

Designing for value:

Structuring voluntary certification programs to increase producer participation and stakeholder credibility

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ABSTRACT

Commodity agricultural production in tropical forest regions is expanding rapidly and is frequently linked to deforestation, increased emissions of greenhouse gases, biodiversity loss, poor working conditions and wages, and land tenure conflicts. Voluntary certification programs are one type of intervention used to incentivize the agricultural commodity sector to improve sustainability, by incentivizing supply-chain actors to produce and source products according to agreed standards. We used field interviews to consider how the additionality of these programs might be maximized. We identify two dimensions of additionality: 1) increased participation by producers and 2) greater rigor of sustainability standards. We use the cases of the Roundtable on Sustainable Palm Oil (RSPO) voluntary certification program, with a focus on Indonesia, and the Sustainable Agriculture Network (SAN) voluntary certification program for cattle, with a focus on Brazil to examine the role of program design choices in influencing sustainability outcomes. Design choices include standards setting, adoption, implementation, and monitoring and enforcement. We find that design choices by certification program developers tend to strengthen one of the two dimensions of additionality, increased participation or increased rigor, at the expense of the other. We recommend that design choices should aim to increase the value of participation for producers without sacrificing the rigor of the standard, for example by setting intermediary milestones for program participants without compromising the ultimate ambition of meaningfully enhanced sustainability.

KEYWORDS

Additionality, agriculture, Brazil, cattle, deforestation, Indonesia, oil palm, rigor, Roundtable on Sustainable Palm Oil (RSPO), Sustainable Agriculture Network (SAN), value-added

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Table of Contents

ABSTRACT	3
ACKNOWLEDGEMENTS	4
TABLE AND FIGURE CAPTIONS	6
ACRONYMS	7
1. INTRODUCTION	8
2. METHODS	11
2.1 THE ROUNDTABLE ON SUSTAINABLE PALM OIL CERTIFICATION PROGRAM	16
2.2 THE SUSTAINABLE AGRICULTURE NETWORK CERTIFICATION PROGRAM FOR CATTLE	16
3. RESULTS	17
3.1 STANDARD SETTING	17
3.1.1 <i>Governance</i>	18
3.1.2 <i>Sustainability standards</i>	19
3.2 ADOPTION	21
3.3 IMPLEMENTATION	24
3.4 MONITORING AND ENFORCEMENT	25
3.5 INTERACTION WITH EXTERNAL FACTORS.....	27
4. DISCUSSION	30
4.1 A VALUE FRAMEWORK FOR DESIGN	32
4.1.1 <i>Exchanges of non-monetary value</i>	33
4.1.2 <i>Trajectory of producer sustainability maturation in the context of certification</i>	34
4.1.3 <i>Program credibility</i>	37
4.2 DESIGN OPPORTUNITIES	39
5. CONCLUSION	39
REFERENCES	41

TABLE AND FIGURE CAPTIONS

Table 1. Interviewees in Brazil and Indonesia.

Table 2: Categories of stakeholder interview questions

Figure 1. Additionality and the challenges for producers in complying with the Principles and Criteria of voluntary certification programs.

Figure 2. Location of field research sites and interviews conducted in (a) Indonesia and (b) Brazil (adapted from Alves-Pinto et al. 2013).

Figure 3. The logic and progression of voluntary certification programs. a) Setting standards; b) Some producers who were already meeting the level of sustainability identified by the standards become certified; c) Inclusion of design choices (e.g. governance structure) create additional benefits that incentivize other producers to become certified.

Figure 4. Sustainability “transactions” between producers who must implement best practices and external stakeholders who demand incorporation of best practices into production processes. In a market-based scenario (a), there are a number of inefficiencies inherent to the transaction, while for transactions in which the voluntary certification program functions as a broker (b) the exchange of monetary and non-monetary value is measured against a common reference (the standards) and with verification that the producer is in compliance with those standards.

Figure 5. a) Producer maturation trajectory where an intermediate stage exists between capacity building (assistance) and participation in the context of achieving certification standards (RSPO-style program) b) Producer maturation trajectory where a producer moves from capacity building directly to participation and contribution in the context of achieving certification standards (SAN-style program).

ACRONYMS

AMDAL	Analisis Mengenai Dampak Lingkungan Hidup (Environmental Impact Statement)
CB	Certifying Body
CSPO	Certified Sustainable Palm Oil
FPIC	Free, Prior and Informed Consent
HCV	High Conservation Value
ISC	International Standards Committee
ISPO	Indonesian Sustainable Palm Oil
P&C	Principles and Criteria
RSPO	Roundtable on Sustainable Palm Oil
SAN	Sustainable Agriculture Network
WWF	World Wildlife Fund

1. INTRODUCTION

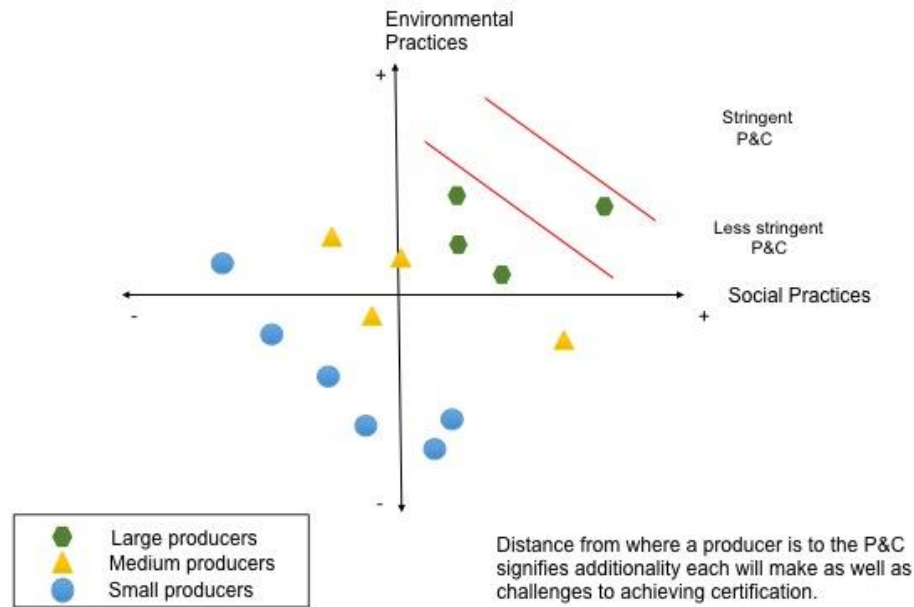
This paper explores how decisions in the design of voluntary certification programs have the potential to help scale-up those programs and increase their contribution to enhanced sustainability. We contrast two different programs, the Roundtable on Sustainable Palm Oil (RSPO) certification program (with a focus on Indonesia) and the Sustainable Agriculture Network (SAN) certification program for cattle (with a focus on Brazil). The two cases provide examples of how program designers seek to maximize non-monetary values to producers and other stakeholders, and how attempts by programs to broker non-monetary values between the two groups have the potential to benefit all stakeholders by maintaining the rigor of the program.

Oil palm cultivation and cattle ranching are closely associated with tropical deforestation and other adverse environmental outcomes (Bustamante et al., 2012; Wakker et al., 2004; Wilcove & Koh, 2010). Indonesia is the leading producer of oil palm and Brazil has the largest commercial herd of beef cattle (Bustamante et al., 2012; USDA, 2010). From 1990-2005, more than 50% of oil palm expansion in Indonesia resulted in deforestation (Koh & Wilcove, 2008). Similarly, Brazil slaughters over 200 million heads of cattle each year (FAO Stat, 2013), and is the largest exporter of cattle products globally. Brazil's cattle industry may be responsible for up to 70% of deforestation that occurs within the country each year (Bustamante et al., 2012).

Voluntary certification programs are one type of market governance intervention that has emerged in commodity sectors with 'forest risk' (Auld et al., 2008; Bass et al., 2001; Klooster, 2005; Steering Committee, 2012). These programs are a leading driver of an emerging alternative market for commodity products sourced according to commitments by individual actors and organizations to greater environmental and social sustainability (Smith & Maser, 2010; Taylor, 2005). Voluntary certification programs set minimum acceptable criteria for agricultural practices, including growing and distributing commodity products, with the expectation that improved practices will result in sustainability outcomes (Klooster, 2005). Most of the best management practices prescribed by the voluntary certification program standards target the production stage (Bitzer et al., 2008), since this is where the majority of threats to sustainability, including deforestation, occur (Cashore, 2004; Gulbrandsen, 2005; Overdevest, 2004). The programs offer incentives such as price premiums, risk management, brand protection, and access to finance and new markets to supply-chain actors who agree to adopt

these sustainability standards into their production processes (Cashore et al., 2003; Fulponi, 2006; Overdevest & Rickenbach, 2006; Prakash & Potoski, 2012; Rickenbach & Overdevest, 2006; van Kooten, 2005). In turn, civil society groups use compliance with voluntary certification programs to track the behavior of supply-chain actors. Consumers who wish to make more informed purchase decisions also rely on voluntary certification programs to verify the sustainability of retail products (Tallontire, 2007).

The recruitment of producers to participate in voluntary certification programs is critical to the scaling up of such programs and to the achievement of greater sustainability in the sector. Typically, large progressive producers are the first to be targeted and to join these programs because they already integrate many best practices into their production processes, independently of their commitment to do so under certification (Bernstein & Cashore, 2007; Cashore, 2004). By recruiting first from this class of large producers, programs come closer to achieving scale, but may have limited additionality in terms of moving sustainability beyond baseline conditions. In contrast, small and medium-sized producers, who tend to have the most to improve in terms of increased sustainability, are challenged by the overall rigor of a program's standards by limited capacity and resources to make changes in production practices (Fig. 1). Together, the scale of participation and the rigor of the standards dictate the aggregate additionality of the program, and its potential to move the sector beyond baseline conditions of environmental and social sustainability.



NB: Producers are hypothetical, and do not represent actual data points.

Figure 1. Additionality and the challenges for producers in complying with the Principles and Criteria of voluntary certification programs.

The availability of a price premium for the production of certified sustainable agricultural products is one predictor of whether a voluntary certification program will attract a large and diverse pool of participants (i.e. achieve scale) while maintaining the rigor of its standards (Eden, 2009; Henson & Reardon, 2005; Klooster, 2010). Less attention has been paid to the means by which voluntary certification programs generate non-monetary forms of value for participants, but this is also an important mechanism to entice participants (Overdevest & Rickenbach, 2006). Non-monetary benefits include access to finance and markets as well as risk management and brand protection (Tallontire, 2007; van Kooten et al., 2005). This paper asks how the administrators of voluntary certification programs can broker the exchange of non-monetary value between producers on the one hand and sustainability stakeholders on the other. Since programs seek to recruit additional participants without compromising the rigor of their standards, we review the other core activities of voluntary certification programs (besides standards-setting) and the structure of the program itself as potential sources of non-monetary value generally and enticements to producers in particular.

2. METHODS

Semi-structured interviews were conducted in Indonesia and Brazil with 54 key stakeholders in the palm oil and cattle supply chains, respectively. Interviews were conducted with actors from the state sector, civil society (local and international NGOs), and market sector (producers, processors, and retailers) (Table 1). Questions addressed the interviewees' perceptions of voluntary certification; financial and logistical issues related to adoption and implementation; the role of non-supply chain stakeholders and their influence on producers; the market for certified sustainable versions of the commodity product; and opinions about the design and structure of the program (Table 2). Interviews were conducted over a six-week period in each country (Indonesia: June-July 2013; Brazil: July-August 2013). Thirty individuals and stakeholder organizations were interviewed in Indonesia by CN, HK, PW, and SD, in the provinces of Jakarta (in the cities of Jakarta and Bogor), Riau (Kuantan Singingi and Pelalawan regencies) and West Kalimantan (Pontianak and Sangau regencies) and 24 individuals and stakeholder organizations were interviewed in Brazil by BC, HNAP, MO, and PN in the states of São Paulo (in the cities of Piracicaba and São Paulo) and Mato Grosso (Cuiaba, Tangara da Serra, Alta Floresta, and Sinop) (Fig. 2; Table 1). In Indonesia, site visits were made to two RSPO-certified oil palm plantations in Sumatra and to both certified and non-certified smallholders in West Kalimantan (Fig. 2a). In Brazil, site visits were made to one SAN-certified farm (Fazenda São Marcelo) and two non-certified farms in Mato Grosso (Fig. 2b). In Indonesia, interviews were conducted in either English or Bahasa Indonesian. In Brazil, most interviews were conducted in Brazilian Portuguese.

Table 1. Interviewees in Brazil and Indonesia

Interviewee role in the organization	Organization	Organization sector	Country of interview
Researcher/Director of Agribusiness at Surya University	Indonesian Center for Agriculture Socio Economic and Policy Studies, Ministry of Agriculture	University	Indonesia
Researcher	Bogor Agricultural University (IPB)	University	Indonesia
Deputy Director - Market Transformation	WWF	NGO	Indonesia
Global Coordinator for Palm Oil, Palm oil campaigner for Greenpeace Southeast Asia	GreenPeace	NGO	Indonesia
Palm Oil Project Manager	Zoological Society of London (ZSL)	NGO	Indonesia
	Sawit Watch	NGO	Indonesia

Project Officer	Forest Peoples Programme (FPP)	NGO	Indonesia
Senior Policy Advisor	Forest Peoples Programme (FPP)	NGO	Indonesia
Officer	AMAN	NGO	Indonesia
	LBBT	NGO	Indonesia
	YPSBK	NGO	Indonesia
Head of Campaign and Advocacy Department	WALHI	NGO	Indonesia
National Coordinator	Serikat Petani Kelapa Sawit (SPKS/Palm Oil Farmer's Union)	Association	Indonesia
Indonesia Director	RSPO	Roundtable	Indonesia
	Indonesia Palm Oil Association (GAPKI)	Industry Organization	Indonesia
Consultant	Daemeter Consulting	Consulting	Indonesia
HCV Consultant	Tropenbos	Consulting	Indonesia
	Sucofindo	Certification Body	Indonesia
RSPO Scheme Manager for ASEAN	British Standards Institute Group (BSI)	Certification Body	Indonesia
	PT Sai	Certification Body	Indonesia
PR, R&D, General Manager, Technical Manager	Anonymous	Producer/MNC	Indonesia
Deputy Head, Sugar Cane Division	Anonymous	Producer/MNC	Indonesia
Chief Operating Officer, Vice President, Corp Affairs	Anonymous	Producer/MNC	Indonesia
Local funding manager	Anonymous	Producer	Indonesia
Owner, Sustainability manager	Anonymous	Producer	Indonesia
Plant manager	Anonymous	Producer	Indonesia
Head of Environment, Health & Safety	Anonymous	Producer	Indonesia
Independent smallholder	Anonymous	Producer/non-certified/smallholder	Indonesia
-	Anonymous	Producer/non-certified/mid-sized	Indonesia
-	Anonymous	Producer/non-certified	Indonesia
Global Product Specialist - Environmental, Social & Trade Standards Sustainable Business Advisory Department	International Finance Corporation (IFC)	Banking	Indonesia
Agricultural Certification	Imaflora	NGO/SAN certifier	Brazil
Executive Director	Imaflora	NGO/SAN certifier	Brazil
Agricultural Certification	Imaflora	NGO/SAN certifier	Brazil
Cattle and Agriculture Political-Economics Analyst	ICV	NGO	Brazil
Executive Coordinator	ICV	NGO	Brazil
Project Manager	ICV	NGO	Brazil
Sustainable Municipality Coordinator	ICV	NGO	Brazil
Sustainable cattle analyst	ICV	NGO	Brazil
Researcher	Amigos da Terra	NGO	Brazil
Conservation Program Analyst	WWF	NGO	Brazil

Sustainable Harvests Coordinator	The Nature Conservancy	NGO	Brazil
Technical Manager	Fazendas São Marcelo	Producer	Brazil
Manager	Fazendas São Marcelo	Producer	Brazil
Human Resources Analyst	Fazendas São Marcelo	Producer	Brazil
Producer	-	Producer	Brazil
Producer	-	Producer	Brazil
Producer	Fazenda Salto das Nuvens	Producer	Brazil
Producer and President of the Sindicato	Sindicado dos produtores de Alta Floresta	Producer	Brazil
President of Animal Proteine sector	AC Agromercantil	Producer	Brazil
Sustainability sector	Marfrig	Slaughterhouse	Brazil
Quality Guarantee	Margrig	Slaughterhouse	Brazil
Marfrig Club	Marfrig	Slaughterhouse	Brazil
Marfrig Club	Marfrig	Slaughterhouse	Brazil
Supervisor of Sustainability	Marfrig	Slaughterhouse	Brazil
Sustainability Director	JBS	Slaughterhouse	Brazil
Manager	Carrefour	Varejo	Brazil
Sustainability Director	Walmart	Varejo	Brazil
Sustainability Manager	Walmart	Varejo	Brazil
Latin America Protein Director	McDonalds	Restaurant	Brazil
Executive Director	Beef Exporters Association - ABIEC	Association	Brazil
Technical Assistant	Beef Exporters Association - ABIEC	Association	Brazil
Marketing Specialist Range and Pastures	Dow	Industry	Brazil
Institutional Relations	Dow	Industry	Brazil
Executive Coordinator	GTPS	Roundtable	Brazil
Director	Acrimat	Producer Association	Brazil
Post-Doctoral and FSC auditor	FEA/Imaflora	Researcher/Auditor	Brazil
Environmental Analist	IBAMA	Government	Brazil
Researcher	Embrapa	Government	Brazil
	Secma 1	Government	Brazil
	Secma 2	Government	Brazil

Table 2: Categories of Stakeholder Interview Questions

Background of interviewee and organization
Perception about the certification program
Participation in the certification program <ul style="list-style-type: none">• Motivations and challenges• Influence of the organization on program design
Compliance (if applicable) <ul style="list-style-type: none">• Needed resources (e.g. expertise, money)
Sustainability outcomes (if applicable)
Rewards for participating in the program (monetary, non-monetary)
View on prospect of the certification program
Practices that the organization has to change

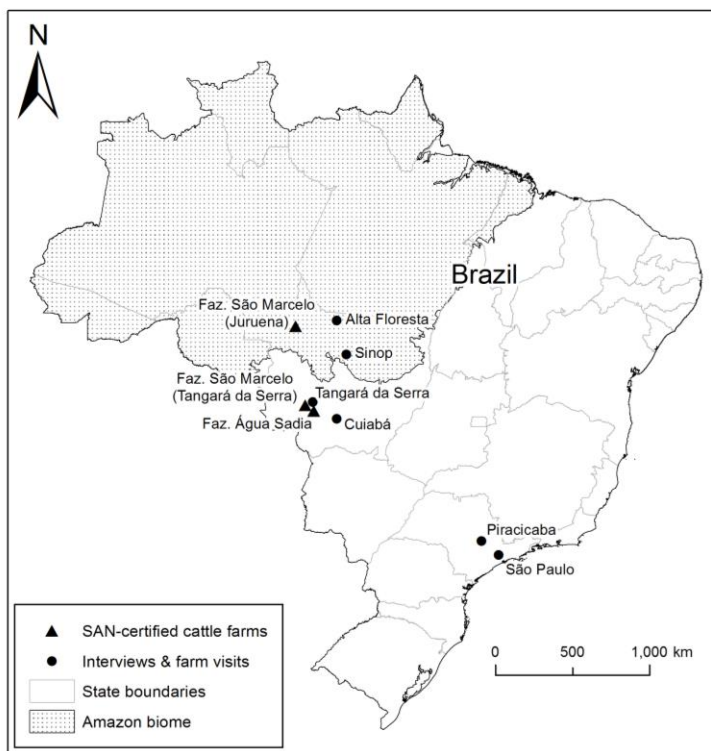
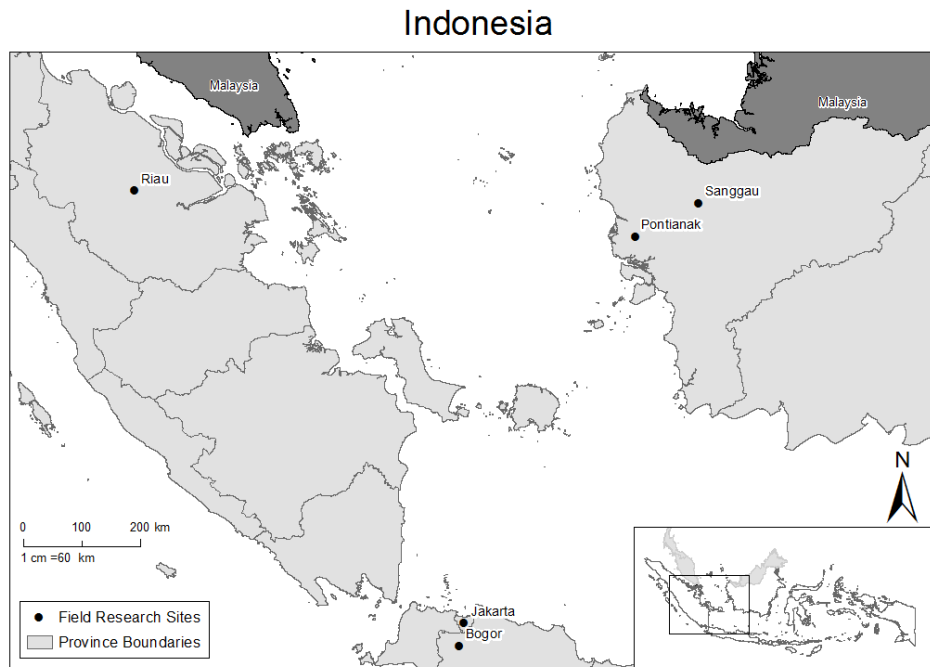


Figure 2. Location of field research sites and interviews conducted in (a) Indonesia and (b) Brazil (adapted from Alves-Pinto et al. 2013).

2.1 The Roundtable on Sustainable Palm Oil certification program

Concerns about severe sustainability issues associated with palm oil gave rise to a global multi-stakeholder governance initiative, the Roundtable on Sustainable Palm Oil (RSPO). The World Wildlife Fund (WWF) and Unilever initiated a first conference in 2003 to address these concerns (RSPO, 2012). This conference brought together 200 participants from 16 countries and, in 2004, the RSPO was officially established. The RSPO's mission is to “transform markets to make sustainable palm oil the norm” (RSPO, 2012). In 2007, the *RSPO certification program* was launched, leveraging the existing governance structure and membership of the RSPO (RSPO, 2012). The certification program establishes a set of standards—a set of eight principles and 39 criteria (P&C)—for producing, processing, distributing, and selling sustainable palm oil. Other core activities of the program include verification and enforcement of participant compliance. To date, the RSPO certification program has certified 50 producers and accounts for 15% of palm oil production globally (RSPO, 2012). The RSPO certification program features four chain-of-custody levels for certified sustainable palm oil (CSPO). *Identity preserved* CSPO is segregated and each certified unit is traceable from farm to retailer. *Segregated* CSPO remains separate from non-certified oil, but segregated batches are blended together. *Mass balance* certified oil is blended with regular palm oil, but CSPO quantities are tracked in order to match claim volumes. The *book and claim* system has CSPO blended with non-CSPO batches. Producers receive certificates for the volume of CSPO they produced, and those certificates are sellable to other supply-chain actors in order to match claimed volumes (RSPO, 2011).

2.2 The Sustainable Agriculture Network certification program for cattle

The Sustainable Agriculture Network (SAN) is a coalition of independent non-profit conservation organizations formed in 2001 whose aim is to establish “sustainable agricultural standards” and promote the social and environmental sustainability of agricultural activities by developing high global standards and criteria for agricultural commodities such as coffee, cocoa, banana, fruits, chili, flowers, palm oil, and tea (Sustainable Agriculture Network, 2010). The *SAN Sustainable Cattle Production System Standard* (hereafter, *SAN cattle certification program*) was launched in 2010, following three rounds of stakeholder consultation. The SAN cattle certification program combines the *Sustainable Agriculture Standard* (10 principles and 99 criteria, used for all SAN agricultural commodities; created in 2008) and the *Sustainable Cattle Production System Standard* (an additional 5 principles and 36 criteria, specifically relevant to

cattle; created in 2010) (Sustainable Agriculture Network, 2010). The goal of the SAN cattle certification program is to elevate the environmental and social sustainability of the cattle supply chain by providing supply-chain actors with a set of standards that reflect a high-level of sustainable practices. The standards address environmental and social responsibility including topics such as cattle management, pasture and soil management, animal welfare and carbon footprint reduction. The standards require strict, annual audits and strive for continuous improvement. To date, three farms and one slaughterhouse have been certified under the SAN cattle certification program (Sustainable Agriculture Network, 2010).

3. RESULTS

We categorize the design elements and functions of voluntary certification programs into four core activities, based on the literature. These four core activities are: standards setting, adoption, implementation, and monitoring and enforcement. Our categories reflect a distillation of the literature describing the structure and features of a wide variety of private standards and voluntary certification programs (see Gulbrandsen, 2005; Henson & Humphrey, 2010; Raynolds et al., 2007; Scarlat & Dallemand, 2011; von Geibler, 2013). The design and structure of these core activities provide program designers with opportunities to strike a balance between encouraging participation and maintaining the rigor of the standards. Responses from our interviews call attention to the ways in which program design choices vary across voluntary certification programs and how those variations have the potential to influence whether producers are able to gain monetary and non-monetary values from participating in the program. We also recognize the importance of external factors and their influence on whether producers decide to participate in voluntary certification programs. External factors may create disincentives for producers as they face additional obstacles to realizing monetary and non-monetary values (incentives and enticements) from their participation in the program. The challenges that producers face in their efforts to comply with standards highlights a process of participant maturation that includes capacity building and a period of trial and error implementing better practices and meeting standards before they fully contribute to the additionality of a program.

3.1 Standard setting

Standard setting refers to the development of goals, protocols, and indicators for guiding participants toward enhanced sustainability in their practices. Standards are used to connect the actions of individual participants to the aggregate contributions of the voluntary certification program as a whole to sector-wide sustainability.

3.1.1 Governance

Certification programs establish rules about which actors are empowered to direct the agenda of the program and set standards through their governance structures. In many cases, program designers must consider how existing external market relationships, such as those between retailers and producers, influence the internal dynamics of the program. The ability of producers to set standards is likely to influence participation rates and the rigor of the standards. In turn, the governance structure of programs influences their legitimacy and the program's additionality as perceived by these different stakeholders.

The RSPO certification program is administered by the RSPO. Members of the RSPO fall into seven sectors of stakeholders: oil palm growers, palm oil processors or traders, consumer goods manufacturers, retailers, financial institutions, environmental NGOs, and social NGOs, though not all membership sectors are represented proportionately (RSPO, 2012). Members have voting rights in the General Assembly (RSPO, 2012). A subset of the members is tasked by the Executive Board to design the P&C and then all members can vote to approve the P&C.

The organizational structure for the SAN certification program for cattle is similar in that it has members that make up a General Assembly, an executive committee, and a secretariat. Unlike the RSPO, the SAN is not organized as a roundtable but rather as a consortium of civil society organizations. The International Standards Committee (ISC) provides input into determination for the SAN standards, including those for the SAN cattle certification program. The ISC is comprised of 12 elected independent members who are international experts and represent various stakeholder categories: academic, NGO, producer, technical, government, and industry (Sustainable Agriculture Network, 2010). Local communities and indigenous groups have not been included in the standards setting process to date.

The two certification programs take differing approaches to determining who can influence the program's direction. Although a diverse group of stakeholders are represented in RSPO deliberations and decision-making, environmental and social NGOs have been critical that

the program standards reflect the disproportionate influence of a minority of market-sector stakeholder groups and are consequently not as rigorous as they ought to be. The result is RSPO approval of standards that are in close alignment with what industry actors believe is realistic in terms of cost and practicality. However, this approach limits progress towards more rigorous environmental and social standards, such as curbing greenhouse gas (GHG) emissions. In contrast, the SAN cattle program's standards are more strongly influenced by a consortium of conservation NGOs. This has led to a standards setting process with a greater emphasis on meaningful environmental and social standards. As a result, the program is widely accepted by civil society stakeholders as rigorous, but participation has been suppressed since supply-chain actors believe that the SAN cattle program does not reflect realistic capabilities, interests, and priorities of many supply chain players, particularly small and medium-sized producers.

3.1.2 Sustainability standards

The P&C contain the details of a voluntary certification program's standards, and are based on an overall set of goals for what the program is designed to accomplish in terms of influencing sustainability in the sector. In general, producers favor standards that are less rigorous. Large producers have complex, expansive operations that become more difficult to certify if the standards are very rigorous, while small producers tend to lack the resources, capacity, and know-how to implement very rigorous standards. Meanwhile, standards that are perceived as weak lack the support of civil society groups and consumers, calling into question the value of participating in the certification program for would-be participants. Therefore, the P&C reflect a careful balance or trade-off between setting requirements at a level of resource commitment that maintains a positive return on investment while raising standards to a level considered credible by external evaluators.

Palm oil producers must follow eight P&C that address social, environmental, and economic sustainability concerns in order to achieve RSPO certification for each plantation. Producers also must commit to transparency and be in compliance with applicable local and national laws and regulations. Social sustainability commitments include requirements to compensate local communities when companies acquire their land for development. The principle of free, prior and informed consent (FPIC) governs such interactions between producers and local communities and indigenous groups. Environmental sustainability

commitments include requirements to adopt better practices to maintain soil quality, erosion control, surface and ground water, and pest management. Producers are expected to mitigate negative impacts on biodiversity by protecting lands identified as High Conservation Value (HCV), in part by completing an environmental impact statement (an AMDAL, in Indonesia). The P&C also require producers to improve energy efficiency, use renewable energy, and reduce pollution, including the emission of greenhouse gases. To ensure long-term financial sustainability, producers must develop a business plan with a minimum three-year outlook. Each criterion identifies indicators, 45% of which are defined as compulsory. Failure to comply with compulsory indicators results in major nonconformities, which prohibit the issuance of a certificate (RSPO, 2007). In cases where a producer owns or operates many plantations or subsidiary companies, a single plantation or subsidiary can be certified as having met the P&C, as verified by an auditor, even if other plantations have not yet met the standard. Subsidiary companies thus frequently achieve certification at different times, depending on how close they are to the standards (RSPO, 2013).

The standards of the SAN cattle certification program address a wide range of sustainable farm management issues such as the environmental management system, wildlife protection, animal welfare, ecosystem and water conservation, occupational health and safety, soil, waste, range, and pasture management, and fair treatment of workers. In Brazil, the SAN cattle certification program is more stringent in most categories than national laws. For example, the program requires producers goes beyond the national Forest Code (law no. 4.771) that governs deforestation forest conservation. Additional SAN standards include the *Chain Of Custody Standard*, *Group Certification Standard* and the *Climate Module*, to certify non-producer actors such as slaughterhouses, to encourage community or co-op based certification and empower smallholder farmers, and to reduce greenhouse gas emissions, respectively (Sustainable Agriculture Network, 2011). To become certified, a farm must comply with at least 50% of the criteria of each principle and 80% of the total criteria. Only when all producers and processors throughout the chain are certified are they authorized to use the Rainforest Alliance Certified™ seal on their products.

The P&C of the two certification programs reflect different levels of feasibility to producers. The P&C of the RSPO certification are developed with the input of all members of

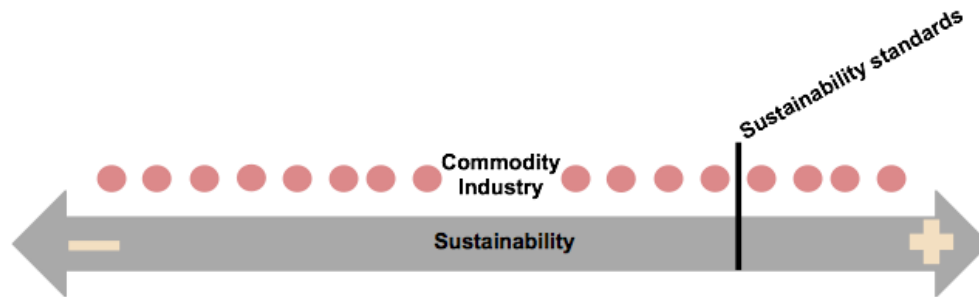
the roundtable. This leads to standards that are more widely accepted by producers, but that are often challenged by social and environmental NGOs who do not believe there are enough changes to bring about additionality. On the other hand, the P&C of the SAN certification program for cattle are rigorous and would likely change the practices of producers towards greater sustainability, but are perceived by producers as difficult to achieve.

3.2 Adoption

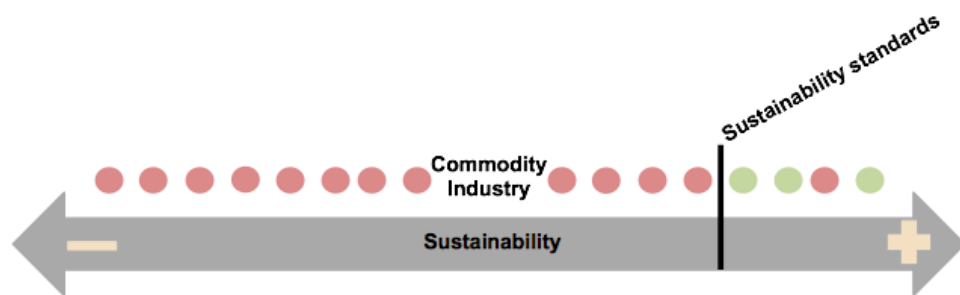
The adoption of a program by producers is critical to the program's success. Program administrators make conscious decisions about which types of participant to target and engage with and when, with respect to the rollout of the program. For instance, the achievement of certification by producers who were previously further from meeting the standards, such as small- and medium scale producers, generates more additionality. But the journey of such a producer towards compliance is often complex and involves financial constraints, as certification can be expensive. The recruitment efforts of program designers must align with the range of potential motivations held by producers who expect financial or strategic advantages from their participation.

The choices of program designers about which prospective participants to target affect the rate at which programs achieve scale and the types of sustainability standards they are able to implement. Recruitment strategies vary for different participant classes and over time as the program's mission evolves and responds to changing external dynamics in the broader market. Large producers are targeted early in recruitment efforts because their production processes are often already aligned closely with the best management practices required by certification programs (Bernstein & Cashore, 2007; Cashore, 2004; Taylor, 2005; Fig. 3). Large producers also have the financial resources to implement new practices. Meanwhile, securing the participation of small producers has the advantage of elevating the sustainability of a producer class that has more room for improvement, resulting in greater additionality of sustainability above baseline conditions compared to when large, progressive producers participate. Also, increasing the diversity of participant types to include more small- and mid-size participants minimizes the risk that a program's agenda is undermined by the priorities or exit of a few large participants (Taylor, 2005).

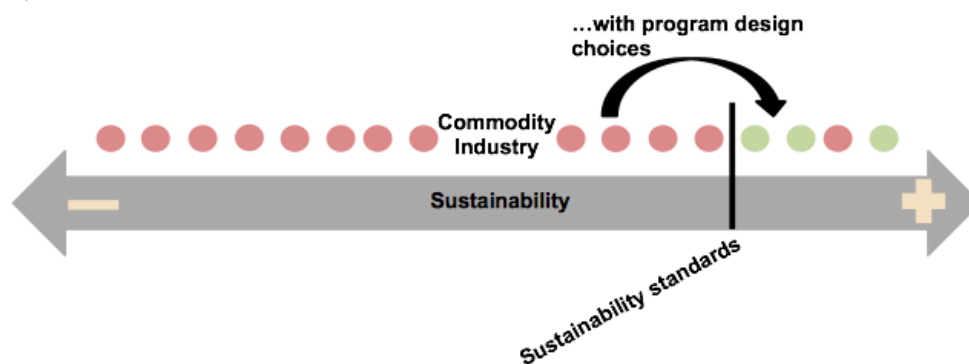
a)



b)



c)



● = Non-certified producers
● = Certified producers

Figure 3. The logic and progression of voluntary certification programs. a) Setting standards; b) Some producers who were already meeting the level of sustainability identified by the standards become certified; c) Inclusion of design choices (e.g. governance structure) create additional benefits that incentivize other producers to become certified.

There are other multiple compelling reasons that motivate participation in certification programs, in addition to monetary incentives. For example, programs offer a total management

system for operating profitable and efficient plantations. Alternatively, companies operating internationally may use certification to standardize and coordinate complex, geographically diverse operations. More progressive producers embrace certification because it aligns with their existing core sustainability values that may not otherwise have been recognized by external stakeholders. Achieving certification also helps to highlight “sustainability hotspots”, or areas of concern within the industry so that producers can efficiently expend the resources they commit to sustainability. Finally, potential members are attracted to the program because it creates opportunities to access export markets, such as in the United States and Europe, and because the program’s best practices are increasingly demanded by financing institutions as a precondition for lending.

The SAN certification program for cattle initially strategically targeted cattle farms and slaughterhouses with existing commitments to sustainability. The Brazilian NGO partner of the SAN, *Imaflora*, reached out early in the development of the program to Fazendas São Marcelo, one of the most socially and environmentally progressive farms in Brazil. Fazendas São Marcelo joined the program because the management and sustainability practices enabled them to reduce their operating cost and business risks, and the certification could yield a slightly higher sale price for their product. Moreover, the owner of Fazendas São Marcelo was known as being very progressive and thus saw certification as a strategy for getting ahead in the market. Prior to achieving the SAN certification, Fazendas São Marcelo had previously been certified for organic production, and had adopted a corporate policy committed to no deforestation; both factors were helpful to the company as it sought SAN certification. For the certified slaughterhouse *Marfrig*, the cost and infrastructure needed to become SAN certified was relatively low, and SAN cattle certification positioned the company to enter premium beef markets, both domestically and internationally. *Imaflora* continues to pursue other large farms as participants in the SAN cattle certification program, but progress is slow – in part because producers are unwilling to expend resources to achieve the program’s rigorous requirements without a strong signal of consumer demand for certified sustainable beef products.

If large producers already have best practices in place prior to certification, their costs of meeting certification requirements are relatively low. In both the RSPO and SAN case, motivation is greatest for large producers who have the resources to adopt a comprehensive

sustainability management strategy and whose activities are also the most visible to civil society groups. Large producers are better able to overcome technical barriers to implementation because of the additional financial resources they can commit to the certification process. Meanwhile, capacity constraints prevent producers for whom the value-added of certification is highest from adopting sustainability standards (Fig. 3).

3.3 Implementation

The bright-line for achieving certification varies depending on the rigor of the P&C and the rules of the program pertaining to implementation of the standard. Some programs require full implementation, including all farms or entities owned by the parent company, before a certificate is awarded. This requirement increases the amount of time necessary to reach full compliance, relative to programs that recognize each entity as they become certified and then confer full certification after all subsidiaries have been certified. Implementation requirements and the time-scale for producers to achieve certification are likely to affect program participation rates.

Voluntary certification programs take different approaches to awarding certification to their participants. The RSPO certification program features a (quasi-official) progression, with membership status in the roundtable acting as an intermediate milestone before actors achieve full certification. Membership status confers many of the privileges of full certification, including affiliation with the program and participation (e.g. voting rights) in the governance and administration of the program. The SAN cattle certification program awards certification after the rancher has fulfilled a minimum requirement of P&C for every unit of production under its management (Sustainable Agriculture Network, 2010). It is easier to distinguish sustainable from non-sustainable products in programs with no intermediate horizons, but such programs also delay the moment at which producers can redeem value from their efforts. Delaying the redemption of value may have negative consequences for the participation of producers who would be motivated by near term benefits.

Oil palm producers can become members of the RSPO roundtable before any of their plantations become fully certified. Producers who become members have to set time-bound plans to be certified by an RSPO-approved third-party certification body (CB) (RSPO, 2012). The time-bound plan is a pledge that demonstrates a producer's intention to certify all of its

plantations before a specified year. Even if the majority of the subsidiaries are able to achieve certification with relative ease, one or two with outstanding land conflicts or particularly problematic environmental practices can delay the entire certification process. In such cases, the parent company must revise its time-bound plan, and the CB must approve all changes. This approach can benefit participants since members can, for example, vote on P&C revisions before they achieve full certification.

The SAN cattle program requires full certification before the Rainforest Alliance Certified™ seal can be placed on any product, and SAN does not have a governance entity analogue to the RSPO roundtable within which producers can participate. In addition to an individual certification, group certification is also available. Group certification enables a number of farms (whether under the same owner or same community) to seek certification collectively. Group certification thus lowers the cost per production unit, but also poses risks to the group since if one entity is not compliant, all entities will be considered non-compliant. The JD group, which operates Fazendas São Marcelo and other farms, has received group certification.

While the RSPO certification program allows individual subsidiaries to be certified as a producer works to gain certification for all of its subsidiaries, the SAN certification program for cattle does not have this provision. This restriction can lessen willingness of new producers to join the SAN cattle certification program, while leading conservation NGOs to question the RSPO program's credibility, because participants can achieve certification before all of their units of production are in compliance with standards.

3.4 Monitoring and Enforcement

Certification programs are able to successfully translate goals into outcomes by developing auditing procedures to track participant progress towards the fulfillment of their sustainability commitments. Conformity assessment also provides data on whether producers are faithfully executing the principles behind the standards. This is critical to the success of programs achieving additionality in the sector.

The auditing procedures for both case-study programs are similar, in that they include third party assessors. The governing body accredits these independent assessors and only accredited CBs can conduct audits. Maintaining assessor independence lends credibility to the

programs, although it can also lead to challenges in standardizing the implementation of the P&C. The credibility of audits is central to the legitimacy and credibility of certification programs. However, while strict, quantifiable assessment methods, using templates and checklists, provide accurate and precise information about participant efforts, they also create opportunities for producers to limit their fulfillment of standards to *pro forma* treatments of the P&C. This can be problematic, for instance, when dealing with local communities, when a more in-depth and considered engagement is more appropriate.

Enforcement is fundamental to the success of voluntary certification programs because it distinguishes sustainable products from their non-sustainable counterparts. Voluntary certification programs 're-qualify' the value of products based on the sustainability of production processes, as opposed to differences in their innate qualities, such as taste, size, or hardness (Buller & Morris, 2004), but sustainability practices do not register very obviously in the end product. Consumer confidence in the declared sustainability of a producer or product is thus dependent on verification mechanisms to ensure strict compliance (Guthman, 2007).

In the RSPO certification scheme, CBs are responsible for enforcement. They assess whether or not participants are compliant, then report their findings and any major nonconformities to the roundtable. The RSPO's complaint system is available to both internal and external stakeholders, to report participant nonconformities (RSPO, 2012). Failure to address minor nonconformities can result in the RSPO elevating the issue to a major nonconformity, and if not resolved in a timely manner may lead to suspension and permit revocation (RSPO, 2007). However, civil society groups have criticized the RSPO's enforcement mechanism for a lack of transparency, delays in initiating investigations, and weak consequences for noncompliant participants (Greenpeace, 2013). Rather than restrict themselves to the RSPO system, however, many of these groups have chosen to pursue redress in other forms, such as consumer awareness campaigns, boycotts, and direct engagement with producers.

In the SAN cattle certification program, independent CBs track the sustainability performance of producers via a cycle of one full audit followed by two annual less-exhaustive audits. After three years, the producer must undergo a full audit again. The CBs encourage producers to strive for continuous improvement with respect to the number of criteria achieved. Each country's CB either conducts the audit itself or contracts with an authorized third party to

complete the audit. The CB does not provide recommendations or technical assistance about the changes needed for producers to meet the criteria, but can clarify the criteria and whether they have been met.

The main challenge related to enforcement is that strict rulings often are at odds with the interest of the program to achieve scale by maintaining and expanding the pool of participants. Programs are loath to revoke certification at the risk of diminishing an already limited or fragile participant buy-in, but must also maintain their commitments to enforcement to the extent necessary in order to satisfy external stakeholders as to their credibility.

3.5 Interaction with external factors

Voluntary certification programs are not implemented in a vacuum: their implementation and the potential outcomes are invariably interacting with external factors such as other local- and national-level interventions (Alves-Pinto et al., 2013). External factors affect participation and the additionality of the program, but are beyond the direct influence of certification program design. External interventions may be based on combinations of policies, incentives, and information (Newton et al., 2013). Institutions and policies include the tools utilized by governments to govern land use, such as Indonesia's moratorium on deforestation (Wich et al., 2011) and Brazil's Forest Code (Tollefson, 2012). Incentives include competing standards, which may divide the attention of participants and may confuse consumers. While these external interventions are outside the control of a specific program, design choices can help to manage their relationship to external factors.

A key feature of voluntary certification programs are their ability to span political jurisdictions and to shape production practices around common best practices, as opposed to varying political circumstances. Most certification programs, including both the RSPO certification program and the SAN cattle certification program, stipulate compliance with all national laws as a minimum criterion for participation. Whether the standards of a certification program conflict with national laws or are difficult to operationalize within the institutional context of the producing nation has a strong influence on participation and affects whether producers are able to implement standards as they were intended.

A national interpretation and reconciliation process exists in the RSPO certification program, to smooth potential conflicts between national laws and the standards. The national

interpretation states which indicators should be used by companies and CBs as baselines for compliance with the P&C. However, the interpretation is far from comprehensive, and this has resulted in a number of stakeholders in Indonesia's palm oil industry believing that the RSPO is incompatible with national law and the country's governmental structures. Principle 2 of the RSPO program's P&C instruct companies to comply with the national law when it is in direct conflict with a P&C, but there is a concern that bending to national laws undermines the ability of a certification programs to standardize behavior across political jurisdictions (RSPO, 2008). For example, it is the expectation of the Indonesian government that land designated for agricultural production is used as such, and Indonesian law permits the government to reclaim land designated for production but that is lying fallow; this directly conflicts with the RSPO certification program's requirement to protect HCV forest within agricultural areas. Producers consequently fear that establishing HCV set-asides will lead to revocation of their permits by the Indonesian government. While the RSPO secretariat and a working group seek resolution to this conflict, there is a seeming incompatibility between Indonesian law and the standards of the voluntary certification program. However, civil society groups have questioned the actual degree of conflict between the HCV model and Indonesian law, arguing that producers have established a false dichotomy in order to avoid honoring the results of a HCV assessment. While recognizing that there are in fact limitations to setting aside HCV land due to government land use policies, these groups maintain that incorporating HCV protections and other conservation efforts within existing estates is possible.

Another potential conflict with national laws in Indonesia is the interaction of the RSPO certification program with a new government mandated scheme, the Indonesian Sustainable Palm Oil (ISPO) standard. ISPO is a national legal intervention that was implemented in 2011 and is a requirement for all palm oil growers (Gillespie & Harjanthi, 2012). The Indonesian government has stated that all Indonesian plantations will need to be ISPO certified by 2014 (Gillespie & Harjanthi, 2012). Many NGOs are concerned that the ISPO will compete with the RSPO and gain validation in the eyes of retailers and consumers. Producers, however, dismiss this concern, suggesting that the two schemes have significant overlap and are even complimentary. One grower stated that the benefit of ISPO was that it covered specific protocols in a way that the RSPO was too general to address, such as with regards to worker safety protocols.

The SAN cattle program does not have a national interpretation and reconciliation process to adapt the program to the national laws of individual countries. Instead, SAN explicitly requires that producers comply with national laws (Sustainable Agricultural Network, 2010). This creates two challenges. First, it is difficult for SAN to ensure that there are no conflict requirements between the national laws of individual countries and SAN's P&C. Second, although to date there have been no conflicts with Brazilian laws, continual changes to national laws, such as Brazil's Forest Code, creates potential uncertainties for producers. The Forest Code requires a set percentage (e.g. 80% in Amazonia; 50% in the *cerrado* biome) of each rural property to remain forested, and recent revisions of the Forest Code mean that producers may have to change their practices to conform. Some producers have elected not to engage in the SAN cattle certification program at least until these uncertainties are resolved.

Other private-sector initiatives that label more sustainably produced beef products already exist in Brazil, and may effectively compete with the SAN cattle certification program. The slaughterhouse Marfrig operates the *Marfrig Club* program, which works with some of the more progressive farmers to produce export-quality beef products. And the retailer Carrefour operates its *Garantia de Origem* (GO) program. The rigor of the P&C of the SAN cattle program exceeds that of both of these programs, but the presence of multiple labels in the market place may mean that the additional benefits of certification to producers are reduced, and that consumers are confused by multiple similar labels.

For both case-study programs, multiple interventions that influence the same commodity can have a negative impact on the certification program by undermining the integrity of the entire market for sustainable versions of the commodity (Taylor, 2005). Several sustainability schemes for the same commodity product may increase awareness, but at the expense of consumer confidence in any one of the programs (Muradian & Pelupessy, 2005). Voluntary certification programs struggle to maintain a quasi-monopoly over the sustainability niche space in the broader market for a commodity, as evidenced by the competition from ISPO in Indonesia and the presence of other label initiatives such as *GO* and *Marfrig Club* in Brazil. The result is that consumer income and civil society group resources may be directed to a broader range of sustainability interventions that each prescribe a different way for producers to achieve sustainability, thus diluting the accumulation of price premiums, suppressing participation, and

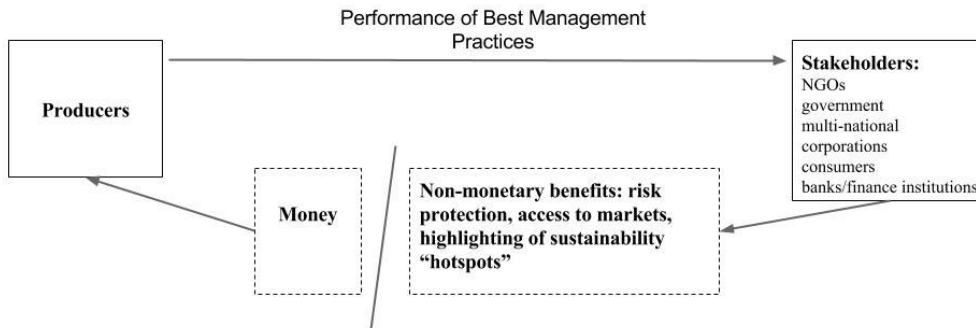
comprising the ability for any one intervention to achieve scale (Guthman, 2007; Mutersbaugh, 2005). On the other hand, external factors, such as Brazil's Forest Code and Indonesia's ISPO, have requirements that overlap with the certification programs and lower the barriers to entry for potential participants (Alves-Pinto et al., 2013).

4. DISCUSSION

Voluntary certification programs seek to maintain the rigor of their sustainability standards while securing participation from commodity producers; these two factors drive the additionality of the program—the contributions to sustainability versus a business-as-usual scenario in which the program did not exist. Design choices about the core activities of voluntary certification programs result in trade-offs between participation and rigor of the standards are common in most voluntary certification programs. The prospect of a price premium is often the primary motivation for producers to become certified (Henson & Reardon, 2005), but premiums are not available in many voluntary certification programs due to a lack of wide demand for certified sustainable products (Klooster, 2006). Non-monetary value is also exchanged between producers and external stakeholders— at the most basic level, a demonstrated commitment to the standards of the program is exchanged for the approval of civil society groups and consumers, which in turn secures such benefits as market access and risk protection. In this context, voluntary certification programs act as a broker of monetary and non-monetary value between the two groups (Fig. 4), with the design choices about the core activities of the program setting the terms of that brokered transaction.

a)

Scenario 1: "Market" transactions



b)

Scenario 2: Transactions when Voluntary Certification Program acts as "broker".

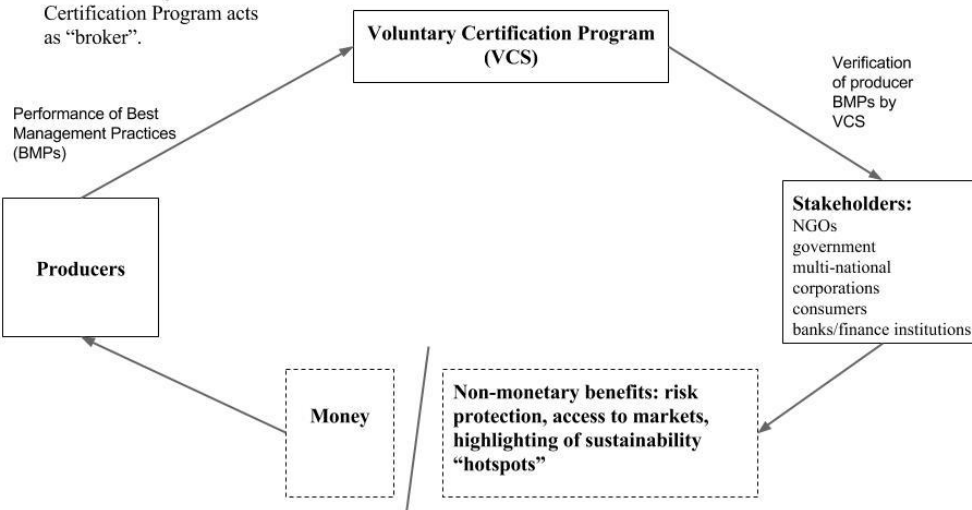


Figure 4. Sustainability "transactions" between producers who must implement best practices and external stakeholders who demand incorporation of best practices into production processes. In a market-based scenario (a), there are a number of inefficiencies inherent to the transaction, while for transactions in which the voluntary certification program functions as a broker (b) the exchange of monetary and non-monetary value is measured against a common reference (the standards) and with verification that the producer is in compliance with those standards.

The activities of program as well as the way they are structured may also generate value for producers. For instance, the RSPO certification program has created an intermediate stage in the form of membership that allows producers to participate in the program before they are fully certified. This means that benefits to producers begin to accrue at an earlier stage as they are recognized for their commitments prior to full compliance. In the case of the SAN cattle certification program, producers are asked to fully comply with the rigorous standards before certification is awarded. While design choices in relation to the core activities are meant to increase additionality, program developers rarely consider the two facets of additionality in tandem. That the trade-off between increased rates of participation and increased rigor of the standards is a product of deliberate design choices not explicitly acknowledged by most stakeholders. Meaningful gains in additionality for these programs are most likely to result when these two facets of additionality are considered in conjunction with one another so that there is an increase in value to producers that accompanies increases in the rigor of standards. At the core of this complex dynamic between boosting participation (achieving scale) and credibility (rigor of standards) are issues of how certification programs understand, create (or fail to create), and appraise the value of participant efforts.

4.1 A value framework for design

Sustainability practices increase the value of commodity products, but that extra value is not clearly visible to consumers. The verification components of voluntary certification (conformity assessment and enforcement) are therefore critical in distinguishing sustainable from non-sustainable producers and their products (Buller & Morris, 2004; Prakash & Potoski, 2012). At minimum, certification programs assign value only to efforts that fulfill standards requirements. The assumption is that the P&C reflect objective standards that are backed either by rigorous research or the consensus of stakeholders about how producers and other supply-chain actors ought to achieve sustainability. The value is intrinsic to the best practices that participants implement. This set of assumptions is reflected in the structure and design choices of the SAN cattle certification where certification is only awarded once the producer meets the standards requirements. By awarding certification to compliant producers, the program facilitates the ability of external stakeholders to differentiate sustainable versions of commodity products and converts abstract sustainability value latent in best practices into other, more liquid forms of value.

The value that producers receive from voluntary certification programs certifying (verifying) their commitments to sustainability comes only after the standards of the program are fulfilled. Meeting the standards is often a lengthy and complex process that requires significant capital outlay before any return on investment is received by producers. The risks and uncertainties inherent in the outlay of capital for best management practices can discourage producer participation. Certification programs may confront this risk by surpassing the limited role of converting value from one form to another; indeed, programs may actively participate in the creation of value. Specifically, certification programs such as the RSPO certification program use their verification and enforcement mechanisms to break the value of full certification into smaller pieces and to create value for producers from the *process* of becoming certified itself. Verification can expand the range of value-added to include not only efforts that lead directly to the achievement of the sustainability goals of the program, but also to intermediate stages of progress, such as monitoring and training as well as other forms of progress related to capacity building and the commitment of the producer's resources towards fulfilling the standards. In breaking down and awarding value at intermediate stages, programs can create value and more incentives for producers to join, especially in the absence of a price premium.

4.1.1 Exchanges of non-monetary value

Producers want to convert the value of their participation into economic value that improves their bottom line. Voluntary certification programs such as the SAN cattle certification program set and verify fulfillment of standards on the assumption that there is an interest among stakeholders for certified sustainable commodity products. By achieving certification, producers who participate in voluntary certification programs that are more minimally structured, may expect to receive a range of non-monetary values in addition to a price premium. Forms of non-monetary value for producer participation can include a full-fledged sustainability management system, opportunities for product marketing, access to finance, risk management, and the use of an eco-label to distinguish their products from non-sustainable counterparts (Overdevest & Rickenbach, 2006; Tallontire, 2007; van Kooten et al., 2005). Indeed, programs can attract producers who are seeking brand protection and new methods of intensifying their operations to increase yields.

Voluntary certification programs may also choose to involve producers in a broader range of activities beyond accomplishing the best practices that meet the sustainability standards of the program. Administrators of voluntary certification programs have opportunities to design and structure those activities in a way that will entice producers to participate in the program. The RSPO certification program draws heavily on the roundtable, using its membership to divide the value of certification into smaller pieces that provide near-term benefits to participants. Membership in the roundtable is considered a gateway to certification. It gives participants a voice in governance and other deliberations, and many external stakeholders recognize membership as akin, or at least related generally to certification, albeit, inaccurately. The RSPO certification program also permits companies to become certified even while some of their estates and mills are still awaiting official recognition from the CB. In these cases, companies are required to develop and seek approval for a time-bound plan to achieve full certification of all their operations. The intermediate opportunities to capture value from best practices and administrative requirements can have a positive impact for producers, especially in the absence of a price premium, when a high cost to benefit ratio for achieving certification makes them otherwise hesitant to participate.

4.1.2 Trajectory of producer sustainability maturation in the context of certification

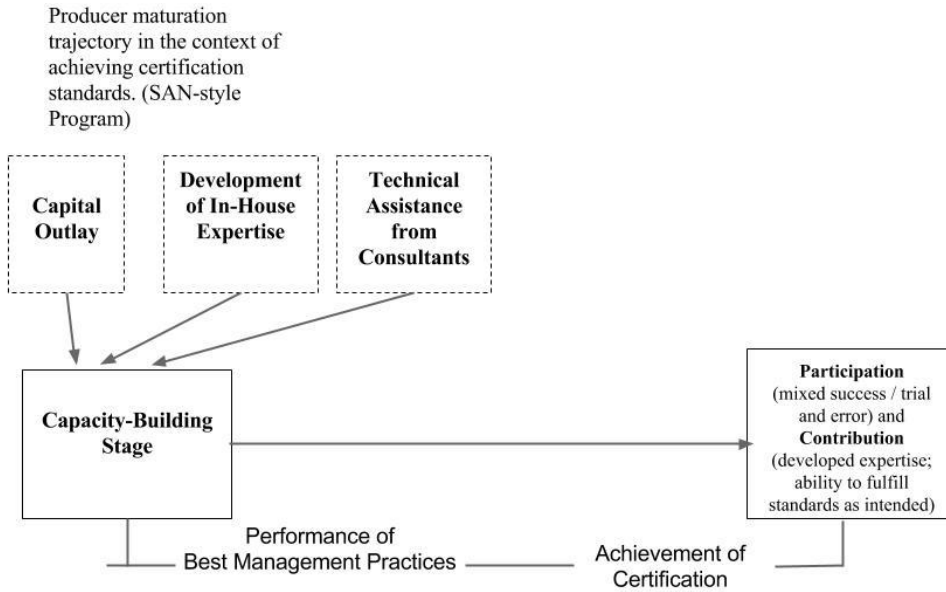
Producers in the agricultural commodity sector follow a common trajectory towards compliance with a voluntary certification program. Participants begin by building capacity and seeking technical assistance from consultants, civil society groups, and researchers. In a second phase, producers are general participants: they make efforts to achieve certification, but not every action leads directly to the achievement of the sustainability goals that are the focus of the program overall. Only in a climax phase do participants make the advancements in sustainability that contributes to the additionality of a voluntary certification program (Fig 5).

This progression from capacity building, to participation, to contributing to the program's additionality is common and inherent for most commodity producers who attempt to achieve sustainability certification. The degree to which the progression is acknowledged explicitly varies depending on the voluntary certification program. Under a more straightforward program, such as the SAN cattle certification program, the progress by would-be participants to fulfill best management practices and meet standards occurs essentially in the dark. That is, the span of time

and activities under which producers outlay capital, build capacity, and seek technical assistance occurs without formal recognition. If an assessor finds that a producer's efforts do not meet the requirements of the P&C, even if only for one of its production units (in the 'participation' phase of the sustainability maturation trajectory), the entire certification can be delayed.

Under a more complex, RSPO-type certification program, the program's coupling with the industry roundtable is important to its potential to attract participants. Indeed, the progression from member to certified company in the RSPO certification tracks the general progression of participants from capacity building, to participation, to contributing to the program's additionality. Producer-members can interact with civil society groups in less adversarial settings, giving them the opportunity to learn about and strategically position themselves in response to known sustainability "hotspots". Since membership in the roundtable is often confused with the achievement of certification, producers may use the vagueness of membership status to quell pressures from their critics. The mechanisms for enforcement and airing grievances against members and certified producers is handled directly by the RSPO, which may provide producers with the leniency they believe is appropriate while in the early stages prior to making a contribution to additionality. In recognition of the complexities of certifying a diverse set of operational units across multiple jurisdictions, producers are also permitted to establish a time-bound plan for when they will achieve full certification. Indeed, the ability for producers in the 'capacity building' and 'participation' phases to obtain value for their efforts at intermediate points in the progress towards certification depends on the shelter of general membership in the RSPO (Fig. 5).

a)



b)

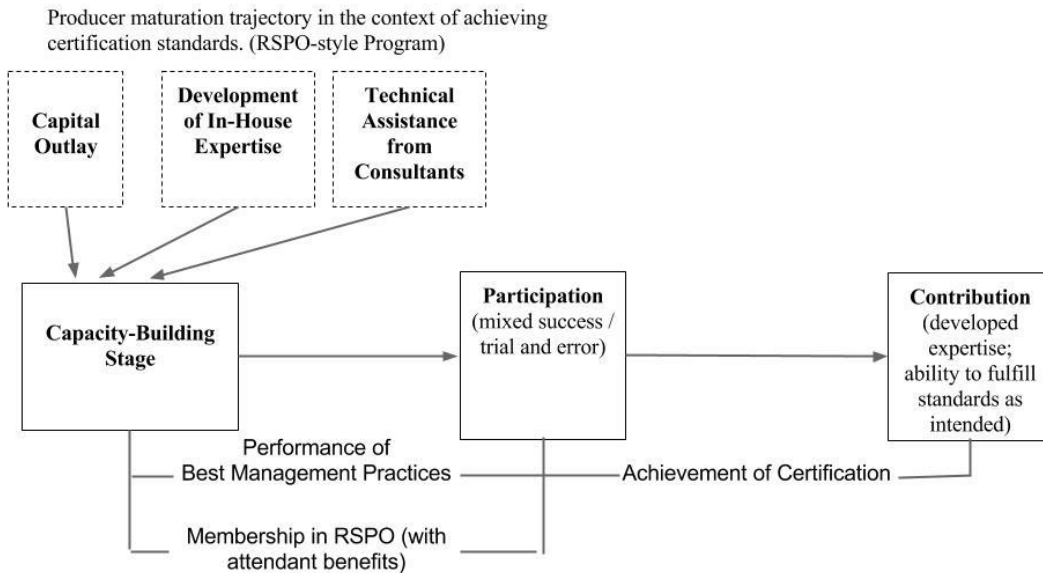


Figure 5. a) Producer maturation trajectory where an intermediate stage exists between capacity building (assistance) and participation in the context of achieving certification standards (RSPO-style program) b) Producer maturation trajectory where a producer moves from capacity building directly to participation and contribution in the context of achieving certification standards (SAN-style program).

The RSPO certification program has the potential to attract participants by offering additional, non-monetary value. Multiple tactics for marketing the program may attract additional participants, but will also influence the kinds of participants recruited to the program as well as their attitudes about the purpose of the program and their role in it. For example, participants who use the RSPO as a total management system may lose sight of the core sustainability mission to reduce deforestation. Their continued buy-in for continuous improvement may be difficult to secure if it is divergent from their original motivation for joining the program. Meanwhile, because the SAN program is marketed solely as a sustainability standard, it may attract a more limited spectrum of potential participants, but there may be less confusion and a clearer vision of its purpose, with a common rationale on the part of producers for why they chose to participate. The differences between the SAN cattle certification program and RSPO certification program may reflect their core constituencies: civil society actors drive SAN cattle certification, while RSPO certification is considered an industry-led institution.

4.1.3 Program credibility

Efforts to entice producers to participate in voluntary certification programs must be balanced with the credibility and legitimacy of the program. The RSPO certification program does require all participants to ultimately reach an endpoint of full certification for all of their production units, but the additional compliance targets can distract from the fact that a number of producers are not at present able to implement all of the standards of the program. Breaking down the value of certification into smaller pieces and making those pieces redeemable earlier in the certification process is problematic for external stakeholders. Sustainability-conscious consumers, financial institutions, and civil society groups have argued that the pairing of the RSPO certification with its roundtable leads to confusion over the actual progress of producers working to achieve standards. For the SAN certification for cattle, producer participation is equivalent to certification and means full compliance with the standards required by the program. While the additional intermediate stage can create value to attract additional producer participation, the delay in full certification can lead to a delay of additionality. Delays in the accrual of additionality, or the perception that the standards are not able to render additionality, can cause the cycling of value between producers and external stakeholders to break down (Fig. 4b). The creation of value for participating producers must be proportional to the value created for external stakeholders. Value for stakeholders can accrue in the form of producers fulfilling

what are perceived as sufficiently rigorous standards or confidence that producers are making meaningful strides towards meeting standards requirements.

In the two cases, questions over the proportionality of value and the mutual interest in the two programs both for producers and for external stakeholders is complicated by the overall goals of the programs. The RSPO certification program is an offshoot of the RSPO roundtable (an industry organization). Accordingly, its emphasis on moving producers into the participation stage (Fig. 5b) is consistent with the overall organizational goal to engage stakeholders to initiate a dialogue about sustainability in the sector. Meanwhile, mechanisms for moving producers through the final “phase transition” to the contributor stage are less well developed because the emphasis is on producers engaging in the ongoing sustainability dialogue. The SAN certification programs make no distinction between the participation and contribution stages for producers (Fig. 5a), which means there is potentially less value to producers.

With lower programmatic goals in terms of producer participation levels (i.e. participant versus contributor), the RSPO certification program is able to create additional opportunities within its structure and activities to generate incentives for participating producers. For example, with a core activity such as enforcement, the RSPO certification program has chosen an internal grievance process. An internal grievance system is favorable to producers, but causes consternation for civil society groups. If, however, program administrators decide that it is more beneficial in terms of influencing sustainability to reprimand rather than dismiss non-compliant producers (Jacobson 2013), then program administrators can strategically choose that enforcement does not require an independent, stricter grievance mechanism.

While targets for participation level vary widely in the two cases according to their institutional history and goals (and this creates varying levels of freedom for programs to create producer incentives) the civil society groups who lend credibility and legitimacy to voluntary certification programs are broadly similar. Most civil society groups have limited allegiance to particular programs; they view voluntary certification standards as one tool among many for achieving greater sustainability in the sector. Institutional history and programmatic goals may be trivial to these groups compared to their own sustainability agenda. Under resource constraints, civil society groups may withdraw their support for the program rather than invest

time and resources in verifying the status of individual participants or working to fortify the program.

4.2 Design opportunities

Examination of these two voluntary certification programs reveals that there is a trade-off between increased participation and greater rigor. A potential remedy is to consciously consider how each design choice can induce a trade-off and how that trade-off can best be mitigated. For example, since additional opportunities to capture and redeem value can lead to increased participation, programs can address concerns about credibility by creating new mechanisms to fairly appraise these intermediate stages of producer efforts. One option is to require producers to adhere to more quantitative, objectively rigorous requirements at each intermediate phase in their progression towards certification, as a way to demonstrate a commitment to meeting standards. This sort of requirement might satisfy some civil society groups who could benefit from more granular data about producer commitments to sustainability. Some authors, however, have criticized the emphasis on what they refer to as output legitimacy of voluntary certification programs in terms of them meeting pre-determined outcomes, arguing that an emphasis on outcomes depoliticizes the decisions about what those outcomes ought to be (Elgert 2012). Another possibility for the complex, RSPO-type certification programs is to focus on input legitimacy by securing more inclusiveness in the power structure of the program (Elgert 2012). For example, producers still may be granted voting rights upon membership to the roundtable, but the RSPO could also award voting rights to representatives of local and indigenous groups who reside in areas of palm oil production.

5. Conclusion

Both programs struggle to move producers from the engaged, interested, or general participant phase, to one in which they are contributing to sustainability in the sector and the additionality of the program. The RSPO certification program provides participants with opportunities to participate at earlier points in the certification process and rewards efforts that other programs, such as the SAN cattle certification program, may regard as ancillary to certification. These intermediate rewards are potential enticements to engage in the program more fully as contributors to additionality. The challenge in the RSPO certification program is that there are no consistent benchmarks for participant progress towards compliance as a

function of where they are in the certification process. In addition, the larger producers seeking certification are so complex that their individual paths to certification are unique. More specificity about what is required of participants at these intermediate horizons (e.g. membership in the roundtable, or time-bound plans) may decrease the ambiguity that currently prevails about the efforts of participants. Civil society groups might benefit from reduced costs of investigating a producer's commitments to certification. The SAN cattle certification has no intermediate opportunities along the route to full certification; it combines the participation and contributor (full certification) stages into one. Participants are not certified until they have met all of the requirements of the standard for the entirety of their operation. But this does not mean that the phase transition from capacity building to a higher stage of participation occurs more readily within the program; potential participants to the program may be deterred by the delayed payoff for their efforts. Within a value-creation framework for understanding the design choices and implementation strategies of voluntary certification programs, the challenge of achieving that final phase transition to contribution is one of external stakeholders asking for more value without having a sufficient amount of non-monetary value to trade back to producers. As such, the cycle of value breaks down.

More conscious planning of the development of certification programs over time is an underutilized design strategy that could mitigate limitations that arise due to a lack of resources and the inherent tensions about striking a balance between scale and rigor. Introducing a set of well-defined expectations about what participants must accomplish at particular milestones may help to reconcile the interests of the program as it interacts with both participants and civil society groups. Producers can use intermediate points of verification to satisfy NGOs about their progress towards sustainability, introduce their products to additional markets, and justify the costs of certification. NGOs can benefit from the ability to assess additionality more granularly and more frequently as part of their efforts to benchmark sustainability progress. Such strategic sequencing could soften the current dilemma faced by most certification programs about the pros and cons of strict enforcement versus wider participation.

REFERENCES

- Alves-Pinto H, Newton P, Pinto L. 2013. Certifying sustainability: opportunities and challenges for cattle supply chain in Brazil. CCAFS Working Paper no. 57. CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS). Copenhagen, Denmark. Available from www.ccafs.cgiar.org. Accessed December 19, 2013.
- Auld, G., Gulbrandsen, L. H., & McDermott, C. L. 2008. Certification schemes and the impacts on forests and forestry. *Annual review of environment and resources*, 33(1), 187.
- Bass, S., K. Thornber, M. Markopoulos, S. Roberts and M. Greig-Gran. 2001. *Certification's Impacts on Forests, Stakeholders and Supply Chains*. London: IIED.
- Bernstein, S., & Cashore, B. 2007. Can non-state global governance be legitimate? An analytical framework. *Regulation & Governance*, 1(4), 347-371.
- Bitzer, V., Francken, M., & Glasbergen, P. 2008. Intersectoral partnerships for a sustainable coffee chain: Really addressing sustainability or just picking (coffee) cherries?. *Global Environmental Change*, 18(2), 271-284.
- Buller, H & Morris, C. 2004. Growing goods: the market, the state, and sustainable food production. *Environment and Planning A*, 36(6), 1065-1084.
- Bustamante et al. 2012. Estimating greenhouse gas emissions from cattle raising in Brazil. *Climatic Change* 115:559–577.
- Cashore, B. W. 2004. *Governing through markets: Forest certification and the emergence of non-state authority*. Yale University Press.
- Cashore, B., Auld, G., & Newsom, D. 2003. Forest certification (eco-labeling) programs and their policy-making authority: explaining divergence among North American and European case studies. *Forest Policy and Economics*, 5(3), 225-247.
- Eden, S. 2009. The work of environmental governance networks: traceability, credibility and certification by the Forest Stewardship Council. *Geoforum*, 40(3), 383-394.
- FAO 2013. FAOSTAT. Available from <http://faostat3.fao.org/faostat-gateway/go/to/browse/Q/QA/E>. Accessed November 12, 2013.

- Fulponi, L. 2006. Private voluntary standards in the food system: The perspective of major food retailers in OECD countries. *Food Policy*, 31(1), 1-13.
- Gillespie, P. and Harjanthi, R. November 2, 2012. ISPO, RSPO: Two sides of the same coin? *Jakarta Post*. Available from <http://www.thejakartapost.com/news/2012/11/02/ispo-rspo-two-sides-same-coin.html>. Accessed November 1, 2013.
- Greenpeace. 2013. Certifying Destruction: Why consumer companies need to go beyond the RSPO to stop forest destruction. Available from <http://www.greenpeace.org/international/en/publications/Campaign-reports/Forests-Reports/Certifying-Destruction/>. Accessed December 28, 2013.
- Gulbrandsen, L. H. 2005. The effectiveness of non-state governance schemes: a comparative study of forest certification in Norway and Sweden. *International Environmental Agreements: Politics, Law and Economics*, 5(2), 125-149.
- Guthman, J. 2007. The Polanyian way? Voluntary food labels as neoliberal governance. *Antipode*, 39(3), 456-478.
- Henson, S. & Reardon, T. 2005. Private agri-food standards: Implications for food policy and the agri-food system. *Food policy*, 30(3), 241-253.
- Henson, S. & Humphrey, J. 2010. Understanding the complexities of private standards in global agri-food chains as they impact developing countries. *The Journal of Development Studies*, 46(9), 1628-1646.
- Klooster, D. 2005. Environmental certification of forests: The evolution of environmental governance in a commodity network. *Journal of Rural Studies* 21. 403–417.
- Klooster, D. 2006. Environmental certification of forests in Mexico: the political ecology of a nongovernmental market intervention. *Annals of the Association of American Geographers*, 96(3), 541-565.
- Klooster, D. 2010. Standardizing sustainable development? The Forest Stewardship Council's plantation policy review process as neoliberal environmental governance. *Geoforum*, 41(1), 117-129.

- Koh, L. P. and Wilcove, D. S. 2008, Is oil palm agriculture really destroying tropical biodiversity?. *Conservation Letters*, 1: 60–64.
- Koh, L. P., Miettinen, J., Liew, S. C., & Ghazoul, J. 2011. Remotely sensed evidence of tropical peatland conversion to oil palm. *Proceedings of the National Academy of Sciences*, 108(12), 5127-5132.
- Muradian, R. & Pelupessy, W. 2005. Governing the coffee chain: the role of voluntary regulatory systems. *World Development*, 33(12), 2029-2044.
- Mutersbaugh, T. 2005. Fighting standards with standards: harmonization, rents, and social accountability in certified agrofood networks. *Environment and Planning A*, 37(11), 2033.
- Newton, P., Agrawal, A., & Wollenberg, L. 2013. Enhancing the sustainability of commodity supply chains in tropical forest and agricultural landscapes. *Global Environmental Change*, 23(6), 1761-1772.
- Overdeest, C. 2004. Codes of conduct and standard setting in the forest sector: constructing markets for democracy?. *Relations industrielles/industrial relations*, 59(1), 172-197.
- Overdeest, C. & Rickenbach, M. G. 2006. Forest certification and institutional governance: an empirical study of forest stewardship council certificate holders in the United States. *Forest Policy and Economics*, 9(1), 93-102.
- Prakash, A., & Potoski, M. 2012. Voluntary environmental programs: A comparative perspective. *Journal of Policy Analysis and Management*, 31(1), 123-138.
- Raynolds, L. T., Murray, D., & Heller, A. 2007. Regulating sustainability in the coffee sector: A comparative analysis of third-party environmental and social certification initiatives. *Agriculture and Human Values*, 24(2), 147-163.
- Rickenbach, M. & Overdeest, C. 2006. More than markets: assessing Forest Stewardship Council (FSC) certification as a policy tool. *Journal of Forestry*, 104(3), 143.
- RSPO. 2007. RSPO Certification Systems. Available from <http://www.rspo.org/sites/default/files/RSPOcertification-systems.pdf>. Accessed December 28, 2013.

- RSPO. 2008. National Interpretation of RSPO Principles and Criteria for Sustainable Palm Oil Production: Republic of Indonesia. Available from http://www.rspo.org/sites/default/files/Indonesia%20NI%20of%20RSPO%20P&C_May2008.pdf. Accessed December 26, 2013.
- RSPO. 2011. RSPO Supply Chain Certification Systems. Available from http://www.rspo.org/files/resource_centre/RSPO%20Supply%20Chain%20system_Final%20version_app%20EB%202011%2011%2025%20-%20rev.pdf. Accessed February 20, 2014.
- RSPO. 2012. Roundtable on Sustainable Palm Oil Website. Available from <http://www.rspo.org/>. Accessed September 28, 2013.
- RSPO. 2013. RSPO Principles and Criteria for Sustainable Palm Oil Production Including Indicators and Guidance. Available from http://www.rspo.org/file/PnC_RSPO_Rev1.pdf. Accessed November 9, 2013.
- Scarlat, N., & Dallemand, J. F. 2011. Recent developments of biofuels/bioenergy sustainability certification: A global overview. *Energy Policy*, 39(3), 1630-1646.
- Smith, W. & Maser, C. 2010. *Forest certification in sustainable development: Healing the landscape*. CRC Press.
- Steering Committee of the State-of-Knowledge Assessment of Standards and Certification. 2012. *Toward sustainability: The roles and limitations of certification*. Washington, DC: RESOLVE, Inc.
- Sustainable Agriculture Network. 2010. Available from <http://sanstandards.org/sitio/> Accessed March 23, 2013.
- Sustainable Agriculture Network. 2011. SAN Climate Module: Criteria for Mitigation and Adaptation to Climate Change. Available from <http://www.saipatform.org/uploads/Modules/Library/SAN%20Climate%20Module%20February%202011.pdf> . Accessed December 30, 2013.

- Tallontire, A. 2007. CSR and regulation: towards a framework for understanding private standards initiatives in the agri-food chain. *Third World Quarterly*, 28(4), 775-791.
- Taylor, P. L. 2005. In the market but not of it: Fair trade coffee and forest stewardship council certification as market-based social change. *World Development*, 33(1), 129-147.
- Tollefson, J. 2012. Brazil set to cut forest protection. *Nature*, 485, 19.
- USDA. 2010. Indonesia: Rising global demand fuels palm oil expansion. Commodity Intelligence Report. Available from <http://www.pecad.fas.usda.gov/highlights/2010/10/Indonesia/>. Accessed February 5, 2014.
- von Geibler, Justus. 2013. Market-based governance for sustainability in value chains: conditions for successful standard setting in the palm oil sector. *Journal of Cleaner Production*. 56, 39-53.
- van Kooten, G. C., Nelson, H. W., & Vertinsky, I. 2005. Certification of sustainable forest management practices: a global perspective on why countries certify. *Forest Policy and Economics*, 7(6), 857-867.
- Wakker, E., Watch, S., & Rozario, J. D. 2004. Greasy palms: the social and ecological impacts of large-scale oil palm plantation development in Southeast Asia. Friends of the Earth, London. Available from http://www.foe.co.uk/sites/default/files/downloads/greasy_palms_impacts.pdf. Accessed September 28, 2013.
- Wich, S., Koh, L.P., & van Noordwijk, M. 2011. The Indonesian deforestation moratorium: The devil is in the details. The Jakarta Post. Available from <http://www.thejakartapost.com/news/2011/02/21/the-indonesian-deforestation-moratorium-the-devil-details.html>. Accessed February 20, 2014.
- Wilcove, D. S. & Koh, L. P. 2010. Addressing the threats to biodiversity from oil-palm agriculture. *Biodiversity and Conservation*, 19(4), 999-1007.