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Sustainability certification schemes: evaluating their effectiveness and adaptability

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Abstract

Purpose – *New sustainability certification schemes (SCS) with different scope, governance structure and operating practice are fast emerging. This rapid growth and divergence in metrics has resulted in questions about the effectiveness of such schemes. Although this practice has been growing fast, to date, there are no reviews comprehensively synthesising the literature regarding SCS' main flaws, challenges and improvement opportunities. This paper aims to identify what are the key components affecting effectiveness of SCS, highlighting their benefits, flaws and improvement opportunities.*

Design/methodology/approach – *An integrated literature review was conducted to identify and assess recent studies related to the benefits, flaws, effectiveness and improvement opportunities of SCS worldwide.*

Findings – *Key components affecting the effectiveness of SCS were identified (sustainability awareness; market access; management systems and productivity; social, environmental and economic impacts; monitoring outcomes; competition, overlapping and interoperability; stakeholder participation; and accountability and transparency). The authors argue that SCS to succeed have to be effective; provide accountability about their goals and achievements; and manage stakeholders' expectations. Civil Society's awareness of the scientific underpinnings of sustainability issues also contributes to the existence and improvement of such schemes.*

Research limitations/implications – *The limitations of this study are associated with the secondary material that was publicly available for our literature review.*

Originality/value – *This paper fulfils an identified need to explore the key components affecting effectiveness of SCS, their benefits, flaws and improvement opportunities. Such a synthesis also identifies the key areas where interoperability between SCS should be pursued by corporations and governments.*

Keywords *Accountability, Sustainability, Standards, Corporate social responsibility, Effectiveness, Certification schemes*

Paper type *Literature review*

1. Introduction

Sustainability certification schemes[1] (SCS) for a wide range of commodities and products are a relatively new practice that has emerged and grown fast in recent years (Reinecke *et al.*, 2012; Blackman and Rivera, 2011; Young *et al.*, 2010; Derkx and Glasbergen, 2014; Manning *et al.*, 2012). SCS are mostly voluntary and new certification schemes with different scope, governance structure and operating practice are fast emerging. For example, comparing various voluntary SCS WWF (2013) concluded that environmental and social performance varies greatly among schemes and in high-risk countries (countries where risk factors such as land grabbing and weak governmental performance are found) there is a rapid growth of weak certification schemes. This fast growth allied with the differences among different SCS has resulted in questions about the effectiveness of those schemes and to what extent those schemes are delivering important economic, social and environmental outcomes. The existence of weak and ineffective SCS can undermine the credibility of the practice and their existence in the long term.

Although this practice has been growing fast for the past few years, to date there are no reviews comprehensively synthesising the literature regarding SCS' main flaws, current challenges and improvement recommendations in different sectors. This paper attempts to identify what are the key components affecting effectiveness of SCS, highlighting their benefits, flaws and improvement opportunities. Through this process, we consider whether or not these schemes are being co-opted by particular vested interests, and how best to make them most reliable and effective in delivering improved societal outcomes. This comprehensive synthesis of the literature aims to improve the practice, identifying flaws and placing recommendations; and to impact stakeholders, influencing their public attitudes regarding SCS and sustainability.

2. Methods

An integrated literature review was conducted to identify and assess recent studies related to the benefits, flaws, effectiveness and improvement opportunities of SCS worldwide. The integrated literature review is considered an appropriate method to enhance understanding of a new topic of interest from diverse sources. This is in contrast to systematic literature reviews, which generally aim for a complete compendium of the literature on a mature topic (Gill, 2015; Kohtala, 2015; Whittemore and Knafl, 2005).

This overview of the literature was conducted considering two elements: data collection and data analysis. Regarding the data collection element, keyword combinations to search for academic and non-academic literature on SCS were used. Keywords used included: "sustainability certification" or "sustainability standards" or "sustainability schemes" or "sustainability certification schemes" and "effectiveness", "benefit", "advantage", "disadvantage", "flaws", "improvement opportunities" and "recommendations". Our search was limited to documents in English and excluded any study whose major concepts were not directly focused on SCS. As a result, 138 documents were identified and 48 were referenced.

The data analysis was conducted according to the guidelines provided by Leedy and Ormrod (2009), which considers the following phases: organisation of details, categorisation of data, identification of patterns and synthesis. This data analysis approach allows researchers to systematise ideas and compare data with predicted patterns to draw conclusions (Benaquisto, 2008; Yin, 1993). Once all relevant sources were identified, pertinent information on SCS' main flaws, current challenges and improvement recommendations was extracted and common characteristics and ideas were then grouped together to form key components. As a result, eight key components affecting the effectiveness of SCS were identified:

1. sustainability awareness (15 sources referenced);

2. market access (14 sources referenced);

3. management systems and productivity (6 sources referenced);

4. social, environmental and economic impacts (21 sources referenced);

5. monitoring outcomes (13 sources referenced);

6. competition, overlapping and interoperability (15 sources referenced);

7. stakeholder participation (21 sources referenced); and

8. accountability and transparency (13 sources referenced).

3. Concept

Certification schemes are processes by which products or services are produced or provided according to predetermined standards. The level of achievement of those standards by a product or a service is assessed and a certification or label is provided to demonstrate the level of achievement of that specific product or service against the

standard. Barry *et al.* (2012) define certification as a mean of providing assurance that a product or a service comply with a specific criteria. Similar definition to certification is provided by International Organization for Standardization (ISO), which is: "the provision by an independent body of written assurance (a certificate) that the product, service or system in question meets specific requirements".

The diversity and recent growth of SCS have been demonstrated by different organisations. The International Trade Centre Standard Map[2], an online platform which enables users to explore and compare SCS, provides information on over 160 schemes addressing sustainability in global supply chains. The Ecolabel Index[3] provides information of 459 different SCS in 197 countries and 25 industry sectors. According to International Trade Centre (2010), fair trade initiatives and organic markets have increased at double or more the rates of traditional markets in different sectors.

Increased societal concerns about environmental destruction, human rights, pollution and social inequalities and the increased concern of consumers in relation to the organisations' social and environmental impacts have contributed to the development of SCS (Ndhlukula *et al.*, 2009; Schiavi and Solomon, 2007; ISEAL Alliance, 2011). This societal awareness about those aspects resulted in pressure on companies and governments to improve their performance and assume a new approach to manage their impacts and deliver better outcomes with transparency.

In this new context, governments and organisations are facing new challenges. Without a new approach to manage their activities, those entities are in danger of losing credibility with consumers. This new approach to deal with social and environmental challenges aimed to go beyond the traditional approach where regulation and legal aspects are not enough to improve governance and deliver important outcomes. SCS are aligned to this new approach, providing guidelines in which different organisations can cooperate using a common language to deliver more sustainable practices (Waide and Bernasconi-Osterwalder, 2008; Marin-Burgos *et al.*, 2015; Reinecke *et al.*, 2012; Barry *et al.*, 2012; Campbell, 2006).

At the same time, there are different SCS for different products and services, there are also several differences between structure and operation of such schemes. For instance, schemes could be voluntary or compulsory, could have different levels of stakeholder engagement and could have different types of assurance processes. Although there are many variations in the structure and operation, Barry *et al.* (2012) state that most of the SCS have the same basic components, as follows:

- setting the standards;
- the management of the scheme;
- making decisions about compliance based on the results of assurance;
- evaluating the competence of the certification body and assurers; and
- the label and marketing of the scheme.

In applying those basic components, SCS could achieve their main objectives – to foster cooperation and to guide different organisations to implement more sustainable practices and deliver positive outcomes. Providing accountability about sustainability and how organisations and governments are dealing with their social and environmental impacts is the cornerstone for SCS.

4. Findings

4.1 Sustainability awareness

Previous authors have mentioned the role SCS play in improving sustainability awareness among different stakeholders. Young *et al.* (2013) stated that SCS allow consumers and business representatives to know more about the provenance of materials and products they purchase, giving them the choice to shift market preferences towards better

sustainability performers. This statement supports the idea that increased societal awareness pressures organisations and governments to improve their environmental and social performance and contributes to the development of SCS.

Waide and Bernasconi-Osterwalder (2008) provide similar statement that SCS allow consumers to compare products' environmental performance characteristics considering this information in their purchasing decision. Equally, Mikkilä et al. (2009) and Huertas et al. (2010) point out that level of success of SCS is directly related to the level of interest of consumers towards certified products.

SCS could improve sustainability awareness of consumers, allowing them to consider products or services in terms of their environmental and social performances at their purchasing decision. This consumer behaviour will also influence industries and governments to improve their social and environmental performances. In addition, those initiatives have the capacity to increase public awareness regarding the management of natural resources, bringing positive outcomes (Acosta, 2014).

4.2 Market access

SCS can affect the capacity of producers and service providers to access market opportunities through different mechanisms. Certified products can create new market opportunities, especially in markets where consumers are more aware about sustainability and corporate social responsibility issues and where regulations are more restrictive (Giovannucci and Ponte, 2005; Vogt et al., 1999; Barry et al., 2012).

On the other hand, SCS can result in uncompetitive products and barriers to trade in some situations. For instance, Ndhlukula et al. (2009) studying SCS in Namibia state that in developing countries, the cost of obtaining certifications can result in uncompetitive products, and the lack of certifications is a barrier to trade in some markets. Barry et al. (2012) also highlight the challenges faced by small producers to meet certification standards and gain access to markets.

The International Trade Centre (2010) also states that implementing standards requires resources and capabilities, which small producers in many cases do not have. Assessing schemes relevant to climate change, Waide and Bernasconi-Osterwalder (2008) identified financial and technical difficulties of small producers and producers in developing countries to adapt their process according to limitations determined by importing countries. Komives and Jackson (2014) went beyond and linked this situation with the term "accessibility", noting that accessibility is a particular concern for small producers and producers in developing countries because of the costs involved to achieve compliance (needed investment) and to demonstrate compliance (assurance process).

4.3 Management systems and productivity

The improvement of management systems and productivity has been noted as a positive outcome of SCS. For example, Vogt et al. (1999) mentioned that certifications resulted in forest managers believing that the assessment of their management practices and internal controls during the certification process made them improve their management systems. Similar outcome was obtained by Lewis and Davis (2015) analysing the impacts of the Malaysian Timber Certification Scheme. This study points out that schemes may lead to significant improvements within management systems over relatively short period of time.

Regarding productivity, Delmas and Pekovic (2013) revealed that organisations that adopt environmental standards present higher labour productivity results than organisations that have not adopted such standards (organisations involved in social causes lead a positive impact on employee work attitudes, and adoption of environmental standards is associated with increased employee training, which improves labour productivity). Similar result was provided by Vogt et al. (1999), who argued that forest certifications have a positive impact improving morale of the forest managers which improves their productivity.

Because SCS tend to be developed on best practices, organisations seeking for certification need to have their management systems improved or developed based on best practice to be in compliance. This leads to positive changes in management and production practices. Those changes have the capacity to improve performance, quality and productivity. However, costs to bring organisations' management and production practices in compliance with best practices can hinder technological development.

4.4 Social, environmental and economic impacts

Previous authors have discussed about social, environmental and economic impacts of SCS. Barry et al. (2012) conducted a critical review of schemes in four sectors (agriculture, forestry, fisheries and aquaculture) and found out that SCS provide social, environmental and economic benefits through positive changes in management systems and production practices. For example, reduction of pesticides and herbicides used in certified organic farms has a direct positive environmental impact on regional biodiversity. It also provides direct positive economic benefits, such as better access to the organic food market, premium price because of the consumers' willingness to pay more for certified organic products and cost reduction due to lower use of chemicals. Similarly, Scarlat and Dallemand (2011) reviewing SCS for biofuels and bioenergy identified that some biofuels SCS contribute positively to the climate change effect and the protection of biodiversity in not allowing the use of high-biodiversity-value lands (e.g. primary forests, nature protection areas) and high-carbon-stock lands (e.g. wetlands, forested areas) in biofuels production areas.

Social impacts were also mentioned in previous studies. Stark and Levin (2011) state that SCS contribute with social development through the implementation of fair and ethical trade initiatives, which improves working and living conditions and the respect of the human rights. The promotion of a fairer distribution of wealth, improvement of human health, reduction of corruption and reduction of poverty were also mentioned by previous authors as positive social impact (Acosta, 2014; ISEAL Alliance, 2011; Chiputwa et al., 2015; Cradle to Cradel Products Innovation Institute, 2014; Ayuya et al., 2015).

There are also some critiques of the current SCS approaches. For instance, the lack of emphasis in the long-term development and lack of innovation initiatives was considered an aspect to be improved by SCS (Mikkilä et al., 2009; Stark and Levin, 2011). SCS have also been criticised for not properly addressing important environmental and social aspects. For instance, Stark and Levin (2011) argue that critical aspects of the sustainability have not been properly addressed by SCS, such as protected areas, non-discrimination, gender, security, artisanal and small-scale mining, conflict zones, local procurement, contractors, bribery and corruption. WWF (2013) achieves similar result assessing different biofuel voluntary SCS. This study concludes that a significant number of SCS do not address important environmental and social aspects of the biofuel production. Some important areas of sustainability, such as water management, waste management, hazardous chemicals management and invasive species management, are not properly addressed.

4.5 Monitoring outcomes

The assessment of the effectiveness is important to measure SCS' achievements and guide future improvements and to provide accountability to stakeholders. Schemes should periodically review their effectiveness in meeting their stated objectives through monitoring mechanisms (ISEAL Alliance, 2010; Schiavi and Solomon, 2007). At the same direction Miller and Bush (2015) highlight the importance of collating evidence to back up rhetorical claims. However, Stark and Levin (2011), Mori Junior et al. (2015) and WWF (2013) found that few schemes had properly evaluated their effectiveness.

Blackman and Rivera (2011) identified that SCS did not clearly articulate the objectives of the scheme as well-measurable indicators of success. Komives and Jackson (2014) also

state that SCS do not fulfil stakeholders' expectations about whether their outcomes actually result in sustainability improvements and/or stop harmful practices. Tikina and Innes (2008) suggest that to evaluate an SCS, the following question must be stated: "Has the certification scheme eliminated or mitigated the problem?"

4.6 Competition, overlapping and interoperability

Duplication and overlapping between schemes can create confusion in the market place and/or contribute to greenwashing[4]. The divergent monitoring, reporting and assurance requirements of different schemes increase the cost of compliance. The uncoordinated existence of competing schemes creates a fragmented governance system and the diversity of scope and operating practice result in weak outcomes (Campbell, 2006; Derkx and Glasbergen, 2014).

Mikkilä et al. (2009) point out that the application of existing schemes and the development of new ones addressed more aspects related to the primary production of bioenergy than the complete value-chain. The existence of various schemes does not guarantee good outcomes without covering the entire value-chain. Also, Scarlat and Dallemand (2011) argue that the increasing number of SCS could lead to competition resulting in improvement. However, the increasing number of SCS could lead to lower confidence among stakeholders resulting in lower acceptance and confusion. In addition, numerous SCS with different requirements could lead to schemes with loose performance standards and lack of reliability, and stakeholders could not be able to identify and recognise such differences.

WWF (2013) argued that interoperability has the potential to reduce costs and can amplify the outcomes achieved by individual SCS, as SCS can coordinate and exchange knowledge and practices. Interoperability can also be designed to avoid duplication, which can lead to incosistencies and loss of credibility, and to interact with governments, industry sectors and civil society organisations, in addition to amongst schemes themselves. Harmonisation between SCS and regulations, laws, principles and/or initiatives already in place or under development allows these initiatives to further their reach and outcomes (Barry et al., 2012; Main et al., 2014; Stark and Levin, 2011; Young et al., 2010; Mori Junior et al., 2015). SCS should ensure that their mechanisms complement regulations and/or are aligned with regulations rather than replacing them (Columbia Center on Sustainable Investment, 2014).

4.7 Stakeholder participation

Participation and cooperation of stakeholders in developing, monitoring and reviewing SCS is essential to assure the success of any scheme with high-quality outputs (ISEAL Alliance, 2013; Round Table Codes of Conduct, 2009; Mori Junior et al., 2015). The different perspectives and experience of diverse stakeholders can strengthen the design of schemes. Engagement can also help to regulate or reduce conflict and improve the legitimacy and credibility of the scheme (Gulbrandsen, 2005; Mueller et al., 2009). However, the inclusion of divergent stakeholder perspectives and attempts to reach consensus during scheme development can be challenging and can create unanticipated delays (Barry et al., 2012; ISEAL Alliance, 2010; WWF and World Bank, 2006; Freeman, 2009; AccountAbility, 2011). Barry et al. (2012) argue that the content of a scheme is based on the negotiation between subject matter specialists and interested stakeholders. ISEAL Alliance (2013) goes further and states that in addition to stakeholder participation in the development, monitoring and assurance phases, it is important to have stakeholders participating in governance. Through balanced input from organisations, civil society and governments, SCS can play a key role in addressing inequality (Giovannucci and Ponte, 2005).

Barry et al. (2012) warn that sometimes decision-making based on stakeholder-driven processes can put stakeholders' interests ahead of decisions related to operation and

objectives of the scheme. When it comes to decisions about specific aspects of the operation of the schemes (e.g. pricing policies, membership strategies) the multi-stakeholder model can make the decision-making process slow. In this regard, Global Witness (2012) argues that although SCS are able to establish regulatory frameworks and institutional infrastructure to stem the trade of conflict minerals, it could take long to be fully implemented and start acting. This author defends the idea of supply chain due diligences, conducted by downstream organisations, as a quicker instrument to tackle the trade of conflict minerals in Africa rather than SCS.

Moreover, ISEAL Alliance (2013) recommends that it is important to determine the most appropriate occasion to engage with stakeholders so as not engage stakeholders unnecessarily at the expense of efficiency. When schemes are developed in a broad and inclusive process, the potential for conflict is lower and the potential for support from stakeholders is higher (Gulbrandsen, 2005).

4.8 Accountability and transparency

The role SCS play to improve accountability and transparency has been also addressed in previous studies. For example, Acosta (2014) and ISEAL Alliance (2011) state that SCS encourage multi-stakeholder dialogue and create regional, national and international networks of different stakeholders committed to a good natural resource governance, contributing indirectly in the sense that conditions for enhance participation and accountability are facilitated.

Even though previous studies have declared that schemes improve accountability, lack of accountability and transparency can still be pervasive. For instance, the Kimberley Process was criticised by Partnership Africa Canada (2009) and Sharife and Grobler (2013) for having situations of non-compliance or violation that did not result in consequences, which affect stakeholders' level of trust in the Kimberley Process and the transparency of its processes. Stark and Levin (2011) assessing different schemes identified that violations do not carry consequences and concluded that in SCS used in the mining sector, social and environmental issues are more likely to be safeguarded if there are consequences for the mining companies. These authors also identified situations of lack of accountability and transparency, such as:

■ certifications making use of vague language, leading to loopholes and misinterpretation;

■ organisations using sustainability standards to mislead stakeholders about their environmental practices resulting in greenwashing; and

■ disclosure and reporting processes not being developed with enough quality to provide accountability.

4.9 Improvement opportunities

Compliance cost remains a major area where improvements are needed, particularly for developing countries. Waide and Bernasconi-Osterwalder (2008) suggest that schemes should be flexible allowing different approaches for different participants. This flexibility would allow those with costs and/or technical difficulties to achieve the same goals through different approaches. SCS should offer premiums higher than the costs of certification to guarantee a considerable number of participants, and capacity-building and facilitating finance initiatives should be implemented to improve accessibility of those participants with financial or technical difficulties (Blackman and Rivera, 2011; Komives and Jackson, 2014).

Technical and finance support and capacity building initiatives are important to make schemes more accessible and flexible. Without these instruments, participants with financial or technical constraints might not be able to overcome burdens. In this situation, the SCS could work towards inequalities, allowing only participants with financial and

technical capacity to reap the benefits of being certified. SCS should foster and develop initiatives to enhance innovation and increase society's awareness in relation to sustainability and corporate social responsibility. Roundtable initiatives, accessibility programs and training opportunities could be developed and implemented.

Related to the lack of evidence about the achievements and contributions of the SCS, Barry et al. (2012) recommend that schemes should shift from measuring practices and activities (management-based) to measuring performance (performance-based). This shift would clarify and make clearer the contributions of schemes to sustainability. Yet, management-based schemes are regularly criticised because an organisation can meet all the requirements to be certified and still be a poor performer (Track Record Global, 2010). Gulbrandsen (2005) also states that performance-based schemes are more likely to modify practices in ways that lead to less environmental deterioration than management-based schemes.

The assessment of the effectiveness of any SCS is important not just to measure achievements and guide future improvement opportunities, but also to provide accountability about the schemes' performance and achievements to their stakeholders and to encourage the participation of new comers. SCS could start measuring and managing properly few relevant indicators rather than trying to incorporate many variables at once. The use of the theory of change could be also considered as an instrument to define and evaluate impacts over time and to establish achievement strategies.

To address the problem of competition and overlap, SCS could be designed to interact with regulations and other SCS. This interaction could improve sustainability practices and performance in ways that could not be achieved by an SCS alone (Stark and Levin, 2011; Main et al., 2014; Young et al., 2010; ISEAL Alliance, 2013). SCS should explore opportunities for coordination to obtain better outcomes and also be able to share and learn with previous experiences, such as conferences, forums, discussion lists and/or international best practices databases.

According to Gulbrandsen (2005), linking domestic schemes with international schemes increases supply chain support due to the preference for legitimate and widely recognised schemes and labels. Aspects such as integration, competition, coordination and overlapping with other SCS, governments and/or regulations should be considered by schemes during their design, development, implementation, operation and revision processes.

Regarding situations of non-compliance or violation that do not result in consequences, Acosta (2014) recommends that schemes should link non-compliance situations with sanctions, especially in countries with lack of democracy. The lack of sanctions in situations of non-compliance impacts the credibility of the schemes and stakeholders' perceptions. In addition, entities already certified and in situations of compliance could lose their enthusiasm and interest to be in compliance with, which could affect their capacity to improve performance and generate positive outcomes.

Definitions about situations of compliance and non-compliance should be clearly communicated by the scheme. These definitions should at least inform the following:

- aspects that participants must be in compliance with;
- criteria and methodology to assess the level of compliance; and
- the entity responsible to assess the level of compliance.

How the results of the compliance assessment should be communicated and at what frequency also needs to be considered upfront. Situations of non-compliance, complaints and conflict resolution should be analysed and decision-making process and decision makers involved in situations of non-compliance should be advised of sanctions, timelines and penalties.

Assurance or verification is considered another important aspect. This is, in most of the cases, the instrument used to assess the level of conformity of participants and to assess situations of non-compliance. The importance of the transparency in assurance processes was studied by Mori Junior et al. (2014) who identified that to improve transparency, assurance processes must themselves be transparent. To do so, it is recommended that full versions of the assurance statements with detailed information about the work carried out, scope, methodology used and results obtained must be publicly available, explicit and understandable to the majority of the stakeholders. The transparency of the assurance process and its outcomes are key factors that need to be considered (Track Record Global, 2010; WWF, 2013). The use of independent assurance providers as an instrument to avoid conflicts of interest, avoid greenwashing, enhance independency and provide accurate results is considered a good practice (Blackman and Rivera, 2011; ISEAL Alliance, 2011; Komives and Jackson, 2014; Round Table Codes of Conduct, 2009).

In addition, assurance processes need to be accessible (not penalise participants with high costs). To do so, best practices to reduce costs of the assurance processes could be considered, such as:

■ the use of a materiality approach to determine the scope and sampling strategy;

■ cross-recognition to avoid duplication and overlapping;

■ the use of first and second-party assurance combined with third-party assurance; and

■ online accessibility and transparency of data.

Recommendations regarding the scope of SCS have also been suggested by Blackman and Rivera (2011) who state that schemes should set strict indicators and monitoring processes. Yet, Castka and Balzarova (2008) point out that in one hand, less stringent regimes attract lower performers. On the other hand, extensive assurance processes may adversely become self-defeating, and participants may become more concerned with generating the right indicators than with actually doing a good job.

Although strict indicators could avoid poor performers, a very strict scheme could avoid new starters to participate, due to the efforts and costs needed to be certified. Regarding this matter, Gulbrandsen (2005) states that if standards are stringent, participants could not accept it because those standards could be considered demanding and intrusive. On the other hand, the more stringent the standards, the greater the likelihood to modify practice that lead to improvements.

In that case, SCS could determine and make use of different categories and levels, allowing participants with different levels of performance to participate at the same time. The use of different timeframes for compliance could also be established by SCS, determining that some indicators should be complied to qualify for certification and other indicators should be complied by further progress after the certification.

The stakeholder engagement process also plays a very important role in SCS. Participation and cooperation of stakeholders in developing, monitoring and reviewing schemes is essential to assure the success of any certification scheme with high-quality outputs (ISEAL Alliance, 2013; Round Table Codes of Conduct, 2009). The content of SCS should be based on the negotiation and compromise between subject matter specialists and interested stakeholders to effectively address inequalities (Barry et al., 2012; Giovannucci and Ponte, 2005).

Gulbrandsen (2005) states that fostering stakeholders' engagement improves the legitimacy and credibility of SCS because when stakeholders do not feel involved, it is likely that they will leave the process. Marin-Burgos et al. (2015) identified four key aspects that should be considered regarding the stakeholders' engagement process:

1. In situations involving social and/or environmental conflicts, all entities affected are considered relevant stakeholders.

2. Legitimacy depends on the local stakeholders' effective participation and inclusion during the development of the standard phase, the implementation at the local levels and the scheme ability to manage local stakeholders' concerns.

3. Adequate strategies and methods should be developed and implemented to guarantee the attendance and effective participation of all relevant stakeholders.

4. Building trust among all relevant stakeholders is the key aspect to achieve legitimacy.

Legitimacy is fundamental to engage properly with all relevant stakeholders affected or affecting the scheme. Without legitimacy, stakeholders affected could choose to not participate, which would compromise the effectiveness of the scheme, as the social and environmental impacts that affect those stakeholders might not be considered. An effective stakeholder engagement process should consider at least the following steps:

■ identify all stakeholders affected and those that could affect;

■ define criteria to determine all relevant stakeholders. Determine the boundaries and who are the representatives of the relevant stakeholders identified;

■ define and implement a stakeholder engagement strategy considering the different types of stakeholders, risks associated with the processes, resources needed, stakeholders' different concerns and perceptions, interrelationships among stakeholders, stakeholders' particular characteristics (aspects such as language, cultural context, level of instruction), objectives of the engagement process and details about the communication channel;

■ keep available an efficient communication channel and a grievance mechanism aligned to the stakeholder engagement strategy; and

■ define and implement a periodic revision process including action plans.

The International Finance Corporation (2007) recommends that to succeed, organisations need to begin to engage with their stakeholders at early stages because fundamental aspects, such as trust, mutual respect and understanding, are developed and evolved over time. According to WWF (2013), multi-stakeholder schemes with active participation from different stakeholder representatives perform better in terms of ecological and social aspects.

It is also important to maintain communication channels for stakeholders to obtain their perceptions, expectations and concerns. It is also important to have a grievance mechanisms impartial (based on procedures that do not favour one entity over another) and documented (decision-making processes and decisions are written and available). WWF (2013) recommends the development and implementation of a grievance mechanism to improve communication with stakeholders allowing them to contest certificates and products labels.

In conclusion, schemes must be able to monitor their performance against their goals, provide accountability about their outcomes and results and identify and implement improvement opportunities considering key stakeholders' concerns and expectations. Table I provides summarised information about the improvement recommendations provided by previous authors.

5. Conclusion and future directions

This paper addressed previous studies' claims that more information about SCS is needed in an integrated and comparative synthesis (Barry et al., 2012; Marin-Burgos et al., 2015; Reinecke et al., 2012; Blackman and Rivera, 2011; Delmas and Pekovic, 2013). Through this literature review, eight key components affecting the effectiveness of SCS were

Table I	Improvement recommendations provided by previous authors	
Current situation	**Improvement recommendation**
Lack of flexibility allowing different approaches for participants with financial or technical constraints	Offer premiums higher than the costs of certification to guarantee and attract a considerable number of participants (Blackman and Rivera, 2011); implement/expand capacity-building initiatives and finance instruments to improve accessibility (Komives and Jackson, 2014; Mori Junior *et al.*, 2015)
Lack of long-term development strategies and innovation initiatives	Evaluate material social and environmental impacts over the life cycle of the object under certification. The life cycle assessment could be used as an instrument to foster innovation and long-term development (Stark and Levin, 2011; Mori Junior *et al.*, 2015)
Lack of programs and instruments in place to assess the impacts and effectiveness	Shift from measuring practices and activities (management system based) to measuring performance (performance-based). This shift would clarify contributions and impacts (Barry *et al.*, 2012, ISEAL Alliance, 2013, Track Record Global, 2010); implement monitoring mechanisms to assess effectiveness and performance claims (Schiavi and Solomon, 2007; Mori Junior *et al.*, 2015)
SCS have not been fully designed to harmonise, cooperate and interact with other schemes and regulations	Domestic/local schemes could be linked with international schemes to increase supply chain support (Gulbrandsen, 2005); explore opportunities for coordination to obtain better outcomes and share experiences (Barry *et al.*, 2012); interact with government bodies and other SCS to take advantage of the strengths of these entities and delivery better outcomes by combining efforts (Barry *et al.*, 2012; ISEAL Alliance, 2013; Main *et al.*, 2014; Young *et al.*, 2010)
Lack of stakeholder participation	Develop and implement initiatives to improve stakeholder participation (Iseal Alliance, 2013; Round Table Codes of Conduct, 2009; Barry *et al.*, 2012; Giovannucci and Ponte, 2005; Marin-Burgos *et al.*, 2015; Acosta, 2014; International Finance Corporation, 2007; WWF 2013)
Existence of situations of non-compliance or violation that do not result in consequences	SCS should link non-compliance situations with sanctions and penalties (Acosta, 2014;, Schiavi and Solomon, 2007)
Lack of transparency of the assurance process	Information about assurance processes and their results should be publicly available (Mori Junior *et al.*, 2014; Track Record Global, 2010; WWF, 2013)
Inexistence of a complaints and conflict resolution mechanism in place	A complaints and conflict resolution mechanism should be developed and implemented (ISEAL Alliance, 2013)

identified (sustainability awareness; market access; management systems and productivity; social, environmental and economic impacts; monitoring outcomes; competition, overlapping and interoperability; stakeholder participation; and accountability and transparency).

Different schemes have different characteristics and deal differently with those eight key components. Those differences could affect social, environmental and economic impacts of schemes in different ways, generating different outcomes. Although different SCS have different characteristics and bring different outcomes, to succeed they have to be effective, transparent and provide accountability about their goals and achievements to their stakeholders. It is important to highlight that the success of SCS depends on the extent they bring, measure and clearly demonstrate positive social, environmental and economic outcomes. The success on the long term of SCS is also associated to the extent they can properly engage and manage stakeholders' expectations.

Furthermore, it is important to highlight that the societal awareness of sustainability and corporate social responsibility is one of the key factors affecting the existence and effectiveness of schemes. Without society's pressure for better performers and better outcomes, and a transparent accountability about achievements, the effectiveness and credibility of SCS could be seriously impacted.

Results presented and recommendations suggested allow scheme representatives to develop long-term strategies based on best practices and implement action plans to improve the effectiveness of their schemes. Further research must continue to consider how best to use SCS to influence corporate governance and public attitudes regarding SCS.

Notes

1. This study considers sustainability certification schemes all types of certification schemes and standards that address governance, social and/or environmental issues, resulting in a public claim, label or certificate attesting to compliance.

2. The ITC Standard map, available at: www.standardsmap.org/ (accessed 22 April 2015).

3. The Ecolabel Index included, available at: www.ecolabelindex.com/ (accessed 22 April 2015).

4. Stark and Levin (2011) refer to the potential for greenwashing in certification through the deceptive use of aggregated data to indicate compliance with schemes.

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