Corporate biodiversity management through certifiable standards

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Abstract

This article analyzes the motivations, internalization challenges and outcomes of implementing certifiable standards for corporate biodiversity management. For this purpose, a qualitative study based on interviews with 39 environmental managers, auditors, consultants and other experts in the field was conducted. The findings show that the adoption of new standards for biodiversity management is essentially driven by the need to improve the social acceptability of activities that can have a significant impact on natural habitats. The possible benefits of certification, particularly in terms of stakeholder relationships, and the difficulty of measuring the intangible aspects of biodiversity issues are also discussed. The study contributes to the emerging literature on organizational biodiversity management and to the debates on the symbolic versus substantial adoption of certifiable environmental standards. Managerial implications for organizations interested in biodiversity management are also discussed.

Keywords: corporate environmental management; corporate biodiversity management; certifiable standards; stakeholder relationships; internalization; social licence to operate

Introduction

The adoption of voluntary certifiable standards for corporate environmental management has become common practice for companies worldwide (Martín-de Castro et al., 2016; Tuppura et al., 2015; Boiral et al., 2016; Lee et al., 2017). Most certified companies have adopted generic standards – particularly the ISO 14001 system – which has become the reference model for environmental management systems (EMSs). Nevertheless, this type of system is focused not on specific environmental issues but rather on general management principles and voluntary programs, whose content is left to the discretion of certified organizations (Bansal and Hunter, 2003; Boiral, 2007).

As a result, some important environmental issues, such as biodiversity conservation, are not necessarily considered in depth by generic standards for EMSs. To address this gap and help organizations respond to the increasing social pressures for biodiversity conservation, which is increasingly seen as one of the main challenges for sustainable development (see, e.g., Bonini and

Oppenheim, 2010; Jones and Solomon, 2013), various certifiable standards have been launched in recent years (see the next section). These new standards are intended to enhance the credibility of biodiversity initiatives and improve the social legitimacy of organizations. Neither the outcomes of these initiatives nor the motivations of the organizations adopting them have been fully investigated.

The objective of this paper is to analyze the motivations, internalization challenges and outcomes of implementing certifiable standards for biodiversity management. This analysis is carried out through in-depth interviews with environmental managers, auditors, consultants and other experts in the field. The adoption of effective practices and standards in this area is essential for at least three reasons. First, although biodiversity conservation is an essential component of sustainable development (Heller and Zavaleta, 2009; Jones and Solomon, 2013; SCBD, 2010; Scherrer, 2009), this issue has been neglected in the literature on organizational environmental management. Although various studies have analyzed the marketing aspects of green and organic products that are assumed to indirectly preserve biodiversity (e.g. Larceneux et al., 2012; Ottman et al., 2006; Thompson et al., 2010), the organizational practices for biodiversity and implementation of certifiable standards in this area have not been fully investigated. Second, organizations face increasing pressures for biodiversity conservation, particularly in natural-resource-based sectors that can have significant impacts on natural habitats (Bonini and Oppenheim, 2010; Jones and Solomon, 2013; Rimmel and Jonäll, 2013; van Liempd and Busch, 2013; Winn and Pogutz, 2013). For companies in these sectors, the implementation of biodiversity conservation programs may be a basic requirement for the social licence to perform their activities in certain regions. The implementation of certifiable standards may therefore be an appropriate response to address this type of institutional pressure. Third, as consistently shown in the literature on standards for EMSs, the effectiveness of certifiable standards largely depends on the organization's internalization of them (e.g. Boiral and Henri, 2012; Boiral et al., 2017; Heras-Saizarbitoria et al., 2011; Heras-Saizarbitoria and Boiral, 2013; Qi et al., 2012; Yin and Schmeidler, 2009). Such internalization has not been investigated in the case of biodiversity management standards.

The rest of this paper is organized as follows. First, the literature on biodiversity management and the internalization of certifiable standards is analyzed. Second, the methodological approach followed in this study is described. Third, the main findings of this study with regard to the motivations, outcomes and challenges of the internalization of biodiversity management standards are analyzed. Fourth, the main contributions, managerial implications and avenues for future research are shown.

Literature Review

Companies whose activities are based on the exploitation of natural resources in the mining, energy and forestry sectors have been blamed for undermining fragile ecosystems (Kitula, 2006; Wishart, 2012). The social pressures for biodiversity conservation also target companies that are not directly involved in the exploitation of natural resources, but operate up- or downstream in the supply chain. For example, various companies producing or distributing products containing palm oil produced in Indonesia, such as Dove soap and Nutella spread, have been the object of huge stakeholder pressure from governments, customers and NGOs, particularly Greenpeace (Disdier

et al., 2013; Orsato et al., 2013). Certain stakeholders have organized extensive communication campaigns blaming companies such as Dove and Ferrero for the impact of palm oil plantations on the deforestation of high biodiversity ecosystems and the disappearance of endangered species. This type of institutional pressure can undermine the social legitimacy, profitability and even sustainability of corporate activities (Berrone et al., 2013; Boiral et al., 2016; Boiral et al., 2017; Colwell and Joshi, 2013). According to neo-institutional theory, organizational structures and activities are shaped by institutional pressures and the search for social legitimacy (Boiral and Gendron, 2011).

Although biodiversity conservation is highlighted as an essential component of organizational environmental management (Bonini and Oppenheim, 2010; Jones and Solomon, 2013; Rimmel and Jonäll, 2013; van Liempd and Busch, 2013; Winn and Pogutz, 2013), the actual measures implemented in this area and their outcomes and effects on corporate legitimacy are under-researched. With a few exceptions (Boiral et al., 2016; Boiral and Heras-Saizarbitoria, 2015; Jones and Solomon, 2013; Rimmel and Jonäll, 2013; Schaltegger and Beständig, 2012; van Liempd and Busch, 2013), this literature has mainly focused on general environmental practices and strategies (e.g. Chiarini, 2014, 2017; Heras-Saizarbitoria et al., 2015) rather than more targeted measures such as the conservation of natural ecosystems. Yet environmental issues are not monolithic and can be very specific, depending on the natural habitats to be preserved. As underlined by Schaltegger and Beständig (2012), corporate biodiversity management 'involves the methodical design of processes, products and projects to ensure business success while protecting biodiversity. It systematically analyses the impact of business activities on biodiversity as well as its structural and social conditions in order to find strategic measures that lead to sustainable development for both business and society' (Schaltegger and Beständig, 2012, p. 10).

Generally speaking, the burgeoning literature on corporate biodiversity management has shown the critical importance of conservation practices for certain organizations as well as the need to enhance corporate legitimacy through stakeholder collaboration and more rigorous reporting practices (e.g. Houdet et al., 2012; Jones and Solomon, 2013). The credibility of initiatives in this area and the reliability of information disclosed by companies have been questioned (see, e.g., Boiral et al., 2016; Hagan and Whitman, 2006). To improve credibility and inform stakeholders of the implementation of recognized practices, more and more organizations are adopting certifiable standards, and various certifiable standards can be implemented to demonstrate corporate commitment to biodiversity (e.g. ISO 14001, EMAS, FSC). Current versions of voluntary certifiable standards for corporate environmental management, such as ISO 14001:2015 and the latest version of EMAS, include the potential harm to biodiversity as one of the criteria to assess the environmental aspects of organizations (Hammerl and Hörmann, 2016). These standards are not specifically focused on biodiversity issues, and to meet this need several certifiable standards focused on biodiversity issues have been launched in the recent years.

Following the way paved by the general certifiable standard for corporate environmental management, various certifiable standards for biodiversity management have been introduced (see Table 1 for a summary). The recent mushrooming of certifiable biodiversity management practices reflects the need for organizations to respond to increasing stakeholder pressure and to maintain their social licence to operate.

Name	Acronym	Organization	Year	Country (headquarters)	Certifications issued (year)	Aim
Biodiversity certification of land	[none]	Office of Environment and Heritage (NSW Government)	2010	Australia	n.d.	Implement conservation measures that will improve or maintain biodiversity values
Business and Biodiversity Offsets Programme	BBOP	Business and Biodiversity Offsets Programme	2009	USA	n.d.	Improve biodiversity management practices
Climate, Community and Biodiversity Standards	CCB	Climate, Community and Biodiversity Alliance	2012	USA	n.d.	Identify projects that simultaneously address climate change, support local communities and smallholders, and conserve biodiversity
European Biodiversity Standard	EBS	European Centre for Nature Conservation	2012	The Netherlands	n.d.	Assess, upgrade and profile the biodiversity performance of companies
Forest Stewardship Standard	FSC	Forest Stewardship Standard	1994	Germany	140 000 (2012)*	Protect the people and plant and animal species that live in and around, and depend upon, the forest
LIFE (Lasting Initiative for Earth) Certification	LIFE certification	Instituto LIFE	2013	Brazil	n.d.	Implement robust and measurable Biodiversity Action Plans
Programme for the Endorsement of Forest Certification	PEFC	Programme for the Endorsement of Forest Certification	1999	Switzerland	18 800** (2016)	Promoting Sustainable Forest Management
Roundtable on Sustainable Palm Oil	RSPO	Roundtable on Sustainable Palm Oil	2007	Switzerland	2 280 (2016)***	Monitor and evaluate the economic, environmental and social impacts of the uptake of sustainable palm oil
Wildlife Habitat Council	WHC	Wildlife Habitat Council	1998	USA	678 (2016)	Certifiable standard for corporate conservation actions

Table 1. Certifiable standards for biodiversity management
Source: Self developed.
*Smallholders certified
**Chain of custody certification
***Suppliers certified

The possible contradictions between, on the one hand, the rigorous appearance and external legitimacy of certifiable standards and, on the other hand, their superficial internalization inside organizations have been demonstrated in various studies on ISO 14001 (e.g. Aravind and Christmann, 2011; Boiral and Henri, 2012). The implementation of this standard is often driven by external pressures rather than internal motivations or a desire to improve environmental performance (Aravind and Christmann, 2011; Boiral, 2011; Heras-Saizarbitoria et al., 2011). As a result, the documentation required by the standard can be somewhat disconnected from internal practices and may be mostly intended to obtain the ISO 14001 certification at low cost. The lack of involvement of managers and employees is also conducive to a symbolic rather than substantial implementation of the standard (see, e.g., Boiral, 2007; Psomas et al., 2011; Yin and Schmeidler, 2009). From this critical perspective, the adoption of certifiable standards on biodiversity management may appear to be a marketing tool, mostly used to increase the social licence to operate of organizations exposed to institutional pressure.

This critical perspective may be too reductionist to describe adequately the specifics of biodiversity certification. The literature on corporate environmental management has shown that the outcomes of the adoption of the main international standards (ISO 14001, EMAS or FSC) are quite heterogeneous (Boiral, 2011; Kaur, 2011; Poksinska et al., 2003; Yin and Schmeidler, 2009). The literature shows that the internalization and effectiveness of these standards depends on various factors, particularly the internal motivations for their adoption (Gavronski et al., 2008; Qi et al., 2012; Prajogo et al., 2014; Heras-Saizarbitoria et al., 2015). However, because the standards on

biodiversity management are relatively new and stakeholders are not very aware of them, their implementation may reflect a proactive environmental strategy by organizations rather than a reactive approach intended to comply with external requirements. Various studies have shown that the early adoption of environmental standards such as ISO 14001 enhances their internalization and effectiveness (Heras-Saizarbitoria et al., 2011; Prajogo et al., 2012; Russo, 2009). In the absence of studies on the main drivers and outcomes of certifiable standards on biodiversity management, it is difficult to draw conclusions on their effectiveness.

Methods

The focus on the perceptions of various respondents and the exploratory nature of this study required a qualitative approach, which is more appropriate to analyze, from a holistic perspective, the meanings of under-researched and complex issues (Birkinshaw et al., 2011; Corbin and Strauss, 1990). The study was based on semi-structured in-depth individual interviews with environmental and biodiversity managers, auditors and representatives from certification bodies and experts, consultants and representatives from NGOs specializing in biodiversity conservation.

The Global Reporting Initiative (GRI) database was used to select relevant companies and managers. This database is maintained by a non-profit homonymous organization, which provides a comprehensive reporting framework for all types of organization. The GRI provides a framework that is used around the world. A total of 430 reports were extracted from this database, and key words such as biodiversity standards, biodiversity certification or WHC standard were used to identify companies that implemented measures in this area. Most environmental and biodiversity managers were contacted by email prior to the interview. Certification bodies and NGOs involved in the promotion of standards of biodiversity (e.g. WHC, CNC, FSC) were also contacted by email to identify relevant respondents. Documents from these certification bodies (e.g. website, standards, reports and publications) were also analyzed to complete the data collected from respondents. Referencing and snowball sampling (Miles and Huberman, 1994) were used to complete our sample with experts, consultants and representatives of NGOs specializing in biodiversity conservation. To ensure the anonymity of respondents, a research protocol was developed and approved by the university ethics committee prior to the data collection process. Altogether 39 respondents were interviewed (see Table 2). All interviews were conducted in English, French and, to a lesser extent, Spanish. On average, interviews lasted 60 min each, and all were tape-recorded. The transcripts were analyzed in the original languages.

		Status of respondents			
		Biodiversity or environmental manager	Auditors and consultants	Other experts	Total
Organizations	Private firms (total)	9	3	1	13
	Large mining company	5	0	1	6
	Large energy company	3	0	0	3
	Large automotive company	1	0	0	1
	Small consulting company	0	3	0	3
	Public sector	2	1	0	3
	NGOs	3	2	0	5
	Certification bodies	0	0	5	5
	Other	4	8	1	13
	Total	18	14	7	39

Table 2. Sample of respondents

The analysis of data was based on the grounded theory approach (Strauss and Corbin, 1994). This approach focuses on the codification and grouping of similar themes through an inductive and iterative process of data structuration. This process was facilitated by the use of qualitative analysis software (QDA Miner Version 4). A preliminary categorization framework covering the main themes of the study was developed. At the end of the categorization process, more than 2700 passages were coded into 105 categories covering five main topics: development of certification on biodiversity, market aspects, certification process, outcomes of the standard and respondent's background. To enhance the reliability of the coding process, double-blind coding (Thomas, 2006) was performed by two independent coders. The summaries and representative passages were organized around three themes reflecting the main outcomes of the study:

- the adoption of biodiversity standards as a social licence to operate of organizations
- the organizational and environmental outcomes of certification
- the difficulties and challenges of managing biodiversity standards.

The description of the main findings is also organized around these three themes.

Findings

Gaining a Social Licence to Operate

According to respondents, biodiversity conservation is an increasing concern for organizations and society at large. In certain sectors of activity, notably those based on the exploitation of natural resources, such as forestry and, to a lesser extent, mining, biodiversity initiatives appear to be a mainstream business practice, while in other sectors this type of initiative tends to be overlooked or virtually ignored. The majority of respondents highlight that the integration of policies and management systems in this area concerns an increasing array of organizations from various sectors of activity. While biodiversity conservation initiatives can be quite technical (e.g. impact assessment, development of ecological corridors, reintroduction of species) and are traditionally associated with a specialized expertise, they are increasingly managed through broad-scope management systems and organizational practices (e.g. policies, guidelines, standards, action

plans). The development of biodiversity management certifiable standards or guidelines and the integration of biodiversity within existing environmental standards is part of this trend toward a more managerial and comprehensive approach to environmental conservation. Standards on biodiversity, such as the WHC and the BBOP, offer guidelines to help organizations integrate a complex and often poorly understood concept. More importantly, these standards contribute to the social licence to operate of organizations, which appears to be the main motivation for their implementation:

> From a larger corporate standpoint, initiatives on biodiversity are for corporate reputation. We want to be the preferred provider for energy development (…) We work with the landowners and with the folks to promote biodiversity and to show how we operate in a safe manner. It gives us an increased license to operate in areas around the world (environmental manager in a large mining private company).
>
> The argument is always around securing license to operate, securing continued access to resources (independent sustainability consultant).

Overall, biodiversity management and the implementation of certifiable standards in this area are mainly driven, according to the interviews, by three non-mutually exclusive motivations, which reflect different facets of a sort of social licence to operate: the social acceptability of corporate activities, market pressures and the promotion of a self-regulation rationale. The concept of social licence to operate is often used in the mineral industry to highlight the importance of implementing measures to improve the social legitimacy of operations that may have a significant impact on biodiversity and that may give rise to pressure from local populations (see, e.g., Hall et al., 2015). This concept can be defined as the social approval of and support for organizational activities from stakeholders, particularly the local populations that may be affected by new project developments.

Around 75% of respondents highlighted that the adoption of certifiable standards for biodiversity management enhances the social acceptability of corporate activities for various stakeholders. Some stakeholders, particularly NGOs, such as the WHC, the World Wide Fund for Nature (WWF) or Flora and Fauna International (FFI), actively promote certifiable standards for biodiversity. Other stakeholders may be strongly opposed to the development of corporate activities located near or within specific natural habitats. This is the case, for example, of aboriginal communities whose culture and way of life are closely related to the flora and fauna of regions with fragile ecosystems. From this perspective, certifiable standards on biodiversity management appear to be a reassuring tool to show that the organization is actually committed to preserve, as much as possible, natural habitats and local culture. Certain standards, such as FSC, integrate specific requirements for both the consultation of local populations – including aboriginal populations – and the conservation of ecosystems. This type of standard can be used to improve relationships with stakeholders and prevent possible conflicts related to land occupancy and impacts on biodiversity. Overall, pressures from various stakeholders – including local communities, financial markets, NGOs and industry associations – play a major role in the implementation of new standards for biodiversity management:

> There is definitely pressure from stakeholders, and we work in combination with those stakeholders to address [biodiversity] issues (environmental manager in a in a large mining private company).
>
> Certification is a kind of assurance. It allows us to demonstrate to stakeholders that the system in place is rigorous, properly monitored and well designed. It brings us certain credibility among the local community and environmental organizations (independent environmental consultant).
>
> A lot of financial institutions are now requiring an environmental plan for operations which have biodiversity components. So in order for different partners that we work with to obtain funds for projects, they have to adhere to biodiversity standards set forth by the financial institutions (environmental manager in a in a large private energy company).

Around 75% of respondents mentioned that the adoption of certifiable standards on biodiversity can be driven by economic and marketing purposes such as improving corporate image or entering certain markets. Customers appear to be increasingly concerned about biodiversity and environmental issues in general. As a result, certification logos are regarded as a possible tool to improve corporate image and social licence to operate among customers and other stakeholders. Certain logos can be applied to signs at the site of the protected areas and can positively influence the perceptions of local residents and visitors. For example, the WHC offers different site signs that can be used by certified companies to boost their image: 'Available in a variety of sizes and prices to fit your needs, our beautiful new Conservation Certification site signs are solidly constructed from sand-blasted cedar and made to withstand outdoor elements for decades'.[1] Other logos can be applied to the products themselves and may have a direct impact on consumer behavior or access to certain markets. This is the case for FSC certification, which is increasingly used by customers to select suppliers in the forestry and pulp and paper sectors (e.g. certified wood, paper or cardboard). Overall, although customers are not necessarily well informed about biodiversity-related standards, certifications in this area seem to be increasingly driven by market pressures and competitiveness:

> In the paper industry, FSC has become a requirement to sell a high quality product (independent auditor and consultant).
>
> I think it's about market share and competition with other companies (independent environmental consultant).

Certifiable standards for biodiversity can help organizations promote a rationale of self-regulation through the voluntary implementation of programs and management systems verified by external auditors. Around 25% of respondents emphasized that the practices implemented through these voluntary standards are more stringent than regulations or can complement existing norms, while 80% of the respondents from a certification authority mentioned this. Moreover, in certain countries, regulations on biodiversity are almost non-existent or as not properly applied. From this perspective, the development of certifiable standards for biodiversity may be a relevant tool to

[1] http://www.wildlifehc.org/certification-site-signs/ [16 August 2016].

control the environmental impacts of organizations in various regions worldwide and, therefore, to enhance their social licence to operate in the eyes of stakeholders, including governmental agencies. Some respondents also reported that many stakeholders do not trust governmental agencies, particularly in emergent countries. Because most certifiable standards for biodiversity are developed and audited by environmental NGOs, they can be perceived as more reliable than existing regulations or as a valuable complement to them. Likewise, these standards tend to be more adapted to corporate and stakeholder needs than some regulations developed through a traditional command and control approach:

> When there is a consensus on the definition of a standard, the compliance of organizations is easier to obtain than when this standard is imposed through a top-down approach, such as in governmental regulations (independent biodiversity consultant).

> People wanted to know that what the forest companies were doing were best sustainable practices and there was not a lot of faith in just a government process to regulate it (…) Companies wanted to demonstrate that they were doing the right thing and that they were operating at these high standards (person in charge of certification in a certification body).

Other motivations such as ethical issues or promotion of corporate accountability for biodiversity were also mentioned by respondents. Nevertheless, these motivations appeared to be of secondary importance, and biodiversity certification was essentially regarded as driven by institutional pressures likely to undermine the organization's social licence to operate.

The Outcomes of Biodiversity Standards

Biodiversity certification appears to have both external and internal outcomes. With regard to external outcomes, most respondents observed some improvement in the corporate image and stakeholder relationships. For example, some respondents in the mining and forestry sectors stated that certification facilitated the granting of exploitation permits from governmental agencies. The credibility of environmental and biodiversity initiatives by organizations was also mentioned. Overall, the most common external benefit, mentioned by 72% of respondents, is the improvement of relationships with various stakeholders, including NGOs, governmental agencies and landowners:

> Certification is a tool to develop consensus with various stakeholders on our management of land and biodiversity. This is a way to give voice to different groups (independent auditor and consultant).

> The biggest benefit is the social license, the fact that we can conduct our operations and have a stronger relationship with people that we normally would never talk to (person in charge of certification in a certification body).

People from the private sector were less likely to value this benefit, as only 46% of them highlight this outcome. Although internal motivations were rarely mentioned to explain biodiversity certification, the implementation of standards in this area can produce unexpected organizational benefits, including understanding of what biodiversity really means and how to manage this

multifaceted concept. The majority of respondents mentioned the complexity of biodiversity issues and lack of knowledge in this area in organizations that often ignore or minimize their possible impacts on natural habitats. From this perspective, biodiversity certification can contribute to structure action programs, better understand the raison d'être of natural conservation and give more substance to a misunderstood concept:

> It's always complex and it's unclear exactly what it means to manage biodiversity (environmental consultant in the public sector).

> The certification process provides rigor and obligations to achieve results. It really helped us to improve our environmental performance, particularly with regard to biodiversity (biodiversity manager in the public sector).

Nevertheless, these positive outcomes of biodiversity standards are not automatic and straightforward. Rather, they seem to be uncertain, difficult to foresee and conditional on several factors, particularly employee awareness, involvement of managers and implementation of environmental assessments.

65% of respondents considered employee commitment to be critical for the effectiveness of the implementation of biodiversity standards. Because of their presence on the ground, employees from various sectors (mining, forestry or energy) are often in direct contact with local habitats and surrounding communities. Conversely, many managers are perceived to work in the office, often at a great distance from field operations, which may be located in remote areas. Many employee behaviors (e.g. machinery operation, industrial equipment maintenance, waste disposal and weed control) can have a direct impact on biodiversity. Raising awareness through training and communication is therefore deemed to be essential to the internalization of biodiversity practices. Such internalization also reduces the dependency on external consultants:

> The basic idea is to have a system that can be used by employees themselves, without the need for consultants except for the annual validation of the system (independent sustainability consultant).

> They [employees] need to be part of the process. You can't actually generate outcomes unless you have got them on board and engaged in doing the job (independent biodiversity consultant).

The active involvement of managers was also mentioned by 43% of respondents as being essential to the successful implementation of biodiversity standards, and this point was mentioned more often by people from certification authorities (as 75% of them highlight this). This involvement seems all the more important in that certain standards, such as FSC, require significant changes within the organization. Moreover, measures such as the implementation of biodiversity plans and the consultation of stakeholders depend on the commitment of managers or middle-managers who are not necessarily versed in environmental issues. Overall, the support of managers is needed to internalize the practices required by biodiversity standards:

> The level of managers' commitment plays an important role. There is a whole range of commitment to biodiversity, from very reactive to proactive managers, and this will have a strong effect on its effectiveness (former auditor in the private sector).
>
> You need somebody at the management level who understands the opportunities and risks related to biodiversity for business (environmental manager in in a large mining private company).

As described by nearly 21% of respondents, the assessment of the environmental situation of organizations is a prerequisite for biodiversity actions and the implementation of standards in this area. In the absence of a detailed and high quality assessment, biodiversity initiatives may be disconnected from certain critical issues such as the existence of endangered species or fragile ecosystems surrounding corporate activities. Because biodiversity assessment can be rather technical and specific to each ecosystem, external expertise is most often required – even for large organizations – to implement appropriate measures. Some respondents insisted that environmental assessment must also include a comprehensive analysis of the stakeholders concerned with biodiversity issues and, as far as possible, their involvement:

> We should also know at the beginning what the situation is in terms of biodiversity. It is essential to know what the basic elements of the surrounding environment are. By involving communities we are able to do a proper assessment (environmental manager in a large mining private company).
>
> You need to understand how the communities are dependent on biodiversity, what their cultural use of it might be, what their sort of reliance on it might be, and what their perspectives are and that is an important feed-in into any activity around biodiversity (independent consultant).

Regarding the outcomes of certifiable management standards for biodiversity management, it might be highlighted that interviewees did not tend to mention concrete outcomes in terms of the improvement of the biodiversity performance of these certifiable standards (e.g. lower biodiversity impact). The absence of comments on these specific issues could be attributed to the stage of the evolution of certifiable standards, especially in the case of the newer and more ambitious initiatives such as the EBS.

The Limitations and Drawbacks of Certification

Although most respondents remained rather optimistic about the added value of biodiversity certification for companies and stakeholders alike, around 82% of them did mention some limitations and drawbacks. Their criticisms show the reflexivity of most respondents – including environmental NGOs who developed certain biodiversity standards – with respect to practices they promote. The limitations expressed relate to three main issues:

- the costs and uncertain economic benefits of certification
- the tendency toward a symbolic rather than substantial adoption of certifiable standards on biodiversity

- the complexity, context-specificity and intangible outcomes of biodiversity initiatives.

Around 69% of respondents who mentioned the limitations of certification highlighted its costs and lack of external recognition. The implementation of certifiable standards in this area is perceived as a long and demanding process requiring substantial financial and human resources at every step: biodiversity assessment, development of documentation, recruitment of external experts, training programs, communication, audits and follow-up of the management system. The financial resources required to achieve certification and to sustain the biodiversity management system are not necessarily available, particularly in small- and medium-sized enterprises (SMEs). These problems are exacerbated in times of economic crisis. This is often the case in natural-resource-based sectors due to the cyclical nature of certain markets and activities such as construction and mining, which also pose high risks to biodiversity. As a result, biodiversity certification tends to appear to be an unnecessary expense for companies facing economic difficulties. Moreover, the economic advantages of being certified seem uncertain due to clients' lack of knowledge of specific biodiversity standards or their reluctance to pay more for a product with a biodiversity label or produced by a certified company. The proliferation of new certificates related to biodiversity may also be quite confusing for consumers and stakeholders in general, who are rarely well informed on these issues. As a result, the promotion of biodiversity standards to companies may be a difficult task for NGOs, consultants and organizations involved in this area:

> Ideally, if you have a certified product, you generate a greater income for that product, a greater price point for that product. We have not found that to be the case for our program (consultant in the public sector).

> There's a cost involved. It doesn't come free. (…) In today's economic climate, driving biodiversity programs within organizations is incredibly hard, because they [companies] are trying to reduce costs (independent biodiversity consultant).

In addition, around 50% of criticisms focused on the lack of internalization of biodiversity standards and the emphasis on marketing rather than substantial organizational changes, which could actually challenge business as usual. While only 20% of the respondents from NGOs who mentioned limitations talked about lack of internalization and the emphasis on marketing, 75% of respondents from certification authorities who mentioned limitations highlighted the lack of internalization of biodiversity standards and the emphasis on image issues.

The lack of internalization seems to be mostly related to the motivations for the adoption of biodiversity standards; these motives are most often shaped by the search for the social licence to operate and more rarely by the reduction of biodiversity impacts in itself. In certain cases, the institutional pressures for certification and efforts to improve corporate image can lead to real improvements in internal practices, although such improvements were not initially a major concern. As one environmental manager in the public sector noted, ‘At the beginning, it is often just a façade but, at a certain point, companies are caught out at their own game and, gradually, they feel compelled to be more substantially committed’. Nevertheless, external pressures and the adoption of biodiversity standards do not necessarily translate into substantial initiatives and long range improvements on the ground, due to, among other things, the lack of involvement of managers and employees. The lack of internal knowledge and continuous impetus for biodiversity

management were also mentioned by respondents to explain the rather symbolic adoption of biodiversity standards. Because of their lack of expertise in this area, organizations tend to rely on experts or external consultants who are not continuously present on the ground. The knowledge required to manage biodiversity in daily activities therefore tends to be concentrated on specific individuals rather than disseminated within the organization, particularly at the level of field activities. Moreover, although the certification process tends to create a positive impetus for biodiversity conservation, the follow-up of the management system and long-term commitment of the organization seems uncertain. As a result, the reassuring image of certification can gradually be disconnected from internal biodiversity practices, which require long-term engagement:

> Many companies are interested in obtaining certification because it is requested by customers. When the pressures come from the market, companies are less interested in meeting all the requirements and being virtuous about certification (independent auditor and consultant).

> We observed a strong mobilization during the implementation phase of the standard but, after that… this is an interesting subject but not necessarily a priority for most companies. It takes companies a long time to think about it (person in charge of certification in a certification body).

Around 31% of limitations mentioned by respondents relate to the complexity, lack of measurability and often intangible outcomes of biodiversity initiatives. The complexity and context-specificity of biodiversity issues make the development and implementation of recognized standards in this area more difficult. The promoters of biodiversity certification seem to face a dilemma. On the one hand, international markets and a search for corporate legitimacy require more standardization through companies' adoption of well-established certification programs. On the other hand, the majority of respondents stressed that most biodiversity issues are very specific, context dependent and cannot be covered by a single standard. Such specificity and context-dependency explain the proliferation of regional standards or programs for biodiversity and the difficulty of establishing more recognized worldwide standards that could be used by various organizations. Moreover, the qualitative and contextual nature of biodiversity makes this concept very difficult to measure. When they exist, indicators are generally non-standardized, tailor made and non-comparable from one organization to another. As a result, it is hard to measure possible progress. Likewise, such progress is difficult to translate into financial terms and difficult to demonstrate to stakeholders. As a result, although the certification process makes corporate commitment for biodiversity more visible in the eyes of stakeholders, its concrete outcomes tends to remain, to a large extent, invisible, intangible and immeasurable:

> One of the biggest issues is metrics. How do you actually measure what you need to put in place and how do you know that you're achieving the right outcomes through the process (independent biodiversity consultant)?

> We need to find a way to measure biodiversity on the ground in a more comprehensive way to really assess where we're at and what our impacts are (environmental consultant in the public sector).

It's very difficult to create standards that apply across regions and across ecosystems (environmental consultant in the public sector).

Discussion and Conclusions

The objective of this paper is to analyze the motivations, internalization challenges and outcomes of implementing certifiable standards for biodiversity management. These standards are essentially driven by the need for social licence to operate for organizations whose activities can have significant impacts on natural habitats and may give rise to institutional pressures from stakeholders that can undermine the development of certain projects. The findings on the drivers of biodiversity certification echo the literature on the neo-institutional approach of environmental management standards; the certification process is driven by institutional pressures and the search for social legitimacy rather than internal motivations, which were rarely mentioned in our interviews. This theoretical lens also partly explains the heterogeneous and uncertain internalization of environmental standards, which are often adopted symbolically rather than substantially. Nevertheless, most biodiversity standards have been launched only recently and are not well recognized, unlike environmental management systems such as ISO 14001. As a result, organizations that adopt biodiversity standards are early adopters and proactive on an issue that is often ignored in environmental management. Moreover, certification contributes to structuring new biodiversity practices and the dissemination of new knowledge among managers and employees, who rarely had the expertise to implement substantial programs for conservation. It also appears to encourage better stakeholder relationships through the implementation of environmental initiatives in collaboration with NGOs and other organizations that have more credibility with respect to nature conservation. Finally, through certification for biodiversity, organizations can become more aware of the natural habitats surrounding their activities and how to preserve them.

The study shows that biodiversity certification responds to specific needs in terms of the social acceptability of activities that have a direct impact on natural habitats, particularly in sectors based on the exploitation of natural resources. In these sectors, the implementation of certifiable standards on biodiversity appears to be a sort of bargaining chip to obtain social approval of activities that can disturb natural habitats. Similarly, the study also shows the importance and the main constituents of the corporate social licence to operate. Although this concept is widely used by practitioners as shown in this study, it remains under-studied in the managerial literature. Linked with corporate legitimacy, corporate social licence is more specific and better adapted to biodiversity management. The social licence to operate focuses on certain activities and projects that may provoke important opposition from stakeholders due to perceptions of a project's environmental and social impacts. It is generally grounded in regional – rather than organizational – contexts, characterized by specific issues of natural habitat preservation and maintenance of the quality of life of local communities. Our findings show that the social licence to operate associated with biodiversity standards has three complementary components: the social acceptability of corporate activities and prevention of possible conflict with local communities, the implementation of self-regulation that goes beyond regulations and public policies and the marketing aspects of certification.

This study contributes to the literature on biodiversity management and the internalization of certifiable environmental standards. Very few studies have focused on the organizational and managerial aspects of biodiversity practices in organizations. Moreover, the current literature on biodiversity management is essentially based on information disclosed by organizations and, as a result, the perceptions of various stakeholders are rarely taken into account. By focusing on interviews with managers and stakeholders, this study offers a more comprehensive view of biodiversity management. The findings also illustrate the challenges of internalizing environmental management standards throughout the organization. As highlighted in the literature, these challenges are generally associated with the symbolic adoption of standards and the lack of involvement of either managers or employees, but the findings also show how the complexity, context-specificity and intangible outcomes of biodiversity initiatives are major obstacles to the development of standards in this area.

Finally, the study has managerial implications for organizations interested in biodiversity management or faced with related environmental pressures. Certifiable standards appear to be useful tools to gain a social licence to operate and improve relationships with stakeholders, particularly surrounding populations. Nevertheless, these relationships should not be implemented through the symbolic or superficial adoption of biodiversity standards with the intention of improving the social acceptability of operations. Biodiversity management requires resources, commitment from managers and involvement of employees whose activities can have a significant impact on natural habitats. The literature on EMSs, such as ISO 14001 and EMAS, has shown that the internalization of those standards through the commitment of managers and middle-managers is critical to improve environmental practices and performance in this area (e.g. Qi et al., 2012; Yin and Schmeidler, 2009). Moreover, internal motivations to implement EMSs play an important role in the successful adoption of EMSs (see, e.g., Guoyou et al., 2012; Boiral, 2011; Heras-Saizarbitoria et al., 2011; González-Benito and González-Benito, 2005). Likewise, one can assume that internal motivations and commitment from employees and managers are essential to the internalization and successful implementation of biodiversity standards. Nevertheless, the findings of this study indicate that biodiversity certification is essentially driven by institutional pressures, in contrast with the situation for EMSs such as ISO 14001, where internal motivational factors – i.e. improvement of effectiveness, performance monitoring, cost reduction – are frequently mentioned (Boiral et al., 2017). In this context, to avoid a symbolic and superficial implementation of biodiversity practices, managers should clarify the motivations for the adoption of biodiversity standards, especially in terms of internal improvements. The implementation of these standards should serve both to reduce impacts on biodiversity and to improve the social acceptability of operations located in fragile ecosystems. Biodiversity standards could also help managers and employees to improve their environmental connectedness through a better understanding of the natural habitats surrounding their activities. Finally, our findings suggest that biodiversity certification improves multi-stakeholder relationships and the social licence to operate, as well as improving the image of organizations. Less importance is given to the internal benefits than is the case for standards on EMSs (see, e.g., Heras-Saizarbitoria et al., 2015; Qi et al., 2012).

The main limitations of this study relate to the sample of respondents and the methodological approach. The focus on environmental managers and experts in biodiversity standards leads to a bias toward the perceptions of individuals who are committed to the successful implementation of biodiversity practices, particularly employees. Future studies could investigate how biodiversity is

perceived and taken into account by employees in direct contact with natural ecosystems. Considering the stage of the evolution and dissemination of some of the most ambitious certifiable management standards for biodiversity management recently launched, more empirical work would be advisable in order to shed light on the outcomes of these schemes in terms of biodiversity impact.

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