would not meet the reforestation requirements. From their perspective, educating the member farmers as to the importance of the reforestation and changing their understanding of mangrove trees from negative to positive required more time than was allowed.

---

[8] For a more in-depth discussion of how local conditions constrained the implementation of the organic standards, see Hatanaka 2010a.

[9] Farmers were required to plant mangrove trees around their ponds with a maximum of seven meters between them.

However, when I returned for my second field visit in 2008, the number of member farmers had not declined, but increased. Although, as a result of their audits, Green Soil was aware that many farmers were not in full compliance with the mangrove reforestation standard, they did not revoke certification. Rather, Green Soil warned PA that it needed to try to ensure full compliance with the standards by member farmers. From the perspective of the PA officials I interviewed, certification was not revoked because TPC had become increasingly competitive and Green Soil did not want to lose a client to another certifier. Making this point, one official with PA commented, "it turns out that we could negotiate with Green Soil regarding their standards… I think this is because they need certified projects to make profits. Without certificated farmers, there is no business for them."

In short, the above findings indicate that for both PA and Green Soil, organizational independence did not ensure the operational independence of their audits. In both instances, the structure of the conformity-assessment process was insufficient for ensuring the disinterestedness and impartiality of auditors. Consequently, the practices of the auditors were not solely based on technical and objective practices, but also entailed negotiation and compromises based on personal and organizational interests.

Conformity Assessment and Standards Compliance

In a third-party certified project, farmers are to implement standards, which are monitored using a conformity-assessment process based primarily on audits. In this way, TPC standardizes production practices and thus, removes farmers' subjectivity from farming. Put differently, TPC substitutes rules and objective monitoring practices for local knowledge and trust. However, as audits largely check documents, and practices only periodically, the efficacy of the conformity-assessment process is dependent on documentation. In the organic shrimp project, some farmers filled out the required documentation fraudulently. Such a finding raises questions as to the effectiveness of the conformity-assessment process of TPC.

In interviews, some farmers in the organic shrimp project admitted that they were not fully complying with the standard. Consequently, they said that they filled in inaccurate information on the required documentation forms to stay in the project. According to them, this was possible as the audit process was often unable to detect noncompliance. For example, one farmer commented, "inspectors don't come to the pond everyday. They come only sometimes. Besides, they always

believe whatever we report them. It's so easy to cheat them. When they ask 'did you use chemicals?' all we have to do is to say 'no.'" In short, as some farmers found the standards or parts of them to be inappropriate or not in their best interest, yet wanted the economic benefits the project offered, they partook in fraud.

Those member farmers who filled in inaccurate information often justified their actions by explaining that the standards were imposed on them, and that the standards were not always appropriate. Furthermore, even if they voiced their concerns, no changes were made in the standard. Rather, they were simply told to leave the project if they were unhappy with how the project operated. Consequently, many farmers felt that they had to change the farming practices, which they had long used and were effective, to practices specified by outsiders. Reflecting on the situation, one farmer commented that, "It does not mean that we want to lie, but we have no choice. They force us to do this."

In the six years in which the shrimp project was certified organic, PA detected fraud several times. Sometimes they could uncover inconsistency in documentation, and sometimes other farmers reported cases of noncompliance by particular farmers. As they found cases of noncompliance, PA made changes to its ICS and audits to try to increase their effectiveness. For example, they added additional checks (i.e., increased the number of inspections and documentation requirements). Nevertheless, despite the changes, noncompliance did not disappear. As one farmer commented in an interview, "[PA] is getting smarter and smarter. It is increasingly becoming difficult to deceive them. However, we still can cheat them… No matter how perfect the regulatory mechanism appears to be, there is always a way to sneak out… Every system has a hole." Therefore, despite changes instituted to make the conformity-assessment process more stringent, it was not able to ensure farmers' full conformity to the standards.

In sum, many farmers saw project managers as seeking to control farming practices in a top-down manner. Put differently, they felt that they had become "standards-takers." Thus, falsifying documentation functioned as "weapons of the weak" for farmers (Scott 1985). That is, from the perspective of many farmers, by not complying with the standards they were not cheating per se, but exercising their limited power. Thus, the impartial and technical rules-based conformity-assessment process did not remove farmers' subjectivity regarding how to farm shrimp. Rather, it pushed farmers to maneuver around the rules covertly. Furthermore, while rules and audits are designed to substitute for trust, my findings suggest that for rules and audits to function effectively, they are partly dependent on the existence of relations of trust. In other words, the above findings

raise questions as to the effectiveness of impartial and technical rules and audits in instances where there is little trust.

CONCLUSION

Building on Busch's argument in *The Eclipse of Morality* (2000), this paper has empirically examined the ways in which the governance of food and agriculture has become increasingly scientized through third-party certification (TPC). As discussed above, TPC is based on, and legitimated by, the notion of "mechanical objectivity." That is, the processes of standards development and conformity assessment consist of clearly defined rules and procedures that are based on scientific practices and norms (i.e., objectivity, impartiality, technicality, etc.). As Porter (1995) argued, such rules and procedures function to eliminate politics and interests.

In the organic shrimp project, however, the rules and procedures did not result in TPC functioning as an objective governance mechanism. Put differently, mechanical objectivity was not sufficient for eliminating politics and interests from either the standards-development or the conformity-assessment process. First, while the rules-based standards-development process limited the use of non-expert knowledge, it did not eliminate politics. Rather, politics were grounded in expert knowledge in that expert knowledge that represented specific interests was used in the standards-development process. Second, the rules were not able to ensure the operational independence of audits. Specifically, personal and organizational interests influenced the audit process, despite rules and procedures designed to eliminate them. Third, whereas rules and objective monitoring practices are meant to substitute for farmers' subjectivity and trust, the conformity-assessment process was unable to do so. Consequently, it could not ensure farmers' compliance with the standards. Thus, my findings indicate that the rule-based character of TPC may not always remove politics and interests from governance. Rather, at least in the organic shrimp project, rule-based governance masks politics and interests with its claims to objective and scientific practices. In particular, such forms of governance push politics and interests backstage.

While the above findings are based on a single case, they raise important questions regarding the science-based governance of food and agriculture. Specifically, what are the implications of a governance system where the governance of food and agriculture is separated from those who produce and consume them? Increasingly, producers must adhere to specific standards (e.g., organic, sustainable, and fair trade), which are developed by experts using rule-based scientific processes.

Simultaneously, consumers make choices about what food to eat partly based on labels, which are based on standards. However, as my findings indicate, producers may not comprehend why and how the particular standards were developed and why they have to comply with them. Similarly, consumers may understand the meaning of labels, but have little knowledge about how food is produced. In short, neither producers nor consumers have much voice in the determination of what organic, sustainable, and other quality attributes entail.

Thus, in increasingly relying on "experts" and "professionals" (e.g., third-party certifiers), producers and consumers are abdicating their rights and responsibility in the governance of food and agriculture. For example, producers are losing control over the production process and consumers are relying more on private bodies to inform them about food and agriculture. Abdicating governance to private bodies opens opportunities for such bodies to incorporate their interests into the governance of food and agriculture (e.g., economic interests and social movement objectives). It needs to be noted that these interests may or may not further the public good. As the politics of governance increasingly take place backstage, this means that the ways that standards reflect specific interests may not be readily apparent on the front stage. Furthermore, the separation of governance from producers and consumers, and its private character, may be further exacerbated by the globalization of supply chains, as producers and consumers are increasingly disconnected. Thus, I contend that the outcome is potentially a political, yet undemocratic, form of food and agricultural governance, where science and rules are used to mask politics.

AUTHOR BIOGRAPHY

Maki Hatanaka is an adjunct assistant professor in the Department of Sociology at Sam Houston State University. Her research examines possibilities for democracy and social justice in alterative agrifood governance. (maki.hatanaka@shsu.edu)

REFERENCES

Bacon, Francis. [1605/1626] 1974. *The Advancement of Learning and the New Atlantis.* Oxford, UK: Clarendon.

Barbier, Edward. 2003. "Habitat-fishery Linkages and Mangrove Loss in Thailand." *Contemporary Economic Policy* 21(1):59–77.

Blowfield, Michael. 1999. "Ethical Trade: A Review of Developments and Issues." *Third World Quarterly* 20:753–70.

Busch, Lawrence. 1999. "Beyond Politics: Rethinking the Future of Democracy." *Rural Sociology* 64:2–17.

_____. 2000. *The Eclipse of Morality: Science, State, and Market.* New York, NY: Aldine De Gruyter.

_____. 2010. "Can Fairy Tales Come True? The Surprising Story of Neoliberalism and World Agriculture." *Sociologia Ruralis* 50:331–51.

Cashore, Benjamin. 2002. "Legitimacy and the Privatization of Environmental Governance: How Non-state Market-driven (NSMD) Governance Systems Gain Rule-making Authority." *Governance* 15(4):503–29.

Courville, Sasha, Christine Parker, and Helen Watchirs. 2003. "Introduction: Auditing in Regulatory Perspective." *Law & Policy* 25(3):179–84.

Dunn, Elizabeth. 2005. "Standards and Person-making in East Central Europe." Pp. 173–93 in *Global Assemblages: Technology, Politics and Ethics as Anthropological Problems*, edited by A. Ong and S. Collier. Malden, MA: Blackwell.

Environmental Justice Foundation (EJF). 2003. "Smash and Grab: Conflict, Corruption and Human Rights Abuses in the Shrimp Farming Industry." Retrieved December 16, 2005 (http://www.ejfoundation.org/pdf/smash_and_grab.pdf).

Goss, Jasper, David Burch, and Roy E. Rickson. 2000. "Agri-food Restructuring and Third World Transnationals: Thailand, the CP Group and the Global Shrimp Industry." *World Development* 28(3):513–30.

Hatanaka, Maki. 2010a. "Governing Sustainability: Examining Audits and Compliance in a Third-party Certified Organic Shrimp Farming Project in Rural Indonesia." *The Local Environment: The International Journal of Justice and Sustainability* 15(3):233–44.

_____. 2010b. "Trust, Certification, and Partnership in an Organic Shrimp Network: Rethinking Transnational Alternative Agrifood Networks." *World Development* 38(5):706–16.

Hatanaka, Maki and Lawrence Busch. 2008. "Third-party Certification in the Global Agrifood System: an Objective or Socially Mediated Governance Mechanism?" *Sociologia Ruralis* 48(1):73–91.

Hatanaka, Maki, Carmen Bain, and Lawrence Busch. 2005. "Third-party Certification in the Global Agrifood System." *Food Policy* 30(3):354–69.

Hatanaka, Maki, Jason Konefal, and Douglas H. Constance. Forthcoming. "A Tripartite Standards Regime Analysis of the Contested Development of a Sustainable Agriculture Standard." *Agriculture and Human Values.*

Higgins, Vaughan and Geoffrey Lawrence. 2005. *Agricultural Governance: Globalization and the New Politics of Regulation.* New York, NY: Routledge.

International Federation of Organic Agriculture Movements (IFOAM). 2011. "The Principles of Organic Agriculture." Retrieved February 3, 2011 (http://www.ifoam.org/about_ifoam/principles/index.html).

Jasanoff, Sheila. 1990. *The Fifth Branch: Science Advisers as Policymakers.* Cambridge, MA: Harvard University Press.

Jessop, Bob. 2002. "Governance and Meta-governance: On Reflexivity, Requisite Variety, and Requisite Irony." Retrieved May 22 2007 (http://www.comp.lancs.ac.uk/sociology).

Konefal, Jason and Lawrence Busch. 2010. "Markets of Multitudes: How Biotechnologies are Standardising and Differentiating Corn and Soybeans." *Sociologia Ruralis* 50:409–27.

Konefal, Jason and Maki Hatanaka. Forthcoming. "Enacting Third-party Certification: A Case Study of Science and Politics in Organic Shrimp Certification." *Journal of Rural Studies.*

Lebel, Louis, Nguyen Hoang Tri, Amnuay Saengnoree, Suparb Pasong, Urasa Buatama, and Le Kim Thoa. 2002. "Industrial Transformation and Shrimp Aquaculture in Thailand and Vietnam: Pathways to Ecological, Social, and Economic Sustainability?" *Ambio* 31(4):311–23.

Loconto, Allison. and Lawrence Busch. 2010. "Standards, Techno-economic Networks, and Playing Fields: Performing the Global Market Economy." *Review of International Political Economy* 17:507–36.

Marine Stewardship Council (MSC). 2010. "How We Meet Best Practice." Retrieved December 10, 2010 (http://www.msc.org/about-us/credibility/how-we-meet-best-practice).

Marsden, Terry, Robert Lee, Andrew Flynn, and Samarthia Thankappan. 2010. *The New Regulation and Governance of Food: Beyond the Food Crisis?* New York, NY: Routledge.

McCarthy, James and Scott Prudham. 2004. "Neoliberal Nature and the Nature of Neoliberalism." *Geoforum* 35(3):275–83.

Murray, Douglas and Laura Raynolds. 2000. "Alternative Trade in Banana: Obstacles and Opportunities for Progressive Social Change in the Global Economy." *Agriculture and Human Values* 17:65–74.

Mutersbaugh, Tad, Daniel Klooster, Marie-Christine Renard, and Peter Taylor. 2005. "Certifying Rural Spaces: Quality-certified Products and Rural Governance." *Journal of Rural Studies* 21:381–8.

National Sanitation Foundation (NSF) International. 2010. "Standards and Publications." Retrieved December 10, 2010 (http://www.nsf.org/business/standards_and_publications).

Newell, Peter. 2007. "Corporate Power and 'Bounded Autonomy' in the Global Politics of Biotechnology." Pp. 67–84 in *The International Politics of Genetically Modified Food: Diplomacy, Trade and Law*, edited by R. Falkner. New York, NY: Palgrave Macmillan.

O'Rourke, Dara. 2006. "Multi-Stakeholder Regulation: Privatizing or Socializing Global Labor Standards?" *World Development* 34(5):899–918.

Pentland, Brian T. 2000. "Will Auditors Take over the World? Program, Technique and the Verification of Everything." *Accounting, Organizations and Society* 25:307–12.

Porter, Theodore M. 1995. *Trust in Numbers: The Pursuit of Objectivity in Science and Public Life*. Princeton, NJ: Princeton University Press.

Power, Michael. 1997. *The Audit Society: Rituals of Verification*. New York, NY: Oxford University Press.

Quarto, Alfredo, Kate Cissna, and Joanna Taylor. 1996. "Choosing the Road to Sustainability: The Impacts of Shrimp Aquaculture and the Models for Change." Retrieved January 18 2004 (http://mangroveactionproject.org/files/shrimp-aquaculture/Choosing%20the%20Road%20to%20Sustainability.pdf).

Renard, Marie-Christine. 2003. "Fair Trade: Quality, Market and Conventions." *Journal of Rural Studies* 19:87–96.

Scott, James C. 1985. *Weapons of the Weak: Everday Forms of Peasant Resistance*. Bethany, CT: Yale University Press.

Skladany, Michael and Craig Harris. 1995. "On Global Pond: International Development and Commodity Chains in the Shrimp Industry." Pp. 169–91 in *Food and Agrarian Orders in the World-Economy*, edited by P. McMichael. Westport, CT: Praeger.

Stoker, Gerry 1998. "Governance as Theory: Five Propositions." *International Social Science Journal* 50(1):17–28.

Stonich, Susan C. and Conner Bailey. 2000. "Resisting the Blue Revolution: Contending Coalitions Surrounding Industrial Shrimp Farming." *Human Organization* 59(1):23–36.

Swyngedouw, Erik, Ben Page, and Maria Kaika. 2002. "Sustainability and Policy Innovation in a Multi-level Context: Crosscutting Issues in the Water Sector." Pp. 107–31 in *Participatory Governance in Multi-level Context: Concepts and*

Experience, edited by P. Getimis, H. Heinelt, G. Kafkalas, R. Smith, and E. Swyngedouw. Opladen, Germany: Leske & Budrich.

Tanaka, Keiko. 2005. "Redefining the Moral Responsibilities for Food Safety: The Case of Red Meat in New Zealand." *Rural Sociology* 70:470–90.

Tanner, Bob. 2000. "Independent Assessment by Third-party Certification Bodies." *Food Control* 11(5):415–7.