



MANAGING WICKED PROBLEMS IN AGRIBUSINESS

The Role of Multi-Stakeholder Engagement in Value Creation

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Managing Wicked Problems in Agribusiness: The Role of Multi-Stakeholder Engagements in Value Creation

EDITOR'S INTRODUCTION

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Abstract

Environmental degradation and biodiversity loss, persisting poverty, a mounting obesity epidemic, food insecurity and the use of biotechnology are all examples of wicked problems faced by agricultural and food organizations. Yet, managers and policy-makers often do not recognize that these problems are “wicked”. Wicked problems have cause-effect relationships that are difficult or impossible to define, cannot be framed and solved without creating controversies among stakeholders and require collective action among societal groups with strongly held, conflicting beliefs and values. In contrast to past research, this Special Issue takes an organizational perspective by tackling three key managerial questions: what is the value of managing wicked problems and engaging with multiple stakeholders? What are the human and organizational resources and the strategic conditions needed to engage with multiple stakeholders effectively? How can multi-stakeholder engagements be undertaken? A world collection of empirical case studies conducted by business, NGO and university leaders tackle these questions. For managers, the Issue offers recent and thought-provoking insights on how to recognize and deal with wicked problems. For academics, it proposes an agenda for addressing the topic and promises to fuel a research and education debate for years to come.

Keywords: wicked problems, sustainability; agriculture; Stakeholder Theory; multi-stakeholder initiatives

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Introduction

“Wicked problems” refer to issues which are highly complex, have innumerable and undefined causes, and are difficult to understand and frame. They result in outcomes that are either uncertain or unknowable, and often affect multiple stakeholders throughout the agri-food system and beyond. Thus, wicked problems cannot be resolved through finding “right answers” or “solutions”, but rather, they must be managed. Agri-food sustainability, natural resource constraints and biodiversity loss, persisting poverty in peripheral areas, the growing obesity epidemic, the use of biotech in food and agriculture and how we will feed current and future generations with fewer resources—are a few examples of wicked problems.

This Special Issue stems from two burning tensions in the intensifying debate on the sustainability of the global agricultural and food system. First, managers increasingly recognize the relevance and urgency of addressing sustainability problems such as the increasing scarcity of natural resources, dramatic climate change, and socio-economic turbulence. Agribusiness managers do not always recognize that these are wicked problems that require not only the adoption of technological innovations but also or primarily organizational change (Freeman 2010). In particular, addressing wicked problems requires firms to engage in a strategic dialogue and to take action with a diverse set of stakeholders both inside and outside the supply chain at levels that have been uncommon in the agri-food sector (Batie 2008; Peterson 2010; Brown et al. 2012). These multi-stakeholder engagements may include civil society organizations, non-governmental organizations (NGOs), policy-makers, and universities with trans-disciplinary knowledge. However, a recent study reveals that a few agribusiness firms actually undertake such organizational change (Dentoni and Peterson 2011). Instead, the approach of the majority of agribusiness firms has been to essentially replicate traditional forms of limited stakeholder interactions. Common approaches that firms have used to address sustainability have been to collaborate with industry competitors to set harmonized industry standards or to engage in bilateral agreements with one third-party organization, such as an NGO, to obtain certifications or endorsements of sustainable practices (Ross et al. 2012). These initiatives have typically not included wide engagement of multiple stakeholders outside their supply chain or major organizational changes (Dentoni et al. 2012a).

Second, academics have also been concerned with sustainability issues. In fact, they characterize such problems as “wicked problems” to highlight their complex, multi-dimensional, and system dynamic nature. Their wickedness is further exacerbated by the collective action strategies that are often prescribed to address such problems. These collective strategies typically involve engagement with multiple societal groups that possess strongly held and conflicting beliefs and values (Rittel and Webber 1973; Conklin 2006).

Although the literature on wicked problems continues growing rapidly, the main approach thus far has been to examine wicked problems from a systemic and governance perspective. This has led to the identification of various types of wicked problems and to recommendations for policy planning (Weber and Khademian 2008). With regards to providing implications for managers, the literature on wicked problems is limited. A notable absence has been for organizational research that might contribute to enhance a managers’ strategic decision-making ability (Camillus 2008). In particular, the following questions remain unaddressed with regards to

engaging multi-stakeholders to address wicked problems: 1) What is the value proposition for managers to engage with a large and diverse set of stakeholders, some of whom have conflicting beliefs, values and goals? 2) Which types of multi-stakeholder engagement processes are available to managers, and how can these be initiated and developed over time? And 3) what are the necessary human and organizational resources and strategic conditions that managers need to undertake such processes effectively?

This Special Issue hopes to contribute to these organizational questions while : 1) presenting empirical research and thought pieces from leaders in business, NGOs, academia and policy-making organizations from around the world; 2) proposing a decision framework that links a managers' choice of engaging (or not engaging) with multiple stakeholders on wicked problems with organizational and strategic factors; and 3) providing an agenda for immediate "community action research" on managing wicked problems in agribusiness. The rest of this essay is organized around these three objectives.

Methods and Content of the Special Issue

The content for this Issue has been collected and organized using an inductive research approach (Eisenhardt 1989). The inductive process involved comparing and contrasting cases from multiple authors (which includes synthesizing/interpreting ideas and harmonizing languages from different scientific backgrounds), then interlinking novel practices to existing theory. Based on the empirical cases presented by the authors, the Editors develop a conceptual framework (see section 3) to initiate a dialogue on future managerial and policy actions and questions for future research related to wicked problems in agribusiness. The selection of papers was based on their likely contribution to the academy in helping members understand the causes, processes and effects of engaging with multiple stakeholders to manage wicked problems and further articulate the complexity of the emerging framework.

The nine empirical papers selected for the Issue include: four invited essays from industry experts, an executive interview, and five peer-reviewed research articles. Four articles focus on managing multi-stakeholder engagement through partnerships. Based on the case of the global coffee, cotton, and cocoa chains, Bitzer (2012) describes partnerships among agribusinesses, NGOs and governments as a form of multi-stakeholder engagement and highlights that the effects of partnerships on value creation for agricultural producers upstream in these chains are so far ambiguous. With evidence from a case study of soybean production and marketing in Brazil, Hospes et al. (2012) discusses the importance of harmonizing interactions across multiple partnerships within the same sector in order to mitigate the wicked problem and avoid the risk of exacerbating it. Building on the evidence from the Roundtable on Sustainable Palm Oil and the Roundtable on Responsible Soy, Schouten and Glasbergen (2012) analyze which practices within multi-stakeholder engagements increase the legitimacy of the partnership and its members. Finally, van Latesteijn and Rabbinge (2012) reflect on their experience of a government-business-university partnership that facilitated the startup of thirty new businesses founded on sustainable development principles.

Two articles analyze the organizational resources and the strategic conditions necessary to effectively engage with multiple stakeholders. An executive interview with three managers at

Unilever (Dentoni and Veldhuizen 2012) highlights how fostering organizational culture and structure is essential for effective participation in multi-stakeholder engagements. Finally, Pieters et al. (2012) describes the challenge of implementing harmonized sustainability strategies in the Dutch transportation and logistics sector since competition is mainly based on cost reduction rather than on providing value-added benefits to customers.

The final section of the Special offers grand and strategic views from the world of academia, civil society and business on managing multi-stakeholder engagement and wicked problems. Based upon her experience as an academic leader participating in the sustainability debate in the US, Waddock (2012) discusses the behavioral characteristics needed to help individuals engage with stakeholders and reflects on the importance of developing solutions based upon the welfare of the common good. Pesqueira and Verburg (2012) describe Oxfam Novib's role as a NGO and their use of combining an insider-outsider approach within global multi-stakeholder partnerships to collaborate with companies while maintaining an independent perspective. Connolly (2012) concludes the Special Issue by describing the complexity of the global debate on feeding an increasing world population with reduced natural resources and analyzes the human and systemic leadership role that agribusinesses should take to face this wicked problem.

Conceptual Framework

Based on a synthesis of the empirical evidence collected and discussed by the authors, the Editors propose a conceptual framework for analyzing wicked problems in agribusiness that also provides links to the existing management literature (Figure 1). The goal is to provide researchers and practitioners with the opportunity to further refine and test this proposed framework through theory and practice advancement. Moreover, the ultimate goal for this Special Issue is that managers will find value in these synthesized insights for their strategic decision-making. The following four key concepts play a key role within the emerging framework.

Multi-Stakeholder Engagements

The terms multi-stakeholder and engagement have become “buzzwords” in the sustainability business and policy arena. Stakeholders are groups and individuals that are influential and/or are influenced by an organization (Freeman 2010). Stakeholders are often classified in types such as stockholders, employees, supply chain partners and consumers, competitors, governments and communities (Donaldson and Preston 1995) and by their salience (Mitchell et al. 1997). Multi-stakeholder actions are processes “in which actors from civil society, business and governmental institutions come together in order to find a common approach to an issue that affects them all” (Roloff 2008). Evidence from this Special Issue adds that the multi-stakeholder attribute is a scalar rather than a yes/no characteristic, which ultimately depends on the representativeness (Bäckstrand 2006) and diversity of societal values, voices and beliefs on a topic brought by stakeholders involved in the process (Pesqueira and Verburg 2012; Waddock 2012).

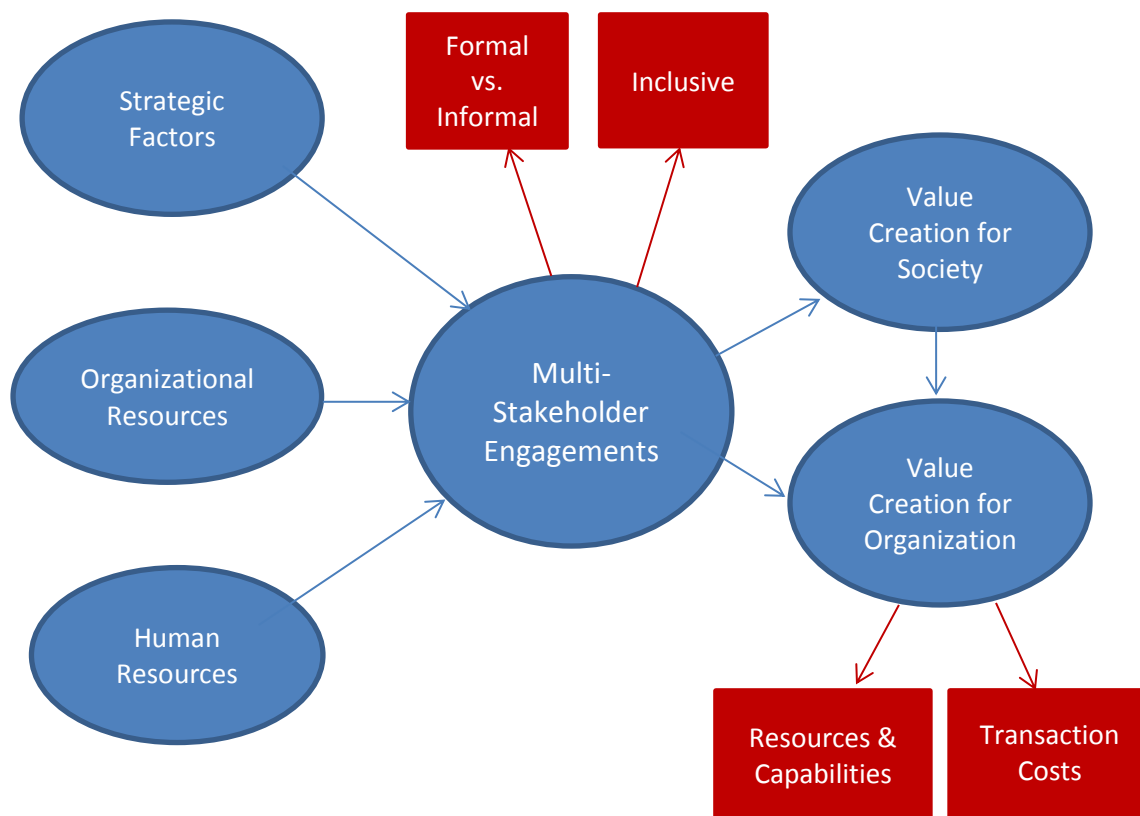


Figure 1. Managing Wicked Problems in Agribusiness: A Framework on Resources, Processes and Effects of Multi-Stakeholder Engagements.

Note. The arrows between circles indicate the relationships among concepts which could be either positive or negative. The squares are dimensions of a concept. Multi-stakeholder engagements vary within the degree of formality and inclusiveness; value creation varies within the creation of resources and capabilities and within the reduction of transaction costs.

As widely described in recent literature, multi-stakeholder engagements come in multiple forms and sizes, including both formal (such as multi-stakeholder alliances, partnerships, platforms and initiatives) as well as informal (such as networks, interactions, relationships) (Russo and Tencati 2009). This Special Issue provides evidence that formal and informal elements of engagements are interlinked both within and across different multi-stakeholder processes (Schouten and Glasbergen 2012; Hospes 2012). The main question that remains open for future research is: what combination of formal and informal engagement within and across multi-stakeholder processes can help to cope with wicked problems and contribute to value creation for both society and organizations?

Strategic Factors & Problem Wickedness

By definition, wicked problems can only be tackled by involving multiple stakeholders (Rittel and Weber 1973). They represent strategic issues for organizations, which have to assess opportunities and threats that turbulent external environments may cause and to identify their own internal strengths and weaknesses to tackle them (Freeman 2010; Arevalo et al. 2011). The literature has dissected the definition of problem wickedness (Norton 2012) and established that some problems are more wicked than others (“super wicked problems”), such as climate change, because of their urgency, uncontrollability, confusion on which stakeholders are creating or tackling the problem and stakeholders’ myopia (Levin et al. 2007). Overall evidence from this Special Issue adds that a number of strategic factors exacerbate problem wickedness and affect multi-stakeholder engagements. Intense price-based sector rivalry can make business stakeholders myopic (Pieters et al. 2012); cognitive distance among goals, values and beliefs (Pesqueira and Verburg 2012), the number of stakeholders involved and the geographical scope of the problem (Dentoni and Veldhuizen 2012; Hospes 2012) all increase the complexity of framing the issues at hand. The question that is still open for future research and practice is: how can a manager design strategies for multi-stakeholder engagement in such a way that this is neither exacerbating problem wickedness nor is putting too much pressure on limited organizational resources?

Organizational and Human Resources

To engage with a diverse set of stakeholders at such unprecedented levels, organizations need appropriate tangible and intangible resources. Management scholars have identified dynamic capabilities (Teece 2007), stakeholder integration, higher-order learning, continuous innovation (Sharma and Vredenburg 1998), and stakeholder orientation (Farrell et al. 2010; Maignan et al. 2011) as key factors in determining an organization’s level of proactiveness and responsiveness when engaging with stakeholders. Similarly, policy scholars have identified governance capabilities that allow policy actors to achieve “small wins” when dealing with wicked problems as key success factors for multi-stakeholder engagements (Termeer et al. Forthcoming). Evidence from this Special Issue provides insights on structural and cultural elements within large organizations that lead to these appropriate capabilities (Dentoni and Veldhuizen 2012). Moreover, the organizational experience of participating in multi-stakeholder engagements can only develop new capabilities if at least some of the involved stakeholders (such as universities and NGOs) make the experiential learning purposive (Pesqueira and Verburg 2012; van Latesteijn and Rabbinge 2012).

The development of new organizational capabilities requires teams of human resources that allow managers to initiate, lead or join multi-stakeholder engagements (Alban-Metcalf and Alimo-Metcalf 2010; Dentoni et al. 2012b). Within this Special Issue, Waddock (2012) takes a different approach and discusses behavioral attributes that could make people and organizations thrive in the long run, rather than survive in the short run, in a world of wicked problems. These include the ability of leaving “one’s power hat at the door” and the capacity of reframing issues and problems at a higher level of abstraction by “shifting minds through conversations and experiences” (Waddock 2012). The question still open for future investigation is: how organizations can develop such human resources and deliberative capacities of stakeholders to shift minds and learn from each other to address wicked problems?

Value Creation for Society and for the Organization

How to assess the effectiveness of multi-stakeholder engagements at managing wicked problems also remains an open question (Austin and Seitanidi 2012). Given the complex nature of wicked problems, disentangling the cause-effect relationships of multi-stakeholder engagements on value creation for society from other factors is a challenging, if not impossible task (Hospes 2008). On the other hand, a consensus has developed among management scholars that effective multi-stakeholder engagements often leads to value creation for the organization (Margolis and Walsh 2003; Porter and Kramer, 2011, PrC 2011). The literature in this area has mainly focused on value creation in terms of building new resources and capabilities. These new resources and capabilities may be associational (i.e. legitimacy or credibility), transferred (i.e. subsidies and market intelligence), interactive (i.e. access to networks and improved relationships) and synergistic (i.e. learning and innovation) (Austin and Seitanidi 2012). As you will see in this Special Issue, scholars have also observed that multi-stakeholder engagements create value by reducing transaction costs for organizations (Williamson 1979). For example, Unilever engages with multiple stakeholders to secure country stability and prevent supply negotiations (Dentoni and Veldhuizen 2012).

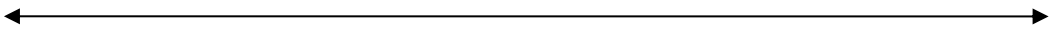
Conversely, transaction costs—in the form of continuous renegotiations, coordination costs and distrust—may increase if formal multi-stakeholder engagements do not develop open and inclusive interaction processes within (Schouten and Glasbergen 2012) and across (Hospes 2012) platforms appropriately. The key question is what kind of leadership, management and governance is needed to create value through multi-stakeholder engagement, instead of reproducing fixed positions and “dialogue of the deaf”?

A Call for Immediate and Inclusive “Community Action Research”

This Special Issue collects and synthesizes the experience of agribusiness, NGO and university leaders on how to engage (or not engage) with multiple stakeholders to manage wicked problems. An inductive process allows building upon existing literature in four directions: 1) multi-stakeholder engagements vary in terms of social representativeness, process inclusiveness, and in their mix of formal versus informal engagement processes; 2) several strategic, organizational and human factors influence managers’ choice of undertaking multi-stakeholder engagements and the type of engagement process; 3) the type of multi-stakeholder engagement process influences the value creation for the organization, while the effects on value creation for society seem still impossible to establish in the context of wicked problems; 4) the impact of multi-stakeholder engagements on value creation for organizations can also take the form of reduced transaction costs.

Finally, this Special Issue demonstrates that working collectively as a (small) “community of practice” of agribusiness managers and researchers facilitates the process of generating new theory from empirical evidence (Eisenhardt 1989). Yet further action, research and a wide spectrum of “action research” is necessary to fully develop, test, use and reframe a theory on managing wicked problems as described in Figure 2. In particular, “action researchers” (Kemmis and McTaggart 2005) will play a key role in refining and testing theory by applying a research-action iteration process (Peterson 2011). Along this action/research continuum, several communities of scholars and practitioners are currently collaborating to generate and use theory

to explain how to manage wicked problems in food and agriculture (GOLDEN 2012; PrC 2012, Seas of Change 2012; Sustainable Food Lab 2012) although with differences in themes, methods and roles along the action-research continuum. Given the enormity of the challenge, as Editors we believe that the only way to advance theory and practice in this field is to encourage wider participation in “community action research” programs (Senge and Scharmer 2006) that focus on managing wicked problems in agribusiness. With this goal in mind, our job as Editors of this Special Issue will be to strive to create new opportunities for researchers, practitioners and managers to engage in such a community.



	Action	Action Research	Research
<i>Who</i>	Managers & Supervisors	Consultants, Trainers and Managers supported by Researchers, “Action Researchers”, “Engaged Scholars” and Trainers	Researchers & Teachers
<i>Role</i>	<ul style="list-style-type: none"> Developing multi-stakeholder engagements, strategies and organizations based on instinct, past experience, imitation and theory. Assess the process of value creation for society and the organization in real time. Supervising and incentivizing human capital to undertake or facilitate multi-stakeholder engagements. 	<ul style="list-style-type: none"> Refining the existing categories of multi-stakeholder engagements based on their attributes: <ul style="list-style-type: none"> Degree of formality/informality of engagements Inclusiveness Representativeness Others? Exploring cause-effect patterns on: <ul style="list-style-type: none"> Relationships between strategic, organizational and human factors and categories of multi-stakeholder engagements Relationships between categories of multi-stakeholder engagements and value creation for the engaging organizations To the extent that is possible, the relationships between categories of multi-stakeholder engagements, value creation for society and value creation for the organization. Developing individual competencies on engaging with multiple stakeholders and managing wicked problems through learning-by-doing, past experience and theory. 	<ul style="list-style-type: none"> Conducting systematic reviews and meta-analyses from different strands of the multi-stakeholder engagements literature Crafting or applying measures of attributes and categories of multi-stakeholder engagements Testing cause-effect patterns on relationships between strategic, organizational, human factors, categories of multi-stakeholder engagements and value creation. Teaching students on theory and current practices of multi-stakeholder engagements and management of wicked problems.
<i>Aspects of Knowledge</i>	Practical Knowledge (Peterson 2011), therefore with trial and error learning.	Grounded Theory Knowledge (Peterson 2011), therefore with emphasis on induction processes.	Positivistic Knowledge (Peterson 2011), therefore with emphasis on deduction processes.

Figure 2. A “Community Action Research” Agenda on Managing Wicked Problems in Agribusiness: An Action-Research Continuum.

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Managing Multi-Stakeholder Engagement through Partnerships

C H A P T E R 1

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Partnering for Change in Chains: the Capacity of Partnerships to Promote Sustainable Change in Global Agrifood Chains

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Abstract

Intersectoral partnerships mirror the changing nature of the relationships among state, business and civil society organizations, and are often considered innovative mechanisms to overcome single actor failure in the context of globalization. This article analyzes the capacity of partnerships to promote sustainable change in global agrifood chains from a governance and a development perspective. The global coffee, cotton, and cocoa chains serve as main fields of application. From a governance perspective, the emergence of partnerships is largely positive inasmuch as partnerships act as initiators and agents of change which, although still mostly confined to niche markets, unfolds a chain-wide governance effect. From a development perspective, partnerships can be viewed critically as their top-down and business-driven nature leads to uncertain benefits for producers and results in the marginalization of certain development concerns. These differing conclusions can be explained by the fact that partnerships largely embody the neoliberal agenda, which raises specific questions, particularly from a development perspective.

Keywords: intersectoral partnerships; agrifood chains; sustainable change; governance; development

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The Rise of Partnerships in Global Agrifood Chains

Over the last ten to fifteen years, intersectoral partnerships between actors from state, market and civil society have attracted the attention of researchers and professionals alike. By creating an institutionalized platform for collaboration between public and private actors, partnerships are often considered as innovative mechanisms to overcome single actor failure in the context of globalization, and advance public goods as well as private interests (Witte et al. 2000; Biermann et al. 2007; Schäferhoff et al. 2009). These positive credentials have placed partnerships in the center of the debate on what kinds of institutional arrangements are most promising to address complex, multilayered, and multi-scalar sustainability issues (Glasbergen 2007).

Partnerships have since emerged in a variety of issue areas, ranging from international development (Reed and Reed 2009) and forestry (Pattberg 2005) to biodiversity (Visseren-Hamakers et al. 2010) and climate change (Bäckstrand 2008). Especially in global agrifood chains, partnerships have experienced considerable growth since the late 1990s in the expectation that they would manage the ‘wicked problem’ (Batie 2008; Peterson 2009) of realizing sustainability within such chains, such as addressing environmental degradation, poor working conditions, and impoverishment of smallholder producers (Bitzer et al. 2008; Schouten and Glasbergen 2011; Fuchs et al. 2011; Dentoni and Peterson 2011). This has given rise to an international policy consensus on the desirability of partnerships (OECD 2006; World Bank 2007), even though the consequences of partnerships are still poorly understood (Lund-Thomsen 2009).

Most notably, the literature on global (environmental) governance and on development studies pick up the debate on partnerships in global agrifood chains. Both strands seek to explain the emergence and implications of partnerships as new institutional arrangements, albeit it from different perspectives. The governance literature originates from a state-based rather top-down view, and focuses on the changing relationships between state, market and civil society. Partnerships, which encompass both state and non-state actors in different constellations, are studied for their potential to serve as new governance arrangements and to solve global sustainability problems, including problems linked to international production and consumption patterns. The development studies literature, on the other hand, is characterized by a bottom-up, producer oriented perspective, and looks at constraints to and solutions for rural development. Partnerships, which have become increasingly common with development organizations, are analyzed for their potential to serve as new development tools by contributing to different development objectives, including poverty reduction and agricultural growth.

As key points, both the governance and development studies literature explore partnerships as new institutional arrangements with greater potential problem-solving capacity. However, important questions remain unanswered as regards the capacity of partnerships to deliver on their proposed added value and on the type of change partnerships promote. Therefore, this article focuses on some of the issues of this debate in order to contribute to a better understanding of partnerships in global agrifood chains, thereby providing lessons for the broader theory on partnerships. More specifically, the article aims to analyze the capacity of partnerships to promote sustainable change in global agrifood chains, and reflect on partnerships from a governance and a development perspective.

Intersectoral partnerships are here defined as collaborative, institutionalized arrangements between actors from two or more sectors of society which aim at the provision and/or protection of collective goods (Glasbergen 2007; Schäferhoff et al. 2009). Partnerships are characterized by a complementarity of actors' roles, which, in theory, allows for a division of labor, risks, and responsibilities among participating actors (Narrod et al. 2009). While this paper uses the term *intersectoral partnerships*, other terms found in the literature include *cross-sector partnerships*, *multi-stakeholder alliances*, *public-private partnerships*, *global public policy networks* or *global action networks*. The *capacity* of partnerships is viewed as an outcome-oriented concept and understood as the ability to promote sustainable change in global agrifood chains by means of pursuing distinct strategies and performing distinct functions. Arguably, this ability is partly influenced by the embeddedness of partnerships in the institutional context and in horizontal network relationships. In line with the two main strands of literature used in this paper, the capacity of partnerships can either be viewed from a governance perspective (partnerships as governance tools) or from a development perspective (partnerships as development tools). Although there are deliberate overlaps between the perspectives, the existing differences between them provide important insights for a systematic enquiry into the capacity of partnerships to promote sustainable change. Finally, *sustainable change* refers to a shift in the configuration and functioning of agrifood chains that addresses the sustainability challenges associated with them.

This article analyzes the capacity of partnerships in the global coffee, cotton and cocoa chains. For all three commodities, the rise of partnerships since the late 1990s is closely related to the increased pressure on multinational companies by NGOs to reassess their responsibility for the conditions at the production level. Public allegations of severe environmental degradation, human rights abuses and widespread poverty, which began to be voiced from the mid-1990s onwards, posed a clear threat to corporate reputation and sales, particularly for branded manufacturers (Schrage and Ewing 2005). Many companies sought to protect their business by engaging in corporate social responsibility activities, such as partnerships (Dentoni and Peterson 2011). Especially in the coffee and cocoa chains, the development towards partnerships coincided with a change in global demand towards high quality and ethical products, which created new markets for smallholders' products (Giovannucci and Ponte 2005). Partnerships with NGOs and other development actors are among the most common means to exploit these market opportunities and secure supply, while demonstrating ethical business behavior (Linton 2005; Neilson 2007). Concerns of supply were particularly salient in the cocoa sector; considerations to develop new specialty markets were dominant in the case of coffee; and incentives to highlight responsible business behavior were the leading motives in the cotton sector. The engagement of NGOs and development agencies, on the other hand, is motivated by the opportunity to directly address unsustainable business behavior, and raise social and environmental standards at the production level (Weidinger and Schmitz-Hoffmann 2007; Pattberg 2005). In general, the objectives of partnerships are stated to encompass the promotion of sustainable production practices, the increase of market access and revenues for producers, and the empowerment of smallholder producers. Combined with other activities at the production level to assist farmers, many partnerships seek to achieve their objectives through the application of a variety of generic and product-specific sustainability standards and certification. By now standards have turned into a key mechanism of partnerships for promoting sustainable change (Bitzer et al. 2012b), making it critical to understand the effects of standards in order to understand the overall effects of partnerships.

This article is structured as follows. Section 2 sheds light on the conceptualization of partnerships from the perspective of the literature on global governance and from the perspective of the literature on development studies. Section 3 briefly elaborates the methodological approach taken in the article. This is followed by an analysis of the capacity of partnerships from the two main perspectives: Section 4 interprets the capacity of partnerships from a governance perspective, and section 5 focuses on the capacity of partnerships from a development perspective. Both sections present different viewpoints on the capacity of partnerships, which partly overlap, but more often appear to be at odds with each other. Differences can also be distinguished between partnerships in the three chains investigated, which are considered in section 6. Finally, section 7 seeks to explain and reflect upon the different viewpoints on the capacity of partnerships presented in sections 4 and 5, offering an overall interpretation of the typical biases partnerships seem to imply.

Theoretical Perspectives on Partnerships in Global Agrifood Chains

Conceptualization of Partnerships in the Governance Literature

The governance literature focuses on the changing relationships between state, market and civil society, and the manifestation of new ‘governance’ arrangements that include both state and non-state actors, such as partnerships. Various scholars conceptualize their emergence as a response to the decreasing capacities of the state to solve the manifold problems posed by global change (Haufler 2003; Jessop 1998; Stoker 1998). Accelerated levels of globalization and the cross-border nature of major contemporary sustainability problems create new interdependencies between actors, and render governments unable to effectively act unilaterally (Biermann and Dingwerth 2004). As a result, private actors have become involved in governance processes in order to counteract the perceived governance gap, i.e., the absence or weakness of governmental regulation (Haas 2004). This has led to a fundamental change in the state-market-society relations towards increased cooperation among actors (Jessop 1998), reflecting a “new image of the manageable society” (Glasbergen 2007, 16). Governance draws more and more on the involvement of actors beyond government, and rests on shared responsibility (Lemos and Agrawal 2006). The implications of this development for the liberal-democratic order are widely debated. Although governance is suggested to be able to address the inefficiencies of state action (Lemos and Agrawal 2006), scholars caution that governance initiatives, such as partnerships, frequently exhibit weak participatory foundations and struggle with legitimacy and accountability deficits (Stoker 1998; Glasbergen 2007; Bäckstrand 2008; Kaan and Liese 2011). Also in terms of their potential to serve as new governance instruments and solve global sustainability problems, the evidence of partnerships’ effects remains largely inconclusive, and is often contested. While partnerships have been shown to contribute to agenda-setting, knowledge production, and discourse formation (Pattberg 2005), the picture is less clear with respect to their actual output. Research suggests that partnerships fulfill rule-setting functions to establish rules and norms for sustainable production and business behavior (Andonova et al. 2009; Visseren-Hamakers and Glasbergen 2007). Yet, they perform considerably worse when it comes to policy and rule implementation (Biermann et al. 2007; Pattberg 2010). The capacity of partnerships to address global governance problems thus appears ambiguous.

Conceptualization of Partnerships in the Development Literature

The development literature examines partnerships in the context of a paradigm shift in the political economy of international development in the 1990s (Van Tulder and Fortanier 2009; Reed and Reed 2009). Firstly, this refers to the increasing recognition of the inability and failure of individual actors – be they market actors, governments, donors, or civil society organizations – to solve the development problems associated with global agrifood chains (Kolk et al. 2008). Such a situation is to be addressed through multi-actor collaboration where the capacities and bottom-up orientation of development agencies and NGOs can be joined with the resources and market knowledge of business (Utting and Zammit 2009). More fundamentally, partnerships prescribe a new, active role of business in development. Previously regarded as the “enemies, unconscious engines, or ungrateful beneficiaries of development” (Bendell 2005, 363), businesses are now acknowledged for their potential to contribute to development. This concurs with the new mainstream development discourse, emphasizing long-term interaction, goal alignment and mutual understanding between different actors as key ingredients for institutional change (Van Tulder and Fortanier 2009). This is most pronounced in global agrifood chains, where large multinational companies have considerable influence on how trade is conducted, and are therefore needed for any type of chain-wide change (Weidinger and Schmitz-Hoffmann 2007; World Bank 2007). While the donor discourse tends to emphasize the potential of partnerships to improve the position of farmers in global agrifood chains and to promote sustainable production practices, little is known on their impact and effectiveness. On the one hand, this lack of knowledge is caused by the general difficulty to measure the outcomes of any types of development intervention (Blowfield 2007). On the other hand, observers suggest that different stakeholders may not want to know the effects of partnerships, as it allows them to capture the moral high ground without there being any hard evidence that effectiveness is lacking (Blowfield 2007; Lund-Thomsen 2009). Moreover, critics argue that the close contact of donor agencies and development NGOs with the corporate world makes partnerships susceptible to privileging business interests whilst doing little about the situation of the poor and marginalized people (Utting and Zammit 2009; Reed and Reed 2009; Gregoratti 2011). This raises questions about the capacity of partnerships to serve as new development tools in global agrifood chains.

Analyzing the Capacity of Partnerships in Global Agrifood Chains

Both strands of literature recognize the potential of partnerships, but also point out critical issues which cast doubt on their capacity to fulfill the hopes vested in them. The following analysis looks at partnerships in the global coffee, cotton and cocoa chains, and interprets their capacity to promote sustainable change by looking at the functions fulfilled by partnerships. Such a “functionalist” approach has been particularly popular in policy implementation studies to accommodate an outcome-oriented analysis (e.g. Skok 1995) to analyze where (policy) change comes from. It has also been applied to partnerships to capture and explain their capacity for sustainable change (e.g. Visseren-Hamakers and Glasbergen 2007; Bitzer et al. 2008). The following functions of agenda-setting, rule-setting, policy implementation and upscaling are utilized in this paper:

1. *Agenda-setting* represents the process of opening a discussion around certain issues, including “establishing what values are at stake and mapping out potential diagnoses of the roots of the problem” (Ascher 2007, p. 142). Agenda-setting can also entail the dismissal of other issues and questions as unimportant, i.e., keeping them off the debate.
2. *Rule-setting* denotes the creation of new norms and standards regarding the production, processing and trading of agricultural products. Such a process of rule-setting thus stands in contrast to spontaneous, uncoordinated action (Pattberg 2006).
3. *Policy implementation* describes the process of executing and putting into use the norms and standards evolving from rule-setting, possibly embedded into wider activities in the target locations of the new norms and standards.
4. *Upscaling* refers to the extent to which successful individual initiatives are mainstreamed, connected to each other and unfold a durable effect (cf. Knorringa et al. 2011).

All four functions are interpreted and applied in a rather broad manner to the two perspectives of this paper. This implies that from a governance perspective, the functions of partnerships are particularly relevant to explore their chain-wide steering capacity. From a development perspective, the functions of partnerships shed a light on their capacity at the production level, including the implications for rural producers and their organizations.

Methodological Approach

This article builds on a three year research project connected to and confronted with other research on this topic in the context of the Dutch-based Utrecht-Nijmegen Programme on Partnerships (UNPOP). The idea of this article is to present a synthesis of the key insights, to draw overarching conclusions and to offer fresh perspectives based on the findings and results of this research project.

The methodological approach taken was as follows. First, a comprehensive literature review on partnerships, encompassing both literature on global environmental governance and literature on development studies, was conducted in order to construct the conceptual framework. This resulted in the comparative differentiation between a governance perspective and a development perspective on partnerships, and in the identification of four main outcome-oriented functions against which partnerships are assessed from each perspective.

The subsequent analysis draws on primary research from previous publications by the author (Bitzer et al. 2008; Bitzer and Glasbergen 2010; Bitzer et al. 2011; Bitzer et al. 2012a; Bitzer et al. 2012b). Between these five papers, a total of 82 partnerships were assessed, including 16 partnerships in the coffee chain, 5 partnerships in the global cotton chain, all through qualitative research, and 55 partnerships in the global cocoa chain through a combination of quantitative and qualitative research methods (see Table 1 for more details on the methods used concerning the partnerships in each chain). Data on these partnerships was collected in the 2007-2010 period, among others through literature reviews, analyses of “partnership documents” (data made available by partnerships, including plans, status reports, impact evaluations, sales contracts, presentations, websites, etc.) and analyses of secondary literature (all other documents and literature on the case studies made available mostly through an internet search). Over 70 in-depth semi-structured interviews in person or by phone were conducted with partnership members and

experts from business, NGOs, development agencies, governments, international organizations, and producer organizations. Participant observation in stakeholder meetings and a two months field trip to partnerships' sites as well as smallholder coffee and cocoa plantations in Peru in 2008 complement the data collected.

Table 1. Partnerships studied in each chain and methods used

Case studies	Data methods and sources	Reference
16 coffee partnerships	<ul style="list-style-type: none"> • 49 semi-structured in-depth interviews • Literature review • Secondary document analysis • Partnership document analysis • Participant observation 	Bitzer et al. 2008 Bitzer et al. 2011 Bitzer et al. 2012b
5 cotton partnerships	<ul style="list-style-type: none"> • 12 semi-structured in-depth interviews • Literature review • Secondary document analysis • Partnership document analysis 	Bitzer and Glasbergen 2010
55 cocoa partnerships	<ul style="list-style-type: none"> • 18 semi-structured in-depth interviews • Literature review • Secondary document analysis • Partnership document analysis • Participant observation 	Bitzer et al. 2012a

The reliance on primary research from previous publications had the advantage of offering different theoretical and empirical perspectives on the capacity of partnerships, both from a governance and a development angle. The diversity of case studies provided insights into an array of issues related to partnerships, and facilitated a systematic inquiry surrounding the capacity of partnerships to promote sustainable change. At the same time, two main limitations regarding this approach can be identified. Firstly, whilst the author holds primary knowledge of all case studies reviewed, the reliance on previously collected data implied that the case studies were originally not explored according to the conceptual framework applied in this article, but served a different, albeit related research purpose concerning partnerships. Secondly, the analysis of this paper only deals with a certain number of partnerships in the coffee, cotton and cocoa chains, limiting the generalizability of the results to *all* partnerships in these chains and even more so to the entire partnership phenomenon in global agrifood chains. Thus, the following analysis needs to be interpreted in the context of these limitations.

Partnerships from a Governance Perspective

From a governance perspective, the capacity of partnerships refers to their ability to solve the 'governance problem' in global agrifood chains, that is, the lack of governance mechanisms to ensure the sustainable production and trade of commodities. Partnerships address the governance problem to varying degrees by contributing to the spread of sustainability values, by establishing private rules for agricultural production, by implementing activities at the production level aimed at the transfer of technical skills, or by forming networked structures and creating linkages to each other, thereby reproducing institutional opportunities.

Agenda-Setting: The Spread of Sustainability Values along Agrifood Chains

As noted also in other issue areas (e.g. Witte et al. 2000), partnerships act as important agenda-setters, and have triggered a debate on sustainability in the coffee, cocoa, and cotton chains. On a broad level, this concerns the spread of values based on environmentally friendly and socially responsible business behavior (Bitzer et al. 2008). Since the issues at stake are complex, covering a variety of complicated cause-effect relationships and concerning different types of producers, manufacturers and retailers (Kolk 2011), partnerships vary in their interpretation of sustainability values and their implications for global agrifood chains, resulting in a multiplicity of approaches of how to deal with sustainability challenges (Dentoni and Peterson 2011). Nonetheless, a baseline consensus has been established among stakeholders, which identifies a set of unacceptable practices in agricultural production and trade, including child or other forms of bonded labor, cutting of primary forest, and severe forms of environmental degradation (Bitzer et al. 2012a). The agenda-setting function of partnerships does not only involve the emergence of mutual norms and values, but also entails adjustments in the behavior of actors towards the recognition of the importance of partnering. NGOs and development agencies have become accepted as knowledgeable and credible partners, whilst businesses have taken on an active role in sustainability initiatives: Particularly in the coffee and cocoa sectors, several multinational companies have been active in sustainability initiatives in an attempt to build core competence and demonstrate leadership in addressing sustainability challenges (Dentoni and Peterson 2011). Finally, the practice of working directly with farmers and producers' organizations, often through partnerships, has become widespread and institutionalized, denoting a clear turning point compared to business practices of up to ten years ago.

Rule-Setting: Creating and Reinforcing the Trend towards Sustainability Standards

Sustainability standards and certification as private rules for agricultural production have experienced considerable proliferation in all of the three agrifood chains over recent years – a trend which has been absorbed and fuelled by partnerships (Bitzer et al. 2012b). A general distinction can be made between two levels of standards, which refers to (i) their main market outlets and participating businesses (niche versus mainstream) and (ii) their content (more stringent versus broader, more lenient requirements) (Bitzer and Glasbergen 2010). Whilst this would amount to a broad classification into four categories of standards, only the combinations of niche/more stringent requirements and mainstream/more lenient requirements can be observed in practice (see Table 2 below).

The coffee chain exhibits the greatest variation of standards used by partnerships, ranging from highly stringent standards (SMBC bird-friendly) to stringent (Fairtrade and organic) to less stringent (Rainforest Alliance, Utz Certified) to quality-oriented standards (Starbucks' C.A.F.E. Practices, Nespresso AAA) and, finally, to baseline standards (Common Code for the Coffee Community-4C) (see also Table 3). Considering the variety of standards, it would appear that the coffee market is saturated in terms of diversity of standards. This might be different in the cocoa and cotton sectors, where fewer standards exist. In the global cocoa sector, five standards have entered the market (organic, Fair trade, Rainforest Alliance, Utz Certified and Starbucks' Cocoa Practices), but none of them is an explicit baseline standard that covers large parts of the sector. In the global cotton sector, two relatively new baseline standards (Cotton made in Africa-CmiA

and Better Cotton Initiative-BCI) seek to enter the mainstream market, whereas organic and Fairtrade have managed to establish themselves in niche markets at the other end of the market spectrum. However, it seems that the middle ground in between is missing, which in the cases of coffee and cocoa is taken up by the Rainforest Alliance and Utz Certified standards. Thus, we could potentially see movement in this direction, should the consumer demand for more ethical cotton be confirmed.

While partnerships use different standards, we can observe a trend towards mainstream-oriented standards at the expense of Fairtrade and organic standards (Raynolds et al. 2007; Bitzer et al. 2008) (see Table 2).

Table 2. Broad Classification of Standards Used by Partnerships

	(More) stringent requirements	(More) lenient requirements
Niche-oriented	Mostly “old” sustainability standards, including Fairtrade, organic, SMBC	(not observed)
Mainstream-oriented	(not observed)	“New(er)” sustainability standards, including Rainforest Alliance, Utz, 4C, Starbucks Practices, CmiA, BCI, Nespresso

Trend

This is a twofold trend, indicating that partnerships increasingly use mainstream standards and also seek to reach a greater target group of producers. Various factors contribute to this ‘standardization strategy’ of partnerships in favor of mainstream standards, mainly relating to the initiating and/or predominant actor(s) involved in partnerships. Firstly, while even mainstream standards only capture small percentages of the global market, they offer greater market potential than Fairtrade and organic standards, which are mostly confined to niche markets (Bassett 2009; Kolk 2011). Secondly, due to the important role of business in partnerships, increasing emphasis is placed on product quality and quantity, which are only minor aspects in Fairtrade and organic standards, if considered at all (Muradian and Pelupessy 2005). Thirdly, most companies reject the idea of guaranteed minimum prices for producers as required by Fairtrade (Ruben and Zuniga 2011). This also holds for price premiums, which, in mainstream standards, are either flexible and considered to be a matter of negotiation between buyer and supplier, or completely absent. Finally, this market-oriented thinking is increasingly accepted or even endorsed by NGOs and development agencies (Knorringer and Helmsing 2008). For instance, the certification NGOs of Rainforest Alliance and Utz Certified, which both promote mainstream-oriented standards, are among the most active partnership initiators. In sum, mainstream standards are characterized by a high ‘market compatibility’.

At the same time, the standardization strategy of partnerships is influenced by institutional factors at the production level, which facilitate the application of mainstream sustainability standards as opposed to Fairtrade and organic standards (Bitzer and Glasbergen 2010). Partnerships that use organic and Fairtrade standards often face considerable institutional constraints, whereas mainstream sustainability standards fit the existing institutional structures of agricultural production, i.e., exhibit a high ‘institutional compatibility’. Such higher institutional

compatibility, including less stringent social and/or environmental requirements, allows for a relatively fast and large-scale application by producers and increases the potential target group (Bitzer and Glasbergen 2010).

Table 3 provides a comparative overview of the standards used by partnerships, further detailing their market and institutional compatibility based on six indicators each.

Table 3. Sustainability standards used by partnerships compared

	SMBC (bird-friendly)	Organic (IFOAM)	Fairtrade (FLO)	Rainforest Alliance	Utz Certified	Common Code for the Coffee Community (4C)	Cotton made in Africa (CmiA)	Better Cotton Initiative (BCI)	Starbucks (C.A.F.E. and Cocoa Practices)	Nespresso AAA
Coffee ★										
Cocoa ▲										
Cotton ◆										
Agrifood chain	★	★▲◆	★▲◆	★▲	★▲	★	◆	◆	★▲	★
MARKET COMPATIBILITY	LOW	LOW	LOW	MEDIUM	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH
1. Self-portrayal	Niche	Niche	Niche	Main-stream	Main-stream	Main-stream	Main-stream	Main-stream	Main-stream	Main-stream
2. Quality requirements	Low	Low	Low	Low	Medium	Low	Low	Low	High	High
3. Emphasis on quantity	Low	Low	Low	Low	High	High	High	High	High	High
4. Traceability	Medium	Medium	Medium	Low	High	Low	High	Low	High	Medium
5. Guaranteed minimum price?	No	No	Yes	No	No	No	No	No	No	No
6. Price premium for compliance?	Yes (set)	Yes (flexible)	Yes (set)	Yes (flexible)	Yes (flexible)	No	No	No	Possibly	No
INSTITUTIONAL COMPATIBILITY	LOW	LOW	LOW	MEDIUM	HIGH	HIGH	HIGH	HIGH	MEDIUM	HIGH
7. Entry level for producer organizations	High	High	Low	Low	Low	Low	Low	Low	Medium	Medium
8. Number/stringency of environmental criteria (apart from national regulation)	High	High	Medium	High	Low	Low	Low	Low	Medium	Low
9. Number/stringency of social criteria (apart from national/ILO regulation)	Low	Low	High	Low	Low	Low	Low	Low	Low	Low
10. Organization of farmers required?	No	No	Yes	No	No	No	No	No	No	No
11. GMOs allowed?	No	No	No	No	Yes	Yes	No	Yes	No	No
12. Certification or verification?	Cert.	Cert.	Cert.	Cert.	Cert.	Veri.	Veri.	Veri.	Veri.	Veri.

Table 3 also reveals that there is a trade-off between the market compatibility and institutional compatibility of standards on the one hand and the number and stringency of environmental and/or social requirements on the other hand. This trade-off causes standards to compete with each other and most of all, with Fairtrade and organic standards on the definitions of sustainable commodities (Bitzer et al. 2008; Visseren-Hamakers and Glasbergen 2007). Despite primarily forming part of a type of parallel production by large companies, such partnerships have already become part of the power struggle in global agrifood chains.

The application of standards enables partnerships to initiate a change in the coordination used among actors along global agrifood chains by commodifying certain sustainability values (Lyon

2006). Normal market-based coordination is supplemented with industrial coordination, which solves uncertainties about the quality of a product through inspection and certification, and with civic coordination, which internalizes social and environmental values into trade, albeit to varying degrees (Bitzer et al. 2008). The notion of complementing market-based coordination with industrial coordination seems consistent with firms forming a type of non-equity alliance to coordinate exchanges between parties along agrifood chains with higher control intensity, but without equity exchanges. Following Peterson et al. (2001, 153), the element of third party certification (or verification) constitutes “the most extreme ex post control” as ultimate enforcement of performance is delegated to a third, external party, exceeding the control of chain actors. Fairtrade is the most civic-driven by focusing on changing the governance structures of global chains and on empowering smallholder farmers vis-à-vis other chain actors (Renard 2003). In contrast, most standards used by partnerships are less civic-driven and can instead be labeled as business-driven, for they rely on inspection-centered coordination to integrate a basic set of environmental and social criteria into trade in reward for a basic price improvement for producers. However, as the effects on producers remain ambiguous, the main benefits accrue to large companies which are able to use standards to attain their business goals, such as market development, chain coordination and strengthening of brands (Muradian and Pelupessy 2005; Daviron and Ponte 2005; Giovannucci and Ponte 2005). Thus, standards leave intact the existing governance structures of agrifood chains and turn into new mechanisms for supply chain governance by large companies (Hatanaka and Busch 2008; Bain 2010). It might even be suggested that, while standards were originally designed to constrain the behavior of companies, and verify their adherence to a set of sustainability values, the current use of standards creates new power imbalances among producers and large buyers (Raynolds 2009). Together with the fact that standards compete with each other, this decreases the value of standards as steering mechanisms for sustainable development.

Policy Implementation: Working with Smallholder Farmers

Regarding the implementation of sustainability values, partnerships introduce good agricultural practices for production and post-harvest processes to increase the skills of smallholder farmers and enhance farm management (Ruben and Zuniga 2011). Often this is combined with the use of standards and certification to promote a set of rules for sustainable production and to align production to global market demand. In this regard, partnerships present a new source of technological change in agrifood chains that often fills a vacuum in developing countries where many farmers do not have access to adequate information and extension services (Bitzer et al. 2011). Thus, partnerships fulfill a task that is generally thought to be the responsibility of governments and public extension services.

Empirical research has shown that the transfer of technology and application of good agricultural practices have resulted in four main benefits for farmers, although there is arguably considerable variation in the extent of the benefits at the individual farmers' level (Bitzer et al. 2011; Bitzer et al. 2012b). Firstly, the employment of improved production methods has led to an increase in product quality and frequently productivity (cf. Potts et al. 2010; Bassett 2009). Secondly, good agricultural practices have improved the environmental performance of farms by adhering to basic environmental management practices, including the conservation of soil and water resources, the rejection of banned pesticides and the upkeep of primary forest (Perez-Aleman and Sandilands 2008; Ruben and Zuniga 2011). Thirdly, partnerships are able to improve the

working conditions at the production level and rule out unacceptable practices through the application of standards (Manning and Von Hagen 2010). Finally, certification can increase farmers' revenues, as it is often associated with the payment of price premiums (Raynolds et al. 2007; Potts et al. 2010).

Upscaling: the Creation of Networked Structures

Glasbergen (2011) suggests that the lack of strategic linkages among partnerships using standards leads to excessive multiplicity and fragmentation of the global governance system. This, in turn, limits their potential for upscaling. However, not all partnerships seek to promote chain-wide change by employing standards. A recent research project (Bitzer et al. 2012a), however, shows how particularly in the global cocoa sector, many partnerships work on pre-competitive sustainability challenges, e.g., child labor and poor production practices. Such non standard-based partnerships (NSBPs) take up a chain-wide function by establishing ties to one another, which are formed through overlapping memberships of organizations and increasingly also through institutional linkages between partnerships. The linkages channel the transfer of information (e.g. on agricultural production or farmer training), financial resources and services (e.g. provision of training to farmers), which reinforce the capacity of individual partnerships. Particularly the spread of knowledge and information between NSBPs serves two main purposes. Firstly, it helps in creating a common problem definition, for instance, on the issue of child labor. Secondly, it supports and steers the activities of individual partnerships. In this regard, the dissemination of information takes on a chain-wide governance function and contributes to the convergence of partnership activities according to commonly accepted best practices. The linkages not only increase the upscaling of overall partnership activities, but also indicate the formation of a global network of partnerships, which exists because it is inclusive in terms of (industry) members and exclusive in terms of issues that are addressed by partnerships. This implies that all powerful industry stakeholders are included in the linkages between partnerships, thereby fortifying the power structures of the industry, while competitive issues, such as standards, are excluded from the collaboration. Both aspects serve the purpose of avoiding internal conflicts of interest.

The impact of the linkages between NSBPs is enhanced through a meta-governance organization, such as the World Cocoa Foundation, which strengthens the linkages between partnerships by creating a shared vision of a new legitimate cocoa economy. It also provides guidance to partnerships by spreading information, setting priorities among sustainability issues and lobbying on their behalf. In this manner, the World Cocoa Foundation steers partnerships in reference to overall network goals and sustains the broader sustainability efforts of the cocoa industry. However, the formation of linkages between partnerships was only possible because the competitive issue of standards was deliberately excluded. Thus, NSBPs may address specific issues in a pre-competitive manner; yet, they are not able to establish and enforce rules for sustainable business behavior. They are also limited in their ability to deal with the existence of and competition between different sustainability standards. This exposes the structural fragility of the network of partnerships (Bitzer et al. 2012a).

The Capacity of Partnerships from a Development Perspective

While the governance perspective is largely positive about partnerships in global agrifood chains, various restrictions to the capacity of partnerships become visible when viewing partnerships from a development perspective. This perspective studies the capacity of partnerships in the context of a ‘development problem’ of agrifood chains, referring to the situation at the production level which is characterized by wide-spread poverty, environmental degradation and labor exploitation. Seen from this perspective, the capacity of partnerships remains limited due to the focus on incremental and not radical change, the ambiguous implications of the use of standards for producers, the inability of partnerships to empower smallholder farmers, and the questionable durability of partnerships’ achievements.

Agenda-Setting: Questions on the Type of Change Promoted

While partnerships act as important initiators of change, their aim is not to disrupt current structures, but rather to adjust these structures within the framework of stakeholder consent, and to take the ruling out of unacceptable practices as the starting point for a sustainable trajectory of agrifood chains. In line with this argument, Visseren-Hamakers and Glasbergen (2007) suggest that some partnerships are merely developed with the aim of slowing down more fundamental change. Bain (2010) even asserts that such a reformist approach may modify some mainstream agricultural practices, but is ultimately aimed at assuring and projecting large buyers’ economic priorities.

The incremental change pursued by partnerships has the advantage of being backed up by powerful stakeholders, particularly large corporations, and of fitting into current institutional structures (Fuchs et al. 2011). This shows, for instance, in the ‘institutional compatibility’ of mainstream-oriented standards, which advocate a process of incremental change based on prevalent agricultural practices, and in the institutional bias against Fairtrade and organic standards, which demand a shift in thinking on agricultural production (Bitzer and Glasbergen 2010). This indicates that the institutional environment of partnerships is most conducive to an incremental and facile type of change that can easily be applied on a large scale. However, this change strategy risks ignoring some of the underlying causes of the development problem of global agrifood chains, such as the significant power and resource imbalances between buyers and producers, which is causally related to the limited share of value added for producers and the exploitative conditions at the production level (cf. Daviron and Ponte 2005; Auld 2010).

Rule-Setting: The Ambiguous Implications of the Use of Sustainability Standards

As mentioned earlier, one of the key functions of partnerships is the use of sustainability standards and certification. Whilst there are several advantages associated with this approach, such as the promotion of set rules for sustainable production, partnerships also create specific problems related to certification burdens. This connects to the recent debate on standards in agrifood chains, in which claims and counterclaims are raised as to whether or not standards exclude smallholder farmers from potentially lucrative export-oriented markets (e.g. Daviron and Ponte 2005; Henson and Humphrey 2009; Jaffee et al. 2011). The core of this debate deals with two aspects: firstly, the compliance demands of standards and secondly, the costs of certification

(although Jaffee et al. (2011) caution that inclusion/exclusion equally hinges on a number of other factors, such as economies of scale and access to inputs). Regarding the first aspect, a general consensus has emerged that capacities at the production level are critical for being able to comply with the high demands of standard schemes propagated by partnerships and that if such capacities do not exist, substantial support for training and extension is essential (Mutersbaugh 2002; Bray et al. 2002; Ruben and Zuniga 2011). However, research from the coffee chain indicates that partnerships tend to go for the low hanging fruit, and focus their support activities on the most capable producers in an effort to ensure economic viability and to facilitate quick compliance with standards (Bitzer et al. 2012b).

Concerning the high costs of certification, observers agree that these put considerable financial strain on standard adopters, i.e., producer organizations (Henson and Humphrey 2009). With the exception of cotton, partnerships neither cover the costs of certification nor provide sufficient credit opportunities for producer organizations. Producers themselves are responsible for ensuring that they receive certification to demonstrate their compliance with standards. The lack of available finances to cover certification costs creates great difficulties for producer organizations, and in many cases fortifies their dependence on external donors (Bitzer et al. 2012b).

Whilst the burdens of conformity, including financial costs and risks, are shifted downstream to the production level, the benefits of certification for producers are often uncertain, both in terms of price premiums and enhanced market access. Most standards offer, if at all, only flexible price premiums which are subject to negotiation, regardless of the efforts of farmers to comply with the standards (Daviron and Ponte 2005; Giovannucci and Ponte 2005). Only Fairtrade works with guaranteed minimum prices, but since this approach contrasts the market-based formation of prices, it is rejected by most partnerships (cf. Ruben and Zuniga 2011). Instead, the premiums for certified products are based on process and product quality, negotiation capacity and scarcity. However, the last two criteria make it difficult for producers to receive high premiums. On the one hand, the negotiation capacity of producers and their organizations is often severely limited due to lacking managerial skills (Bitzer et al. 2012b). On the other hand, many certified products are already experiencing situations of oversupply. As supply outstrips demand, price premiums associated with certified products are bound to decline (Muradian and Pelupessy 2005). This confirms that standards do not set in motion a meaningful redistribution of income along agrifood chains (Daviron and Ponte 2005).

Moreover, standards do not serve as a guarantee for enhanced market access in the face of limited absorption capacities of markets for certified products (Daviron and Ponte 2005). Partnerships already face considerable difficulties in finding sufficient buyers for the entire 'partnership produce'. As a result, producer organizations are increasingly motivated to simultaneously maintain multiple certifications with differing demands to improve their chances for favorable market access (Ruben and Zuniga 2011; Bitzer et al. 2012b). Yet, although farmers are required to adopt new production techniques, comply with a variety of non-harmonized demands, and face high certification costs, improved market access remains elusive in many cases. The limited size and high demands of markets for certified products imply that only a limited number of farmers can participate (cf. Jaffee et al. 2011). These critical aspects limit the sustainability of certification as a business model from a development perspective.

Policy Implementation: Working with Producers, but Without Empowerment

The governance perspective observed different benefits of partnerships for producers due to the promotion of good agricultural practices. However, partnerships seem to be unable to complement this technological change with a more human-centric type of change that focuses on the strengthening and empowerment of producer organizations (Bitzer et al. 2012b). Such empowerment can be understood in a twofold way, referring to the position of producer organizations within a partnership as well as to the position of producer organizations as chain actors. Both perspectives reveal a discrepancy between the objectives and claims of partnerships and the effects of partnership activities.

While many partnerships, especially in the coffee and cocoa chains, cooperate with producer organizations, the latter are often not able to significantly influence the process and outcome of partnering (Bitzer et al. 2011). Producer organizations are considered the beneficiaries and recipients of partnership interventions instead of actual members. They are chosen by the partnership initiators based on already existing relationships, and they are rarely involved in the design planning of partnerships (Rein and Stott 2009). Similarly, other actors from producer countries are frequently underrepresented in partnerships, whereas actors from consumer countries bring in substantial resources, perform critical tasks and are thus able to shape the contour and content of partnerships (Dingwerth 2008; Arifin 2010; Fuchs et al. 2011). Such a pattern of actors' representation and roles reproduces existing power imbalances between already powerful actors, such as businesses, and actors from producer countries, especially producer organizations (Gregoratti 2011). This implies that partnerships are less an expression of an equal reconciliation of interests, but rather one of a managerial approach to the sustainability challenges of global agrifood chains, wherein influence is granted through individual capabilities and resources. As a result, partnerships are mainly business-driven following a demand-oriented strategy as opposed to being producer-driven which would facilitate a needs-based strategy.

This situation also limits the capacity of partnerships to strengthen the position of producer organizations as chain actors. It is generally acknowledged that the establishment and strengthening of producer organizations are associated with several challenges stemming from the lack of human, material and financial resources of producer organizations. Partnerships seem to recognize the difficult situation of producer organizations and often implement training activities to improve managerial and business administration skills. However, the focus of partnership activities on farmer training to promote good agricultural practices and sustainability standards appears to detract attention from the condition and needs of producer organizations. Measures to strengthen producer organizations have been implemented in piecemeal fashion as add-ons and with patchy success at best (Bitzer et al. 2012b). Only partnerships that work with the Fairtrade label are required to pay special attention to the strengthening of producer organizations; for the remaining partnerships producer organizations constitute a means to get access to producers and to create economies of scale. The empowerment ideal might be part of the rhetoric of partnerships, but largely disappears in practice (Auld 2010). As a consequence, producer organizations often continue to struggle with weak financial and human resources, and rely on external support to uphold operations.

Upscaling: The Uncertain Durability of Partnerships' Achievements

Finally, the capacity of partnerships to promote sustainable change is restricted due to the questionable durability and upscaling potential of partnerships' achievements (cf. Visseren-Hamakers et al. 2010). Both appear to be constrained by the focus of many partnership activities on certification and by the implementation of activities in a project-like manner within a limited timeframe. The focus on certification is associated with high financial burdens for producer organizations, and results in a comparatively narrow target group of farmers. The project-like trait of partnership activities seems to confine the capacity of partnerships to promoting technological change whilst overlooking to a large degree the importance of empowering smallholder producers and their organizations to act as self-determining chain actors for the uptake and upscaling of partnership activities. Moreover, the shift of technology provision from public agencies towards partnerships raises questions about the roles and responsibilities of these agencies and other governmental institutions from producer countries once partnership activities are terminated. Particularly in the coffee sector, local public agencies are hardly involved in partnerships, limiting the ability of partnerships to institutionalize their changes in local practices (Bitzer et al. 2008). This problem is less pronounced in the cocoa sector, where similar observations on partnerships have been made in the past, and where partnerships have started to actively seek the engagement of producer country governments to link up their own activities with local initiatives and public agencies (Bitzer et al. 2012a). In a related manner, cotton partnerships either include companies with local branch offices or establish ties to public extension services to root new technologies in local systems (Bitzer and Glasbergen 2010).

Differences between Partnerships in the Three Chains

Two key differences between partnerships in the three chains investigated can be distinguished (see Table 4 for a comparative overview). Firstly, this concerns the role of so-called lead firms, i.e., firms that are able to set the parameters under which other actors in the chain operate (Humphrey and Schmitz 2001). Particularly in the coffee and cocoa chains, the presence of lead firms, such as large coffee roasters and chocolate manufacturers, is well documented (Daviron and Ponte 2005; Fold 2002). In these chains, lead firms are generally involved in multiple partnerships simultaneously, and have also assumed prominent roles in partnerships in terms of initiation, funding and implementation. This has contributed to a mainstreaming of partnerships, which, in turn, has paved the way for sustainability values to enter the agenda of big business. At the same time, the active role of lead firms creates an imbalance in resources compared to other partnership actors, thereby reproducing existing imbalances within these chains. The inclusiveness of large business actors is less pronounced in the cotton sector, where fewer partnerships are active and clear lead firms are difficult to point out due to long and fragmented supply chains and the reduced concentration of market power amongst a limited number of companies (Daviron and Gibbon 2002).

Secondly, the three chains differ significantly regarding the development of institutional linkages among partnerships for purposes of collaboration and resource exchange. The global cocoa sector constitutes a kind of prototype for such linkages among partnerships, whereas the case of coffee showed that partnerships compete with each other due to their reliance on sustainability standards (Bitzer et al. 2008). Just a few years ago, the cocoa sector was considered to be lagging

behind the coffee sector in terms of sustainability efforts, which had significantly more partnerships, featured more sustainability standards (with greater market share), and attracted more publicity, particularly to the activities of large coffee companies. Since then, the cocoa sector has taken a different development path in terms of sustainability initiatives, which outshines the achievements of coffee partnerships with respect to the emergence of linkages which channel different types of resources among partnerships. The presence of such linkages can largely be attributed to the explicit focus of many cocoa partnerships on issues other than promoting standards, to the involvement of all large industry stakeholders, and to the performance of a meta-governance role by the World Cocoa Foundation. This does not imply that institutional linkages among partnerships are completely absent in the coffee and cotton chains. However, they do seem to be more unlikely due to the rootedness of most coffee partnerships and all cotton partnerships in the use of standards. Moreover, a neutral meta-governance organization, such as the World Cocoa Foundation, is lacking in both chains.

Table 4. Comparison between the coffee, cotton and cocoa chains

	Coffee chain	Cotton chain	Cocoa chain
Total number of partnerships (until March 2010) (Bitzer 2010)	125	25	55
Key drivers behind partnerships	Increased pressure on companies (e.g. coffee crisis, child labor allegations); emergence of new specialty markets	Some pioneer companies, but mostly conventional corporate social responsibility policies	Supply concerns; increased pressure on companies (child labor allegations)
Role of ‘lead firms’ in chains	From reactive to active	No clear lead firms; generally passive business behavior	From reactive to active
Engagement of lead firms in partnerships	Common; often multiple partnerships at the same time	No clear lead firms; slowly increasing engagement of big textile companies	Common; often multiple partnerships at the same time
Mainstreaming of partnerships?	Yes	No	Yes
Institutional linkages among partnerships	Hardly (due to competition between standards)	Hardly (due to competition between standards and lack of mainstreaming of partnerships)	Yes, particularly between non-standard based partnerships
Meta-governance organization coordinating different partnerships?	No	No	Yes, the World Cocoa Foundation

Discussion and Conclusion: Partnerships and the Neoliberal Agenda

Partnerships can mostly be seen as reactions to government and market failures which result in various sustainability challenges of global agrifood chains. From a governance perspective, the emergence of partnerships is largely positive inasmuch as partnerships act as initiators and agents of change which, although still mostly confined to niche markets, unfolds a chain-wide

governance effect. From a development perspective, the positive effects of partnerships are rather indirect and ambiguous. Several aspects of partnerships can be viewed critically and challenge their capacity to promote sustainable change. These differing conclusions on the capacity of partnerships can be explained by the fact that partnerships fit into and largely embody the neoliberal agenda (Blowfield and Dolan 2008; Utting and Zammit 2009), which raises specific questions, particularly from a development perspective. Here, we do not refer to the neoliberal project of the 1980s and early 1990s, propagating privatization, liberalization and deregulation, but rather to the subsequent process of what Peck and Tickell (2002) refer to as 'roll-out neoliberalization', i.e. extending the legitimacy of neoliberalism, including the efficiency of private enterprises and market-based solutions to social and environmental issues.

The article revealed that the neoliberal agenda is mirrored in three key conceptual underpinnings of partnerships, which each create considerable friction with certain development objectives. Firstly, partnerships, in a reciprocal interplay, promote as well as reflect the increased importance of businesses, but also of stakeholders from civil society. While this is suggested to counteract the insufficient reach and enforcement of traditional governmental approaches, the endeavor of exploiting the changing role of business in society seems to result in partnerships being increasingly driven by businesses that are able to strategically use partnerships to address concerns relevant to them and to expand their sphere of influence on sustainable development issues (Gregoratti 2011). Secondly, partnerships epitomize the decreased importance of governments, since governments, particularly from producer countries, are conspicuously underrepresented in partnerships, and since partnerships primarily act as change agents at the global and local levels, but not at the national level. This risks leading to the exclusion of governments from shaping the notion of development, and it implies that important decisions regarding production issues are often made far away from the actual country of production (Schouten and Glasbergen 2011). Thirdly, partnerships represent a managerial approach to solving sustainability challenges, which can best be seen in the popularity of standards among many partnerships. However, standards do not represent neutral tools, but rather typify new social practices that have ambiguous implications for producers and serve to focus on particular issues, while detracting attention from other issues (Hatanaka and Busch 2008).

This neoliberal orientation of partnerships appears to result in a depoliticized agenda-setting, which marginalizes certain development concerns, such as the issue of smallholder empowerment, the costs and benefits of different certification schemes, or the implications for the poorest segment of producers. Other concerns are not addressed at all, such as the patterns of power and resource distribution underlying global agrifood chains. The dominance of business objectives over development concerns shows that partnerships are constrained in their capacity to reshape the relationship between business and development without external incentives. Ultimately, they might adjust current structures, but it is unlikely that the incremental change pursued by many partnerships would lead to more fundamental change.

This should not be taken as a plea against the involvement of business in partnerships. Rather, this discussion aims to highlight the tensions within partnerships due to the difficult relationship between the neoliberal orientation of partnerships and certain development objectives. The comparison of partnerships from two distinct perspectives revealed that partnerships pursue a pragmatic view of sustainable change, which is subject to different limitations, and is not able to

fully capture the conditional nature of positive development outcomes. This calls for a re-conceptualization of partnerships and their underlying assumptions to change the way that they construct the relationship between business and development. Partnerships are not ‘wrong’, but insufficient and therefore, renewed attention should be paid to the gaps in the solutions provided by partnerships.

Businesses cannot be expected to commence such a re-conceptualization against their self-interests and their framing of problems. As Knorrinda and Helmsing (2008: 1059) argue: “Firms have no interest in [...] a focus on development impacts beyond what they need in terms of verifiable information to satisfy their stakeholders”. Participation in partnerships makes good business sense on a variety of grounds and can be helpful in gaining or maintaining competitive advantage. On the one hand, corporate engagement is important for their license to operate by portraying responsible business behavior to consumers, investors, business partners and society at large. On the other hand, involvement in partnerships can result in concrete deliverables, such as developing new markets and products, securing supply, coordinating supply chains and mitigating risks. Although no information exists on the actual benefits gained by businesses through their engagement in partnerships, the fact that businesses have been so successful in determining the agenda of partnerships, including the use of standards, may indicate that most existing partnerships are the best governance mechanism for achieving the sustainability goals of *businesses*.

So the question remains, which other actors could stimulate and nurture a renewed conceptualization of partnerships? Governments, as noted throughout the partnership literature, are hardly or only sporadically involved in partnerships, and mostly lack a strategic and coordinated approach to partnerships. This leaves us with NGOs, despite the significant criticism they have received, among others as regards their effectiveness and accountability in development efforts, and despite their shortcomings in addressing these criticisms. Yet, given their active role in initiating the partnership trend by challenging firm behavior, it would appear that it depends mostly on NGOs to re-politicize their interactions with businesses in order to achieve a broader framing of the sustainability problems than businesses are willing to endorse. Furthermore, their position as intermediaries between state, market and citizens, as intermediaries between different countries and levels of global-local action, and as intermediaries between vision and pragmatism (Edwards 2011) might make them well-suited to embrace the challenge of reconceptualization. Again, this does not imply that NGOs should collectively abandon the collaborative approach towards business and resort back to campaigning, naming and shaming. As Edward and Tallontire (2009, p. 830) point out, re-politicization is about creative contestation in lieu of antagonistic confrontation and should therefore not be interpreted as anti-business behavior. Rather, it entails a renewed, deliberate and independent problem analysis in terms of what the sustainability challenges of global agrifood chains are, what kind of change would be necessary to overcome these challenges, how this change could come about, either through partnerships or through alternative action, and what the roles of the different stakeholders in these pathways could be.

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Parallel Development of Five Partnerships to Promote Sustainable Soy in Brazil: Solution or Part of Wicked Problems?

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Abstract

The central question of this paper is how to understand and characterize the parallel development of global private partnerships and other partnerships at the global level or national level, that all aim to promote sustainability of a global commodity. The aim of this paper is to contribute to the discussion on the role and use of global private partnerships in coping with sustainability as a wicked problem. For this purpose we have constructed and used a theoretical framework on complex decision-making processes with a grounded theory that explains diversity of private governance networks in terms of rivalry and exclusion. Focusing on five partnerships that promote sustainable production of soy in Brazil, the paper concludes that their development is highly interdependent and dialectical. One of the five partnerships is the Round Table on Responsible Soy. Both the start and development of this global private partnership have not ended but fuelled rivalry between different partnerships, herewith reproducing the wickedness of governance of sustainable production of soy. Managing sustainability as a wicked problem requires an understanding of the dialectical development of partnerships. Instead of embracing one partnership as the best or the benchmark, it may be wiser for policymakers to invest in managing interactions and articulating relationships between different partnerships at the global and national level.

Key words: Private partnerships, rivalry, wicked problems, sustainable soy, Brazil

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Introduction

Sustainability has been called an example of a special kind of problem: wicked problems (Batie 2008; Peterson 2009). Wicked problems are ‘dynamically complex, ill-structured, public problems. The causes and effects are extremely difficult to identify and model; wicked problems tend to be intractable and elusive because they are influenced by many dynamic and political factors as well as biophysical complexities’ (Batie 2008, 1176). Peterson (2009) considers sustainability as a wicked problem because it is ‘complex, ill-defined, messy and unsolvable in any traditional sense’ (p.71). In this paper we want to highlight two other dimensions of sustainability as a wicked problem: first, sustainability is a wicked problem because ‘there is no definitive formulation of what the problem is’ (Rittel and Weber 1973, 161). The problem of sustainability has something to do with lack of congruence between environmental, social and economic values, institutions and practices that explain more or less irreversible, processes of environmental degradation, social exclusion and, or economic decline. However, it is difficult to define and agree on what the problem exactly is, where the problem starts and what the scale of the problem is. Second, sustainability is a wicked problem because there has been an explosion of organizations and authorities at local, national and international levels to discuss and solve sustainability but at the same time little agreement on what formal and/or informal rule systems should define and direct sustainability (Rosenau 2003). The search for sustainability is characterized by ‘double dynamics’ of governance : ‘actors not only deliberate to get favorable solutions for particular problems, but while deliberating also negotiate new institutional rules, develop new norms of appropriate behavior and devise new conceptions of legitimate political intervention’ (Hajer 2003, 175-176). In other words, sustainability can be characterized by parallel processes of institutional proliferation and emergence of institutional voids.

One of the worldwide controversies on sustainability involving business, civil society and government actors, is about negative environmental and social effects of the production and expansion of global agricultural commodities, like soy, palm oil, wood, coffee, etc. Typically, different views exist on the relative weight and importance of negative effects and to what extent they outweigh positive effects. Also, there is no consensus on the extent to which negative effects can be attributed to production and expansion. Whilst knowledge and information on cause-effect relationships is still evolving or outright contested, actors from different spheres and different places have organized multi-stakeholder consultations to discuss how to promote sustainable production. Sharing concerns or desires on sustainability, they gradually realized that they were part of a very complex global system, glued together by multiple chains of production, trade and consumption of a global commodity.

Global Private Partnerships

The 1990s and even more so the 2000s have been the era characterized by the emergence of new forms of global governance in the field of sustainable production of global commodities like palm oil, soy, wood, coffee, etc. Whereas the UN Sustainability Summit of Rio in 1992 marked the beginning of many public-private partnerships to address sustainability concerns, it were typically business and civil society actors who manifested themselves as new authorities to govern sustainability of global commodities through private partnerships (Glasbergen 2008; Hospes 2011; Schouten and Glasbergen 2011). Seeing that national governments were hesitant to

develop global sustainability standards to direct producers and business of global commodities on pathways to sustainability, business and civil society actors began to organize themselves at different levels and in different countries to prepare the development of sustainability principles and criteria. They developed network-based polities or institutional arrangements and began to organize non-territorialized representation of stakeholders and stakeholder groups from different parts of the world. With a view to establish widely shared principles and criteria for sustainability rules and to become accepted as a new authority to develop such rules, the early developers of global private partnerships or networks tried to be inclusive in at least two ways: to include as much as possible of stakeholders from different spheres and places in the process of developing global principles and criteria and to develop as comprehensive as possible a set of sustainability principles and criteria.

Global private partnerships can be defined as new authorities or institutional arrangements to manage or at least cope with sustainability as a wicked problem. The rise of these partnerships can be seen as answering the call of Rosenau (2003) for ‘innovative partnerships between different actors to reverse ecological decline in the early decades of the new century’ (p. 28). However, the rise and development of these partnerships have neither been easy nor uncontroversial. First, business and civil society actors not only come from different places and spheres but also have different missions and concerns are inspired by values that may be hard to reconcile, and last but not least, may join or leave the process of consultation at different times. Second, for different reasons business or civil society actors may consider other organizational or regulatory initiatives at the global or national level as either more effective or legitimate in promoting sustainability. This means that some kind of rivalry may exist between global private partnerships and other partnerships at global or national level, calling themselves networks, coalitions or alliances.

The aim of this paper is to contribute to the discussion on the role and use of global private partnerships in coping with sustainability as a wicked problem. For this purpose we want to describe the parallel development of global private partnerships and other partnerships, coalitions or networks, that all aim to promote sustainable production of a global commodity. Our main question is: how to understand and characterize this parallel development? Our specific questions are: to what extent and how is the start of a global private partnership affected by other, parallel initiatives? Does the development of global principles through multi-stakeholder consultation end or rather feed rivalry between a global private partnership and other partnerships, coalitions or networks? Does the global private partnerships emerge as the benchmark or rather as one of the forms of governance to generate and implement sustainability principles and criteria for a territory or category of people?

To describe and analyze interactions through time between different partnerships and their principles or programs, we will construct and use a theoretical framework. The framework is a combination of the ‘rounds model’ that has been coined by Teisman (2000) to analyze complex decision making processes, and a grounded theory that explains diversity of private governance networks in terms of rivalry and exclusion (Smith and Fishlein 2011).

The empirical and analytical part of this paper will focus on the emergence and development of the Round Table on Responsible Soy (RTRS) as a global private partnership and four other

organizational and regulatory initiatives that started before or after the formal launch of this global private partnership: the Soy Platform of Brazil, the Basel Criteria, the Soy Moratorium and Soja Plus. As far as the locus of soy production is concerned, we will concentrate on global and national organizations or agreements that are of importance for production of soy in Brazil, as the second largest producer of soy in the world.

Our empirical data are based on semi-structured interviews with different business, civil society and some government actors in Brazil and the Netherlands as part of evaluation research in 2006 (Hospes 2006; Hospes et al. 2009; Hospes 2010) and in 2011 (Valk et al. 2012); participatory observation of the authors at national and international conferences organized by the RTRS; and desk study of minutes of board meetings and meetings of the General Assembly of the RTRS. Appendix 1 provides a detailed and chronological overview of the sources and methods used to describe the parallel development of the five partnerships directed at the promotion of sustainable soy and the interactions between them.

In the next section we will present our theoretical framework. Thereafter, as a background note, we will briefly introduce soybean production and the Forest Code of Brazil. We will then analyze three rounds of interactions between different partnerships, principles and programs of business and civil society actors, that all are directed at promoting sustainable soy in Brazil. In the final section we will draw some conclusions and present some methodological ideas and policy suggestions for studying or supporting the development of partnerships.

Theoretical Framework

To analyze complex decision making in societies that are confronted with network structures, Teisman (2000) distinguishes three models. The first one is the phase model. A key assumption underlying this model is that decision-making can be neatly divided into distinctive stages of formation, adoption and implementation of policy. Another assumption is that a focal actor adopts a dominant definition of the solution to a problem. The phase model is a planning model, but is not very useful to analyze decision-making processes of actors involved in geographically wide and socially diverse networks.

The second model is the stream model. This model is based on the idea that policy making consists of three parallel streams: a stream of problem definitions, a row of solutions and a series of political commitments. According to this model, major policy changes can only occur if these streams become linked, that is, when problem statements, solutions and political commitments of different actors coincide and fit at one moment in time. This model comes much closer to reality, but fails to acknowledge interactions between actors through time and the actor as a processor of (particular versions of) the three streams.

The third model is the rounds model. This model is focused on interactions between different actors (individuals, groups or collective entities) in and through time. In contrast to the phase model, this model assumes that many actors are involved in decision making, not just a focal actor. In contrast to the stream model, this model assumes that every actor involved in decision making will introduce his or her own perception of relevant problems, possible solutions and political judgment. Like the phase model, the rounds model adopts a time perspective: a

distinction is made between different time periods. However, these periods are not characterized in terms of the distinctive stages of the phase model but by more or less controversial decisions that mark the beginning and end of a 'decision making round'. Much more than the stream model, the rounds model is focused on interactions among different actors, or the wicked character of these interactions: during one period or round, one actor may consider a proposal or activity as part of policy implementation. This same proposal or activity may be conceived as part of policy development by another actor. Also, one actor may consider his proposal or activity as a solution to a problem whereas another actor may conceive this proposal or activity as the beginning or cause of a problem.

The rounds model has been mainly used to analyze interactive decision-making in public policy and public-private partnerships in western countries (like the Netherlands, UK, Canada) in the domains of resource management, spatial planning or environmental assessment (Edelenbos and Klijn 2005; Howlett 2007; Klijn and Teisman 2003; Kørnøv and Thissen 2000). Howlett (2007), for instance, used the rounds model to explore policy chronologies of decision-making processes. He examined activities and interaction in five domains between government and NGO actors during different rounds of public policy making in Canada. Calling for further investigation and elaboration, his analysis found that both governmental and NGO activity vary greatly over rounds in terms of intensity and that NGO activity in particular appeared to be driven by opposition to proposed bills.

Given the network-like character of global private partnerships and the many actors and interactions involved in decision-making, we think that the rounds model is also extremely useful to describe and analyze interactions and decision-making processes at these partnerships. However, to make the model more suitable to describe interactions between different partnerships, we propose to redress a flaw in the model and use a theory that explains diversity and competition between different networks.

The rounds model focuses on interactions between actors but assumes that actors remain where they are. The study of Smith and Fishlein (2011) on rivaling private governance networks, however, shows that we cannot assume that all actors are remaining engaged with one particular network all the time but may shift from one to another, or even leave one initiative to start a new one. The rounds of decision-making can be seen as a game of musical chairs, with actors moving around the chairs and deciding to sit or leave the game when the music stops. Actors may switch from one negotiation space or rule-making process to another. They observe that, 'The impetus for creating a competing network most often stems from groups of stakeholders that are either excluded from the creation of the initial effort or feel disadvantaged by the course its development is taking' (Smith and Fishlein 2011, 514). Moreover, they argue that exclusion of actors from existing networks explains diversity of and competition between different organizations and networks. Finally, they conclude that competitiveness does not so much depend on specific rules but on the composition of an organization or network and the unique relation-specific resources and capabilities of this organization or network (ibid).

Combining the theory on rivalry of Smith and Fishlein with the rounds model of Teisman, we want to posit the following. Exclusion of actors from a decision-making process can be considered as the critical mechanism or event to explain both diversity of and rivalry between

different initiatives. Such exclusion can take place in different ways and for different reasons during different rounds of decision making. Actors may not have been invited at the very beginning of an initiative, or find it too hard to make their voice heard or vote count. Some may find an issue lacking on the agenda, others disagree with the adoption of specific principles and criteria. For different reasons, they may leave a network because they feel disadvantaged by the course of its development, and start a new initiative.

To further develop the theoretical argument on rivalry between different initiatives to explain diversity, we want to consider the scale of an initiative. Next to membership composition and specific rules, an initiative can be characterized in terms of scale. With the scale of an initiative, we mean the scale at which the initiators believe or assume that problems, norms and other solutions for (lack of) sustainability need to be negotiated and agreed upon. If an initiative to promote sustainable production of a commodity is defined at the global scale, then actors from all over the world can join the initiative and participate in decision-making processes, provided they have the means to do so. For those global commodities that are geographically concentrated in a few countries, this implies that producers have to cope with or see themselves confronted in a network with many foreign or international actors. If an initiative is defined at the national or local scale, then foreign or international actors are or can be excluded from membership and decision-making rounds.

Soybean Production and the Forest Code of Brazil

Soybean is a multi-purpose crop and global commodity. It is used for production of feed, food and fuel. All over the world, the myriad uses of soybean have been discovered and developed by firms, researchers and government agencies in the fields of health, nutrition, food, agriculture and industry. Not surprisingly, soybean has been qualified as a ‘miracle bean’ (Both ENDS 2006; Prodöhl 2010).

Production of soybean is largely concentrated in the western hemisphere. The USA, Brazil and Argentina are the three main soy producers in the world (see Figure 1). These three countries are also world leaders in export. China is the major destination market: 59 percent of all traded soybean is imported by China, followed by the EU 27 (14 percent).¹

Whereas the USA is the world’s leading producer and exporter of soy, much of the sustainability debate has concentrated on Brazil, covering the largest part of the Amazon biome. The fear of rapid and irreversible deforestation of the Amazon biome as a result of agricultural expansion has been a key motive of international and national civil society organizations (like WWF, Greenpeace, the Brazilian Forum of NGOs and Social Movements for the Environment, the Amazon Working Group, etc.) to call for sustainable or responsible soy production to minimize negative environmental and social effects.

¹ Until the second World War, China was the world’s largest producer of soybean. In 1943 the USA took over its position and in 1974 Brazil’s production also passed that of China (Shurtleff and Aoyagi 2007).

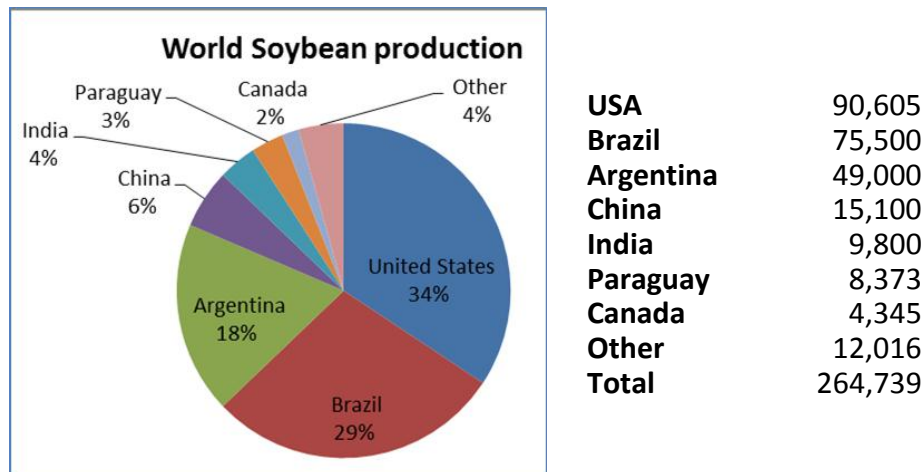


Figure 1. World soybean production 2010/2011 (in 1,000 MT)

Source. USDA-FAS Table 07 Soybeans: World Supply and Distribution, downloaded September 20th of 2012 at <http://www.fas.usda.gov/psdonline/circulars/oilseeds.pdf>

These civil society organizations are not concerned about the lack of environmental law to regulate deforestation but rather the lack of compliance to such law and the political pressure of soy producers to soften the Brazilian Forest Code (Lima et al. 2011). This code sets limits on the amount that can be cleared within any plot of land. ‘The 1965 Code (Law 4.771/65) was amended in 2001 (MP 2.1666/67), making it a legal requirement that 80% of each parcel within the Amazon biome must remain forested, which means that soy farming will be much less profitable here than in the Cerrado, where only 35% of native vegetation cover has to be retained’ (ibid). In addition, the Brazilian Forest Code distinguishes Areas of Permanent Preservation (APP). These are vulnerable areas, such as riversides, hilltops, and steep slopes, where agricultural production and expansion is not allowed.

The Ministry of Environment of Brazil has concluded in several studies on deforestation in Brazil that poorly defined property rights form a major explanation of on-going deforestation and lack of compliance to the Forest Code of Brazil (Valk et al. 2011). These poorly defined property rights also form one of the main reasons why land conflicts persist at the agricultural frontiers in Brazil (Alston et al. 1996; Mueller et al. 1994).

In May 2011 the Brazilian Congress approved an amendment of the Forest Code, that would provide amnesty for illegally logged forest before 2008. This amnesty did not pass the Brazilian Senate. The senate, however, did accept a revision of the Forest Code in December 2011, that gives a long time (20 years) to large soy producers to comply with legal requirements and sets smaller margins for cultivation close to vulnerable areas (Valk et al. 2011).

Global private partnerships, and certainly the RTRS that requires soy producers to comply with applicable national legislation, can be seen as social mechanisms or designers of soft law to realize greater compliance to the Forest Code of Brazil. Second, they offer alternative and higher sustainability standards for soy production, certainly in case this code is watered down.

Five Sustainability Partnerships

In the 2000s, business and/or civil society actors have formed different partnerships, coalitions or networks to develop principles or programs for promoting sustainable production of soy (CREM 2011; Proforest 2005; Valk et al. 2012). Five of these partnerships, networks or coalitions are relevant for the production of soy in Brazil (see Table 1). Two of them have been the initiative of global players from business and civil society: the Swiss retailer COOP and WWF Switzerland are the initiators of the Basel Criteria; WWF and Unilever are the initiators of the Round Table on Responsible Soy. Three partnerships, networks or coalitions are the joint initiative of Brazilian agribusiness and, or NGOs: the Soy Platform of Brazil is the initiative of one Brazilian NGO and four Brazilian networks; the signatories of the Soy Moratorium are two Brazilian associations: ABIOVE (Brazilian Association of Vegetable Oil Industries) and ANEC (National Association of Grain Exporters of Brazil). These two associations, together with Aprosoja (Mato Grosso Soybean Producers Association) and the civil society organization ARES (Responsible Agribusiness Institute), are the initiators of Soja Plus.

Table 1. Partnerships, principles and programs for sustainable soy in Brazil

Initiators of partnership, principles and/or program	Name of partnership, network or coalition (Year of start)	Name of principles or program (Year of launch or adoption)	Territorial focus or social object in Brazil
1. Brazilian NGO and four Brazilian networks	Soy Platform Brazil (2004)	Criteria for socially responsible soy (2004)	Companies that buy soy or soy-related products
2. COOP Switzerland and WWF Switzerland	(2004)	Basel criteria (2004)	Non-GM soy producers
3. WWF and Unilever	Round Table on Responsible Soy (2006)	RTRS standard (2010)	All soy producers
4. Brazilian business associations ABIOVE and ANEC	(2006)	Soy Moratorium (2006)	Amazon biome
5. Brazilian business associations and civil society organization (ABIOVE, ANEC, Aprosoja and ARES)	(2010)	Soja Plus program (2010)	All soy producers

In three cases, the initiators did not give a name to their partnership but simply presented their principles or program to a wider audience: the Basel criteria, the Soy Moratorium and Soja Plus. In two other cases, the initiators did give a name to their partnership, as to underline the importance of forming a new network and organizing deliberation on the development of principles and criteria: the Soy Platform of Brazil and the Round Table on Responsible Soy. This is most visible in the case of the RTRS with a time lap of four years between the official start of the partnership and the adoption of their soy standard.

Though all partnerships have developed principles or programs that are relevant for the Brazilian context, they are not directed at the same territory or social objects. The Basel criteria are meant

for production and producers of non-genetically modified soy only. The RSPO principles and criteria refer to both GM and non-GM soy. The criteria developed by the Soy Platform are meant for companies that purchase soy or soy-related products in Brazil. The Soy Moratorium refers to the Amazon biome, not all of Brazil. Soja Plus is a program for all soy producers in Brazil.

Using our theoretical framework, we will now describe interactions between business and civil society actors during different rounds of decision making on partnerships and principles to promote sustainable soy. Each round is characterized by a multitude of actors, initiatives and decision-making processes, that influence each other. Some actors may consider their initiative as the framework for new ones, yet other actors who have been not been invited at the very beginning of this initiative, may deny this initiative and start their own. The establishment of a partnership or a solution to a problem in one round, may be challenged or denied during another round, leading to new governance arrangements and solutions.

The first round includes the following events: the launch of the Basel Criteria, the start of the Soy Platform Brazil, the organization of the first international conference on sustainable soy and the start of the Soy Moratorium. The official registration of the RTRS as an association under Swiss law in November 2006 marks the end of this round. The second round includes the following events: the annual extension of the Soy Moratorium, the launch of the Soja Plus Program and the adoption of the principles and criteria for responsible soy at the General Assembly of the RTRS in June 2010, also marking the end of this round. The third round is still evolving. Our description of this period will focus on what we expect to be future dialectics of the RTRS as a global private partnership amidst other partnerships, increasingly involving government actors from Brazil. Figure 2 provides a schematic picture of the three rounds, characterized by the parallel development of and interactions between different partnerships to promote sustainable soy in Brazil. These interactions and their outcomes will be presented in more detail in the following description of the three rounds. For our use of the rounds model, we have followed a methodological protocol (see Appendix 2).

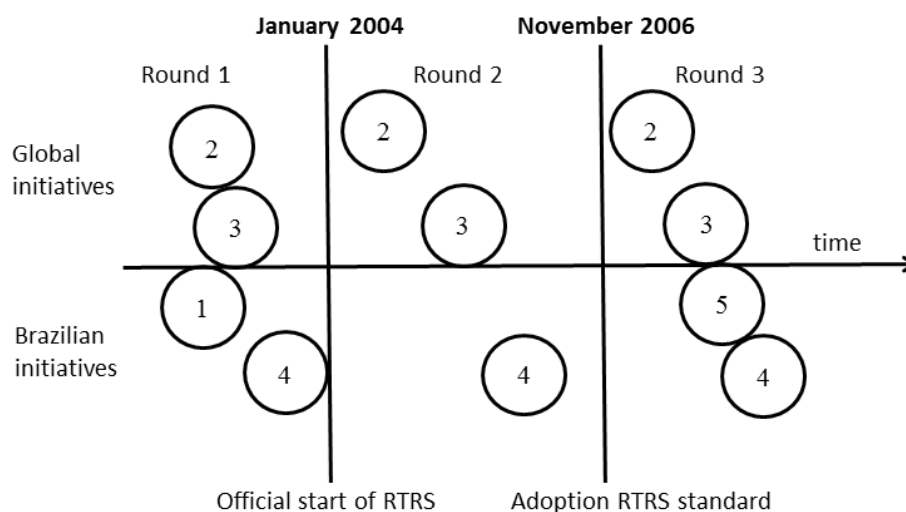


Figure 2.

Note. The circles refer to different partnerships, principles or programs for sustainable soy in Brazil. 1= Soy Platform of Brazil; 2= Basel criteria, 3= RTRS, 4= Soy Moratorium; 5= Soja Plus.

The First Round: Parallel Private Initiatives in Brazil and Europe

In the first half of 2004 different meetings were organized in Brazil and Europe that would lead to different principles for promoting sustainable production of soy.

From February to June 2004 the Soy Platform of Brazil organized two meetings and one virtual forum to develop a common view on principles and criteria for sustainable production of soy. The platform was organized by CEBRAC Foundation and four network organizations from civil society of Brazil (Proforest 2005): the Brazilian Forum of NGOs for the Environment (FBOMS), the Cerrado Network, the Amazon Working Group (GTA) and the Southern Brazil Family Farmworkers' Federation (FETRAF-Sul). Some 61 Brazilian environmental and social NGOs got involved in drafting 'social responsibility criteria for companies that purchase soy and soy products'. The consultation process was financially supported by three Dutch organizations (Cordaid, DOEN Foundation and Solidaridad), that wanted the diverse Brazilian civil society organizations to get their act together.

March 2004 WWF Switzerland and the Swiss retailer COOP launched the Basel Criteria, consisting of principles and criteria for responsible soy production. A distinctive principle is that genetically modified seed must not be used. Two months later WWF International and Unilever organized an informal meeting in London to discuss the organization of a global multi-stakeholder consultation process to develop principles and criteria for sustainable soy. This meeting led to the establishment of an organizing committee to prepare an international conference on sustainable soy. The international committee consisted of WWF, Unilever, the Dutch development agency Cordaid, the Brazilian smallholder organization FETRAF-Sul, the Brazilian holding company Grupo André Maggi that happens to be the largest private producer of soybeans in the world, and the Swiss retailer COOP.

The first international conference on sustainable soy was held in March 2005 in Brazil. In theory, the Basel Criteria could have been put on the agenda as version 1.0 of global principles and criteria for sustainable soy at this conference. However, the organizing committee was divided about the question whether or not to consider genetically modified soy as sustainable. With financial support of Cordaid, Fetraf-Sul had been conducting a campaign to keep soy production in Brazil GM-free, much to the regret of large soy producers. At the conference, genetic modification of soy became an issue that created a huge divide between smallholder organizations and environmental NGOs on the one hand and large producers and trading companies on the other hand, that did not want to purchase non-GM soy only (Hospes 2006, 12-14). Confronted with this deadlock and fearing to lose participation from NGOs or business in the consultation process, the organizing committee decided not to take sides: 'The Round Table process will not promote the production, processing or trading of either genetically modified nor non-genetically modified soy'.² The issue was simply put off the agenda. This did not prompt COOP, one of the initiators of the Basel Criteria, to turn its back to the multi-stakeholder process. The Swiss retailer remained seated at the organizing committee of the RTRS after its

² Roscher, B. 2007. Responsible Soy Production: What Are the Issues at Stake? WWF's Approach: Roundtable on Responsible Soy and Basel Criteria. Presentation at Soy Certification Seminar Berlin, downloaded from <http://awsassets.panda.org/downloads/01feb282007bellaroscher.pdf> on February 20, 2012.

first international conference. This was not the case for FETRAF-Sul, who could not agree with declaring genetic modification as a non-issue. This organization of family farmers left the organizing committee, with its Dutch funding agency, Cordaid, following its steps.

In theory, 'the social responsibility criteria for companies that purchase soy and soy products' as developed by the Soy Platform of Brazil could also have served as a baseline for discussion at the first international conference. In fact, the Soy Platform of Brazil had not only been organized to reach consensus among the very diverse NGOs of Brazil on criteria and indicators but also to serve as an input for negotiations with actors in the soy production system, including major international soy purchasers: 'We present, as guidelines for the negotiations, indications and suggestions of criteria, that should be adopted around the world'.

Unfortunately, many companies did not accept or simply ignored the social responsibility criteria of the huge network of Brazilian civil society organizations at the first international conference on sustainable soy. The representative of the large soy producers in Brazil and member of the organising committee of the RTRS, Grupo André Maggi, raised the rhetorical question: 'how to expect a company to adopt social responsibility criteria if it is not allowed to participate in the discussion on these criteria?' (Hospes 2006). At the same time, small Brazilian NGOs monitoring soy expansion in the north and north-east complained about the limited time for them to raise their concerns at the international conference and turned their back to the multi-stakeholder process. They turned their back to the RTRS. From that moment, the organizing committee and later the board of the RTRS would face great difficulties in getting Brazilian social NGOs and associations of family farmers to be represented among their ranks. The organizing committee faced much less difficulty in getting more representation from other spheres: after the first international conference, two environmental NGOs (Guyra Paraguay and Brazilian research institute IPAM), a producer organization from Argentina (AAPRESID) and two business actors (ABN-AMRO and the Brazilian ABIOVE) accepted the invitation to join the organizing committee.

The multi-stakeholder consultation at the first international conference on sustainable soy did not lead to a shared problem statement but rather reinforced conflicting points of view of companies and NGOs on soy cultivation. Companies regretted that NGOs only emphasized negative effects of soy production, ignoring positive ones. In their view, NGOs 'lacked understanding' and 'spread false messages' whereas NGOs accused companies of 'greenwashing': image building meant to obscure real problems related to soy cultivation. Still, the organizing committee accepted the proposal of CEBRAC, Greenpeace, the Dutch development agency Cordaid and some other NGOs to rename the round table process and to replace the concept of 'sustainable soy' with 'responsible soy'. These NGOs could not accept the idea that large-scale and export-led soy cultivation would be qualified as sustainable. With the concept of responsible soy, they wanted producers and traders to accept their responsibility for negative social and environmental impacts of (expansion of) soy production.

Whereas quite some Brazilian NGOs and farmer organizations turned their back to the RTRS after the first international conference on sustainable soy, the organizing committee decided to proceed. At this point, they did not want to use earlier initiatives of Brazilian NGOs and Swiss actors as a starting point for global multi-stakeholder consultation on principles and criteria for

responsible soy: the criteria of the Soy Platform of Brazil were disregarded because they were not the result of a consultation between business and civil society; another reason why they were not accepted as a baseline for consultation at the RTRS was that the criteria included a prescription that companies must only purchase non-GM soy. The Basel criteria were disregarded because they were biased towards the production of not genetically modified soy. Also, they had been developed by only two actors from one country and were not based on a global multi-stakeholder consultation.

Before the official registration of the RTRS as a foundation under Swiss law in November 2006, the Soy Platform of Brazil had become defunct. Contrast to the criteria developed by the Soy Platform of Brazil, the Basel criteria remained 'alive'. A certification company (CertID) would use the Basel criteria to develop the ProTerra standard for Brazil for non-GM agricultural commodities, including soy.

During the 'informal life' of the RTRS, a third initiative was taken. Two Brazilian business actors, ABIOVE and ANEC signed a moratorium, or temporary stop, in July 2006 on the trade of soy that would be planted as of October 2006 coming from deforested areas within the Amazon biome. This step did not come out of the blue. To a large extent the moratorium can be attributed to the publication of the report of Greenpeace (2006) called 'Eating Up the Amazon'. In this report the planting of 1.2 million hectares of soy in the Brazilian rainforest in 2004-2005 was called a 'crime'. Noting that 80 percent of world's soy production goes to the livestock industry, European agri-food businesses were then qualified as 'partners in crime'. Fearing damage to their reputation and loss of market share if no action would be taken, McDonalds, El Corte Ingles, Waitrose, Asdao, Ritter-Sport and Tegut agreed to form an alliance with Greenpeace with a view to demanding responsible soy from their suppliers in Brazil. Together they made a proposal to Brazilian vegetable oil and grain industry to accept a moratorium on the trade of soy from the Amazon. Less than two months before the second international conference on responsible soy, ABIOVE and ANEC proudly announced a soy moratorium for two years, presenting it as a form of self-regulation. To comply with this commitment and to organize the monitoring of any deforestation in the Amazon biome due to expansion of soy production, a Soy Working Group (GTS) was formed with representatives from the business sector and civil society organizations, including Greenpeace, International Conservation, IPAM, the Nature Conservancy and WWF-Brazil.³

For the business actor ABIOVE, their decision to sign the Soy Moratorium was not reason to give up their leading role in the organization of the multi-stakeholder process at the RTRS. On the contrary, this dual strategy made a lot of sense. We could say that ABIOVE tried to cope with the wicked problem of civil society organizations having different perceptions of problems and solutions regarding soy expansion and deforestation. Some civil society organizations (like WWF) believe in development of new partnership models and multi-stakeholder dialogue to make production of soy more sustainable. Other civil society organizations (like Greenpeace) do not believe in multi-stakeholder dialogue to generate solutions for the problem of de-forestation. They consider critical campaigns and bad publicity as more effective tools to change practices of

³ The Amazon Environmental Research Institute (IPAM) became a member of both the organizing committee of the RTRS and GTS in 2006.

companies and to stop deforestation. ABIOVE organized deliberations with both types of civil society organizations, explaining their commitment to both the Soy Moratorium and RTRS.

In sum, we can say that the first round (January 2004-November 2006) is characterized by different initiatives, disagreement on problem definitions and multi-stakeholder consultation processes that exclude actors, views and issues and herewith trigger new initiatives. The round begins with a series of three parallel initiatives of business and/or civil society actors in Brazil and Europe during the first half of 2004: the formulation of socially responsible criteria by Brazilian civil society organizations through the Soy Platform of Brazil, the launch of the Basel Criteria by COOP Switzerland and WWF Switzerland and the start of an international organizing committee to prepare the first international conference on sustainable soy in Brazil. The parallel initiatives did not really cross-fertilize each other. The criteria of the Soy Platform of Brazil that were meant as an input for multi-stakeholder consultations were not accepted by soy businesses as a framework or baseline for discussing principles and criteria.

This was not only a matter of disagreement on specific criteria. In the first place, they could not agree with the problem definition of civil society organizations on soy production, that was too much focused on negative effects of soy production and ignored positive ones. Second, businesses ignored the initiative of the civil society organizations because they had been excluded from the development of these criteria. Feeling that there was too little room at the first international conference on sustainable soy to voice their problem statements and to discuss their solutions, that is: the socially responsible criteria, many social and environmental NGOs of Brazil turned their back to the RTRS as a multi-stakeholder consultation process. At this conference, genetic modification was a very controversial issue. The organizing committee decided not to take sides, which immediately disqualified the Basel Criteria, that are directed at non-GM soy only, as a framework or baseline for future consultation.

Not awaiting the establishment of a global standard for sustainable production of soy orchestrated by the RTRS and faced with the alarming report of Greenpeace 'Eating Up the Amazon', Brazilian business associations agreed to temporarily ban the purchase of soy from the Amazon biome. In July 2006 ABIOVE and ANEC signed the Soy Moratorium. Four months later the RTRS would register as a foundation under Swiss law.

The Second Round: The Global Partnership Losing Ground in Brazil

The official start of the RTRS in November 2006 marked the beginning of a series of consultations on principles, criteria and verification of responsible soy. From October 2007 until March 2009 a working group organized five meetings to formulate draft texts, taking into account comments from three multi-stakeholder consultation periods. This resulted into a Field Testing Version that was put on the agenda for approval by the General Assembly of the RTRS in June 2009.

Not all participants were happy about the Field Testing version. Aprosoja (Mato Grosso Soybean Producers Association) could not agree with criteria 4.4 on responsible expansion of soy cultivation:

Expansion for soy cultivation during field test period may not take place on land cleared of native habitat after May 2009. Exception: Producers who want or plan to clear native habitat after the cut-off date of May 2009 must produce scientific evidence from a comprehensive and professional third-party assessment of the area concerned that identifies the absence of: all primary forest, other High Conservation Value Areas (HCVAs), local peoples' lands. Payment for Environmental Services will be explored during field test period beginning after the cut-off date of May 2009.

Mato Grosso is the major soy bean producing state of Brazil, in which about 30 percent of total Brazilian soy production is cultivated (Goldsmith 2008). According to Aprosoja, the criteria on responsible expansion would make it difficult for their soybean producers to log lands after May 2009, even though it is permitted according to Brazilian law. In a similar vein, Aprosoja objected the requirement of an alternative High Conservation Value analysis, when deforestation is legally allowed. Moreover, such an analysis would simply bring extra costs to producers. Therefore, Aprosoja proposed an alternative version, providing compensation for farmers who voluntarily would refrain from clearing lands which could legally be cleared.

Environmental NGOs were not very pleased with this alternative version. They feared that due to the strong lobbying of 'ruralists' in the Brazilian Parliament, the revision of the Forest Code would result in more leniency on deforestation. These NGOs considered the RTRS as an alternative tool to keep up high standards and to restrict deforestation when the new code would offer less legal protection of high conservation areas from agricultural expansion. In addition, small-scale producers from other countries, like India, who cultivate soy under very different conditions, did not squarely support the proposal of Aprosoja.

The proposal of Aprosoja for an alternative version of criteria 4.4 did not reach a simple majority in every chamber of the General Assembly. The General Assembly of RTRS consists of three chambers, with an equal number of votes: producers, civil society, and industry, trade and finance. For a proposal to be adopted, every chamber has to reach a simple majority. The alternative version of Aprosoja was rejected. Aprosoja decided to raise an official protest against a procedural error on the voting, proposing that the formulation of the article should be reconsidered by the working group. However, the General Assembly also voted against this protest, which prompted Aprosoja to resign from membership of the RTRS.

Nearly one year after the adoption of the RTRS principles and criteria, another major Brazilian player announced its withdrawal from the RTRS: ABIOVE. This is a serious matter for the RTRS for two reasons. First of all, ABIOVE had joined been in the board of the RTRS since its official start. Second, the nine members of ABIOVE (including large multinationals like ADM, Bunge, Cargill and Louis Dreyfus) together represent 72 percent of Brazil's soybean processing volume. ABIOVE left the RTRS and at the same time launched the plan to organize a new voluntary scheme for soybean producers of Brazil: Soja Plus. Together with Aprosoja, ANEC and ARES, the association declared that public consultation rounds with stakeholders would be organized to discuss sustainability criteria.

The major issue on the agenda of the General Assembly of the RTRS in June 2010 was the adoption of version 1.0 of the RTRS principles and criteria. Six members of ABIOVE participated in the General Assembly. They had not resigned from membership of the RTRS after their association had withdrawn. Cargill openly questioned the future of the RTRS without substantial participation of Brazilian soy producers and called for a longer field testing period. ADM complained that 'we do not see many farmers attracted' and proposed to invite farmers to seek modifications to the principles and criteria. This way they both proposed implicitly to postpone the adoption of version 1.0 of the principles and criteria. This did not happen. The standard got accepted, though not unanimously: ADM, Bunge and Cargill raised a red card.

Parallel to the process of consultation on RTRS principles and criteria for responsible soy, the Soy Moratorium was annually renewed by ABIOVE and ANEC. In 2008 the two-year moratorium was extended for the first time with one year, much to the liking of Greenpeace that happily reported about this decision. The Brazilian Ministry of Environment was invited to join the Soy Working Group to monitor any deforestation in the Amazon biome. This way the moratorium not only got a kind of quasi-permanent status but also evolved from a business-to-business agreement into a public-private partnership.⁴ Also, whereas the Soy Moratorium is geographically limited to the Amazon biome, the actors involved in the monitoring include national and international actors, like Greenpeace and International Conservation. In 2009 and 2010 the Soy Moratorium was again extended with one year.

In sum, we can say that the second round (November 2006-June 2010) is characterized by disagreement at the RTRS on the proposed criteria for responsible soy expansion and on its decision-making process, triggering Brazilian business actors to leave this partnership and to establish a new one. Multi-stakeholder consultations on principles and criteria for responsible soy of the RTRS dominated interactions between different business and civil society during the second round. During this process two leading Brazilian business associations turned their back to the RTRS process: Aprosoja (the association of soy producers from the largest soy producing state of Brazil, Mato Grosso) and ABIOVE (representing major soy traders and global agribusiness, like ADM, Bunge and Cargill) resigned from membership. They were not happy with the criteria on responsible expansion of soy cultivation. At the same time they were unable to effectively direct the decision making process of the RTRS as a member-based organization. The producers held one of the three chambers of the General Assembly, the others taken by civil society and commerce. Also, during the process of multi-stakeholder consultations on RTRS principles and criteria, the membership of the chamber of producers not only grew but also diversified. For instance, associations of family farmers from India joined the RTRS, having little in common with large-scale soy farming business in Brazil. As a result, Aprosoja and ABIOVE could not easily organize and direct decision making within their constituency, the producer chamber of the General Assembly, having one third of all votes. They decided to establish a new partnership, together with ANEC and ARES, with a view to prepare a new voluntary certification scheme: stepping out the RTRS, they started Soja Plus.

⁴ Globalsat, 2008. Mapping and monitoring of the Soy Moratorium. Globalsat 2010. Soy moratorium: mapping and monitoring of soy plantings in the Amazon biome in the third year.

The Third Round: Brazilian Business Building Public-Private Partnerships

Several events after the adoption of the principles and criteria at the General Assembly of the RTRS in June 2010 suggest that Brazilian business initiatives will not fade away. On the contrary, we expect that Aprosoja, ABIOVE and ANEC will use Soja Plus to create maximum political space to define what is sustainable production of soy in the legal context of this country and to develop public-private partnerships for this purpose. On the one hand, the Brazilian Forest Code is considered a strict environmental law that sets high limits to deforestation in the Amazon biome and vulnerable areas. On the other hand, this code is subject to constant political struggle. Soy producers are exercising political pressure to get it changed, offering them more time to comply or more possibilities to compensate for deforestation by renting or buying parcels of forest elsewhere (Lima et al. 2011).

In a seminar of March 2011, Soja Plus seemed to water down its original ambition to establish a new voluntary standard for certification. The initiators announced to focus primarily on capacity building which should enable soy producers to comply with Brazilian legislation. This step could be seen as a defeat of Soja Plus and indirect acceptance of the RTRS as a global standard. However, the opposite could also be true. The capacity building of soy producers is not only focused on best practices but also on sharing information and contributing to a better understanding of the new Forest Code. In July and August 2011 producers participated in on-site workshops on labor legislation for producers and rural property managers and in seminars on Regulatory Standard No. 31 of the Ministry of Labor and Employment. This shows that the disappointment of Aprosoja about the adoption of an RTRS criterion that was more stringent than the Forest Code, had not only made them leave the RTRS but also start a new initiative: Soja Plus. This initiative takes national legislation, not the global standard of the RTRS, as its terms of reference. The capacity building of soy producers could also be seen as a first step of the organizers of Soja Plus towards preparing these producers for certification under a new Brazilian standard.

It is not unlikely that Soja Plus will evolve in a similar way as the Soy Moratorium, also being an initiative of ABIOVE and ANEC. These two Brazilian business associations had turned the Soy Moratorium from a form of self-regulation into a public-private partnership, involving Brazilian governmental actors and (inter)national environmental NGOs. The Soy Working Group that is monitoring the moratorium not only consists of ABIOVE and ANEC's member companies but also the Ministry of the Environment, the Bank of Brazil and five environmental NGOs. In October 2011, the Soy Working Group announced that the Soy Moratorium will be renewed for another year until the end of January 2013.

The controversy about criteria 4.4 on responsible expansion of soy and the workshops of the Soy Plus program to learn soy producers about the new Forest Code have not gone unnoticed to the organizers of the seventh international conference of the RTRS. The controversy and workshops boil down to the question how to articulate private voluntary standards and public regulations, which has been defined as one of the key themes at the conference of 2012. The position paper on this theme states that 'private standards and public regulations are often complementary and work in synergy; synergy that must be consolidated' (Djama 2011). Our analysis of rivalry and dynamics of sustainability governance of soy suggests that such consolidation will invoke new

interactions between business, civil society and government actors on rules for sustainability and who is to define sustainability. The articulation of linkages between global private standards and public regulations at the national level is complex, if not a wicked problem, and will form a new challenge for business, civil society and government actors.

In sum, we can say that a new parallel development of partnerships characterizes the third round (from June 2010 onwards). The RTRS is seeking to implement the principles and criteria adopted at the General Assembly of 2010 and to develop synergy between the RTRS as a global standard and public regulations at the national level. At the same time Brazilian business associations use and develop their private agreements and programs to seek conformity of soy production with national legislation and to build what the RTRS has not realized, that is, the development of public-private partnerships, involving both national and international actors. Whereas the decision of Brazilian business associations to leave the RTRS and to establish new partnerships reflects their disappointment about criteria and decision-making at the RTRS, their development will remain dependent on actors and interactions at this round table.

Conclusions

The parallel development of the RTRS and other partnerships, networks and coalitions directed at the promotion of sustainable soy can be characterized as an interdependent and dialectical development.

Two partnerships had contributed to controversy at the RTRS prior to its official launch and had influenced decision-making at this round table. The first one was the Soy Platform of Brazil, an initiative of Brazilian networks of civil society organizations. They had organized the platform to formulate socially responsible criteria for companies that buy soy or soy-related products. Their main aim was to use these criteria as a baseline for negotiation with business actors at the first international RTRS conference. However, soy businesses refused to discuss these criteria because they had not been involved in the formulation and could not agree with the underlying problem statement that soy production has only negative environmental, social and economic effects. As a result, many social NGOs turned their back to the RTRS. The Soy Platform of Brazil collapsed after the official start of the RTRS.

The second partnership that affected early discussions at the RTRS before its official start, was a joint initiative of a Swiss NGO and retailer to formulate principles and criteria for responsible soy production. A key element of their 'Basel criteria' is that genetically modified seed must not be used for soy production. Faced with diametrically opposed views of business and civil society actors on whether genetically modified soy can be regarded as sustainable, the organizing committee of the first international conference on soy decided to define GM as a non-issue. They feared that taking sides with one side in the debate would damage and slow down the process of multi-stakeholder consultation. This decision put both the criteria of the Soy Platform of Brazil and the Basel Criteria off-side in decision-making processes at the RTRS: both initiatives did not consider GM-soy as sustainable.

After the official start of the RTRS, Brazilian soy business very much tried to influence the decision-making process with regard to the formulation of global principles and criteria for

responsible soy. Associations of large soy producers and multinationals buying their produce could not agree with the proposed RTRS principle on responsible expansion of soy. This principle was more stringent than the Brazilian Forest Code, allowing deforestation in certain situations. However, the Brazilian soy businesses failed to get their views on responsible expansion of soy accepted at the General Assembly. Aprosoja and ABIOVE resigned from membership and, together with ANEC and ARES, started Soja Plus. The original ambition of Soja Plus was to develop a new voluntary certification scheme for all soy producers in Brazil. On second thought, the initiators decided to focus first on training soy producers in good agricultural and financial practices, and on helping soy producers to comply with national legislation.

Both the start and course of development of the RTRS as a global private partnership can be characterized in terms of rivalry between different organizational initiatives, criteria or programs of civil society and/or business actors from different parts of the world, most notably from Brazil. Both the start and development of the RTRS have not ended but fuelled diversity and rivalry. Whereas the adoption of the soy standard at the General Assembly of the RTRS can be seen as an attempt to establish a worldwide benchmark, the initiatives of Brazilian business actors to establish the Soy Moratorium and Soja Plus clearly suggest that they take a different view on this: national legislation of Brazil and the economic sustainability of the Brazilian soy industry should be taken as the point of departure in this country to promote sustainable production of soy, not some global rules. If additional environmental services are imposed on the Brazilian soy industry by international players, they expect to be compensated for their services.

Using our theoretical framework, we have gained a number of insights from our analysis. These insights can be helpful to overcome some blind spots and limitations in the discussion on the role and use of global private partnerships to cope with sustainability as a wicked problem. First, though the difficulties and limitations of organizing global private partnerships are not ignored in the literature, there is still a lack of understanding processes and dynamics of these partnerships. To redress this, we propose to study global private partnerships as part of a series of interactions with other partnerships, coalitions or networks at the global and national level. We also propose to focus on mechanisms, motives and interactions that explain lack of participation in multi-stakeholder consultation, or resignation of membership of global private partnerships. As we expect dialectical developments of global private partnerships and public regulations and authorities at the national level, we finally propose to put greater emphasis in research on interactions between business, civil society *and* government actors in their competitive and confusing search for sustainability.

Second, we think that there is a bias in the literature towards conceiving global partnerships and multi-stakeholder consultations as better or even ideal and certainly more promising forms of governance. They are too easily seen as a solution to wicked problems instead of breeding ground of such problems, characterized by lack of agreement on the problem statement, solution or supreme authority to develop the principles. Any actor (whether from the sphere of business, civil society or government) that wishes to support or commit itself to a partnership or criteria to promote sustainability, should understand the dialectical development of partnerships and criteria. Instead of choosing one initiative as the best or the benchmark, it may be wiser to invest in managing interactions and articulating relationships between different initiators of partnerships at the global and national level (Glasbergen 2011; Visseren-Hamakers et al. 2011).

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Appendix 1.

Key Sources and Lists of Interviewees

1. The key document for the description of the first round (2004-2006) has been an evaluation report entitled 'Cordaid and the adoption of social responsibility criteria for soy production by companies' (Hospes 2006). The objective was to assess the efficiency and effectiveness of the Dutch development agency Cordaid in contributing to the adoption of social responsibility criteria for soy production by companies. For this purpose, the preparation and early development of the RTRS was reconstructed on the basis of analysis of archival data and through interviews in April-May 2006 with a wide range of people, both in Brazil and the Netherlands. This research provided a comprehensive view of different actors and initiatives involved in the promotion of sustainable soy in Brazil from 2004 till 2006, as reported by Hospes (2006).

The report was part of the evaluation by the Netherlands Ministry of Foreign Affairs of policy influencing through the Dutch Co-Financing Program (Netherlands Ministry of Foreign Affairs 2007), led by the first author of this article. The interviewed people for the evaluation of Cordaid and the adoption of social responsibility criteria for soy production were:

Cordaid:

- Bob van Dillen, Lobbyist
- Wim Goris, Programme Officer Latin America Department

- Dicky de Morrée, Policy Adviser and Programme Officer Latin America Department
- José Ruijter, Co-ordinator Quality, Policy and Strategy for Access to Markets
Partner organizations of Cordaid in Brazil:
- Judson Barros, President, Funaguas
- Luis Eduardo Montenegro Castelo, Vice-President, Cebrac
- Padre Edilberto, Coordinator, FDA
- Mauricio Galinkin, President, Cebrac
- Marcus Roszinsky, Representative Fetraf in Parana state
- Lindomar Silva, Regional Secretary, Caritas
- Jane Souza, Agricultural Engineer, CPT and Caritas Para
- Marco Antonio Sperb Leite, Director, Cebrac
- Jax Nildo Aregao Pinto, Project Coordinator, CPT Para
- Altemir Tortelli, General Coordinator, Fetraf-Sul
- Rui Valença, Coordinator, Fetraf-Sul
- Agnes Vercauteren, Assistant International Relations, Fetraf-Sul

Business representatives in Brazil

- Rodrigo Moreira, Complexo Soja, Cargill
- Luiz Antonio Regi, Manager Quality Department, IMCOPA
- Michel Henrique R. Santos, Manager Corporate Marketing & Communication, Bunge
- João Y. Shimada, Environment Department, Grupo André Maggi
- Adalgiso Telles, Director Corporate Marketing & Communication, Bunge
- Gilmar Tirapelle, Complexo Soja, Buyer of local soy, Cargill
- Ocimar de Camargo Villela, Environment Department, Grupo André Maggi

Business representatives in the Netherlands

- Hessel Abbink Spaink, Corporate Social Responsibility, Rabobank International
- Frans Claassen, Director, Product Board for Margarines, Fats and Oils (MVO)
- W.G. van de Fliert, Secretary General, Dutch Association of Animal Feed Industry (Nevedi)
- Sjaak Hendriks, Manager Quality & Environment, Hema
- Simone A. Hertzberger, Head Quality and Product Integrity, Albert Heijn
- Frank van Ooijen, Director Corporate Communications / Corporate Social Responsibility Officer, Nutreco
- Richard W.A. Piechocki, Issue Manager, Rabobank Nederland
- Jan Kees Vis, Director Division Sustainable Agriculture, Unilever

Others:

- Jan Maarten Dros, Consultant, AIDEnvironment
- Jan Gilhuis, Programme Officer Sustainable Soy, Solidaridad
- Henk Hartogh, Coordinator NWE/EWE programme, NC-IUCN
- Ronald T.R. Hiel, Partner, Schuttelaar & Partners
- Ilan Kruglianskas, Agriculture and Environment Programme, WWF-Brazil
- Tamara Mohr, Director, Both ENDS

2. The key source for the reconstruction of the second round (2006-2010) of decision-making and interactions between different actors and partnerships involved in the promotion of sustainable soy in Brazil has been the General Assembly of the RTRS in Sao Paulo in June 2010. The first author was an observer at this General Assembly. He combined informal interviewing at the General Assembly with analysis of minutes of board meetings to explore why Aprosoja and ABIOVE had resigned from membership of the RTRS. Given the sensitivity of the issue and busy schedules of participants, interviewing of key players (Aprosoja, ABIOVE, Cargill, members of RTRS board) was informal and focused on one issue: the background and motives of Aprosoja and ABIOVE to resign from the RTRS.
3. The key source for describing the third round (2010-now) has been the comparative study of sustainable soy initiatives in Brazil and Argentina, conducted by the three authors of this article: Van der Valk, Mheen-Sluijer and Hospes (2012). Two key questions of this study are: can we speak of rivalry in sustainability schemes? do multiple standards enhance or obstruct sustainability? To address these questions for the Brazilian context, four initiatives and their interactions were analyzed on the basis of analysis of written sources (evaluation reports, annual reports, minutes of meetings, websites) and interviews with stakeholders in Brazil and the Netherlands in February-March 2010: the RTRS, Agricultura Certificada, Soja Plus and the Soy Moratorium. The interviewed people are members of the RTRS (WWF, Instituto Ethos, Solidaridad, ADM, Grupo Los Grobo, Andre Maggi) or initiators of Soja Plus (ABIOVE, Aprosoja).

The interviewed people were:

a) In Brazil:

- Carlo Lovatelli, ABIOVE and Soja Plus
- Diego di Martino, ADM Brazil
- Marcelo Duarte Monteiro, Aprosoja
- Cassio Franco Moreira, WWF-Brazil
- Bernardo Pires, ABIOVE
- João Shimada, Grupo Andre Maggi
- Ricardo Manoel Arioli Silva, Aprosoja
- Fabio Trigueirinho, ABIOVE, Soja Plus and Instituto Ethos
- Alex Ehrenhaus, Grupo Los Grobo

b) In the Netherlands:

- Marieke Leegwater, Product Board for Margarines, Fats and Oils (MVO)
- Pieter Sijbrandi, Solidaridad

Appendix 2.

Methodological Protocol for Our Use of the Rounds Model

1. Select a partnership that aims to promote sustainable production of a global commodity.
2. Collect as many documents as possible (articles, reports, minutes) about the genesis and evolution of this partnership.
3. Try to identify moments that suggest the start or completion of a decision-making round of this partnership by searching for milestones, markers, turning points or critical events in the development of the partnership (meeting of founding fathers, official start, change of status, new agenda, membership changes, agreed procedures, adopted principles).
4. Distinguish three or more decision-making rounds.
5. Search for other partnerships (at global or national level) that also aim to promote sustainable production of the same global commodity in a same country of production.
6. Classify all partnerships in terms of initiators (public, private; global, national, local), year of start, territorial focus or social object in the selected country.
7. Put the start and possible ending of every partnership on a time-line.
8. Try to identify references to other partnerships in documents of every partnership for every round.
9. Make a list of actors whose names often appear in documents, or who seem to have played a key role at the start or completion of every decision-making round of the partnership selected under 1.
10. Make a list of (representatives of) organizations that have been critical at key events close to the start or completion of a decision-making round of the partnership selected under 1.
11. Make a list of (representatives of) organizations that have resigned from participation in meetings or membership of the partnership selected under 1.
12. Conduct interviews with these actors and ask them (a) to explain the rationale of and differences between partnerships; (b) to reconstruct the start or completion of every decision-making round of the partnership selected under 1; (c) to list their concerns and/or explain why they have resigned from membership of the partnership selected under 1.
13. Try to participate in an annual meeting of all members of the partnership selected under 1; conduct participatory observation and organize interviews with actors who seem decisive, controversial or influential for decision-making during this event.
14. Use the results of document analysis and interviews to describe interactions between partnerships during different rounds of decision-making and to explain diversity and/or rivalry between them.



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Private Multi-stakeholder Governance in the Agricultural Market Place: An Analysis of Legitimization Processes of the Roundtables on Sustainable Palm Oil and Responsible Soy

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Abstract

Over the past decades a new model for governing agricultural commodity chains emerged in response to severe sustainability challenges: so-called Roundtables. This paper aims to better understand the process of creating legitimacy in these Roundtables. The legitimization processes of two cases are analyzed: the *Roundtable on Sustainable Palm Oil* and the *Roundtable on Responsible Soy*. From this analysis explanations for the specific development of such a process are derived. The first level of explanation is actor-based and addresses the factors trust and collaborative advantage. The second level refers to institutional factors that provide opportunities and constraints for legitimate interactions to develop, such as the structure of the commodity chain, the type of lead firms in it and the role of governmental policies. The analysis reveals several characteristics of possible legitimization problems and their implications for the application of this governance model.

Keywords: multi-stakeholder governance, legitimacy, roundtables, palm oil, soy

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The Rise of Partnerships in Global Agrifood Chains

Over the last decennia we have seen the initiation of a new model for governing agricultural commodity chains in response to severe sustainability challenges. These so-called wicked problems are “dynamically complex, ill-structured, public problems” (Batie 2008, 1176) for which no ultimate problem definition and definite solution exists and for which stakeholders have fundamentally different frames of reference (Peterson 2009). These new models of governance have become a crucial component of the strategy of many large multi-national companies in the food industry (Dentoni and Peterson 2011). In a new form of partnership, businesses and NGOs took the initiative to define more sustainable production standards and related certification schemes to address these problems. These arrangements often focus on a specific product(-type) and aim to make a whole agricultural sector more sustainable. These collaborative, multi-stakeholder arrangements have been defined as non-hierarchical, self-organizing alliances to promote more sustainable production and consumption practices, while using the market as a coordinating mechanism to realize this objective (Glasbergen 2007). Not only are these partnerships non-hierarchical, they can also be categorized as post-territorial, because their spatial boundaries are not demarcated by fixed, jurisdictional borders.

Outstanding examples of these arrangements take the form of a Roundtable. The two front running Roundtables are the Roundtable on Sustainable Palm Oil (RSPO) and the Roundtable on Responsible Soy (RTRS). These multi-actor arrangements show overlap in driving actors, face similar sustainability problems, and have similar organizational structures:

- The founding actors of the RSPO, the World Wide Fund for Nature (WWF) and Unilever, were also involved in setting up the RTRS and several businesses and NGOs actively participate in both roundtables.
- Both palm oil and soy are used on a global scale for food, feed and fuel. Both crops are largely planted as export driven, large-scale monocultures and belong to the fastest expanding crops in the tropics. Sustainability problems in both sectors relate to deforestation, loss of biodiversity and labor and land rights issues.
- Their governance structure and decision-making processes are such that commodity chain actors, as well as environmental and developmental NGOs are represented in the Executive Board and General Assembly of the roundtables. The General Assembly is in both cases the highest decision-making body.

The RSPO started a process to address sustainability concerns in palm oil production by engaging actors from all levels of the commodity chain in 2002. The RSPO currently counts over 1000 members and represents approximately 40% of global palm oil production and the majority of upstream food manufacturers in the supply chain. Members are divided into several membership categories: Oil Palm Growers; Palm Oil Processors and/or Traders; Consumer Goods Manufacturers; Retailers; Banks and Investors; Environmental/Nature Conservation NGOs; Social/Developmental NGOs; and Affiliate members. This last category of affiliate members does not have decision-making power or voting rights within the RSPO. Through a series of multi-stakeholder working groups, members of the RSPO spent several years designing Principles and Criteria (P&C) for sustainable palm oil production, a verification and certification process, and mechanisms for supply chain traceability and tradable credits. The General

Assembly is the highest decision-making body of the RSPO, where all members have one vote and decision-making occurs by majority voting. The first shipment of certified palm oil entered the market in November 2008.

The first RTRS meeting was held in London (2004), when WWF invited 25 potential stakeholders to discuss the idea of addressing sustainability issues in mainstream soy production through a multi-stakeholder process (RTRS 2010). Currently, the RTRS has approximately 150 members and represents a smaller portion of the market than the RSPO. Members are divided into 4 categories: Producers; Industry, Trade and Finance; Civil Society; and Observers. Observing members have no decision-making power or voting rights in the RTRS. The General Assembly also is the highest decision-making body. To prevent domination of one stakeholder group, voting in the General Assembly takes place per constituency group, instead of the one-member, one-vote principle in case of the RSPO. The RTRS approved the P&C for responsible soy production and an accompanying verification system in June 2010. The first shipment of certified soy from South America came to Europe in June 2011.

Both RSPO and RTRS can be seen as representatives of the development of a new global domain that is not only filled with (inter)governmental organizations but also with private arrangements that aim to fulfill a public function (Ruggie 2004; Abbott and Snidal 2009). One of the central debates related to this development regards the legitimacy of what Bernstein addressed as 'non-state governance in the market place' (Bernstein 2011). This debate is mainly based on a specific interpretation of the role of states in liberal democracies. According to this interpretation, states are the ultimate and exclusive authoritative agents in public affairs. The state needs to set the rules of the game and private actors need to pursue their activities within these rules (Glasbergen 2011). From this interpretation, legitimization of private governance may be problematic, for example, because private actors taking over political functions may erode public power; because these arrangements cannot be held accountable like governments to those who are affected; or because of doubts about the effectiveness of voluntary private standards given the lack of sanctioning power (i.e., Bäckstrand et al. 2010; Bexell 2010; Steets 2010).

However, these studies tell us little about the practices of creating legitimacy in terms of the ability of the arrangements to develop a more sustainable alternative to current practices that becomes accepted as an authoritative norm in their issue field. They also inform us less about problems associated with legitimacy that can occur within these multi-stakeholder settings and what this implies for these types of arrangements. Therefore this paper analyzes the practices through which legitimacy is created by looking at the interactions between the actors in Roundtables and the institutional context in which these interactions take place. The next section presents an operationalization of the question of legitimacy. Subsequently the methodology is presented, followed by an empirical analysis of the two Roundtables. From this analysis two levels of explanations for the specific development of these legitimization processes are derived. The first level refers to actor-related factors, while the second level refers to institutional factors that provide opportunities and constraints for legitimate interactions to develop. In the concluding section several problems regarding the creation of legitimacy are identified as well as possible strategies to overcome these.

Operationalization of the Question of Legitimacy

The concept of legitimacy refers to the acceptance and justifications of authority. According to Suchman, it is “a generalized perception or assumption that the actions of an entity are desirable, proper, or appropriate within some socially constructed systems of norms, values, beliefs and definitions” (Suchman 1995, 574). Biermann and Gupta’s approach of legitimacy refers to this classical interpretation and define legitimacy as “being in accord with established norms and requirements, or recognized principles or accepted rules and standards of behavior” (Biermann and Gupta 2011, 1858). Most studies on legitimacy take a state of affairs as a starting point and assume that this state can be evaluated on its *degree* of legitimacy. Their starting point is normative, in the sense that evaluations are based on what is assumed to be required to make governance arrangements legitimate. They either evaluate the procedures or the substantial content of private arrangements (i.e. Bäckstrand et al. 2010; Bexell 2010).

The procedural or input legitimacy approach evaluates the process through which decision-making takes place. It is assumed that non-state governance may become as legitimate as intergovernmental policies if they conform to equivalent democratic prerequisites, such as transparency, accountability, inclusiveness, etc. (Dingwerth 2007; Keohane 2011). The substantive or output legitimacy approach is concerned with the purpose and appropriateness of the governance activity of the arrangements. Here the arrangements are assessed in terms of their contribution to collective problem solving, for example, their ability to contribute to the protection of basic human rights, environmental protection, or empowerment of less privileged groups. If an outcome of a policy decision serves the public good and is effective in tackling a problem, it attains output legitimacy (Scharpf 1999). Both approaches focus on what *should* count as justification for recognizing the authority of private arrangements (Bernstein 2011, 21). However, they inform us less about the process through which their standards become *accepted* as an authoritative norm in their issue field. According to our view, an (additional) approach that aims to better understand the process of creating legitimacy would look at the practices through which legitimacy is realized. This approach studies the often cumbersome process of bringing diverse actors together to develop a common acceptable new management standard and the factors that influence this process.

This approach assumes that the legitimacy of private governance arrangements is rooted in a process of interaction among diverse actors, connected to a specific issue area, and in a specific contextual environment (Bernstein 2011; Schouten and Glasbergen 2011). For analytical reasons we divide this process into several ideal-typical phases. These phases are informed by theories regarding the policy cycle frequently used in the field of policy analysis (see for example Crabbé and Leroy 2008, 3) and are adapted to the multi-stakeholder governance model of Roundtables based on earlier studies (Schouten and Glasbergen 2011; Schouten et al. 2012). These phases include: engaging stakeholders in the multi-stakeholder process; defining the problem area and coming to an agreement on how to tackle the issues; implementing the agreed solutions and assuring compliance; assuring acceptance of external audiences. These phases should not be interpreted as taking place in a strict chronological order. A Roundtable process is an iterative process and phases can overlap as actors as well as issues can be in a different phases of the process at the same time. This paper takes the interactions between the partners in the

arrangement as the key unit of analysis. Related to these phases in the development of a Roundtable four factors are important to the process of creating legitimacy:

1. The inclusion of relevant stakeholders in the multi-stakeholder process.
2. The opportunities for stakeholders to come to an agreement on how to govern the sector.
3. The degree of compliance of involved stakeholders with the agreements.
4. The degree of acceptance of third party audiences of the outcomes of the process.

From this analysis this paper derives explanations for the specific development of these legitimization processes. The first level of explanations is actor-based and regards the factors trust and collaborative advantage. The second level refers to the, on the short-term inalterable, societal context in which the interactions develop. Here our focus shifts to institutional factors that provide opportunities and constraints for legitimate interactions to develop, such as the structure of the commodity chain, the type of lead firms in it and the role of governmental policies. Subsequently, it is important to understand how these two levels are interacting.

Methodology

This paper takes a case study approach similar to the one described by Eisenhardt (1989) and uses in-depth data to understand the complex dynamics going on in multi-stakeholder settings. Previous research endeavors on legitimacy did not reveal much about the processes through which multi-stakeholder arrangements become legitimized. In order to provide empirical substantiation to this field of research, this paper studies the practices through which legitimacy comes about. Several data collection methods are combined, including desk research, interviews and observations. Our comparative case study analysis is based on official documents produced by the RSPO and RTRS, minutes of Executive Board meetings, minutes of General Assemblies, and minutes of Working Group meetings. These documents are supplemented by documents on both Roundtables published by individual stakeholders of the Roundtable, and news articles. The desk research is further complemented by over 30 semi-structured in-depth interviews with individual members of both Roundtables (representatives of NGOs and value chain actors) and members of both Executive Boards about the development processes of the arrangements. Furthermore, several employees of NGOs that did not apply for membership of a Roundtable, but are working on palm oil and/or soy issues related to sustainability, were interviewed (a list of interviewees is available in the appendix). Additionally, observations were made during Executive Board meetings of the RTRS, the fourth Roundtable Conference on Responsible Soy and the third General Assembly of the RTRS, all in May 2009 in Campinas, Brazil. Furthermore, observation methods were used during the ninth Roundtable Conference on Sustainable Palm Oil and the eighth General Assembly of the RSPO in November 2011 in Kota Kinabalu, Malaysia.

The two cases were selected on the basis of their organizational similarities, as the RTRS is a copyist initiative of the RSPO. This unique situation allows us to conduct an in-depth comparative case study analysis in which we try to bring the factors that cause differences in their legitimization processes to the surface. This article uses the in-depth data in an inductive manner to generate new insights on factors that might hinder or enhance legitimization processes of Roundtables. Our qualitative data are very useful for understanding the dynamics underlying relationships and the reasons behind what we see happening in the cases (Eisenhardt, 1989).

Inclusion of Stakeholders in the Process

Both roundtables have the aim to get all stakeholders in the commodity chain plus environmental and developmental NGOs involved (RSPO 2012b; RTRS 2012a). Despite this intention, they both face problems including smallholders, local communities and consumers (Cheyns 2011; RTRS 2011). These stakeholder groups are mostly made up out of individual actors instead of organized interest groups. To actively involve these large numbers of individual stakeholders is extremely challenging for Roundtables.

Nonetheless, the RSPO was relatively successful in involving relevant stakeholders. They managed to attract large producing companies from the two most important producing countries, Indonesia and Malaysia (Unilever 2012). Furthermore, they have managed to get an important part of retailers in Europe and the United States involved, as well as a large amount of NGOs from many parts of the world (RSPO 2012a). On the other hand, they have hardly been able to engage stakeholders from importing countries of palm oil outside the Western world, such as China. Several programs were set up to get Chinese stakeholders involved, but so far the RSPO has only managed to get three Chinese companies on board (Cheng Hai 2011). Private market initiatives, like the RSPO, miss an institutional fit with the socialist market economy as it exists in China. The RSPO is aware of this problem and recognizes that the role of the Chinese government is critical to provide the enabling environment for collaboration to take place. However, it is still unclear how this process should exactly be managed.

The RTRS was less successful in including stakeholders into their multi-stakeholder process. First of all, they faced difficulties including global development and social NGOs in the standard setting process. Most Latin American NGOs did not become part of the process so that they are able to oppose the outcomes if they do not agree with them (Interview #8). Fetraf-Sul, the only organization representing small farmers stepped out of the RTRS early on in the process (2005) because it didn't feel it could influence the agenda enough. The development NGO Cordaid showed solidarity and left as well (A Seed Europe 2005). Secondly, not all main producing countries are well represented in the RTRS. While the United States are the biggest producers of soy (38 % of global production in 2003) only few RTRS members come from there (4,7 %) (RTRS 2012b). In general, soy producers from this part of the world do not see the need to address sustainability issues in their domestic industry. Third, the RTRS faces the same problem as the RSPO in terms of involving stakeholders from some important consumer countries. China's soy imports account for over 50 % of the world total. Despite this major role in the global soy market their membership count in the RTRS is very low (2 % of total membership), whereas Europe, importing only 17 % of global soybean, has a share of 44 % of the members (USDA 2010).

A fair distribution of costs and benefits is essential to keep stakeholders involved in a partnering process. Both Roundtables were not able to manage this issue properly and had prominent members leaving the process. Future expansion of palm oil is most likely to occur in Indonesia and so standards aimed at reducing deforestation and requiring environmental assessments and social audits on new developments will mostly affect plantations there (Interview #10). This makes Indonesian producers feel they bare most of the costs of certification, while benefits of the collaboration did not yet materialize. The Indonesian Palm Oil Association, GAPKI, resigned

their RSPO membership in the second half of 2011 (RSPO 2012c). They felt the organizational structure of the RSPO was not balanced enough at the expense of the producers and want to focus on their own Indonesian certification system (ISPO) (Interview #34) (TROPIS 2011; RSPO 2010). The RTRS faced similar problems. During the creation of the P&C an important participant, APROSOJA (Mato Grosso's State Association of Soybean Producers), left the organization because of forest conservation criteria introduced in the P&C. APROSOJA argued strenuously for the RTRS to approve a compensation program for any avoided deforestation. Without seeing any prospect for financial gain from the process, they were not willing to accept the P&C and terminated their membership of the Executive Board and the RTRS at the General Assembly in 2009¹. Roundtables focus on certification standards at production level, which means that producers bare most of the costs. Some of these stakeholders therefore tend to feel that the process is unfair and unbalanced. In both cases we see that in reaction local certification systems emerge: i.e. Brazil (Soya Plus), Malaysia (MSPO) and Indonesia (ISPO).

Coming to an Agreement

Consensus-based decision-making is institutionalized in the practices of both Roundtables and forms the backbone of the standard setting process. In order to reach consensus, issues need to be framed in a way that corresponds with the views of all stakeholders involved. To realize this cohesion, contentious issues are sometimes left out of the debate and so are advocates of radical viewpoints. However, in exceptional cases, when the ultimate reliability of the arrangement is at stake, the principle is abandoned, even at the cost of stakeholders leaving the process.

In the first years of the RSPO a conflict arose about the specific contribution of palm oil to sustainability problems. Whereas Malaysian producers focused mainly on poverty reduction due to palm oil development, NGOs stressed issues of deforestation caused by this development (RSPO 2003). Producers implicitly acknowledged the need to codify best practices, but were reluctant to say that sustainability was a problem in the palm oil industry. This conflict, which posed a risk to the development of the RSPO, was solved pragmatically. Instead of carrying on the debate on the exact contribution of palm oil to environmental degradation, it was decided to focus on a concrete standard for sustainable palm oil. At the first Roundtable conference, the natural-resource consultancy ProForest presented technical studies that would serve as a basis for the development of a standard (RSPO 2004). This document was acceptable to all partners, because contentious issues were avoided. The P&C were further developed by a working group that was put together by the Executive Board. The facilitator of this working group indicated that none of the members tried to slow down or frustrate the process (Interview #12).

An issue of contention in the P&C development group was the use of agrochemicals, in particular the use of paraquat. While prohibited in the European Union, paraquat is one of the world's most widely used herbicides. Producers insisted it was essential for their business to use agrochemicals, while NGOs insisted that the risks associated with the use of some of these chemicals to human health and safety were unacceptable. The resulting compromise on which consensus could be reached was quite disordered (Interview #12). The P&C, while requiring producers to actively look for alternatives to dangerous chemicals, ultimately do not ban their

¹ Observations during EB meetings in 2009, Campinas, Brazil and the GA in Campinas Brazil

use (Carrere 2006). A note was added to the P&C saying that the RSPO will urgently identify safe and cost effective alternatives to replace chemicals like paraquat, which is still included in the latest version of the P&C (RSPO 2007). Agreement on the remaining criteria was reached relatively quickly; producers knew that there was no chance of removing or weakening criteria and still reach consensus (Interview #12). Nevertheless, at the third Roundtable conference (2005), producers reported that the speed of the process gave them the impression that standards were being foisted onto them (RSPO 2005). Despite difficult moments in the RSPO standard setting process, none of our interviewees identified any specific item that was left out of the standard completely. However, still some disagreement remains about the necessary strength and clarity of specific criteria. Standard setting in the RSPO is an ongoing process and in 2011 a P&C review process started. This review process is considered an opportunity to substantially change and improve the standard, but only if consensus on changes is possible (Yaacob 2011).

The RTRS needed more time than the RSPO to come to a standard. Unlike the RSPO, the first RTRS conference did not have input studies on which to base their work. As a consequence the discussions were very unstructured and general and provided little direction for the future (Interview #14). According to one of the participants, “what was intended to clarify important issues became a messy, politicized event” (Interview #30). In response, the RTRS organized a technical workshop to discuss the problems of soy production in a smaller setting. This workshop produced a list of key environmental and social impacts. The RTRS standard was further drafted by the Development Group, which included representatives from all member constituencies (RTRS 2012c). After every meeting, drafts were made available for public consultation during which all stakeholders were invited to provide input.

The RTRS also faced some critical issues in the standard setting process. First, for the sake of consensus the issue of genetically modified (GM) soy was excluded from the debate early on in the process. The first Roundtable conference had shown that the RTRS could either allow GM soy and lose many of the NGOs in the process, or exclude it and lose numerous producers (Interview #15). They decided to be ‘technology-neutral’ regarding production techniques thereby excluding the topic from the Roundtable process (RTRS 2006), a decision that caused much opposition against the RTRS. A second controversy is related to the issue of deforestation (Interview #4). This issue was so controversial that the development group delivered a proposed set of P&C to the Executive Board wherein the issue of deforestation was not addressed. Producers from Mato Grosso, Brazil resisted agreeing to any criteria on this without implementing a compensation method for the opportunity costs of forest preservation (Interview #19). Earlier in the process these producers already argued that if farms were going to be certified, it was necessary and fair to also certify other operations in the value chain, such as greenhouse gas emissions of food manufacturers (Interview #4 and #19). Several Executive Board members felt very strong about including criteria on deforestation, because they thought the credibility of the RTRS was at stake. After long and difficult discussions it was decided to add a criterion on deforestation to the proposed P&C. They needed to let go of the principle of consensus and made this decision by majority voting instead. Two members voted against adding this criterion, while the rest was in favor. This decision by the Executive Board caused a great deal of dissension at the General Assembly of 2009. Without seeing any prospect for financial gain from the process, APROSOJA was not willing to accept the P&C and therefore left the

meeting and withdrew their membership. Subsequently, the P&C, including the criterion on deforestation, were ratified by the General Assembly.

Compliance with the Rule System

For a governance arrangement to be credible it is necessary that stakeholders involved comply with the rules they have agreed upon. This is not a self-evident process as both Roundtables have difficulties in achieving this.

The RSPO encountered several critical issues in the process of getting members to comply with the developed rule-system. First, when in 2005 a large palm oil producing member was accused of illegally dismissing over 700 employees, evicting their families from estate housing, and expelling their children from estate schools, it was unclear what was expected of the Executive Board (RSPO 2005). Therefore, a Code of Conduct was adopted, which lists the requirements of RSPO membership. It states that every member “supports, promotes and works towards the production, procurement and use of Sustainable Palm Oil”. Without this Code, the Executive Board had no means to assess whether or not a situation like this required their attention. The second critical issue was to get members to comply with the Code. A resolution was passed at the General Assembly in 2008, which called for all members of the RSPO to submit public plans of their time-bound sourcing targets and certification plan. Several producers identified this new change to the Code of Conduct as potentially very significant for predicting how the market for certified palm oil will behave (interviews with several Executive Board members). In practice, however, very few companies submit annual reports, making it difficult for producers to know how seriously end-users take their commitment to using sustainable palm oil. Technically, failing to provide these reports could be grounds for expulsion from the RSPO, but this did not happen so far.

A third critical issue appeared in the provisions of the RSPO Certification Systems document, that states that organizations can only certify individual plantations if they meet certain minimum criteria in their other holdings. These minimum criteria demand that there are no significant land conflicts, no replacement of primary forest or any area containing High Conservation Values, no labor disputes that are not being resolved through an agreed process and no evidence of non-compliance with law in any of the noncertified holdings². Certificates for all of the company’s holdings shall be suspended if there is non-compliance with any of these requirements. These clauses became an important tool for ‘watchdog’ organizations to attack companies that did not comply with these minimum criteria. The first plantation company to certify its operations was United Plantations (in Malaysia). After United Plantations completed this first certification, Greenpeace investigated its non-certified plantations in Central Kalimantan, Indonesia, and alleged that these United Plantations holdings did not meet the minimum criteria. They accused the RSPO of ‘greenwashing’ and allowing companies to “have their RSPO certification of Malaysian plantations but continue with business as usual in their Indonesian concessions” (Greenpeace 2008b). To not jeopardize the Roundtable process, conflicts of this sort were in several cases resolved outside of the RSPO. For example, Unilever in 2009 announced it was suspending future purchases from palm oil supplier PT SMART (Unilever 2009). This act

² RSPO certifications systems 13

followed the publication of two reports by Greenpeace, making allegations that the Indonesian company's plantations were responsible for destruction of high conservation value areas. Unilever took action outside of the RSPO framework and PT SMART remained an active member of the RSPO participating in several working groups.

A fourth critical issue regards the market uptake of certified sustainable palm oil, which has been very disappointing to producers. In 2008, the uptake of certified palm oil was only 2,7 %. While the uptake increased, in 2011 it was still just over half of the certified supply that was sold as such (52 %) (RSPO 2011). WWF decided to take action to address this problem. In 2009, it announced the introduction of a 'Palm Oil Buyer's Scorecard,' through which "companies will be scored on a variety of criteria relating to their commitments to, and actions on, sustainable palm oil" (WWF 2009). By publishing the performance of RSPO members outside of the Roundtable reporting mechanisms, WWF hopes to expose members to criticism for not supporting the process by actually buying the certified product. Because the uptake of certified palm oil is still lagging behind supply, WWF presented a new scorecard at the Roundtable conference in 2011, where the uptake of palm oil was an important topic of discussion. Despite the potential challenges caused by low demand, the certification of plantations has continued and so far 29 companies have had 135 palm oil mills certified (RSPO 2011).

The RTRS faces implementation issues very similar to those of the RSPO. RTRS members also subscribe to a Code of Conduct, which outlines different responsibilities of RTRS members. The basic agreement members make is to "support and work towards the financing, production, implementation of P&C, procurement and use of Responsible Soy". Similar to the RSPO, this Code requires members to "report annually on their efforts to support the RTRS and promote responsible soy". The percentage of members actually submitting annual reports is very low (Interview #36). If members are found to have acted in breach of the Code, they risk disciplinary measures including termination of their membership (RTRS 2012d). As yet, there has never been a member expelled from the RTRS on these grounds. Like the RSPO, the RTRS faces problems with the uptake of certified produce. There is no trade in physical certified soy, but only in virtual credits. This system overcomes the logistical complexities of creating a segregated supply chain. Producers can register their certified soy in a credit trade platform, which soy buyers can purchase in the form of credits. Of the 400,000 tons of certified soy produced in 2011, half is covered by credits that are sold through the trading platform (Interview #36). Although the credits remain valid for two years, it seems that in the RTRS the supply of certified produce also exceeds demand.

The Acceptance of the Roundtables by Third Parties

Multi-stakeholder arrangements, such as Roundtables, have the intention to influence external stakeholders' attitudes towards the industry (Dentoni and Peterson 2011). A good gauge for acceptance of the arrangements by third parties is the character, degree, and content of opposition to a Roundtable. Both roundtables had to face much opposition of third parties, but the character, degree and content of these protests differ.

The RSPO has been subject to numerous criticisms from NGOs that have not joined the initiative. Greenpeace and Friends of the Earth are chief amongst these groups. In 2007,

Greenpeace published a report in which the RSPO was described in a very negative way and the leading role of Unilever and its suppliers (Cargill, ADM-Kuok-Wilmar, Golden Hope, Sinar Mas) was critically assessed (Greenpeace 2007). In 2008, Greenpeace targeted an anti-palm oil campaign against Unilever, using their brand 'Dove' as a symbol for rapid rainforest destruction. Subsequent talks between Greenpeace and Unilever have resulted in a willingness on the part of Unilever to join the call for a moratorium on deforestation in Indonesia (Greenpeace 2009). Also in 2008, Greenpeace attempted to prevent the loading of the first RSPO certified palm oil on a Rotterdam-bound tanker in Indonesia (Greenpeace 2008a). There are many more examples of NGOs that publicly display their disapproval of the RSPO process. One of them is the German NGO 'Rettet den Regenwald'. In 2008 they published the 'International Declaration Against the 'Greenwashing' of Palm Oil by the Roundtable on Sustainable Palm Oil', which was signed by over 250 organizations worldwide (Rettet den Regenwald 2008). While campaigning NGOs are able to drive the process of developing increasingly positive and sustainable criteria forwards, their tactics have had some negative consequences as well. Producers have seen the front-running companies being specifically targeted for anti-palm oil ads. Early campaigns may have encouraged producers to be a part of the RSPO, but they also see the companies that do certify, such as United Plantations, being singled out as a result of their efforts (Interview #7). During the course of the partnering process the opposition against the RSPO decreased. Part of the reason is that campaigns as the ones described above have influenced the process. While Greenpeace and Friends of the Earth are still not members of the RSPO, they do visit RSPO conferences and are sometimes involved in the process on an ad hoc basis.

The RTRS is relatively less accepted as an authoritative agent. This can be seen in the large-scale organized opposition to the organization, which is present on several levels. First, there is opposition to the RTRS as a whole. There are two primary reasons for the relatively low support of NGOs for the process. One is the inclusion of GM-soy as potentially 'responsible.' The critics of the process include many large organizations, such as Friends of the Earth, as well as a large number of single-issue organizations, such as 'Toxic Soy' and ASEED Europe. The other source of opposition to the RTRS is based on the large-scale, mechanized production model that dominates in North and South America. The RTRS is seen by many NGOs as a symbol of big agro-industrial companies, which are viewed very negatively, because of the rapid agricultural expansions in an industry that was formerly dominated by smallholders, which has led to large social problems in Latin America (Interview #24). Second, individual members of the RTRS are attacked for being part of the organization. NGOs such as WWF and Solidaridad have been attacked because of their membership of the RTRS and are accused of legitimizing a standard that does not guarantee sustainable production at all (Gifsoja 2009). Companies are also heavily criticized for being involved in the Roundtable process. An example includes campaigns against a large Dutch supermarket, because of their support to the RTRS (Gifsoja 2011).

The difference between degrees of acceptance of the two Roundtables is quite clear. First, some actors that actively support the RSPO publicly oppose the RTRS. These actors include high profile organization like Oxfam Novib and Cordaid. In our interviews with NGOs the same pattern became visible, wherein the RSPO was believed to be more credible than the RTRS. A second difference is related to the character and content of the opposition. In case of the RSPO the standard is used by NGOs like Friends of the Earth and Greenpeace to attack members of the RSPO that violate the standard. In case of the RTRS, we do not observe this. The opposition

exists mainly of NGOs publicly disapproving very strongly of the standard itself. Third, internal and external NGOs in the RSPO seem to reinforce each other, while internal and external NGOs in the RTRS seem to frustrate each other (Schouten and Glasbergen 2011; Hospes, Stattman, and de Pooter 2009). The interaction between internal and external NGOs in the RSPO often leads to more leverage for internal NGOs in the negotiations, while the public disapproval in case of the RTRS, often leads to frustration for internal NGOs.

Trust and Collaborative Advantage

The previous sections analyzed legitimization processes of the two Roundtables from an actor perspective. From this perspective it seems that trust and collaborative advantages are crucial agency related factors that influence legitimization processes. Trust encapsulates the emotional element of the interactions: the reduction of feelings of risk and vulnerability in the partnering process (Gray 2007; Glasbergen 2010). The concept of collaborative advantage refers to doing business that is in one way or another profitable for all partners. Collaborative advantage encapsulates the synergy argument; for each partner the opportunities should outweigh the risks and they should be able to achieve something that they cannot realize on their own. In other words, potential partners will only collaborate if they supposed to gain from the partnership and they feel that risks and opportunities are fairly distributed (Glasbergen 2010; Gray 1996).

The specific working method used in the RSPO allowed trust to develop more easily compared to the RTRS, which made it easier to get relevant stakeholders involved and to come to an agreement. First of all, because of previous collaborations, the three key actors of the RSPO had already established some level of trust. The Malaysian Palm Oil Association (MPOA) and Unilever therefore perceived WWF as a very reliable partner. If another NGO had initiated the RSPO, industry participation would probably have been limited (Interview # 10). In case of the RTRS the role of WWF is more contested. WWF-Netherlands is a member of the Dutch Soy Coalition, an organization that claimed that the large-scale monoculture model of soy production is inherently problematic, and that the only solution is to decrease soy consumption (Dutch Soy Coalition 2006). Soy producers had trouble believing that this position had been set aside by WWF and this limited the level of trust in the initial phases of the RTRS. Secondly, the RSPO developed from a small group of stakeholders that laid out the direction for the organization before being open to other stakeholders (RSPO 2002). In case of the RTRS no early commitments were made and participants simply agreed that exploring collaboration was worthwhile. It seems to be beneficial to start out with a small group of actors who have already established some general level of trust. In this safe environment it is easier to start a collaborative process than in a situation of distrust with a large group of actors. After the start-up phase in both Roundtables similar issues of trust arose related to the perceived fairness of the partnering process, which relates to the issue of collaborative advantage.

The scale of the problems present in palm oil production and the desire for producers to maintain market position originally provided a significant potential collaborative advantage that allowed for the RSPO to develop as far as it has. The primary concern of WWF was deforestation, while Unilever was ultimately concerned about the security of their supply of raw materials (RSPO 2002). Retailers' main concern was to lower reputational risks. Reasons for palm oil producers to join the RSPO were to counter negative claims about palm oil, possible price premiums, market

access and preferential purchasing policies. However, as our analysis shows, the early expectations on collaborative advantage have not all been met. A specific problem regarding collaborative advantage in both Roundtables has been the obligation to keep part of one's property free from agricultural use to halt deforestation. Without an economic compensation mechanism, many producers object to this (Interview #31). Furthermore, the take-up of certified products by the market up to now has been very disappointing for producers.

This agency related explanation of legitimization processes of Roundtables is still incomplete and structural factors should be used to further explain the manifestation of legitimacy problems. The concept of structure in our case refers to the societal context in which the Roundtables emerge and shifts our focus to institutional factors that provide opportunities and constraints for the interactions to develop (Huijstee, Francken, and Leroy 2007). Based on our document analysis and interviews we identify four structural factors that create opportunities or constraints to the collaborative interactions of Roundtables influencing the manifestation of legitimacy problems: the structure of the commodity chain; the type of lead firms; governmental regulations; and, the political embedding of NGOs. These factors correspond largely with the literature on value chain governance (e.g.: Roberts 2003; Altenburg 2006; Coe, Dicken, and Hess 2008; Vermeulen et al. 2008).

The Structure of the Commodity Chain

A first factor that is assumed to influence the interactions is the structure of the commodity chain in terms of its mode of integration (Roberts 2003; Vermeulen et al. 2008). The more vertically or horizontally integrated a chain is, the easier it is for a governance initiative to progress. Vertical integration means that one firm is in control of multiple processes along the chain, while horizontal integration means that fewer firms are involved at each stage along the chain (Vermeulen et al. 2008). The more diffused the supply base is, the larger the number of possible supply routes, thereby reducing interest in certification amongst manufacturers and retailers (Roberts 2003).

While the production and trade of palm oil are fairly concentrated, the production of soy is much more diffused and the chain is less integrated. About 50 large plantation groups account for 75% of global palm oil production. The refining and trading segments of the chain are even more horizontally integrated: 15 business groups control 75% of the global market (Aidenvironment 2008). Concentration is also reflected by the increasing vertical integration of groups. American companies have recently invested in upstream operations, while Malaysian plantation companies have made investments in processing and trading. The soy value chain has an hourglass structure in which a very broad number of actors are present at the top and bottom, with much greater concentration in the middle (ibid.). There are tens of thousands of soy producers, from many different countries, selling soy to a very small number of large trading companies. The companies Archer Daniels Midland, Bunge, Cargill, and Dreyfuss control around 80% of the processing and trading chain (Carrere 2006). Their customers are processors and food manufacturers as well as feed companies, farmers, and meat/dairy processors. These companies sell to a small number of retailers, who in turn link to large numbers of consumers. The impact of the hourglass structure in the soy value chain has been significant. Changing production practices ultimately means connecting with farmers; however, there are so many different types of soy

farmers that it is very difficult to meaningfully engage with a significant representation. In contrast, the RSPO has been more successful involving a large percentage of producers, which can partly be explained by differences in the structure of the commodity chain.

The Type of Lead Firms

Lead firms are actors who are in the position to set the parameters under which other actors in the chain operate (Humphrey and Schmitz 2001). Depending on how vulnerable a lead firm is towards critical consumerism, they may be more or less committed to different standards, and may use different combinations of pressure and support to enforce a standard throughout their supply chain (Altenburg 2006). Consumer-facing companies, especially the ones with a strong brand, are much more vulnerable to reputation damage than other actors in the chain. However, even though the targeted companies are mostly at the end of the chain, power is not always located in the hands of those companies (Bair and Gereffi 2001; Dolan and Humphrey 2004).

In the palm oil chain, consumer-facing companies are in dominant positions. Unilever, the largest purchaser of palm oil, buying 4% of global production, has a very powerful position in the chain (Unilever 2008). Unilever plays a dominant role in the RSPO from the beginning onwards and its position in the palm oil chain helped producers demonstrate that the RSPO was meant as a progressive, but mainstream and business-friendly initiative. Unilever and other consumer-facing companies in the palm oil chain have inclinations to actively address sustainability, because of marketing benefits, minimizing reputational damage and securing long-term supply and are in a position to do so. In the case of soy, those companies that are presumably most interested in sustainability, the consumer-facing ones, are in a less dominant position. There are tens of thousands of soy producers, who sell their soy to a very small number of large trading companies that control most of the processing and trading and play the role of lead firms. These dominant actors in the chain are not brand-driven, like Unilever is (Interview #24). The size and power position of these companies makes it difficult for downstream actors to significantly influence their activities. Furthermore, they are accustomed to bulk products and pricing based on measurable product qualities rather than issues such as sustainability.

A related factor is product visibility. The more visible a commodity is to consumers, the stronger their demands will be towards consumer-facing companies and the more they shape the process of governance in the chain (Coe, Dicken, and Hess 2008). Although the products of the oil palm are used in approximately 50% of products in European supermarkets (WWF 2009), palm oil is not very visible to European consumers. Ingredient clarifications of products containing palm oil in the EU most of the time do not specify which exact oil is used, because the generic term 'vegetable oil' is used. The same is true for soy oil. Although soybean oil is an important ingredient in many food products, soybean demand is largely driven by the feed industry. These two products (oil and feed) of the soy plant reach the consumer in different ways. Soy is used in large quantities as animal feed to produce meat or dairy products, but is not an ingredient in those products and therefore not visible to consumers. As such, retailers, manufacturers, and meat processors have less of a commercial incentive to strongly push for changes upstream³.

³ Products that are made of soy (and sold in Europe) in which soy beans are more recognizable, like soy drinks or tofu, seem to have different types of certification or other means of guaranteeing that the soy used is not contributing

Government Regulations

There are many regulatory drivers and constraints that may influence the behavior of firms and their attitude towards sustainability initiatives, including taxation policies, national regulations, trade policies, and regulations on property rights (Vermeulen et al. 2008; Altenburg 2006). Subsidies and taxation policies may benefit or hinder supply chain relations and are highly relevant for the sourcing behavior of firms (Altenburg 2006).

Palm oil is grown in countries that do not subsidize the agricultural sector, but rather tax the export of agricultural products (Interview #30). Soy, on the other hand, is one of the most heavily subsidized crops in the United States commodity programs (Wise 2005). By contrast, the soy industry in Brazil is subject to taxes. The existing tensions in the WTO negotiations between these countries (the two biggest producers of soy) about export subsidies for agricultural products directly translate into the roundtable discussions and lead to a lack of trust among producers (Interview # 30). Furthermore, because American producers are subsidized, they have less of an incentive to connect to new markets, as their competitiveness is guaranteed. Tensions like this have never been a problem in the discussions on sustainable palm oil, resulting in totally different Roundtable dynamics and more favorable conditions to include stakeholders.

The RSPO standard requires that a High Conservation Value (HCV) assessment is made of an area before it is developed for the production of oil palm. If part of the area is considered HCV area, it has to be preserved and cannot be planted. Indonesian producers perceive this part of the P&C as a risk to their operations. Producers get a concession from the Indonesian government to develop a certain area within a certain time frame. They fear if they don't develop part of the area, the Indonesian government will transfer the concession to another company, which will then develop this HCV area that will be located inside their plantation (Interview #10, #30). According to a producing company that already preserves HCV areas these are groundless fears (Interview #35), but whether or not these fears are justified or not, they affect the legitimization process of the RSPO.

The Political Embedding of NGOs

Hospes et al. (2009) conclude that the relations between business and NGOs in the case of the RTRS have been a threat to the process, while similar relations in case of the RSPO have pushed the process forward. This difference can be partly explained by the political embedding of NGOs in the relevant continents. The political embedding of NGOs in South-East Asia (who are relevant stakeholders for the RSPO) is completely different from the political embedding in South America (which is a relevant audience for the RTRS) (Interview #33, #32).

The main difference relates to the attitudes of civil society organization towards market actors. In general NGOs tend to be more collaborative or more confrontational toward businesses. NGOs in South America have a long history of campaigning against large-scale agri-businesses and are

to sustainability problems. This might not only be related to the visibility of soy in these products, but also to the type of consumers that buys these products.

very distrustful of market initiatives such as the RTRS. As mentioned before, they see it as a symbol and extension of power of large agricultural companies (Interview #30). NGOs in South America therefore started protesting against the RTRS instead of becoming involved as one of the partners in the process. The position of NGOs in South-East Asia is totally different as civil society organizations were less developed and less influential in this region and tend to be more collaborative towards market actors. Therefore, the initiation of the RSPO has provided a new platform for NGOs to voice their concerns; a space that was not available before (Interview #33). This difference between the two regions reinforced itself under influence of Northern and large international NGOs, as it is a reason for them to support the inclusion of NGOs in the RSPO to strengthen the position of civil society in South-East Asia and to stay out of the RTRS process.

Conclusions

Most research on legitimacy of private governance arrangements takes a normative approach in which the legitimacy of a specific arrangement is evaluated. This approach is limited, because legitimacy is not an overall characteristic of a governance arrangement, but rather an attribute that is created in an interactive process. To better understand these legitimization processes in Roundtables, this paper analyzed the practices through which legitimacy is created by looking at the interactions between the actors in Roundtables and the institutional context in which these interactions take place. This approach revealed a variety of legitimacy problems.

First, it can be problematic to align different views on sustainable development in order to reach agreement about the way in which the industry will be governed. It is fundamental for a legitimization process that stakeholders come to a common problem definition and accompanying rule system. Although this was a difficult process in both analyzed cases, these Roundtables have managed to put a rule-system in place by taking on a pragmatic approach. Problems and solutions were framed in specific ways and some contentious issues were left out.

Second, while decision-making by consensus is a very important principle for Roundtables, reaching consensus is not always possible, certainly not when the credibility of the arrangement as a whole is at stake. In some cases majority voting and accepting the exit of certain stakeholders is the action strategy that is chosen. But since the resignation of important stakeholders is a threat to the legitimization process of the arrangement, in other cases problems are solved outside of the Roundtable process. This allows the sanctioning of nonconforming behavior, while at the same time keeping all partners in the process. Both strategies were present in our case studies.

Third, problems regarding legitimization arise from perceptions regarding costs and benefits of collaboration. For relevant stakeholders to get and to remain involved in the process their expectations and perceptions about collaborative advantages must be positive. For businesses this relates mainly to reducing negative publicity and gaining access to new markets, while for NGOs this mainly relates to expanding their moral influence. In our cases, especially producers felt they had to bare most of the costs of the partnering process. This is related to the fact that Roundtables focus on certification on production level, instead of looking at all stages of the production process and certifying every 'link' in the chain. Our analysis shows that the consequences of perceptions of an unfair distribution of costs and benefits become especially

visible in the implementation phase of the rule system. In that phase stakeholders experience whether they really gain more by complying with the rules than by continuing business as usual.

A fourth, related, legitimization problem concerns the implementation of the created rule system. The analyzed Roundtables are currently unable to get the majority of their members to comply with the standard, let alone the majority of the whole industry. Primarily, this is due to the voluntary character of private governance arrangements. Roundtables are not able to sanction member behavior to force them to comply with the established rule-system. As long as 'business as usual' is allowed, it is easier for producers as well as for buyers. It will be extremely difficult (or at least take a long time) for these Roundtables to change a whole market.

Fifth, in order to be accepted as an authoritative agent the created rule system must not only be credible for market parties, but also for other audiences. If this is not the case counter reactions are likely to develop which jeopardize the legitimization process of the arrangement as well as the credibility of individual Roundtable members. Especially companies are vulnerable to reputational damage by campaigning external NGOs, but negative campaigns form a risk to internal NGOs as well. In our cases we saw two different scenarios regarding this point. One in which internal and external NGOs seem to reinforce each other and bring the legitimization process forward (RSPO), and one in which internal and external NGOs frustrate each other and undermine the legitimization process (RTRS). Another difficulty for Roundtables is the role of consumer markets in some importing countries that, because of political ideology and context, are not (yet) ready to buy products that have extra value regarding sustainability (i.e. China).

These legitimization problems can be partly overcome by managing the process and adjusting the working methods of a Roundtable to ensure that trust and perceptions about collaborative advantage develop more positively. However, structural factors may constrain the development of the legitimization processes of these arrangements, thereby limiting the management options to enhance the creation of legitimacy.

The identification of these legitimization problems shows that taking a more practice-based approach to studying legitimacy of private multi-stakeholder governance provides additional insights that go beyond merely assessing the legitimacy of an arrangement based on normative criteria and shows how legitimization processes can be enabled or hindered by factors on an actor and on a more institutional level. These types of explanatory factors therefore add a new layer to the available theory on legitimization processes of private multi-stakeholder governance.

The findings of this article have some implications for the broader application of the Roundtable as a governance model. Currently, we see many Roundtables being initiated by Northern actors in a diverse range of commodity chains. In order to bring about sustainable change in an agricultural sector it is important to have a balanced participation of Southern and Northern actors in these Roundtables. Even if this balanced participation is secured, there are still risks in using this governance model, since structural factors influence their legitimization processes. Therefore, practitioners, including agri-food managers, should first conduct an institutional analysis of the context in which a governance initiative is meant to operate. This analysis should at least include a thorough commodity chain analysis, an analysis of regulations affecting this chain and an analysis of the nature of civil society organizations in main production areas. If

there are many potential hindering factors for the legitimization process of a Roundtable a different action strategy should be considered or these factors should be resolved.

The managerial impacts of our study mainly relate to adapting to potential hindering factors for the legitimization process of a Roundtable. Structural factors are assumed to be inalterable on the short-term and therefore managerial efforts should focus on the actor-based factors trust and collaborative advantage. These actor-based factors are not independent of structural factors. The structure of the commodity chain, the type of lead firms in the chain, governmental regulations, and the political embedding of NGOs all influence the degree of collaborative advantage for different groups of stakeholders, while trust building is primarily influenced by the type of lead firms in the chain, governmental regulations, and the political embedding of NGOs. When the institutional analysis shows that the structure of the commodity chain, the type of lead firms in the chain, governmental regulations, and the political embedding of NGOs in a specific industry are not beneficial for the legitimization process of a Roundtable, managing efforts should focus on increasing the perceived collaborative advantage for all stakeholder groups. When the analysis identifies the type of lead firms in the chain, governmental regulations, and the political embedding of NGOs as factors that could potentially have a negative influence on the legitimization process of a Roundtable—then managerial efforts should focus on increasing the level of trust between all stakeholder groups.

The research in this article is exploratory in nature and although our conclusions are empirically valid, they are based on two case studies and are therefore lack statistical validity. Future research could therefore test the results of this paper possibly in a more quantitative manner in which a larger number of Roundtable-like initiatives are analyzed, for example on the basis of survey data (a list of 18 multi-stakeholder arrangements that can possibly be studied in the agri-food sector is provided by Dentoni and Peterson 2011). From this data the proposed causal relations could be tested, which requires a quantification of the legitimacy concept for which smart indicators need to be developed. While our research has shown that Roundtables can place sustainability on the agenda of an industry and develop and implement a certification scheme, their legitimization processes can be negatively or positively influenced by different institutional settings. Further research should therefore specifically address the relative importance of individual structural factors on legitimization processes of Roundtables.

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Appendix

Interview List

No.	RT	Interviewee	Member Category	Type and Date
1.	RSPO	Former Ethical Policy Manager, The Body Shop	EB member Retailers	Telephone interview March 30, 2009
2.	RSPO	Senior policy advisor, Oxfam- Novib	EB member Social or Development Organizations (NGOs)	Interview March 30, 2009
3.	RSPO	Consultant & Facilitator,	Facilitator	Interview April 3, 2009.
4.	RTRS	Associate Director, ProForest	Facilitator	Telephone interview April 6, 2009
5.	RTRS	Outreach Manager		Telephone interview April 7, 2009
6.	RSPO	Head of Food & Agribusiness Strategic Advisory & Research for South-East Asia, Rabobank	EB member Banks & Investors	Telephone interview April 8, 2009
7.	RSPO	Global Sustainability Director, IOI Group	EB member Palm Oil Processors & Traders	Interview April 10, 2009
8.	RTRS	Director of <i>consumer policy</i> , Coop Switzerland.	EB member Industry, Finance & Trade	Telephone interview April 14, 2009
9.	RSPO	Environmental Risk Manager, HSBC Malaysia	Banks & Investors	Telephone interview April 14, 2009

10.	RSPO	Ex-chairman, Malaysian Palm Oil Association	EB member Oil Palm Growers	Telephone interview April 17, 2009
11.	RTRS	Regional Expertise Centre Director (Argentina), Solidaridad	President Civil Society	Telephone interview April 20, 2009
12.	RSPO	Director, ProForest	Facilitator	Telephone interview April 21, 2009
13.		Independent International Trade & Development Professional		Telephone interview May 8, 2009
14.	RTRS	Senior Vice President Market Transformation, WWF	Civil Society	Telephone interview May 8, 2009
15.	RSPO	Head of Forest Conversion Initiative, WWF Switzerland	EB member Environmental or Nature Conservation Organizations (NGOs)	Telephone interview May 11, 2009
16.	RTRS	Purchasing Manager, Nutreco.	EB member Industry, Finance & Trade	Telephone Interview May 20, 2009
17.	RTRS	Executive director, Fundapaz	EB member Civil Society	Telephone interview May 30, 2009
18.	RSPO	Manager Marketing Refined Oils Europe, Cargill BV	Palm Oil Processors & Traders	Interview June 9, 2009.
19.	RSPO RTRS	Manager Sustainable Production, Product Board Margarine, Fats & Oils (MVO)	Palm Oil Processors & Traders Industry, Finance & Trade	Telephone interview June 11, 2009
20.	RSPO	Deputy Director, Both ENDS	Social or Development Organizations (NGOs)	Telephone Interview July 23, 2009
21.	RSPO	Director Product Integrity, Ahold	Retailers	Interview July 28, 2009
22.	RSPO	Head of Program & Strategy, Wetlands International	Environmental or Nature Conservation Organizations (NGOs)	Telephone Interview August 17, 2009
23.	RSPO	Head of Food & Agribusiness Strategic Advisory & Research for South-East Asia, Rabobank	EB member Banks & Investors	Telephone Interview August 18, 2009
24.	RSPO	Global Supply Chain Director of Sustainable Agriculture, Unilever.	President Consumer Goods Manufacturers	Interview August 25, 2009

25.	RSPO RTRS	Manager Sustainable Production at Product Board Margarine, Fats & Oils (MVO).	Palm Oil Processors & Traders Industry, Finance & Trade	Interview August 28, 2009
26.	RSPO	Ex-chairman, Malaysian Palm Oil Association	EB member Oil Palm Growers	Telephone interview September, 2009
27.		Campaigner biofuels, biomass & palm oil, Friends of the Earth Netherlands		Interview September 2, 2009
28.		Forest campaign leader in Indonesia, Greenpeace		Telephone interview September 17, 2009
29.	RSPO RTRS	Global Supply Chain Director of Sustainable Agriculture, Unilever	President EB member Consumer Goods Manufacturers Industry Finance & Trade	Phone Interview February, 2009
30.	RSPO RTRS	Global Supply Chain Director of Sustainable Agriculture, Unilever	President EB member Consumer Goods Manufacturers Industry Finance & Trade	Several interviews & personal communications, March-August, 2009
31.	RTRS	Corporate Affairs Director, Bunge Brazil. President, ABIOVE	EB member	Personal Communications, March-August, 2009
32.	RTRS		Civil Society	Informal interview, October 17, 2011
33.	RSPO	Director, Forest Peoples Program		Phone Interview, October 26, 2011
34.	RSPO	Ex-chairman, Malaysian Palm Oil Association	EB member Oil Palm Growers	Phone Interview, November 8, 2011
35.	RSPO	Conservation Manager, PT REA	Oil Palm Growers	Informal Interview, November 23, 2011
36.	RTRS	Outreach Manager		Personal Communications, January, 2012

Note. Interviews #1-24 were conducted by Jordan Nikoloyuk, interviews 25-36 were conducted by Greetje Schouten



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Wicked Problems in Sustainable Agriculture and Food Security, the TransForum Experience

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Abstract

Finding a way to manage the underlying nature of wickedness was the main challenge for the Dutch innovation program TransForum. For six years a diverse group of public and private organizations and businesses took up the challenge to develop new and more sustainable modes of agricultural production. The results were used to help develop over thirty new agricultural businesses in which different, mostly intangible values related to sustainable development were translated into tangible and marketable entities.

Keywords: future, food, wicked problem

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Introduction

Finding a way to manage the underlying nature of wickedness was the main challenge for the Dutch innovation program TransForum. For six years a diverse group of public and private organizations and businesses took up the challenge to develop new and more sustainable modes of agricultural production. The group initiated a platform under the heading “Knowledge Network Transition Sustainable Agriculture” and eventually funded a public-private partnership to execute a six-year innovation program to experiment with new business developments. While working on the dynamic change of agricultural chains and networks toward sustainable development, processes, procedures and methods to address wicked problems were identified. That was done along two lines, a deductive approach in which a method to address wicked problems was designed based on theoretical analysis, and an inductive approach in which general insights on how to address wicked problems were derived from many different case studies.

The results were used to help develop over thirty new agricultural businesses in which different, mostly intangible values related to sustainable development were translated into tangible and marketable entities.

Deduction: Innovation Theory Revisited

The wicked nature of aiming for sustainable development was tackled in the scientific program of TransForum by addressing four themes that together constitute the basis for innovation: visions on sustainable development, inventions for sustainable development, organization of innovation and transitions, and market demands for sustainable products and services (Veldkamp et al. 2008).

The analysis of visions or concepts of sustainable development (theme 1) led to the insight that viewing the on-going debate on sustainable development as a discourse organized around images helps to understand the underlying values involved. Image management at different levels of scale can be applied to deal with different opinions and allows for more effective framing the challenges and thus monitoring progress. In many real life situations this element of values and framing is overlooked and leads to polarized debates on the ‘right solution’ that should be applied. Giving attention to underlying values and translate them into ‘design criteria’ that can be used to re-design business proved to be a critical element in developing action perspectives that inspired all stakeholders.

The analysis of inventions for sustainable development (theme 2) revealed that although inventions themselves are necessary, they are not sufficient for complex innovations where wickedness is involved. Since entrepreneurial drive, skills and knowhow, and institutional and societal context are equally relevant, inventions should be used to support innovation in this sphere, not to lead them. From this finding the practice was developed within TransForum to not only look at ‘hardware’ inventions (in terms of a new tool, product or process) but also at the new ‘software’ (the skills and competencies needed to apply and effectively use new hardware) and with new ‘orgware’ (the social relationships and formal rules and legislation that need to be amended for the innovation to occur).

Analyzing the organization of innovations and transitions (theme 3) led to the conclusion that large-scale, process-optimized innovation efforts aiming at revolutionary breakthroughs are less relevant in the agro domain. Instead, an approach where a large number of small-scale projects are supported will lead to a more evolutionary process of innovation that is much more suited in a situation where wicked problems lay at the heart of the need to innovate. This calls for a process oriented support of innovation efforts. As such, TransForum itself acted as a platform to exchange experiences and organize action learning.

Finally, the analysis of market demand for sustainable products and services (theme 4) revealed once more that attitudes and behavior are not always in correspondence. So, incentives toward sustainable products should be based either on increasing efficiency within the production chain, or on additional company benefits caused by increased consumer spending. The application of these insights led to the identification of three value adding strategies— or action perspectives - in which sustainable development is translated into innovative market propositions. Sustainable intensification aims at establishing a base of public support for new intensive methods of production leading to higher efficiencies and more sustainable modes of production. Sustainable valorization aims at cooperation with new chain partners to open up existing markets by translating values related to sustainable development into visible product characteristics. Sustainable diversification aims at cooperation with ‘unlikely allies’ to develop new products and markets related to agriculture, such as energy production, day-care and recreation.

The overall conclusion is that innovation aimed at sustainable development can deal with the wicked nature of the underlying problems by regarding it as an iterative process that requires a developing shared vision and a clear monitoring process as guidance. To that end, dynamic and temporary goals can be used to spur developments. This calls for intermediary solutions with acceptable levels of investment to avoid lock-in effects (Fisher et al. 2012). The notion of action perspectives as it was developed and operationalized by the Netherlands Scientific Council for Government Policy (1995) is very useful in this context. The way risks are treated and uncertainties are considered in a dynamic environment are typical for wicked problems. Setting up different action perspectives based on different priorities in values and risks combines the best available knowledge about consequences of actions with the possibility to compare different perspectives and incentivize a continuous debate on the next step forward. It also illustrates that there is ample opportunity to address wicked problems but a continuous process of making value driven choices is needed.

Induction: From Practice to Theory

The promotion and stimulation of knowledge creation and innovation by public private partnerships is an often used approach in Dutch policies. Also in the case of TransForum this was seen as a good instrument to make use of use existing dynamics, to renew societal contracts and to strengthen competitive ability. For that reason TransForum was set up as a combination of public and private investments. Many projects were supported; some with a strong initiative in the knowledge institutes, others governed and guided by private corporations.

Based on the experiences in the first year, a set of five assumptions was derived from practice. Three of them reflect the wicked nature of sustainable development: (a) sustainable development

is a dynamic system property, (b) sustainable development needs system innovation, and (c) system innovation is a non-linear learning process. And two more indicate into the direction of a transformational governance structure that is needed to manage these wicked problems: (d) system innovation needs active participation of knowledge institutes, governments, civil society organizations and businesses, and (e) transdisciplinary collaboration of all relevant players is necessary (Peterson 2009).

Eventually, the assumptions were developed into principles and used to shape all following projects. With this approach the methodology of grounded theory is applied that describes the way in which a large number of findings can be used as a database on which inductive theories are built. Using a set of performance criteria it was demonstrated that the application of the principles led to a higher success rate for realizing sustainable development when a certain level of ‘wickedness’ was present (Peterson and Mager 2010).

The case-based experiences we have gathered in the TransForum program in dealing with wicked problems have been translated into a more universal applicable method: the Value Mediation Method®. The method guides the process of developing new businesses in five steps. It combines the experiences of the TransForum program into a hands-on approach toward creating shared values in business as described by Porter & Kramer (2011). Essential in the approach is to postpone the urge to come up with a ‘solution’. Instead, focus on what constitutes the common challenge and how this challenge is related to the different underlying values of the relevant stakeholders. Then actively build a coalition to co-create new business models. In many cases this coalition will encompass some ‘unlikely allies’—for example former adversaries—that have proven to be critical in coming up with new design criteria leading to innovative business ideas.

Towards a Set of Recommendations on the Basis of Lessons Learned

The combination of deduction and induction in the TransForum program made it clear that there is no blueprint for a single method to deal with wicked problems. This is in line with notion that wicked problems have no single solution and therefore cannot be solved, but must be managed.

The deductive analysis of the elements of the innovation process revealed that setting up different action perspectives based on the different underlying values can help to kick-off managing the wickedness of the underlying conflicts. Combined with the recognition that innovation calls for hard- soft- and ‘orgware’ renewal and that different strategies can be used to translate sustainable development into business characteristics, the challenge for setting up an effective innovation process becomes clear.

The inductive development of a set of principles and a more general applicable Value Mediation Method underlines the need for structured process architecture. The application in some thirty projects has shown that a significant higher success rate emerges if the principles are applied systematically. It is also became clear that this mode of operation is overkill in situations where the underlying conflicts are solvable, or in other words, when it becomes clear that no wicked problem is hiding under the surface. Six years of experience in the TransForum program shows

that principles and structured processes help to address wicked problems and realize tangible steps into the direction of sustainable development.

The TransForum model can be used as a guideline for further refining modes of operation to manage wicked problems in agriculture (van Latesteijn and Andeweg 2010). At present the Value Mediation Method is available as a practical tool to address new challenges. However, more experience and theoretical insight has to be built up in combining analytical insights from inductive analyses with deductive understanding of dealing complexity and wickedness in real life situations. The combination of the two will help us to manage wickedness and shape our future by combining analysis with action.

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Key Drivers of Multi-Stakeholder Engagements

CHAPTER 2

C H A P T E R 2

Key Drivers of Multi-Stakeholder Engagements



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Building Capabilities for Multi-Stakeholder Interactions at Global and Local Levels

An Executive Interview with Jan Kees Vis¹, Bert Torn² and Anniek Mauser³

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Abstract

Managers of Unilever discuss the processes that led the company to develop and implement a corporate sustainability strategy working with multiple stakeholders. Major learning points include: 1) interactions with stakeholders are crucial to secure strategic resources in developing countries; 2) developing multi-stakeholder platforms must be rooted in the corporate culture and based on principles of innovation; 3) the overarching sustainability strategy, *Sustainable Living Plan*, launched in 2010, set broad objectives, while empowering local and regional managers—and even individual employees—to start and scale bottom-up initiatives if they find consensus within the organization. The discussions promise to fuel the debate on how organizations can effectively manage “wicked problems” through multi-stakeholder engagement.

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Introduction and Company Background

Unilever is a multinational corporation with Dutch-British roots producing more than 400 brands in the field of health and wellbeing. Today, it is the second largest food manufacturing company in the world after Nestlé, followed by PepsiCo and Kraft Foods. Unilever is the world's most active company in building sustainability partnerships with multiple stakeholders both at local and global levels (Dentoni and Peterson 2011). Their portfolio consists of 11 product categories which range from food and beverages to home and personal care products consisting of: skin, deodorant, oral and hair products; and refreshments including ice cream and beverages. Each year, nearly 1 billion dollars is invested in research to enhance brand image, prove nutritional properties, taste, fragrance and functionality of the products (Unilever 2012).

In 1990 the company expanded into Central and Eastern Europe and is now in more than 190 countries, throughout Asia, Africa Eastern Europe, Western Europe and America. Total turnover in the company dropped in 2009 resulting from the 2008 financial crisis, but increased in 2010. In 2011, turnover increased by 5% to 46.5 billion (Unilever 2012). In emerging markets, sales were up 11.5% between 2010 and 2011. Among the fastest growing products worldwide in 2011 were a number of brands the company invested and promoted which use sustainability principles, such as Lifebuoy soap, Lipton tea and the laundry products (Duurzaambedrijfsleven 2012).

Unilever has a long history of sustainable practices which rely on partnerships with multiple stakeholders (Figure 1 and Table 1). In 1990 the company started to integrate environmental and social sustainability principles into its sourcing and manufacturing processes, thus becoming the core of its business. A sustainability agriculture program was developed to meet the growing environmental pressures and consumer concerns. Additionally, initiatives were started to preserve water resources and sourcing of fish from sustainable stocks. During this period the company developed the Marine Stewardship Council in collaboration with the WWF⁴. In 1996 the first environmental report was published. A new program was implemented to achieve significant growth while minimizing the impact on the environment.

This strategic thread was developed further to launch the *Sustainable Living Plan* in 2010. The plan is designed to touch all aspects of the business—from the source of materials to product development and production—to how products are used, then disposed of by consumers. Three main goals are to be achieved by 2020. First, Unilever committed to cutting its environmental footprint in half by reducing greenhouse gases, waste, and water through increasing sustainable sourcing. Second, the company agreed to help more than 1 billion people by improving their health and well-being. Third, the company will source 100% of its agricultural materials sustainably. For each of these goals, targets have been developed and strategies designed to facilitate the process.

⁴ World Wildlife Fund.

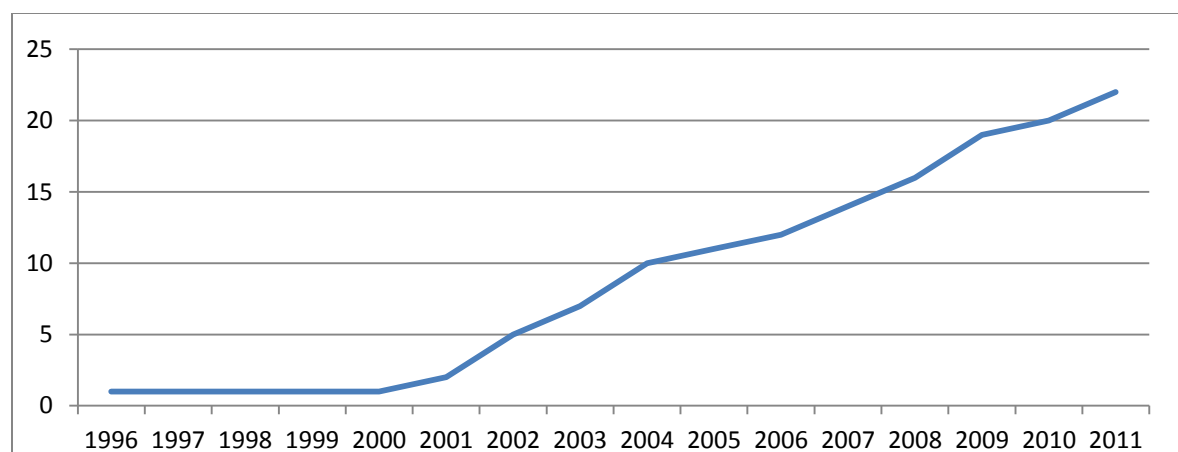


Figure 1. Cumulative Number of Multi-Stakeholder Partnerships on Sustainability joined or co-founded by Unilever (1996-2011).

Table 1. List of Multi-Stakeholder Partnerships joined or co-founded by Unilever (1996-2011)

Year	Name of the Multi-Stakeholder Partnership
1996	Marine Stewardship Council*
2001	Global Public-Private Partnership for Hand washing with Soap*
2002	SAI Platform*; GAIN*; Novella Africa Initiative*
2003	
2004	Roundtable for Sustainable Palm Oil (RSPO)*; Sustainable Packaging Coalition; Sustainable Food Lab
2005	Bonsucro; Carbon Disclosure Project; Supply Chain Leadership Collaboration*
2006	Roundtable for Responsible Soy (RTRS)*
2007	CEO Water Mandate; Sustainable Tea Project*; Greenhouse Gas Protocol Initiative
2008	Water Footprint Network; IDH Soy;
2009	AIM*; Project Laser Beam*; IDH Tea; Climate Savers Computing Initiative
2010	Global Packaging Project
2011	New Vision for Agriculture*; IDH Spices; Unox & Dutch Animal Welfare Organization
Co-Founded*	

Source. Data elaboration based on Dentoni et al. 2012a.

Currently, Unilever managers confirm that sustainability is embedded within all company projects both at global and local level. The Sustainable Living Plan Steering Team is responsible for achieving the goals developed in the Sustainable Living Plan. A board committee reviews the progress of the plan. Both the Unilever Sustainable Living Plan Steering Team and Board Committee benefit from the insights of a group of external specialists guiding and criticizing the development strategy.



An Executive Interview with Dr. Jan Kees Vis⁵

Global Director Sustainable Sourcing Development, Unilever Head Office

DD: Unilever is widely recognized as having a core competence in developing multi-stakeholder engagements on sustainability. How has Unilever developed this skill over time?

JKV: We started in the 1980s and early 1990s. The company realized that the world was changing and it was necessary to analyze general trends that are changing the world environment and to be responsible for undertaking change. We acted not only for a sense of corporate responsibility, but also to secure the future supply and suppliers for our future business. Most of our products are coming from agriculture and we cannot forget about the link between farming and our manufactured products. Land and agricultural production is a strategic resource and these are precious assets as never before during the recent world history. So I personally started attending a number of events such as the United Nations conferences on climate change and became active in the discussions with institutional stakeholders at a global level. At that point, I started building a history of relationships with stakeholders from very different backgrounds. So personally, I have grown up with my career embedded in this type of multi-stakeholder environment.

When looking at environmental and social themes from a supply perspective, there is no controversy with farmers. Let's take the example of India. For decades we have been investing in disseminating and exchanging knowledge on best agricultural practices through our extension officers. Over time, our extension staff initially disseminated agronomic knowledge to our farmers. Later, the extension officers have increasingly dealt with environmental risks, which is how climate change visibly affects farmers' livelihoods, and all the other sets of risks farmers are exposed to. So, we work collaboratively with our farmers to minimize their risks, respond and even anticipate their needs because this is the only way that we can guarantee that farmers will keep producing and selling to Unilever.

DD: Just hiring only one or few expert(s) in managing multi-stakeholder engagements is necessary but not sufficient to make an organization sustainable. Changing organizational culture, internal procedures, and the competences of employees is also necessary. In practice, how has this process of change worked and been managed within Unilever?

JKV: The company needs to be innovative *a priori*. This has much to do with top management and how the company is structured. Unilever developed products and processes based on innovative procedures for at least thirty years. Based on the position and type of contract, employees and local managers are given opportunities to propose new initiatives, both on sustainability issues or on anything else that could improve the effectiveness of our procedures.

⁵ This interview was conducted in October 2011.

I started from a personal initiative as well. As I have a chemistry background, I started my career as a product technologist, and then increasingly managed the supply of ingredients for my products. It was my decision to participate in meetings dealing with global sustainability problems, and then I first started developing and formalizing partnerships with farmer associations, Governments, and NGOs around those debates. Without a company culture of innovation allowing me to invest in the idea of developing multi-stakeholder platforms, I could not have achieved what I did.

Obviously, within the organization we've had and still have debates—sometimes harsh, about how to deal with stakeholders, when starting a new initiative or when replicating an initiative that has worked in other contexts. Discussing ideas and new initiatives always requires building consensus within the organization and this takes place over time—talking to many people and really influencing each other's mindset. Today, instead, open innovation and discussions with stakeholders both locally and internationally constitute the core of our business.

DD: How are you striving to improve this multi-stakeholder process on sustainability? What is the trend of investments that Unilever has made to develop and learn from multi-stakeholder platforms?

JKV: This is the same as asking me how I strive to make my work more effective. I keep my eyes open and train my employees to do the same, I trust my collaborators, down to extension officers and people dealing with stakeholders on a daily basis in the field. Innovate by continuously listening and discussing other people's suggestions and through making suggestions to others, both inside and outside the organization.

This model of innovation is our “business as usual”. Across teams and departments we share and see which practices and platforms can be adopted, but the interactions and decisions which occur with stakeholders are ultimately left to the individual teams. Thus, over time we just started doing things differently, adapting each person's role to the strategic needs of the organization, which is now sustainability-led at its core. We have not necessarily employed more resources or made specific investments in sustainability, we have simply used our time as employees and managers differently.

DD: How do stakeholders outside the platforms (consumers, citizens, private investors) perceive Unilever's sustainability initiatives?

JKV: I am not an expert in marketing, as I deal mainly with agriculture and supply. So I do not know exactly how the impact of sustainability strategies on consumer demand is measured. What I do know is that partnerships are not built for company reputation or brand equity purposes. They have emerged as useful tools to create conditions of stability and prosperity which allow us to secure supply from developing countries. Often, discussions in partnerships become essential to understanding and anticipating legislation and regulation within the company.

We need to work collaboratively along the chain, realizing that reciprocal and collaborative efforts indeed have an impact on the environment. So if other stakeholders ask us to behave sustainably, they must also be ready to do the same. Everyone has to take responsibility to make

the life cycle of production, consumption, recycling and reusing more effective. Within the *Sustainable Living Plan*, we emphasized that consumers and households can also do a lot for sustainability: demanding sustainable products while wasting water and energy at home is a contradiction. It is estimated that water consumption at home is the largest contribution to our water footprint—the little habits at home such as, the time people spending taking showers, washing their hair and brushing their teeth, etc.

More broadly, when developing advertising campaigns for our products, usually we adopt the “me-us-the world” model. First, consumers think about “me”, how can a certain product make my life better? Second, they think about “us”, meaning the people around themselves: family, friends, and people that know personally. Only as the third priority do they usually think about “the world”. When sending messages about our products and how we produce them, we keep this model in mind. This is why you do not usually see sustainability claims on our products or in our advertisements.

DD: Do you choose the stakeholders for your multi-stakeholder partnerships based upon what you can gain or learn from them? We realize that multi-stakeholder partnerships may develop different goals depending on which stakeholders join them. But, how do you assess the returns on investments made when developing multi-stakeholder platforms?

JKV: We do not have a corporate goal with multi-stakeholder initiatives before starting them. Multi-stakeholder initiatives have their own goals and we are only participating in them, so goals are truly set up collectively. For us, making sure that we maintain good relationships with our suppliers and contribute to an environment of social and political stability in the countries where we work is our return of investment. Therefore the impact of multi-stakeholder interactions cannot really be measured in terms of financial performance.



An Executive Interview with:

Dr. Bert Torn⁶

Global Director Strategy Implementation, R&D Operations

MV: How does sustainability get started within R & D?

BT: You can say, every project must take the sustainability implications into consideration. If no steps are taken or progress made—the project will not be approved. Every project needs to make a positive contribution to sustainability. They do not need to be giant steps, so long as the project does not go backwards. For example, if a product requires more packaging, but the project is designed to use less water or chemicals, then the project may be approved. We try to look at the whole footprint—this means materials, production, the product itself and the consumers.

⁶ This interview was conducted in February 2012.

MV: So, you focus on the entire lifecycle of the product?

BT: Yes exactly, we never focus on just one thing, we always take into account the big picture. If the whole picture does not make progress towards sustainability, the project would not be approved.

MV: Were radical changes needed by the R&D team to embrace sustainability?

BT: The objectives related to sustainability increased progressively. They consist of measurable quantities and also how they are measured. Last year, a lot of time was spent developing the current blueprint. Today, we know our footprint in terms of water, waste, packaging, CO2 emissions and sustainable sourcing. We know the current footprint in all categories which means we are able to measure the changes over time. We have three groups: health and wellbeing, environment and economic life health. These groups are sub-divided and every division has a separate matrix. Everything is measurable, this also gives us a way to communicate environmental concerns and impact to consumer groups.

MV: Does the company usually engage with stakeholders during the innovation process or do they primarily initiate the discussions and Unilever responds?

BT: Sustainability is now a major driver in our entire business, including our R&D program. We have been working with an Open Innovation Platform for a number of years, and we are engaged in numerous partnership platforms on many sustainability issues. We have several advisory bodies (Unilever Sustainable Development Group, Sustainable Sourcing Advisory Board), so yes, stakeholder engagement is an important element in our corporate culture.

MV: How are new sustainability initiatives established?

BT: Often, a few competing options are tested with consumers at the beginning of a project related to sustainability. We make use of consumer focus groups to test these ideas. Based on consumer feedback, a selection is made, then R&D and product development follow.

MV: Who within the company is usually coming up with these new projects?

BT: It may be technical people, but also marketing people come up with ideas. There is a lot of collaboration. Sometimes there is heightened publicity surrounding a sustainability issue in a particular country. For example, finding suitable alternatives for animal testing is very active concern in The Netherlands. Additionally, the Netherlands is having a large debate on nanotechnology. In other countries other topics are on the forefront. Enormous objections surround the use of phosphates in France, therefore it is important to be responsive and produce something which does not contain phosphate. Ongoing dialog is necessary between the company and the outside world.



An Executive Interview with

Dr. Anniek Mauser⁷

Director of Sustainability at Unilever Benelux

MV: How did the initiative to introduce 'Better Life' certified meat get started?

AM: In 2010 we introduced the *Sustainable Living Plan* at Unilever. This plan consists of 50 concrete commitments, summarized in three main goals—one of which is to have 100% sustainable sourcing for our raw farm materials by 2020. Meat is part of it, but it is a small part. In the Netherlands the smoked sausage is an icon product, but it is not a global brand. Sustainable meat and animal production systems are very complex. As a company, we developed the *Sustainable Agricultural Code*, which took us 15 years. We worked closely with suppliers to translate this to meat, therefore we also worked with VION⁸, our supplier. Thus, this issue is much broader than just animal welfare. It is important to know which issues are most meaningful to consumers, and which issues best communicate and differentiate yourself from the competition, and one important issue was animal welfare. We gave focus to animal welfare and thereby we could make a very logical link to Dierenbescherming⁹ because they already had a system in place and they are a trustworthy source among consumer groups. This was also about a Dutch product, so we did not need to focus internationally, it was possible to do it with a local NGO.

MV: Did you take the initiative to work together with Dierenbescherming?

AM: The initiative started as part of an employee engagement program on the field of sustainability which I introduced within the company. Several times a year, I create groups of colleagues who investigate certain sustainable issues by interviewing internal and external stakeholders who are involved in the issue. We make a video record of these interviews in collaboration with a small company. This results in a nice document, which makes the company and employees aware of a relative complex issue in a simple way. People who worked on the issue become specialists. It creates ownership, but more importantly, it builds a network so that the issue can be tackled. We started a project on animal welfare with Unox¹⁰ at the end of 2010. A group assembled which consisted of a marketer, a buyer, a category manager—a group of approximately 4 or 5 people who had worked together and interviewed the animal welfare organization, Wakker Dier¹¹. A pig farmer, the supplier VION, a scientist from Wageningen University and consumers were also involved. This was actually the first stage of the process in which contacts were made. A marketer became so enthusiastic when she saw the pigs and the issues which needed to be addressed; she put a lot of effort into process.

⁷ This interview was conducted in March 2012.

⁸ VION: <http://www.vionfoodgroup.com>

⁹ An animal protection organization, <http://www.dierenbescherming.nl>

¹⁰ a Dutch Unilever brand

¹¹ animal welfare organization, <http://www.wakkerdier.nl>

MV: Who works on this project?

AM: An internal team is involved. This team consists of the brand marketer, the meat procurer, and technical management. The technical management involves people from both R&D and project development because the initiative may have implications for them. The production manager from the factory is involved in the team because production streams sometimes have to be temporarily segregated. For example, animal welfare certified meat may not be mixed with the conventional meat stream. This requires considerable effort in planning and logistics. A finance business partner is involved in the team. This person manages the entire cost calculations, because it also has a cost impact. Someone from category management is involved, who sells the product to the supermarket. That person needs to know who wants to buy the product, when, and in what quantities need to be produced. I am involved from sustainability in an advisory role, I have experiences with partnerships and sustainable sourcing. A media colleague was involved, because a lot of public relations and communication is part of the project. Then you have the external partners. The meat supplier—two in this case and Dierenbescherming, the animal welfare organization, is an important partner. But we also needed a partner with different suppliers. Because maximizing carcass utilization is important for the meat industry. It is essential that all parts of the carcass are sold as ‘*Better Life*’ certified meat. It is about value creation of all parts of the animal. We use only 10 to 15% of the pig, to make use of ‘*Better Life*’ certified meat for all our Unox sausages, we need a lot of pigs. The other parts of the pigs also need to be sold somewhere as ‘*Better Life*’ certified meat. Therefore it is important to stay in contact with other suppliers.

MV: Are you sitting around the table with all these people?

AM: The reality is very complex and it depends on the situation, the existing relationships with suppliers and the resources available. In the case of ‘*Better Life*’ certification for our sausages it was relatively straightforward because it is a Dutch product with a Dutch supplier and a Dutch NGO. But most of the time we are part of an international setting, with different countries, whereby there are different issues at different levels in the public agenda. Consumers have different expectations and different things play a role in the media. So, really...the best words to summarize it are “very complex”.

MV: Why do you evaluate this initiative as successful?

AM: There are different reasons. On the one hand you need to organize the technical part of the product, which also means introducing the innovation which is embraced by consumers. You need to organize and align the logistics within the supply chain together with the certifier. There is a lot of work behind the scenes which result in a successful product, or not. Ultimately, a collaboration and a campaign are successful when consumers embrace and appreciate it. So yes, you can measure success in different ways.

MV: What are the most important factors required to make the integration of an initiative effective?

AM: You have to embed your primary objective well in to all of your processes and systems and be sure to include all relevant people so that it's cross-functional.

Conclusions

The discussions with Unilever managers provide us an inside look as to how a leading multinational corporation manages wicked problems by embracing the principles of environmental and social sustainability at a local and global level. The proposition gained from the Unilever interviews can serve as a useful model for managers and organizations attempting to manage other wicked problems (Figure 2).

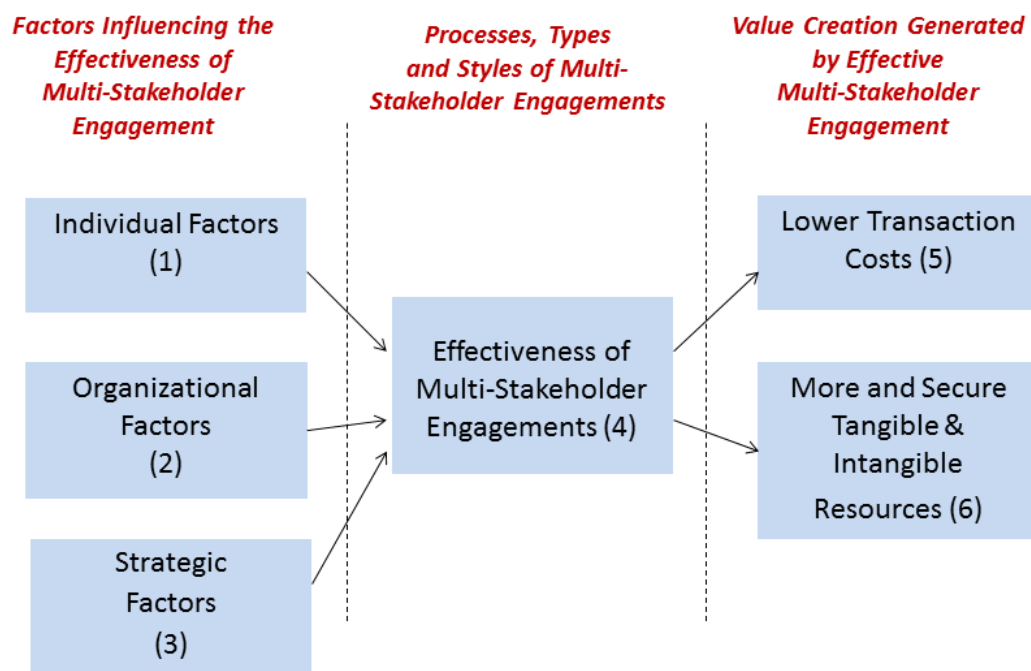


Figure 2. Drivers, Processes and Effects of Multi-Stakeholder Engagements: Learning from Unilever's Experience

Individual factors (1):

- Managerial attendance of international events with stakeholders having different backgrounds, values and goals.
- Managerial ability of delegate interactions with multiple stakeholders to colleagues and employees on a daily basis, and building trust with them.

- Managerial ability of synthesizing relative complex issues simple and short video for employees, such that they get an understanding of complexity, feel ownership and responsibility for the problem, and become part of the multi-stakeholder engagement.

Organizational factors (2):

- An organizational culture, structure and a system of rewards promoting innovation in all its forms.
- Employees and local managers (both from technical and marketing departments) have time in their weekly schedule and are encouraged to propose new initiatives.
- Possibility (and challenge) of building consensus within the organization about a new initiative.
- Making every new project having a discussion about its environmental and social impact
- Cross-functional collaboration among procurement, production and marketing teams to make initiatives implementable and communicable.
- Development of a program to engage employees and explain the importance of the problem and the search for innovations.

Strategic factors (3):

- History of dissemination and information exchange with stakeholders.
- Strong relationships with suppliers, which need to implement most of the changes as a consequence of innovation.
- Wickedness of the problem varies (Netherlands issue on animal welfare is not comparable to global issues).

Processes of Multi-Stakeholder Engagements (4):

- Mechanisms of collaboration based on undertaking reciprocal actions on sustainability; both with NGOs (which need to be realistic in asking change) and consumers (which need to reduce their share of environmental impact too) downstream the chain, both with suppliers upstream the chain.
- Measurability as a way to provide objective feedback to stakeholders and communicate results to consumers.
- Agreements with NGOs at global level (for example with Greenpeace, WWF, Oxfam) and coordination with local initiatives.

Value Creation by Lowering Transaction Costs (5):

- Social and political stability in countries where procurement takes place.
- Anticipating national and international regulations and harmonizing its standards.

Value Creation by Increasing or Securing Tangible and Intangible Resources (6):

- Secure future supply of strategic resources.
- Consumer understanding and appreciation, thus brand equity and loyalty.
- Building history of collaboration with stakeholders and experience in dealing with them.

Building a conceptual framework by systematically comparing experiences will not provide a one “recipe fixes all” solution. Yet, it serves as a theoretical lens in which to further advance the drivers, processes and effects of multi-stakeholder interactions (Dentoni et al. 2012b). A management strategy can be founded on empirical inductive evidence through the interpretative work of future managers, researchers and policy-makers before attempting to generalize a plan of action.

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Dutch Logistics Service Providers and Sustainable Physical Distribution: Searching for Focus

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Abstract

As environmental concerns becoming increasingly important to logistics service providers, the question arises as to how they can achieve sustainable physical distribution practices while surviving the severe competition in freight transport. This issue is further complicated by the pressures from the many different shippers involved, public expectations and regulating authorities. Therefore, achieving sustainable physical distribution is definitely a wicked problem. In order to understand how logistics service providers attempt to tackle these problems, a research study was conducted amongst logistics service providers who are frontrunners in implementing sustainability practices and who participate in the *Lean and Green* program, to promote sustainability within the logistic chain in the Netherlands. Companies willing to participate in this award scheme, must achieve the goal of reducing their CO₂ production by 20% within a 5-year-period. The transport market is very competitive and sustainability is just one of the many logistical concerns that service providers must solve. Our research shows that the logistics service providers participating in the Lean and Green scheme preferred solutions which involved cooperative strategies over – third-parties solutions.

Keywords: sustainable distribution systems, logistics service providers, wicked problems

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Introduction

Environmental issues have captured the attention of stakeholders, with governments, companies and institutions now leading initiatives which incorporate sustainability into their operating strategies (De Ron 2001; McDonough and Braungart 2002). It is not surprising, that sustainability is also featured on the agendas of logistics service providers (Ploos van Amstel 2008). But how are they attempting to make their supply chain more sustainable? Can lessons be learned from those logistics service providers who are the best in their class? And what is the role played by the shippers?

The Dutch logistics sector has been a leader in Europe integrating sustainable business practices across the logistics sector and currently ranks fourth in the World Logistics Performance Index (World Bank 2011). Previously, the Netherlands held the number two slot after Singapore, but was surpassed by Germany and Sweden in 2010. The Dutch government would like the Netherlands to lead Europe by 2020, but this should be accomplished only through the development of sustainable logistics. Sustainability is thus a reference point for all the recommendations and implementation (Topteam Logistiek 2011).

The logistics sector is important to the Dutch economy, contributing € 40 billion (8.5%) to the Dutch GDP and an estimated 750,000 jobs (10%) in 2010. With the EU demanding freight transport to be cleaner (European Commission 2004; European Commission 2011), it is expected that sustainability will become one of the prime drivers within the supply chain (Van den Broek and Van den Broek-Serlé 2010). But just how to achieve a sustainable supply chain and what it implies is not standardized. In 2008, transportation was responsible for 21% of all CO₂ production within the Netherlands—road transport (private and freight) comprises the largest portion at 7%. The remainder is divided into inland shipping (5%), rail (0.3%), air transportation (1.8%) and sea transport (14%). Within road transport, freight transport comprises 36% (Van der Meulen and Kindt 2010). These figures show that the Dutch freight transport sector produced a considerable amount of CO₂ (6%) in the Netherlands in 2008. In the near future, the Dutch logistics service providers and shippers will need to control or, even lower the amounts of CO₂ produced (European Commission 2004; European Commission 2011; Topteam Logistiek 2011). But is there a guaranteed and unique way to reduce CO₂ omissions which will please all stakeholders?

This paper investigates how Dutch logistics service providers try to make one aspect of the supply chain—physical distribution (Ploos van Amstel 2008) sustainable. Where do Dutch logistics service providers look for solutions when placed between government intentions, customer's demands and their own ethical behaviour? With so many stakeholders who often have conflicting interests and demands, every situation is essentially unique. Is a common tactic possible or does every logistics service provider need to develop his own solution? In this study we want to understand what type of strategies Dutch logistics service providers have used to reduce CO₂.

The main question we want to answer is:

How do Dutch logistics service providers translate strategic policies into tangible sustainable activities which will impact physical distribution?

In order to answer this primary question we should answer the following sub-questions:

1. Which stakeholders are involved with the Dutch logistics service providers' decision-making processes thus making physical distribution sustainable?
2. What types of procedures have they developed to make physical distribution more sustainable?

The conceptual framework for our research is based on the same heuristic model used in the 1994 NEA/Cranfield study. Weijers, Kuipers and Becker (2002) adapted this framework for research in industry driven innovations for logistics service providers. We have adapted their model to trace the elements in sustainable physical distribution trends.

Input Variables

Output Variables



Figure 1. Conceptual Framework

In our conceptual framework we assume that every logistics service provider operates within his own specific environment (financial situation, market, customers and location) and has his own special mix of forces for change (drivers, enablers and barriers). Combining these elements, the logistics service provider could develop a plan for achieving a higher level of sustainability. This strategy could be written down explicitly or implicitly embedded into the company's mission. Based on this strategy the logistics service provider implements the plan or maintains the status quo.

Using this conceptual framework we want to understand if new types of physical distribution networks have been developed due to a change in the company's strategy for sustainability. This change in strategy may (or may not) be influenced by the forces for change as explained above. We expect these new types of physical distribution networks will result in new demands on physical distribution systems and, this will drive innovations in sustainable physical distribution.

Based on this conceptual model our argument proceeds as follows: First, we review the forces for change literature, laying out the various aspects for the Dutch logistics service-provider sector. We then present our defense of the concept for “sustainable” physical distribution. Next we introduce sustainable practices which are being utilized by logistics service providers in the Netherlands. This section is based on a web survey conducted in 2010 amongst 82 logistics services providers who are connected to HAN University through work placements schemes, etc. We asked them to answer questions about their experience with sustainability. Sixty-one participants accepted this invitation and, of these, 41 completed the survey. The non-respondents gave work pressure and lack of time as reasons for not completing the questionnaire. As a convenient sample, this group provided a good cross section of small, medium and large logistics service providers and allowed us to get a strong impression of our target group’s views.

Finally, we considered the actions taken by logistics service providers in order to make physical distribution more sustainable. In order to choose suitable providers, we opted to first observe how sustainable practices are being executed through Dutch logistics service providers before examining the innovators and leaders in this field. In order to understand the role of sustainability, we focused on the fifty largest logistics service providers operating in the Netherlands in 2012. By size, these were considered to dominate the Dutch market (Dijkhuizen 2012). The ranking of logistics service providers in the top 50 was determined by the number of full time employees working in the Netherlands. For 2012, the range was between 4.330 for number one, and 385 employees for number 50.

The second group consists of innovators who have taken the lead in sustainable entrepreneurship. This group consists of 145 logistics service providers who are participating in the award scheme Lean and Green (website Connekt). Twenty-five of the Lean and Green members are in the top 50 logistics service providers. Together, these two groups should give a reliable view of Dutch logistics service providers who are actively tackling sustainability.

Our research will concentrate on the sustainability aspects of the actual transport itself. Actions taken to improve sustainability, but not related to the actual transport—such as more environmentally friendly ways of cleaning cars etc., were not included.

It must be noted that the results presented here are based on what members of Lean and Green say they are doing, or going to do, in order to reach the required level of CO₂ reduction. What they are actually doing, or really have done and the impact of these actions will be the subject for further research.

Stakeholders for Sustainability

In this section we want to understand the various drivers and the forces of change which make physical distribution sustainable. First, we will examine the specific situation of the Dutch logistics service industry and the Dutch government’s role in this context. Then we will investigate the impact of the shippers as one of the main driving forces for change in this very competitive market.

Our research focuses on Dutch logistics service providers and how they adapt to the new demands of implementing sustainable practices within the physical distribution sector. But does this group differ from their counterparts elsewhere in Europe or even the World? Although Dutch logistics service providers work in a market dominated by heavy competition and low profit margins, the difference can be found in the way the Dutch work together. In the Netherlands a culture exists of consultation and consensus building which is often called the *poldermodel* (Vollenbroek 2002); this is a stakeholders approach (Mitchel et al. 1997).

In the progression of finding a consensus, the Dutch government provides guidance and incentives. The award scheme Lean and Green discussed below is such an instrument setup by the Dutch government to speed up the process and structure discussions.

This type of consensus building is time consuming. In the Netherlands, local governments such as the cities of Utrecht (2007), Amsterdam (2008) and The Hague (2010), have installed “milieuzones (green zones)” which restrict access for certain large trucks. Each city applies different rules and regulations; for example, fixed timeframes for delivery. If the transport industry fails to formulate a common approach soon, more and more cities will turn areas into green zones—causing more confusion for all concerned. But the Netherlands is not an island unto itself; other countries, such as Germany, link the toll for the motorways to the greenness of the truck. With Germany being a main trading partner, this certainly affects the Dutch transport sector. Perhaps the Dutch logistics service sector should look to its main economic partner and neighbour for guidance and direction? Or even better, why not let the European Union regulate sustainability for physical distribution?

The shipper as a customer of the logistics service provider plays an important role. The transport market is best described as being dominated by heavy competition and low profit margins, so the customer is certainly king (Christopher 2005). But how important is sustainability for these customers of logistics service providers? A survey amongst shippers conducted by Van der Meulen and Kindt (2010) found that shippers used certain criteria when selecting a logistics service provider. The criteria included: reliability, price, service, sustainability and innovation. When asked to rank these criteria, the results favored price and reliability, with sustainability near the bottom, in fourth place.

Table 1. Main selection criteria according to shippers

Selection Criteria	Weight Price =100
Price	100
Reliability	94
Service	72
Sustainability	45
Innovation	33

These findings are further supported by literature regarding logistical considerations; choices made in regards to transportation, are usually determined by two things (Christopher 2005; Visser 2010):

1. effectiveness i.e. speed and reliability
2. efficiency (low cost)

The web survey gives a similar impression. Thirty-two (78%) of the respondents say cost is the most important issue for transportation and 34 (83%) do not think that the customer is willing to pay for sustainability.

Simply put, the customer requires "more value for less money" (Van Dorp et al. 1992, 23). The question is whether in the current era, is this still valid? There is a trend amongst customers to demand a higher level of socially responsible behavior from the supply chain partners (Maloni and Brown 2006).

The portfolio model of Kraljic (1983) can be used to better understand the shipper's choice. Kraljic determines each item purchased by four criteria:

Table 2. Purchasing transport service and the portfolio model of Kraljic

Kraljic's Label	Main Selection Criteria	Decision
1. Leverage Items	Price	The product or service purchased determines the final price of the end product substantially. The purchaser will opt for the lowest cost.
2. Strategic Items	Quality	One specific aspect needs absolutely to be fulfilled by the item or service purchased.
3. Bottleneck Items	Availability	This product or service will not (always) be available. The purchaser will have to acquire potential sources for this product or service.
4. Non Critical Items	Nothing specific	As nothing specific determines this purchase, the purchaser's decision is not clearly cut.

Transportation costs comprise 10% to 25% of the overall costs for a product (Van Goor and Ploos van Amstel 2009). The higher the percentage, the more transportation becomes a leverage item—with price as the primary determining factor. Reliability is a quality aspect and makes transport a strategic purchase item. Transportation is rarely seen as a bottleneck item, except when transportation requires vehicles with unique specifications, due to the size or weight of the transported item, so this aspect can be ignored. Nothing specific can be said about the shippers who were classified in categories different from the top three identified above.

Sustainability could make transportation more expensive (purchases related to more efficient engines, new software purchases, etc.) or lengthen the delivery time (alternative modes for road transportation can take longer). Both of these conflict with the two primary characteristics for transportation as seen by the shipper (Christopher 2005).

On the basis of this information we can say that sustainability is important to the shipper, but costs and reliability take precedence.

Further investigation is needed into the relationship between what is said and what is done. The relationship between a logistics service provider and the shipper should be reflected in the

contract drawn up to facilitate and clarify future transport orders between these two partners. Such contracts or better service level agreements would have to inform all parties concerned as to what is expected and how it will be provided. In order to control performance, key performance indicators (KPI) need to be defined, as well as procedures for the calculation and evaluation of these KPIs (Bask 2001). A typical service level agreement would take the form of a call-off contract, within a framework for future individual transport orders. Every individual order should have to fit into the agreed call-off contract. Call-off contracts must reflect an appreciation for all concerned parties for a specific KPI, such as: price, reliability and sustainability, etc. If the call-off contracts represent the values of the companies involved, sustainability could be considered a top attribute, which also determines the choice of a particular logistics service provider.

An additional problem could be that even if those call-off contracts were drawn up at a high managerial level the individual order for a specific transport requirement would be placed by an employee at an operational level as shown below in Figure 2.

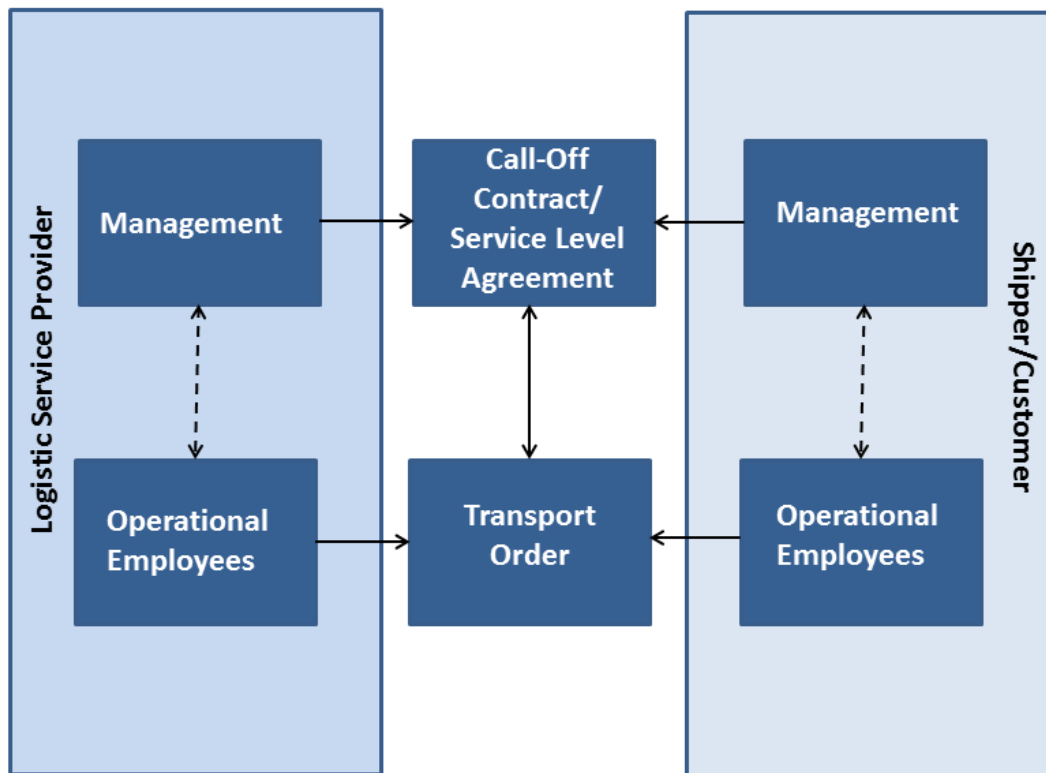


Figure 2. Interaction between the participants, the contract and the transport order

Theoretically all involved with physical distribution should be inspired by the same call-off contract, but what if the operational employees on one or both sides are driven (or measured) by aspects more in line with the findings in Table 1? A problem could result from within physical distribution because the KPIs of service level agreements are often not monitored (De Haan et al. 2011).

If we observe:

- national and local governments impose different restrictions on unsustainable transportation;
- shippers want to get it all: low prices and high service (Christopher 2005);
- shippers place sustainability below price and service (Van der Meulen and Kindt 2010)
- customers demand a higher level of socially responsible behavior from the supply chain partners (Maloni and Brown 2006)
- every shipper chooses a logistics service provider for different reasons (Kraljic 1983).

We can then conclude that not only do we find a huge array of stakeholders involved in physical distribution, they also place different demands on the logistics service provider. Sustainability is not ranked first, rather the main focus is on price and reliability. However, we see a trend that suggests customers expect value chain partners to behave in a socially responsible way and this includes sustainability.

If we further consider that:

- stakeholders themselves are on different levels, therefore, differing views of sustainable transport could exist;
- a logistics service provider has many different shippers for customers.

The problems become even more complicated. This must be a true Gordian knot which would take an Alexander to untie.¹ Can a unique solution be found which satisfies each and every stakeholder? In this case, we must conclude that sustainability is surely a wicked problem (Rittel and Webber 2012; Levin et al. 2012).

Sustainability and Physical Distribution

Every supply chain has its own specific needs and transport operations. We have opted to focus our research on the food sector and its primary determinants, hygiene and traceability.

Recent food scares in the EU with cucumbers and bean sprouts in 2011 underscored the need to ensure proper sanitation occurs within every link in the food supply chain. Hardly any chain evokes a more passionate-emotional response from the public than the food supply chain. This implies that 1) quality is definitely an important factor in the food supply chain (Kraljic 1983) when choosing a particular form of physical distribution; and, 2) it is under constant public scrutiny by consumers. Another reason we chose this particular supply chain is that it contains companies who are on the forefront of implementing sustainable practices in the Netherlands.

Physical distribution is the movement of goods from one location to another. It is more specific than transportation since the latter also includes internal transportation which takes place within the same location. This internal transportation is partly material management and not physical distribution (Van Goor and Ploos van Amstel 2009). A distribution network could include the incoming side of many suppliers (1 to N), but also suppliers belonging to their own company

¹ Refers to a Greek legend which remained unsolvable until Alexander the Great put forth an unconventional solution.

(internal suppliers 1 to N). On the outgoing side the same situation occurs. Here we could find a potentially large number (1 to N) of customers, or internal customers (1 to N) who belong to the same company as the sender (Ballou 2004).

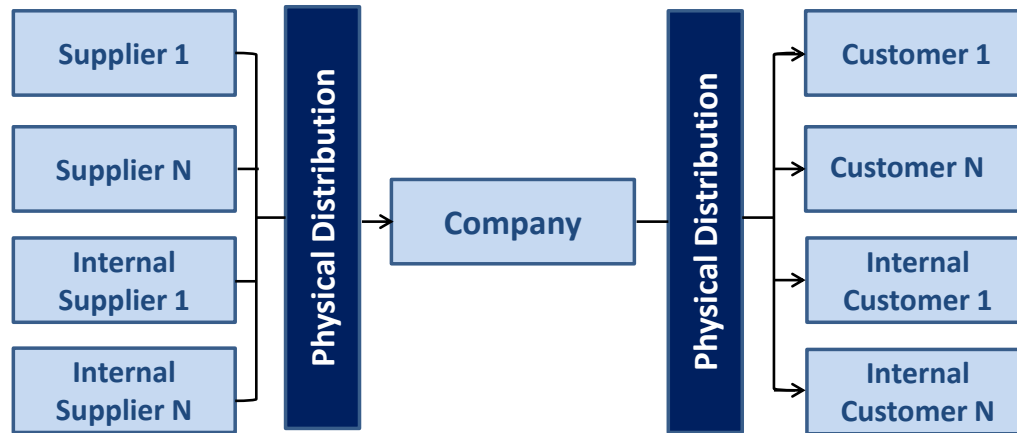


Figure 3. Physical distribution network for a company

What makes freight transportation services sustainable is not altogether clear, therefore it follows that what makes a logistics service provider more sustainable is not clear cut. This could be due to a lack of a generally accepted definition of sustainable transportation (Pezzey 1997). The definition provided by the Brundtland Commission (World Commission on Environment and Development 1987) is often used as a standard definition (Jeon and Amekudzi 2005), but this is difficult to translate into hard, measurable facts. As most trucks still employ an implosion engine, it can be stated that every litre of gasoline used for transportation today will not be available for future generations. The Brundtland based definitions therefore fail to be realistic and usable. A definition of Environmentally Sustainable Transportation (EST) as developed by the OECD is more precise and will serve as the basis for our research:

Transportation that does not endanger public health or ecosystems and meets the needs for access consistent with (a) use of renewable resources at below their rates of regeneration, and (b) use of non-renewable resources at below the rates of development of renewable substitutes (OECD 1999).

This definition takes three aspects of EST into account: public health, ecosystems and natural resources. As a framework for environmental indicators, the Pressure-State-Response (PSR) model was developed by the OECD (1993). PSR provides a mechanism to monitor the status of the environment. The PSR cycle also provides a framework for investigation and analysis of processes involved in environmental degradation. In addition to application at national, regional, local and other sub-national levels, it can also be used for a sectoral analysis, and adapted to individual projects.

The idea behind the PSR model is that human activities exert pressures on the environment that affect its quality and the quantity of natural resources (state). Society then responds to these changes through environmental, general economic and sectoral policies, and through changes in

awareness and behavior or activities (societal response). The PSR model takes the pressures and the driving forces behind these activities into consideration and not the symptoms resulting from a changed state itself.

When discussing sustainable transportation, the attention focuses on reducing exhaust gases. The main exhaust gases are carbon dioxide (CO₂), sulphur dioxide (SO₂), nitrogen oxides (NO_x) and particulate matter (PM) (Francke et al. 2009). There are more polluting exhaust gases concerning transportation like carbon monoxide (CO) and hydrocarbons (HC) (Van der Meulen and Kindt 2010), but these two gases were never mentioned on the researched websites or by the survey respondents. In short, almost the literature on sustainable freight transportation, (Dutch) government information available on this subject, and from the researched target groups, concentrates on CO₂ reduction. The other gases are hardly mentioned. As for the transport sector itself, just two logistics service providers mentioned the four main gases, but do not show how they are trying to reduce them. Our research has followed this lead and also concentrates on the reduction of CO₂.

Award Programs for Sustainable Physical Distribution

What kinds of actions are taken by logistics service providers to achieve their sustainability goals? Hardly any specific information can be derived from the top 50 logistics service providers on how they want to achieve their goals for sustainability. What can be found are the networks or award programs with which they cooperate. Many awards programs have been set up to encourage and support sustainability within the transport sector. They offer participants an opportunity to be compared by a standard measure and to their competitors. For customers and interested stakeholders an award scheme creates trust in the logistics service providers' performance in the field of sustainability. Looking at the forces for change (drivers-enablers-barriers) in our conceptual model, we consider award schemes to be enablers. They allow participants to organize sustainability in a structured, controlled fashion. The web survey found that 22 (54%) of the respondents believe award schemes form an essential part of the shipper's appreciation for the logistics service providers' level of sustainability—an indication as to why an award scheme like Lean and Green is growing so fast.

Many award schemes for sustainable physical distribution have been setup. For the transport sector, the website for the Environmental Forum² registers 61 award schemes for the UK alone. For the Netherlands such a list has never been made. Many logistics service providers in the Dutch top 50 have joined international environmental award schemes e.g.: Dow Jones Sustainability World and Europe Index (8%), World Business Council for Sustainable Development (14%) or the United Nations Global Compact (24%). Other schemes mentioned include: FTSE4 Good Global Index (2%), FLEXpledge (2%), Carbon Trust Standard (2%), Green Supply Chain Award (2%), Electronic Industry Citizenship Coalition (2%), and Responsible Care® (2%). Some awards are linked to specific industries. For example, the goal of Responsible Care® is to seek continuous improvement in health, safety and environment of the chemical industry's stakeholders (website ICCA³). Five companies (10%) have joined more than one international environmental award scheme. Taking this into account, there is a

² www.environmentawards.net

³ www.icca-chem.org

participation rate of 42% for the top 50 logistics service providers for international environmental award schemes.

For the top 50 companies, the involvement rate in international environmental award schemes if ranked by size and numbers breakdown as follows: 1-10 (90%); 11-20 (50%); 21-30 (40%); 31-40 (20%) and 41-50 (10%). It seems that award schemes are particularly interesting for the larger logistics service providers. Looking at the national origin of the logistics service provider, 14 (74%) of the 19 Non-Dutch companies have joined an international award scheme compared to 7 (23%) of the 31 Dutch companies. In addition to these award schemes, 14 logistics service providers (28%) mention they have an ISO14001 certification.⁴ Should this be a measure of environmental awareness within the company?

The Lean and Green award scheme was introduced in the Netherlands in 2008. This program focuses on shippers, logistics service providers and city councils. Lean and Green wants to encourage businesses to grow to a higher level of sustainability. They believe that becoming greener will reduce the environmental impact, while simultaneously saving cost. Since its introduction in 2008 the award scheme has gained popularity and 82 shippers, 145 logistics service providers and also 11 city councils have joined the award scheme as of September 2012. Participants must write a plan, which contains precise CO₂ targets for the next five years and determine key (green) performance indicators (website Connekt).

Figure 4 shows the membership for Lean and Green over the years, 2008-2012. The figures for this group most likely will increase over time and have the potential to become the leading standard for sustainable physical distribution in the Netherlands.

Presently, 61% of the members are logistics service providers, 34% are shippers and 5% are city councils. As of September 2012, 82 shippers participated in the Lean and Green award scheme.

This offers us an opportunity to compare innovative strategies and areas for improvement among the participating logistics service providers. Unfortunately the term shipper as defined by Lean and Green is a combination of both shippers and private carriers. Of the 67 (82%) private carriers focusing on internal measures, only two (2%), included customers or logistics service providers in their action plans. Most of the private carriers transport either specific products (milk, fruit juice) or experience unstable demand patterns. Thirty-two (48%) of the 67 private carriers opt for the new driving style, 13 (19%) are looking for larger trucks and 13 (19%) want to use alternative modes of transportation like river barges and rail instead of road transportation. Of the remaining 15 (18%) “real” shippers, 10 (67%) identified that cooperation was a favorite measure. But this group is too small to be used for our research. Private carriers, with only one customer (their own company), have far less problems compared to the average logistics service providers. For now, we will leave them out of our research study.

⁴ A family of standards related to environmental management that exists to help organizations (a) minimize how their operations (processes etc.) negatively affect the environment (i.e. cause adverse changes to air, water, or land); (b) comply with applicable laws, regulations, and other environmentally oriented requirements, and (c) continually improve in the above.

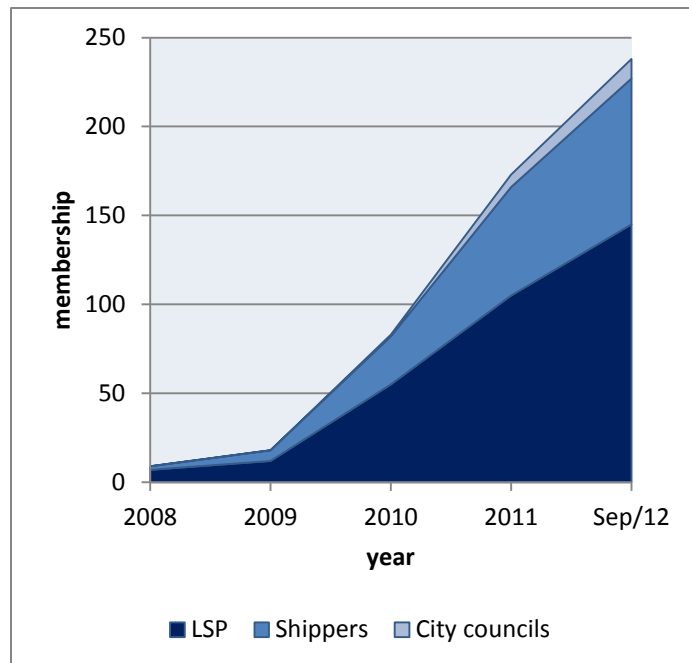


Figure 4. Cumulative membership development 2008 September 2012

All participants in the Lean and Green program must describe how they want to achieve their goal to lower CO₂ by 20% at the end of the five-year-period. A list of measureable actions compiled by logistics service providers include:

- “Het nieuwe rijden” (new driving style), a training for truck drivers to enhance awareness as to how driving (gear changing, braking, speed etc.) impacts CO₂ production
- Buying new and less polluting vehicles
- Reducing energy consumption in warehouses
- Controlling tire pressure
- Monitoring driving speed
- Using alternative modes of transportation
- Using more bio fuels
- Improving loading capacity
- Buying electric vehicles
- Increasing efficiency
- Reducing kilometers driven
- Avoiding empty hauls

In addition to the transport related actions, 51 (35%) indicated they would start with non-transport related actions. These actions include:

- Dimming the lights in the warehouse
- Placing solar panels on the roof
- Recycling water for cleaning cars
- Paperless office and delivery
- Green electricity for the whole company

Of the 688 measurable actions, 80 (12%) were non-transport related. We excluded them from our research because they hinder the focus on physical distribution and instead concentrated on the 608 transport related measures.

Logistics Service Providers' Strategy and Sustainability

The next step in our conceptual model examined whether sustainability is included in the strategy of logistics service providers. Is sustainability part of the strategy policy for Dutch logistics service providers? Forty-one (82%) of the top 50 logistics service providers have included sustainability into their mission statements, and mentioned it on their company website. Those who did not mention sustainability were contacted and asked if they would be willing to provide additional information. Consequently, the number rose to 43 (86%). This group has explicitly included sustainability into their core company values. We cannot comment on the group of non-responders. The number found amongst the top 50 is equal to the results calculated from the web survey. Here, 36 respondents (88%) stated that they endorse sustainability.

It can be stated that sustainability has become one of the major driving forces for influencing logistics service providers' behaviour. It also shows that within the transport sector sustainability is not a unique selling point anymore; it has become a common feature. Based upon this information, we consider sustainability to be an essential part of the strategy of Dutch logistics service providers. But how these strategies get translated into actions is a different matter. In this they show whether or not they take sustainability seriously.

Discerning Actions for Achieving CO₂ Reduction: Framework for a Model

The third step in our conceptual model researches the actions proposed by participants in the Lean and Green award scheme and introduces a model to help understand the direction of the proposed measures.

It is not surprising to see that logistics service providers choose a wide variety of approaches to reach sustainability. Every provider, and its business with customers, demands a different, approach (Szekely and Knirsch 2005). So solutions for reducing CO₂ may also be expected to differ depending on the actual situation.

In order to get a better grasp of the discerning measures mentioned by members in the Lean and Green program, they were grouped into the following four categories which are illustrated in Figure 3:

- | | |
|--------------------------|--|
| <i>Internal Approach</i> | - Measures which will be organized personally by the logistics service provider/shipper. |
| <i>External Approach</i> | - Measures which need cooperation with others outside their own organization (e.g. shippers, governments, competitors, stakeholders etc.). |
| <i>Innovating</i> | - Measures previously unknown to the logistics service provider/shipper. |
| <i>Optimizing</i> | - Measures for improving the efficiency |

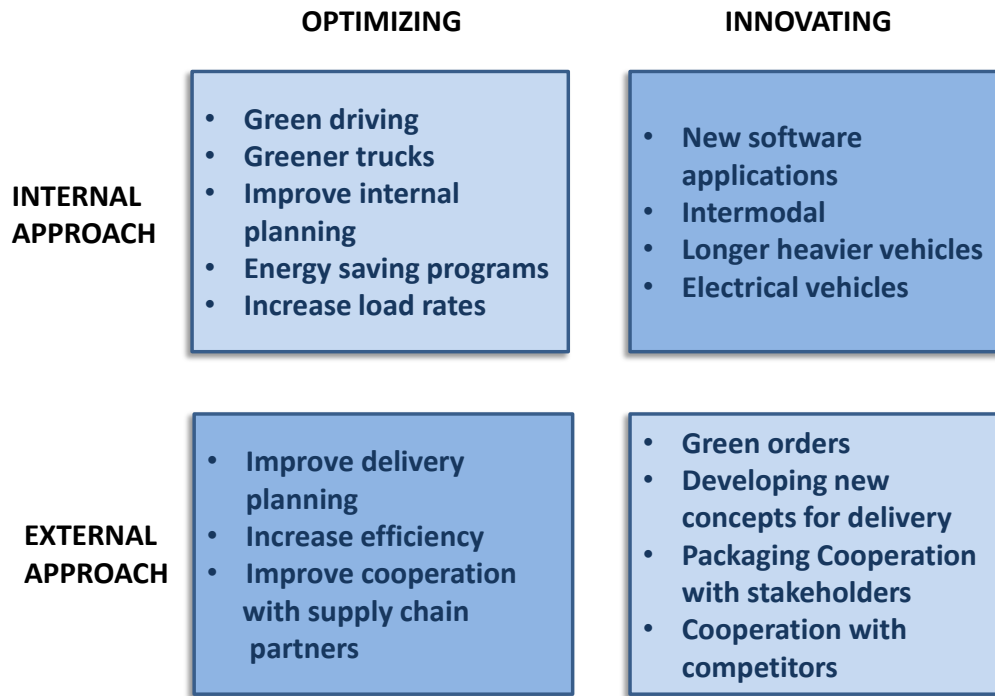


Figure 5. Sustainability activity matrix

This model could be made three dimensional by adding an extra level of the categories, structural and incidental:

- Structural* - The chosen method is employed for a long time and could be used for any situation.
- Incidental* - The chosen method might be used just once.

This additional level could give a better insight into the question of whether the logistics service provider can use the experiences gained to improve other (similar) situations at a later date. It is our intention to interview the participants of the Lean and Green award scheme for the purpose of understanding where long term/multi applicable measures differ from short time/one time measures.

The 145 logistics service providers presented a total of 608 measures related directly to physical distribution. When studying their intentions, we found that most improvements were sought internally. For example, (100%) of the participants used internal optimizing measures and 52 (35%) mentioned innovative measures. Teaching staff are often used to initiate more environmental friendly practices: 97 (67%)—mentioned this measure. Other internal measures included: checking tire pressure 11 (8%) and 28 (19%) want to use greener fuel. Of the 608 measures mentioned 442 (73%) had an internal focus, and 166 (27%) had an external focus. External measurements were less popular compared to internal measures. Forty-six (32%)

logistics service providers intend to improve efficiency in cooperation programs. Twenty-seven (19%) providers mentioned cooperation with shippers. These programs included ideas such as:

- Awareness programs informing shippers of the CO₂ footprint of their shipments;
- Discussion on delivery time schedules;
- Bundling deliveries to avoid empty hauls.

Twenty-six (18%) logistics service providers mentioned cooperating with other logistics service providers by sharing delivery routes. Of these providers, seven (5%) had programs for both shippers and competitors. External innovative measures were mentioned by 27 (19%) of the providers. Interestingly, we found not one initiative was opted by all. We found this strange given the core of transportation is the same for all logistics service providers. We expected simple sustainable practices to be easily adapted by everyone.

Figure 6 illustrates the distribution of measurements related to physical distribution. It clearly shows that the bulk of measures are focused on internal approaches.

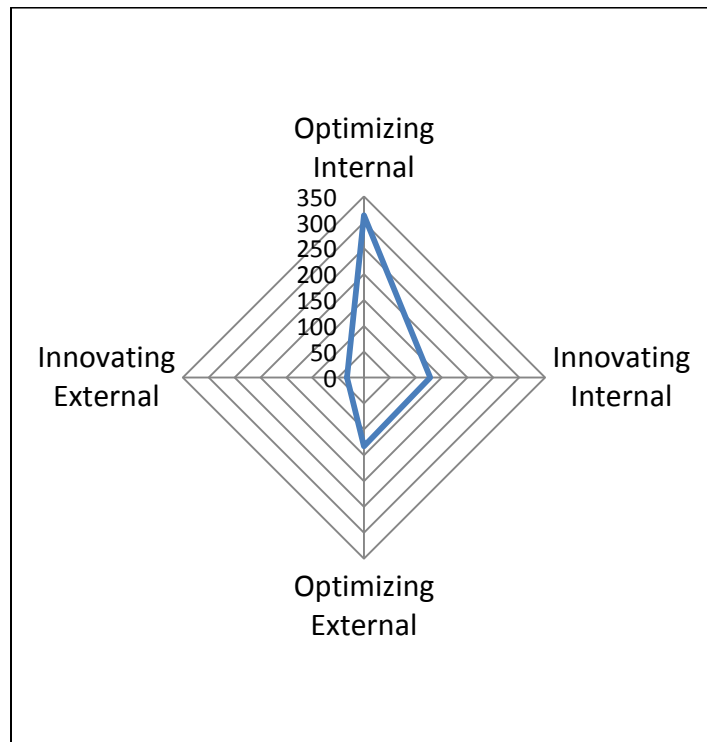


Figure 6. Spread of the measures of LSP

This reluctance to cooperate with shippers is also shown in the web survey. Twenty three (56%) of the respondents stated that shippers will not make any concessions if this includes changing delivery schedules or the use of alternative modes of transportation. According to 31 (76%) of the respondents, the shipper will not make any concession on delivery speed. Apparently, logistics service providers feel that sustainability on its own merit is not a decisive factor for shippers to choose a specific logistics service provider. The main selection criteria of shippers for transport services are definitely price and reliability. This could indicate that logistics service

providers have to develop new ideas on how to make transportation more sustainable if they want to keep the interest of shippers.

The web survey also provides an interesting observation on the ideas of cooperation amongst logistics service providers. Asked if they would be willing to share rides with competitors, 27 (66%) of the respondents answered yes. A smaller group of 18 participants (44%) think that their competitors may be willing to cooperate with them. These figures suggest there is potential for cooperation among competitors in the transport sector. When split up into the function of the respondent, a difference between these two groups becomes apparent: 13 of the 14 general managers (93%) say they are willing to combine rides with competitors compared with six of the 14 (43%) respondents working on an operational level. Asked if competitors would be willing to cooperate with them to improve sustainability, eight of the 14 general managers (57%) said yes as opposed to four of the 14 (29%) respondents working on an operational level. Apparently top management has a more positive view concerning cooperation with competitors than those working at an operational level.

It can be concluded that logistics service providers prefer looking for improvement inside their own company and seem less willing to include value chain partners. Logistics service providers also are reluctant to turn to fellow logistics service providers for cooperation. Cooperation with fellow providers is not always successful. For instance, a project in Leiden (the Netherlands) to build a central warehouse for city distribution failed due to the unwillingness of the logistics service providers to work with competitors (Quak 2008).

Conclusions

On the basis of our research, we can draw some conclusions. It can be stated that Dutch logistics service providers do understand the importance of sustainability for the industry. The majority of these providers have included sustainability in the mission and vision of the company and have adjusted the company's strategy to reflect this value. But a common understanding of sustainable physical distribution shared by all stakeholders is not yet developed. The logistics service provider is trapped between the demands for cheap, reliable and clean transportation and reality. This reality has many stakeholders who must be considered in the equation:

1. Government
 - a. European Union
 - b. Central Dutch government
 - c. Local government
 - d. Central governments of other countries
 - e. Etc.
2. Shippers
3. Final Customers
4. Competitors
5. The Logistics Service Provider
 - a. Management
 - b. Operational Employees

As Dutch logistics service providers attempt to integrate sustainable practices into their business plans they find there are no simple solutions. The measures provided through structured programs (such as Lean and Green) are not adapted by everyone. With so many different solutions for a similar problem, the question could be asked: Does the Dutch logistics service sector perceive this as a manifold problem? After all, every shipper is also a citizen who wants to enjoy good health, beautiful countryside, and perhaps, fewer traffic jams while driving. Multiple stakeholders coupled with conflicting interests and demands makes every situation unique and lacking an ultimate solution. In short, it has all the aspects of being a wicked problem (Rittel and Webber 2012; Levin et al. 2012).

Logistics service providers differ on how to achieve sustainability in physical distribution. This is strange in an industry which shares so much in common with each other. Even providers who operate in the same market show differences in their approach to sustainability. Either there are many ways to achieve the same goal, or there must be room for improvement through a standardization process. The government could play a role (European or Dutch) by acting as a beacon for the transport sector as a whole.

The further development of award programs could connect various stakeholders to each other and help them understand one another's independent motivations and how to best contribute to sustainability in the value chain (Porter and Kramer 2004). Every member must have similar goals. Much can be learned from those involved in award schemes such as Lean and Green. Especially since most of the suggested internal measures such as "green driving" result in quick wins through improved mileage. However, over time these ideas become old news as many copy them. Tackling greater challenges, especially by collaborating with the other primary stakeholders, could provide better and more enduring results. With more stakeholders working with the same aim, wicked problems could become "unwicked" and more manageable.

Further research should provide insight into the impact of the various change—drivers, enablers or barriers (NEA/Cranfield 1994) that make physical distribution sustainable. What role do stakeholders play in how logistics service providers handle sustainability? More can be learned from analyzing logistic service providers who are *first in class* in making transport sustainable. In these case studies (Yin 2009) all partners involved in the physical distribution process should be studied to understand the forces influencing sustainability. With the information obtained through this research, the transport industry could achieve sustainability more efficiently and effectively. It certainly could help to make sustainable physical distribution less "wicked".

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Grand Views on Managing Multi-Stakeholder Engagement and Wicked Problems

C H A P T E R

3

C H A P T E R 3

Grand Views on Managing Multi-Stakeholder Engagement and Wicked Problems



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More than Coping: Thriving in a World of Wicked Problems

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Abstract

This essay asks whether it is possible to find ways of thriving in a world full of wicked problems—the most significant of which may be the sustainability crisis. Ensuring a healthful and adequate food supply comprised of nature-made foods rather than processed goods, demands collaborative actions, new leadership skills and the evolution of global action networks (GANs).

Keywords: wicked problems, sustainability, global action networks, leadership

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Lately, I have been taken by the idea of wicked problems, I suppose in part because so many of the problems confronting businesses, humanity, society, and the planet seem wicked—and increasingly so. Problems, of course, are never simple, but the nature and complexity of problems we face today have grown more complicated as globalization, issues of sustainability and technology provide ever-more connections among problems that once seemed local. As anyone reading this *Special Issue* knows, wicked problems are intractable, hard to define and seldom resolve in ways that satisfy everyone.

Multiple stakeholders holding differing viewpoints, combined with multiple authorities create a scenario where no one is able to simply dictate solutions—despite a possible desire to do so. By their nature, then, wicked problems must receive input from a cross-section of stakeholders and authorities, but a resolution will require that leadership be dispersed among the multiple groups tackling the issue (Churchman 1967; Horst & Webber 1973). Because there are so many ways to define both the problems and the solutions, whatever resolutions develop will most likely leave some parties unsatisfied (Grint 2005; Marshak 2009; van Bueren, Klijn & Koppenjan 2003).

As difficult as it seems, the best path to addressing wicked problems is that collaborative, dialogic, and inherently democratic process which brings the relevant actors together in dialogue. Yet, too often the mechanisms which currently exist to cope with societal/ecological problems of this “wicked” nature are rigid hierarchical systems, run by both bureaucratic and authoritative entities having multiple interests powered by money rather than public interest.

Still, wicked problems beset all businesses, NGOs, and governmental agencies operating in the food and agricultural sectors. Somehow they are managed—for good or for ill. Sustainability, is one such wicked problem that all sectors face, and few know how to handle. Sustainability is about stasis—maintaining things as they are, while we all know that life and systems are dynamic and constantly in a state of flux—they get better or they get worse. The problem with sustainability is that status quo is not working, nor will it provide—business, humanity, or society—a future we wish to achieve. As John Ehrenfeld points out in “Sustainability by Design” (Ehrenfeld 2008), becoming less unsustainable will not actually result in sustainable behaviors and patterns. Switching from “doing less harm” to “doing good” requires a shift of mind, what Peter Senge (Senge 1990; Senge 2006) termed a *metanoia*. Recognizing the revolutionary nature of what humanity is being ‘called’ to do today is to save itself from its current path of ecological destruction and unsustainability (Lovelock 2006; McKibben 2010; Senge 2008).

But sustainability is only the tip of the “wicked” iceberg. To highlight the nature of wicked problems affecting the food and agricultural industry, consider this incident which occurred in the US. In November of 2011, the US Congress determined that pizza, when covered in tomato sauce, could be considered a vegetable (well, ok, tomato sauce is now widely considered to be a vegetable, but technically tomatoes are actually fruit). Recalling President Ronald Reagan’s thwarted attempt to define ketchup as a vegetable in the early 1980s, the US Congress voted in 2011 to undo the proposed healthier food standards for school lunches (which might have limited

foods such as salt, french fries, and pizza in favor of more fresh fruits and vegetables). The sauce on pizza allows it to remain in national school lunch programs and gain credit as a vegetable.¹ Why does the “pizza as a vegetable” issue (taken as a metaphor rather than literally), exemplify the types of wicked problems that I believe are typical today? Well, for one thing, the issues are far from simple—and far from clearly defined. These issues coalesce into significant problems found in the American diet, the obesity epidemic, family lifestyles, school budgets and the right to choose what to eat, as well as the sophisticated marketing practices that “sell” unhealthy products to the unwitting public; the industrialized food-growing-production-and distribution systems; and to a political system in the US that increasingly aligns political interests with industry interests because of corporate contributions to political campaigns. Perhaps solutions for public health interests can be found through redefining “health” issues and applying it to the health of students, schools and their budgets, and the businesses whose interests might be harmed by a reclassification—and by bringing all the relevant stakeholders and policy makers into a room (and process) where all ideas could be vetted and new thinking evolved.

Food production and consumption in the US today has resulted in chronic under-nutrition combined with obesity in some populations who eat a lot of highly processed and high calorie foods low in nutritional value. This reality was dramatically and forcefully illustrated in the documentary “Supersize Me”, which focused on the harmful effects of highly salted, heavily processed and high calorie foods on health. Relatedly, the way food is processed and consumption patterns combined with sedentary lifestyles has contributed to a growing obesity problem (a third of all US adults and children are overweight or obese and 17% of children were considered obese in 2011). There is more. Industrial processing of agricultural foods leads to over-fertilization and overuse of pesticides for monoculture crops grown in huge tracts, particularly: corn, soybeans, and wheat. Michael Pollan in his book “The Omnivore’s Dilemma” documents the extent to which corn, high fructose corn syrup and other corn by-products now permeate our food chain (Pollan 2007). These “modern” agricultural practices tend to result in food products with diminished nutritional value, as well as mono-crops that are vulnerable to pesticide-resistant bugs or diseases.

Further, processing of food results in “food products,” that is, highly processed foodlike substances filled with chemicals, with even less nutrition than depleted soils produce rather than what Pollan calls “real food” or unadulterated nature-grown foods (Pollan 2007). Processing combines food with stabilizers, salts, fats, and other exotic additives (if you doubt this statement, just read the ingredient list on most packaged foods and notice how few are actually recognizable food ingredients) to make the product look and taste appealing, even though the end product may have little in common with its real food ancestor. To add to the complexity, sophisticated marketing practices create an environment in which these “convenience” foods are valued above healthier less processed options, and unhealthy food choices are widely marketed to adults and children alike. In part this happens because these highly processed foods provide more calories at less cost than healthier options, e.g., real fruit and vegetables. A wicked problem indeed!

¹ E.g., MSNBC report, http://www.msnbc.msn.com/id/45306416/ns/health-diet_and_nutrition/#.TsqmQ3KwXXm, 11/15/2011; Jason Linkins, Huffington Post, http://www.huffingtonpost.com/2011/11/16/pizza-vegetable-school-lunches-lobbyists_n_1098029.html, 11/16/2011; Allison Aubrey, Pizza as a Vegetable? It Depends on the Sauce, <http://www.npr.org/blogs/thesalt/2011/11/15/142360146/pizza-as-a-vegetable-it-depends-on-the-sauce>, 11/15/2011.

But what was most striking about the metaphorical “pizza sauce as a vegetable” decision are the political machinations working behind the scenes which suggest how wicked the problem actually is. Health and nutrition advocates argued for healthier foods, which tend to provide fewer calories at a higher cost, a problem in an era of strained local school district budgets. Lobbyists for the salt and food industry argued, essentially, to keep regulations around tomato sauce, salt content, and potatoes from shifting toward options deemed to be healthier because of their investment in the current system.² Conservatives argued that “choice” was somehow being restricted (as if there actually were “choices” in school lunches) and that the new standards would create overly burdensome regulation. In the end, tomato sauce remained classified as a vegetable (along with other salty and high fat foods) for school lunches. Still, it is in the nature of wicked problems not to be resolved to everyone’s liking—though in this case the common good seems to have been thwarted, too.

Although multi-stakeholder interactions can help provide insights into some of the causes and potential resolutions to the wicked problems, the nature of wicked problems, even problems that on the surface seem simple, make them inherently difficult. Grappling with wicked problems necessitates collaborative rather than unilateral approaches (Horst & Webber 1973; Marshak 2009; van Bueren et al. 2003); and they are more complex which makes it harder to reach agreed outcomes.

Waddell has documented the growth of what are called global action networks (GANs) as one type of mechanism for contending with problems. They inherently go beyond the scope of any single institution or entity to focus on issues that are inherently wicked in nature (Waddell 2009; Waddell 2007). GANs, according to Waddell, are global and multi-level (local, regional, global), entrepreneurial action learners, public good producers, diversity-embracing inter-organizational networks that act as systemic change agents—mostly voluntarily (Waddell 2009). GANs, like other parts of what I have elsewhere called the emerging global infrastructure on corporate responsibility (Waddock 2008), represent voluntary collaborative approaches to deal with issues related to the public good that exist on a global scale—all of which are wicked problems. Examples include global reporting on sustainability and social issues (e.g., the Global Reporting Initiative), global principles and standards (e.g., the UN Global Compact), or, more relevant to this *Special Issue*, sustainable food production (e.g., the Sustainable Food Laboratory). We could add multi-stakeholder dialogues of various sorts—and even the spate of protests which occurred during the Occupy Wall Street and other protest movement that have swept the world in recent years. In the Occupy movement, the collaborative, multi-stakeholder structure lacked a central authority or leadership and seemed to offer alternatives to the current rigid systems of decision-making, particularly when the problems being addressed crossed national and institutional boundaries, as wicked problems often do.

The type of leadership needed to manage wicked problems is very different from the heroic or authoritarian forms of leadership that typically come to mind. The very nature of wicked

² Daily Mail Reporter, <http://www.dailymail.co.uk/news/article-2062056/Pizza-vegetable--covered-tomato-paste.html?ITO=1490>, 11/19/2011; International Business Times, <http://au.ibtimes.com/articles/252925/20111121/congress-pushes-classify-pizza-vegetable-au-ibtimes.htm>, 11/21/2011.

problems means that no single individual or organization has the necessary authority to unilaterally impose a solution—and that is why multi-stakeholder alliances and coalitions (and various forms of engagement) are needed. As illustrated in the pizza example, the outcomes are not always to everyone's liking. The way in which the public good or public interest gets defined when dealing with a wicked problem is a necessary product of inputs from multiple stakeholders—some of whom are likely to have more power, more money or more influence than others. Democratically-based initiatives can better absorb a wide range of inputs and consolidate them through some sort of process where unilateral approaches are more likely to achieve outcomes that more stakeholders can buy into.³

Working on wicked problems demands an orientation toward not only the individual or corporate good, but also and more importantly toward the common good. To think about the common good in the same context as the pizza example, entrenched interests with much to gain from the status quo exist and provide an added level of complexity that creates demands for new types of leadership skills. Among the skills in businesses and other institutions that engage in dealing with wicked problems, be they in food and agriculture or in other aspects of society, are an ability to “leave one's power hat at the door,” and enter into a true dialogue about what the common good is. Finding the common good in fraught situations involves losing one's own ego and putting aside one's own interests—and that is hard to do in most business and industry contexts absent of regulatory initiatives that demand that such moves be made. Most incentives in business today, for example, orient leaders toward short term rather than long-term gains and thinking.

Dealing effectively with wicked problems also demands that participants in a resolution process take a long- rather than short-term time perspective. They also need a capacity to reframe issues and problems, often by moving up from a specific definition of the problem to a higher level of abstraction, where it is more likely to find common ground (i.e. the common good or public interest) than at lower definitional levels. Einstein famously stated, “You cannot solve a problem from the same consciousness that created it. You must learn to see the world anew.” The kinds of questions that need to be asked in dealing with wicked problems, even ones that initially appear as simple as the pizza question, include: Whose interests are at stake here? Whose views need to be included in the conversation? How can we negotiate the obvious and not-so-obvious power interests and find alignments that exist underneath the surface of this issue? Where and how can we find common ground in a situation where different opinions abound? Conversations and experiences that shift minds and create new insights, what the Buddhists call “third way thinking,” are needed to create the *metanoia*. It is increasingly apparent that this *metanoia* or mindset change is needed to shift our world from our current unsustainable path where the common good seems to get lost in moneyed interests, toward a path that honors and values all the earth's creatures while listening to the voices of all in an equitable way. It is my hope that the papers in this *Special Issue* can help open our eyes to new ways of thinking about some of these issues and move us along this path.

³ Think for example of future search or mind mapping strategies, or some of the methods for gaining consensus used in total quality management, as methodological examples

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NGO-Business Interaction for Social Change: Insights from Oxfam's Private Sector Programme

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Abstract

For over a decade, Oxfam has increasingly interacted with the private sector as a means to address the wicked problem of poverty. For Oxfam, poverty is caused by injustice and is a consequence of people's inability to materialize their human rights. Such rights-based approach to development shapes Oxfam's view on how businesses can play a role in achieving socially responsible and sustainable economic progress. In this contribution, we present an overview of Oxfam's Private Sector Programme and discuss some of its key features concerning policy and practice. In particular, we define four areas in which Oxfam's Private Sector Programme exerts change: markets, rules, knowledge, and empowerment. We also discuss some of the risks and excuses commonly faced by Oxfam and we pose some questions for future research.

Keywords: Human rights, multi-stakeholder initiatives, Oxfam, private sector, social change.

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Introduction

Wicked problems cannot be solved by single actors and single actions alone. Therefore, Oxfam works with others, including the private sector, to bring about lasting change. Oxfam's mission is to realize a just world without poverty. In Oxfam's view, the wicked problem of poverty is caused by injustice and is a consequence of people's inability to materialize their human rights. This rights-based approach turns development into a political matter. Oxfam organizes its work around the fundamental Human Rights, including the right to a sustainable livelihood and the right to be heard. The private sector also has a responsibility to respect these rights. Oxfam identifies the private sector as a worthwhile actor because of its role in both in the creation and the alleviation of poverty in poor countries and at the global level. In particular, the role of businesses in the contexts of struggle for land, water, and food, as well as in the creation of fair markets and financial systems, are thematic priorities for Oxfam's mission. Since 2003, Oxfam sustains institutional engagement with businesses through its Private Sector Programme.

What gets us out of bed in the morning? The potential to change business practices.

Oxfam believes that, with the right opportunities cultivated, businesses can play a role in achieving socially responsible and sustainable economic progress. To this end, Oxfam might take part in critical advocacy and campaigning, joint development projects, and marketing or fundraising relationships with companies. Oxfam's terms of engagement have been set in the *Guide to Working with the Private Sector and Ethical Screening*. This document states that each Oxfam affiliate retains the right to interact with companies according to its own strategies and circumstances, while committing to some basic principles. Accordingly, all private sector engagements should further Oxfam's mission by means of: influencing corporate policies to bring sustainable gains to people living in poverty; granting Oxfam greater resources, knowledge, or recognition; strengthening businesses that seek to harness equitable economic development and social justice; improving Oxfam's access to key alliances; and/or promoting the development of private standards around the impacts of business activity.

In the field of voluntary regulation, participating in the creation of mainstream certification schemes allows Oxfam to engage in and improve the design of production standards, putting forward rights-based principles that help strengthen social criteria. Oxfam believes that private standards, developed collaboratively by businesses and NGOs, can help fill governance voids that are not addressed by available formal regulatory instruments. Private regulation thus creates interesting opportunities for managing wicked problems, particularly in commodity sectors that affect millions of people living in poverty and are more susceptible to consumer pressure.

Oxfam believes in the potential for affecting the private sector through strategies around markets, rules, knowledge, and empowerment:

1. Using supply and demand forces between value chain stakeholders in pre-competitive conditions, acknowledging a shared responsibility to ensuring ethical policy decisions: Markets have the power to positively change the world.

2. Regulating markets through voluntary standards, e.g. private certification systems, in combination with formal regulatory frameworks that complement each other: Rules have the power to positively change the world.
3. Sharing expertise, transferring technology, and mobilizing innovative networks to bring continuous improvement in entire sectors: Knowledge has the power to positively change the world.
4. Giving stakeholders, notably those that would otherwise be easily excluded, a voice in making the decisions that affect their livelihood, such as decent work conditions and using the natural resources they depend upon: Empowerment and democracy have the power to positively change the world.

A few examples of Oxfam's engagements in multi-stakeholder initiatives include:

Multi-stakeholder Initiative	Oxfam's Role	Challenges Addressed
Aquaculture Dialogues	Technical advisor to standard development for tropical shrimps.	Company-community conflicts over natural resources, certification for smallholders.
Common Code for the Coffee Community (4C)	Advice on rules of engagement, development of verification system.	Certification of smallholders, gender mainstreaming, and empowerment.
Roundtable on Sustainable Palm Oil (RSPO)	Participation in the Executive Board, Complaints Panel, and Smallholders Taskforce. Alliances with other NGOs.	Prevention and resolution of land-related conflicts, deforestation, smallholder certification.
Commission "Corbey" on Biomass Sustainability	Social NGO member, advising the Dutch government on Bioenergy Policy.	Production volumes and their impact on the food versus fuel conflict, food security, and climate change.

What keeps us awake at night? Risks, common excuses, and remaining questions.

Oxfam's theory of change is based on a series of assumptions that need continuous testing and improvement. This implies that the possible outcomes have inherent limitation. Through its engagement with businesses, both directly and through multi-stakeholder initiatives, Oxfam has identified a number of risks that can potentially undermine the opportunities for success, namely:

- Oxfam has the potential to connect the global strategies pursued in multi-stakeholder initiatives with the situation of local actors. Yet, ensuring a decisive impact in the lives of poor people requires a continuous effort.

- Conflicting perspectives need to be carefully managed in cases in which other NGOs or Oxfam affiliates favor a less collaborative philosophy towards the private sector.
- Engagements done with businesses in one country should not conflict with interventions in another. All Oxfam affiliates must ensure a level of policy coherence and internal coordination to effectively act as a countervailing power to the private sector.
- The complex nature of wicked problems compels Oxfam to engage with a growing range of issues and actors, demanding the Private Sector team to effectively manage multiple relationships and combine a healthy balance between expertise and innovation.

With respect to the limitations of its approach, Oxfam needs to deal with the common excuses voiced by actors who resist change and often blame the problem on others who are not at the table. These excuses undermine Oxfam's strategies around markets, rules, knowledge and empowerment:

1. It is easier to blame it on the uncontrollable market power of anonymous consumers, like 'the Chinese', than to improve the way markets work.
2. It is easier to the blame free riders, banana republics, and certain government bureaucrats for ignoring or abusing the rules, than to properly enforce regulation.
3. It is easier to blame it on complexity and the lack of knowledge, or to rather flee into an overburdening technocracy, than to actually share what we know and learn from others.
4. It is easier to blame the majority of the undisciplined, undemocratic, or corrupt forces, than to take a proactive approach to collaborate with those individuals and organizations that are willing to make things happen.

As proactive actors, scientists and research institutions also have an important role to play in addressing the wicked problem of poverty and injustice. They can help Oxfam and a wider range of stakeholders who struggle with similar dilemmas and their related questions. To name but a few:

- a) Despite their public commitment to sustainability, many companies continue to display a disconnection between their policy at headquarters and practice in other country offices, hampering the business case that NGOs and international institutions have made for sustainability.

Under which conditions can market actors harmonize sustainability actions between headquarter policies and their operations in third countries?

- b) Companies are increasingly moving their production facilities to developing countries where labour and land is cheaper, and regulation is more lenient. Corporate investment in less-regulated and fragile states gives way to new power dynamics, demanding collaboration with new actors in different types of institutional arrangements.

Considering that public and private regulation co-exist and complement each other, to what extent and in what ways can voluntary private regulation serve as catalyst for establishing and reinforcing formal regulation? How can private and public regulation mutually affect positive change?

- c) So far, evidence has shown that the effectiveness of certification is context- and issue-specific. In particular, issues internal to specific value chains (e.g. child labour in the cocoa sector and low wages in the coffee sector) have been relatively well addressed by private certification schemes. Yet, managing external issues (e.g. land grabbing and deforestation in tropical countries) has proven to be more difficult.

What factors determine the tipping points capable of bringing the broad transformation required to tackle the wicked problems associated to agricultural commodity production?

Conclusion

Do multi-stakeholder dynamics in the agribusiness sector create the value and resources that Oxfam is hoping for? Oxfam's participation in innovative arrangements with businesses has been largely experimental, and occasionally risky. Oxfam's engagement in such arrangements has not gone unquestioned, both internally and externally. Interaction with private actors has often been accused of contributing to 'greenwashing' or trivializing the sustainability demands of fierce NGOs. Oxfam chooses for a combination of insider-outsider approaches by which it is able to affect multi-stakeholder processes as member collaborating with companies, while remaining able to take an independent perspective and campaign against them. This gives Oxfam enough flexibility to interact with the private sector while remaining truthful to its constituencies. Even though Oxfam acknowledges the limitations of private governance arrangements, it estimates that interaction with multiple stakeholders is one of the keys to managing the wicked problem of poverty and injustice.



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Can Agribusiness Feed 3 Billion New People...and Save the Planet? A GLIMPSE™ into the Future

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Abstract

The challenge of feeding another three billion people within the next 40 years clearly meets the definition of a ‘wicked problem’. Agribusinesses have been seen as part of the problem, pursuing short-term gains at the expense of human development and the environment. We argue that private sector, market-driven solutions are an essential component to meeting this challenge. Combining a literature review with interviews from a panel of 24 agribusiness ‘experts’, we identify seven key barriers which impede our ability to feed nine billion people on earth. Collected under the acronym GLIMPSE, they help to frame the obstacles and identify the opportunities. This is an important step towards harnessing the power of the marketplace so that agribusinesses can bring together the creativity, determination, and technology similar to the ‘miracle of the cerrados’ in Brazil to bear on the challenge of feeding the three billion additional people that will join our world by 2050.

Keywords: agribusiness, food, wicked problem

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“We in agriculture must think differently from how we have in the past, by adopting new technology at a faster pace and communicating in a way we never have before. We must find the balance for sustainable food production and protection of resources while satisfying consumer demands.”

—T.P. Lyons

Introduction

The challenge of feeding another three billion people within the next 40 years clearly meets the definition of a ‘wicked problem’s (Australian Public Service Commission 2007).¹ Indeed, it qualifies as a ‘super-wicked’ problem, because time is running out; there is no central authority to take charge; those who are seeking to solve the problem are also part of the problem, and public policies are generally myopic (Levin et. al 2009).

Agribusinesses have been seen as part of the problem, pursuing short-term gains at the expense of human development and the environment. Greenpeace is on record as saying that Sustainable agriculture can deliver for 9 billion people if governments listen to people, not big agribusinesses (Oran 2012). We argue instead, that private sector market-driven solutions are an essential component to meeting the challenge. Using a modified Delphi approach, we asked a range of experts from all sectors of agribusiness to identify the barriers that they see in meeting the challenge of feeding nine billion people. Through an iterative research and feedback process, major barriers to the necessary level of agricultural development were identified. In turn these were encapsulated into the GLIMPSE™ framework, which provides a useful way of identifying both the obstacles and the opportunities of meeting this global challenge of feeding 3 billion more people.

The Challenge to Agribusiness

It has been assumed that “solving” agricultural challenges is the role of governments, NGO’s, the United Nations and charities. Indeed, many organizations, often government funded, are diametrically opposed to private sector solutions, and have a deep distrust of agribusiness.²

However, the involvement (or interference) of governments reflects competing priorities at best, and corruption at worst. NGO’s, the UN and numerous charities are all doing substantive, important work, but the last 40 years has demonstrated the limitations of institutional approaches. Moreover, the solutions that emerge from conventional thought processes are unwieldy and often unrealistic. One researcher argues that the solution to the wicked problems of food and the environment is an integrated policy for agriculture, R&D, the environment, energy, climate change, trade, health and consumer policy.³ Another allows for more private sector investment in R&D, as long as it is “...carefully designed, adequately funded and politically backed” (Naseem et al.).

¹ The complex, interdependent nature of the problem resists resolution because of incomplete, contradictory, and changing requirements, and the effort to solve one issue creates or reveals other problems.

² Damien McLoughlin

³ Patrick Cunningham, Brussels, Sept. 14, 2010.

These improbably high standards reflect just how wicked the problem is, and why agribusiness expertise could prove to be valuable. One of the few points of consensus among the many researchers and organizations attempting to find solutions, is that the private sector will be a critical part of finding ways to get more food to more people more sustainably. Agribusiness leaders are recognizing both the moral and practical dimensions of their role. One noted that ‘in the last couple of years, the private sector has really come to grasp its responsibility about sustainable production. They realize that it’s not just about profits and it’s not just about keeping shareholders happy. It’s really about having a license to produce and being acceptable in society and investing in the long term.’⁴ Another, perhaps optimistically, pointed out that the “...private sector, I think, is today seen as part of the solution; ten to fifteen years ago it was seen by some people as part of the problem.”⁵ A bank reiterated that point in its report on the principles of Food & Agribusiness (F&A), pointing out that the ‘first priority of F&A chains is to feed the world with healthy and safe products at reasonable prices. This production should not endanger the food supply of future generations.’⁶ There are now a small but growing number of active partnerships between agribusiness organizations and NGOs (Lucas 2012).

This paper examines the barriers that are preventing agriculture and agribusinesses from growing and providing food more efficiently, more sustainably, and at a scale and cost that can solve the ‘wicked problem’ of feeding 9 billion people on this planet.

The Challenges

Twenty two experts were invited to answer a simple question: what are the biggest barriers facing agribusinesses ability to feeding three billion more people? These experts represent producers, agribusiness firms, policy makers, consultants, researchers and academics. Many have substantial experience in more than one of these areas. Although a simple, single question was asked, in every case the experts contributed a wealth of opinions, examples, and expertise. They also provide research, articles, presentations and other material⁷. All of the material provided was collected, sorted and analyzed.

There is some agreement within the agribusiness community in general and the panel of experts in particular as to the key barriers to being able to meet the need for food. Some of these externalities are no more tractable for agribusiness than they are for governments, NGOs or charities such as volatile weather (including the issue of climate change),⁸ changing eating habits⁹, and political or economic instability.¹⁰ However, there are other challenges for which agribusiness can play a limited, but important role, or even lead the way (such as regulations, resources, and infrastructure). And finally, there are some challenges for which agribusiness is perhaps the best hope for progress (such as food chain management, markets and innovation).

⁴ Louise Fresco, New Agriculturalist.

⁵ Paul Conway, New Agriculturalist.

⁶ Rabobank. Food and Agribusiness Principles.

⁷ The analysis was done using a grounded theory approach.

⁸ Judd Larned, David Byrne, Patrick Wall, Joel Newman, Patrick Cunningham

⁹ Daniele Giovannucci

¹⁰ Patrick Wall

The discussion below draws on a range of views and sources, groups the challenges with particular relevance for agribusiness into the GLIMPSE™ framework.

- G** = Government
- L** = Losses in the food and ingredient supply chain
- I** = Infrastructure (trains, trucks, ports, cold storage, supermarkets etc.)
- M** = Markets
- P** = Politics & Policies
- S** = Science & Innovation
- E** = Environment

This framework provides a look at both the challenges and opportunities for agribusiness, and is briefly described below.

Government

“...governments will be the biggest barrier.....”¹¹

Government bureaucracy, policies and regulations contribute substantially to the challenge of feeding the 9 billion.^{12,13,14,15,16} The rules, fees, and costs of establishing and operating a business act as barriers to growth, and are frequently most burdensome in the regions where growth is most needed. For example, the World Bank estimates that African farmers could grow enough food to feed the continent—and generate an estimated \$20 billion in earnings for the government if policy makers agreed to lift cross-border restrictions, simplified the rules and fees involved in food trade, and permitted uncultivated land to be put into use.^{17,18} To do something as simple as finding out what types of documents are needed to ship a container abroad or what the fees are requires a meeting with an official in most African countries.¹⁹ Even to set up a business in Brazil takes 119 days, whereas in Australia it takes just two.²⁰

It has also been argued that there is “a fundamental misunderstanding of the scope of the looming hunger problem and an unrealistic faith ... [about] regulation of conventional food production ...”²¹ and that judging new technologies challenges the resources of government officials and panels.²²

¹¹ Mary Shelman

¹² Judd Larned

¹³ World Food Prize Conference, 2012

¹⁴ Mark Rosengrant

¹⁵ Simon Shane

¹⁶ Mary Shelman

¹⁷ Lesley Wroughton

¹⁸ Bloomberg, November 2012.

¹⁹ The World Bank, October 2011.

²⁰ The World Bank. Time required to start a business.

²¹ Joel Brandenberger

²² Dennis Conley

Finally, there is the issue of corruption²³, which is endemic in many regions. Whether it takes the form of requiring bribes to conduct normal business, controlling with whom or on what terms contracts are made, or to whom the benefits of any contracts or deals accrue, corruption is costly to all concerned. Moreover, while agribusinesses may see themselves as victims of corruption, deals made at the expense of either the local citizenry or the environment reinforce the negative views of multinational agribusiness firms.

While there are limits to how much agribusinesses can affect government regulations and corruption, participation and pressure from the business community can make a difference. One of the reasons that approvals for new technologies can take four to seven years is that the complexity of the science leads to uncertainty on the part of the regulators, who then find it easier to defer making a decision. The scientists in the agribusiness community are at the cutting edge of innovation and can help to reduce the scientific gap between industry, academia and government, in turn reducing the delay in getting innovations into the marketplace.²⁴

For example, 108 economies implemented more than 200 regulatory reforms in 2011-2012, mostly in the areas of starting a new business, increasing the efficiency of tax administration and facilitating trade across international borders²⁵.

Losses

“Waste of food either pre-harvest or further along the food chain is a major issue preventing maximum return from the existing food supply.”²⁶

Loss and waste occur at every stage of agricultural production, processing, distribution and use. The Food and Agriculture Organization of the UN estimates that one-third of food is lost or wasted. Consumers in Western Europe and North America waste upwards of ten times as much food as consumers in sub-Saharan Africa and Southeast Asia. In low-income regions the loss is largely due to harvesting techniques, food management systems (poor post-harvest storage can result in the loss of half the crop from mold and insects)²⁷, packaging and marketing. These are all areas in which agribusinesses have substantial expertise and resources, and are therefore great opportunities. In higher income regions some of the food waste occurs early in the food supply chain (at harvesting or in coordination between sections of the supply chain), but most of the loss is at the consumption stage: food that is still fit for consumption is discarded.

The challenges of managing the feed and ingredient supply chain are significant, but this is an area in which agribusiness can succeed from a business perspective while also making a genuine contribution to ensuring that there is enough food to feed an additional 3 billion people.

²³ Simon Shane, Mary Shelman

²⁴ Dennis Conley

²⁵ World Bank & International Finance Corporation.

²⁶ Patrick Wall

²⁷ Simon Shane

Infrastructure

“...having sufficient infrastructure to move product....to deliver effectively”²⁸

Infrastructure is the tracks on which a supply chain runs. From the truck, trains, and other conveyances, to the roads and rails on which they travel, to the ports and transit points along the way, infrastructure sets the limits as to how quickly feed, ingredients and food products can move through the supply chain to the end consumer. The infrastructure also plays an important part in the condition in which it arrives, directly (through climate control, for example) and indirectly (spoilage rates are reflected in journey time). Successive US governments have failed to reinvest in the existing infrastructure, leading to a relative loss in this competitive advantage.²⁹ The amount of control that agribusiness has over infrastructure varies considerably. Large firms can sometimes build the necessary infrastructure themselves, or can use their influence to encourage government or public-private investment. Firms in a supply chain can work together more closely to streamline the process.

Markets

“...trade not aid will help developing countries become self-sufficient in terms of food security”³⁰

Markets demonstrate both how ‘wicked’ the problem of feeding three billion more people is, and how much agribusiness can do to help. It is highly complex, as each of the elements links to at least one other factor. Barriers to trade are inextricably linked to both Government and Policies, but Infrastructure (or lack thereof) can also be a barrier to trade.³¹ Volatility of supply and demand³² is often exacerbated by Policies, and aggravated by opaque pricing mechanisms.³³ Barriers to investment for marginal cost suppliers³⁴ are linked to market volatility as well as Government and Policy interference. In many regions fragmented markets³⁵ and dependence on middlemen³⁶ make it difficult for agribusinesses to develop efficient operations and act as a constraint on growth and maximization of the resources involved.

There are examples of agribusiness operations working together, such as when farmers in France and McDonalds join in multi-year contracts that act to reduce volatility and stabilize the markets for the farmer, but there are too few of these.³⁷ In part this is due to behavioral constraints in markets, whether from old antagonisms, poor communication or simply the resistance to change

²⁸ Judd Larned

²⁹ Judd Larned, Simon Shane, Michael Boehlje

³⁰ Patrick Wall

³¹ Simon Shane, Clare Thorp

³² Judd Larned

³³ Simon Shane

³⁴ Judd Larned

³⁵ World Food Prize Conference

³⁶ Simon Shane

³⁷ Marc Larousse

found at every level from producer to consumer.³⁸ Changes that are now familiar, such as pasteurization, were once viewed with suspicion by the markets.³⁹ More transparency by agribusinesses about both the risks and the benefits from innovative approaches may help ameliorate some of these factors.

Policies

“Government policy plays a significant role in the ‘market efficiency’ of the global Ag markets”⁴⁰

Moving beyond bureaucracy, there is also the challenge of policies that support wasteful use of resources or subsidized environmentally destructive practices⁴¹ or other perverse incentives. Fertile land in Russia and Argentina lies fallow because of volatile government policies while price supports, subsidized fuel and water encourage crops and herds that would otherwise be unsustainable.⁴² The US and the EU spend more than €200Billion annually on agricultural subsidies, distorting both the crops that are grown and the markets for those crops⁴³. Biofuel subsidies skewed the use of corn crops away from food and into a form of expensive fuel⁴⁴. Moreover, food is often caught up in political issues. For example, a dispute on tires led to China banning the import of chicken from the US (Bradsher 2009).

The level and potential for participating in the development of government policies varies significantly by region, but leaders in the agribusiness arena could do more to help develop ‘best practice’ policies that reflect both the specific needs of a given sector and the impact on the larger environment. These ‘best practice’ policies can then made available more broadly.

Science/Innovation

“The biggest block....is failing to recognize, adopt, pursue or research [appropriate] technologies”⁴⁵

The effectiveness of the chemical arsenal is declining⁴⁶; disease factors are an increasing challenge in animal husbandry⁴⁷; and the “Green Revolution” of the 1970’s appears to have hit a plateau. Antagonism between society and scientists, due in part to environmental and humanitarian concerns, and in part to scares such as BSE, has created barriers to the acceptance

³⁸ Dennis Conley

³⁹ Norman Borlaug

⁴⁰ Patrick Wall

⁴¹ Water and Food in the Bio economy

⁴² Judd Larned

⁴³ Michael Marshall

⁴⁴ Marc Larousse

⁴⁵ Clare Thorp

⁴⁶ David Byrne

⁴⁷ Nick Rosa

of genetically modified organisms (GMOs).⁴⁸ Biofuel technology has led to the diversion of food to fuel⁴⁹ and competition for farmland,⁵⁰ creating a backlash that may obscure the value of the second generation work that is now being done. And finally, the recognition of patents and ability to protect intellectual property is challenging in many regions.

These obstacles are not new. As Nobel Laureate Norman E. Borlaug, one of the leading scientists behind the ‘green revolution’ noted⁵¹:

...we confronted bureaucratic chaos, resistance from local seed breeders, and centuries of farmers' customs, habits, and superstitions. We surmounted these difficult obstacles because something new had to be done. Who knows how many would have starved if we had delayed commercializing the new high-yielding cereal varieties and improved crop management practices until we could perform tests to rule out every hypothetical problem, and test for vulnerability to every conceivable type of disease and pest? How much land for nature and wildlife habitat, and topsoil would have been lost if the more traditional, low-yield practices had not been supplanted?

....the skeptics and critics of the new biotechnology wish to postpone the release of improved crop varieties in the hope that another year's, or another decade's, worth of testing will offer more data, more familiarity, more comfort. But more than a half-century in the agricultural sciences has convinced me that we should use the best that is at hand, while recognizing its imperfections and limitations. Far more often than not, this philosophy has worked, in spite of constant pessimism and scare-mongering by critics.

Innovation is a challenging area in which agribusinesses—individually and collectively have a tremendous amount to contribute: the research that leaders in all agribusiness sectors are already pursuing contain the seeds of the next “green revolution” – one that is likely to be green in both senses of the word.

Environment

“The biggest barrier is access to water and managing scarce water supplies.”⁵²

Resource issues, and the implications for the environment, are one of challenges most often cited by the agribusiness community. According to sources and the UN, agriculture needs “...to produce more food per unit of land, water and agrochemicals”⁵³ Land—availability of arable land,⁵⁴ security of tenure on the land,⁵⁵ degradation and erosion of land⁵⁶ is one of the biggest

⁴⁸ Judith Capper

⁴⁹ Simon Shane

⁵⁰ AFIA, Global Food Security

⁵¹ Norman Borlaug

⁵² Ray Goldberg

⁵³ Gordon Butland, UN Food and Agriculture

⁵⁴ UN Report on Food: China; AFIA: Future Patterns, David Byrne, Patrick Wall

resource issues. For example, it has been estimated that there is a need for 30% more grain from the fast reducing stock of arable land.⁵⁷ Greater productivity is one answer. Another is making better use of marginal land, as with the ‘miracle of the Serra’, in Brazil. In both cases, agribusiness has a lot to contribute. These are areas where pro-active agribusiness interests are already making a difference⁵⁸, but the scale of the challenge, and the fear of risk and/or low returns can act as a brake on investment.⁵⁹

Similarly, water, an issue that was typically associated with specific regions, has recently been recognized as a global issue⁶⁰, it has been called the “silent crisis”.⁶¹ Agribusinesses are often seen as part of the problem, through over-fishing, over-harvesting, use of chemicals and pesticides, wasteful use of natural resources, waste management and so on. The other side is the challenge of creating more food from more difficult environments. These are areas in which innovation, creativity and the desire to succeed that are characteristic of the private sector can be used to advantage.

The Opportunities

Agribusinesses can play a crucial role in addressing some of the major challenges, particularly some aspects of *loss*, *infrastructure*, *markets* and *environment*. The expertise and innovation required for agribusinesses to survive in the competitive marketplace can be applied to these challenges in ways that contribute to the both the organization and the greater good.

Agribusinesses can anticipate, recognize and work to overcome *government* bureaucracy and corruption. It can build credibility with consumers by being more open about the *science* of innovation and also by working to help shape *policy* in ways that are constructive to the larger goals, not simply narrow self-interest. By taking a long-term perspective, and developing working relationships across boundaries, agribusinesses can help reduce *losses*, by bringing supply chain expertise to areas where it is less developed and by helping with efforts to improve Infrastructure. The Environmental challenges will also require a long-term perspective to repair, protect and develop land and water resources. Working with *government and policy makers* will be an important part of meeting the *environmental* challenges, of developing the necessary Infrastructure and helping to ensure that *markets* are fair and open.

However, all of these pieces are reliant on having the people to do carry them out. Several of the experts noted that the importance of education, especially for women⁶², or cited lack of education as a barrier.⁶³ One noted “in my direct experience, the absence of management talent is

⁵⁵ Simon Shane

⁵⁶ Simon Shane, UN Food and Agriculture

⁵⁷ David Byrne: Safe and Sustainable

⁵⁸ Knowledge Based Bio-Economy, Private Sector Investment, Judd Larned

⁵⁹ Private sector investment in R&D

⁶⁰ David Byrne, UN Food and Agriculture, Knowledge Based Bio-Economy, Ray Goldberg, Patrick Wall, New Agriculturalist

⁶¹ Ban Ki-Moon. UN News Center. 2007.

⁶² Patrick Wall

⁶³ Clare Thorp, Mary Shelman

shocking. In countries as diverse as Russia, Pakistan and Uganda, from basic issues such as staff and management development right up to logistics both hard and soft investment is needed.”⁶⁴

Lack of education is a barrier at any time, but the historically conservative agribusiness sector is going through a period of disruptive change in technology, communications and global markets. As noted in the IFAMR Special issue on Human Capital (Shelman and Connolly 2012), “the glue” ... that will define the success of agribusiness organizations in this new environment is not physical resources or financial clout but rather human capital.”

Conclusions

“....the current assumption seems to be that the world can have a rising population, ever-higher per capita meat consumption, devote less land to food production to help hit climate change targets and eschew the advances in science that might increase yields. This is the stuff of fantasy. It is possible to have more intensive farming using the full range of technological breakthroughs in order to feed a bigger, meat-hungry population. Or it is possible to have lower yields from a more organic approach to feed a smaller population eating less meat, but not both.”

-Larry Elliott

Elliott’s quote captures the essential nature of wicked problems: there are no easy answers. The GLIMPSE™ framework makes it clear that the barriers and opportunities to achieving the necessary growth are often two sides of the same coin. It offers researchers, regulators and policymakers insights into the barriers that agribusinesses face in delivering on the promise of those productivity improvements. It also helps these groups and –crucially, agribusiness participants identify areas where there are opportunities to improve the quality of life for the next inhabitants of this planet.

According to a recent OECD-FAO presentation⁶⁵ the 3 billion new people—mostly urban dwellers will require 1 billion tons of cereals and 200 million tons of meat. Building on the evidence that agricultural productivity has improved by 2.6% per annum over the past 10 years; they estimate that productivity will increase a further 1.7% per annum for the next 10. Compounded over the next 35 years, that will allow agribusinesses to generate the requisite 70% increase in food production. These projections correlate closely with the view of the New Vision for Agriculture Project, which estimates that 20% improvement per decade in production, productivity and land expansion will be sufficient to meet the goal.⁶⁶ Clearly, it is possible to achieve the necessary growth, and given the creativity and determination within the agribusiness community, arguably the biggest barrier is not recognizing the opportunities within the obstacles.

⁶⁴ Damien P. McLoughlin

⁶⁵ Wayne Jones OECD Trade and Agriculture, Future Farm Europe, 26-28 June 2012

⁶⁶ World Economic Forum

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