

**Implementation Effectiveness of Corporate
Environmental Policies & Strategies**

By

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Abstract

Conservation International (CI) has for many years recognized both the impact private sector development has on global biodiversity and the opportunity companies present to achieving biodiversity conservation results if their resources are properly harnessed. As a result, CI has long engaged with numerous companies to support their development and implementation of environmental best practices, including policies and strategies. Several years into this collaborative approach, little effort has been placed on a formal evaluation of how effectively these policies and strategies are being implemented, and what positive, measurable impact, if any, this has had on achieving biodiversity conservation results.

Therefore, this research aims to evaluate a select number of companies in the mining sector with whom CI has worked for several years to determine, to the greatest extent possible, how effective their environmental policy and strategy implementation has been, and identify any linkages to achieving biodiversity conservation results. Research methods included a review of scholarly literature, comparative company research of four mining companies (Alcoa, BHP Billiton, Newmont, and Rio Tinto), and structured interviews of seventeen company and CI representatives.

While research concluded that it is too soon to evaluate if CI's partnerships have lead to biodiversity conservation outcomes, they do appear to have contributed to factors that may enable achievement of outcomes in the longer term. Additionally, while companies have identified performance goals and targets as important components of environmental policies and successful implementation, they have not consistently set them for important environmental issues such as biodiversity, water, and GHG emissions. Government capacity was also an issue raised as key to corporate environmental performance. Finally, a lack of existing scholarly work on corporate environmental performance and implementation of environmental policies was identified. This paper presents several recommendations developed for CI, other conservation non-governmental organizations (NGOs), companies, and the academic community to address key research findings.

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Introduction

Conservation International (CI) has for many years recognized both the impact private sector development has on global biodiversity and the opportunity companies present to achieving biodiversity conservation results if their resources are properly harnessed. Therefore, CI has long engaged with numerous companies to support their development and implementation of environmental best practices, including policies and strategies. Several years into this collaborative approach, little effort has been placed on a formal evaluation of how effectively these policies and strategies are being implemented, and what positive, measurable impact, if any, this has had on achieving biodiversity conservation results. With the recent “green wave” sweeping through the corporate world,¹²³ such an evaluation is more timely than ever to guide both CI and the companies with which CI works to develop approaches that achieve positive results for the environment.

Therefore, the goal of this Master’s Project was to evaluate a select number of companies with whom CI has worked for several years to determine how effective their environmental policy and strategy implementation has been, and identify any linkages to achieving biodiversity conservation results.

Specific project objectives were, to the greatest extent possible, to:

- Evaluate how effective CI has been in achieving its biodiversity conservation mission through engaging the business sector through its corporate partnerships;
- Make recommendations for how CI can design and implement corporate partnerships so they are optimally effective; and
- Make recommendations for how companies can best design and execute environmental policies and strategies that achieve biodiversity conservation results.

Methods

This project focused on CI and four multinational mining companies (Alcoa, BHP Billiton, Newmont, and Rio Tinto) with which CI has partnered on development and implementation of environmental policies and strategies. Research was limited to the mining industry as CI has several long-standing, global relationships with companies in this sector, thus allowing for expected greater ease of comparison and in order to create a manageable pool of interview candidates.

The research was qualitative in nature, conducting limited literature and documentation review, and structured interviews were analyzed using the grounded theory methodology.⁴ Initially a review of peer reviewed literature was conducted to survey existing scholarly work in the realm of corporate environmental policy and strategy development and implementation. Search strings included: corporate environmental policy, corporate environmental strategy, corporate environmental performance, corporate sustainability strategy, corporate sustainability policy, corporate biodiversity strategy, and corporate biodiversity policy.

Subsequent to this broad literature review, a targeted research exercise was conducted for each company considered. This review considered public documentation provided on each mining company's corporate website regarding environmental policies, strategies, and self reporting on performance (with special attention to biodiversity). A common set of questions (see Appendix 1) were applied to the search on each company, helping to create uniform boundaries for the search; this is an approach similar to that used by some socially responsible investment firms as they conduct screening research for their investment portfolios.

This comparative corporate research was followed by a series of structured interviews of company corporate and project level health, safety, environment, and community (HSEC) staff, and CI representatives. Separate interview protocols and informed consent forms were used for corporate and CI respondents (see Appendices 2 - 5). The interview protocol was circulated to thirty-four individuals, with seventeen respondents. The data collected from the interviews was analyzed using the grounded theory methodology. The grounded theory approach was selected to analyze data gathered after the scholarly literature review yielded no appropriate theoretical frameworks by which to evaluate data obtained during structured interviews. Using the grounded theory method, results from interviews were first coded for common concepts and themes, followed by sorting coded data into common groupings and integrating the data into coherent conclusions and recommendations (supplemented by earlier research and

documentation review). The following section details observations made through those various research streams.

Observations

General Literature Research

A general search of scholarly databases on topics and themes related to the implementation of corporate environmental policies and strategies yielded limited useful results. While searches catalogued a growing scholarly focus on general issues surrounding business and sustainability issues, very little was found focusing specifically on corporate environmental policies and strategies, and nothing was found that focused specifically on biodiversity. Additionally, of the limited publications that do describe how a company might go about developing an environmental policy and strategy⁵⁶, they do not include comprehensive analysis of how effective or successful companies have been in implementing those approaches as evidenced in their environmental performance.

Instead, they take an anecdotal or case study approach which highlights good practice examples as opposed to observable trends in the field of environmental policy implementation. Furthermore, these examples, if mentioning tangible performance results at all, tend to focus on financial gains realized by companies that adopted new environmentally-friendly approaches. While this data is extremely important for helping to make the business case to corporate executives to make positive changes in their companies' environmental practices, it does not address the question of whether or not implementation of those environmental policies and strategies is successful and whether or not it is contributing to tangible positive impacts on the environment.

Limitations aside, existing literature reviewed did highlight some useful areas to explore in subsequent phases of this research project: environmental policy and strategy components (including goals, targets, and performance measures), leadership commitment, subscription to voluntary standards (i.e. the Global Reporting Initiative, Carbon Disclosure Project, etc.), partnerships with non-governmental organizations (NGOs), public communication and reporting, stakeholder engagement, organizational structure, and other internal and external factors that impact implementation.

Comparative Company Research

Each mining company was initially evaluated to determine some basic characteristics such as country of headquarters, number of employees, and annual sales (see Table 1). Rio Tinto and BHP Billiton are both dual-headquartered out of the United Kingdom and Australia, while Newmont and Alcoa are both based

out of the United States (US). Alcoa has approximately 107,000 employees globally, followed by Rio Tinto with 96,554, BHP Billiton with 39,000, and Newmont with 15,000. Rio Tinto over US\$53 billion in annual sales in 2007, followed by BHP Billiton with over US\$47 billion, Alcoa with nearly US\$31 billion, and Newmont with US\$5.5 billion.

Table 1: General Corporate Characteristics⁷

	Alcoa	BHP Billiton	Newmont	Rio Tinto
Country / countries of headquarters	United States	United Kingdom, Australia	United States	United Kingdom, Australia
Number of employees	107,000	39,000	15,000	96,554
Annual sales (2007)	\$30,748,000,000	\$47,473,000,000	\$5,526,000,000	\$53,341,000,000

A more in-depth evaluation was then conducted of each company’s leadership commitment to environmental issues, environmental policies and strategies, any more specific strategies or positions on biodiversity, performance across a few select environmental issues directly or indirectly pertaining to biodiversity, and environmental reporting. Appendix 1 includes a chart summarizing observations from content presented on each company’s corporate website.

In the area of demonstrated leadership commitment to environmental issues, three criteria were used to evaluate the companies: an environmental representative (i.e. an individual with prior significant professional experience in the environmental field) sitting on the company’s Board of Directors, a Board-level body that addresses corporate social responsibility (CSR) issues (including environment), and the CEO or President mentioning biodiversity in a public speech. Summarized in Table 2 on the next page, while all four companies have a Board-level CSR body, only one included an environmental representative on their Board, and only one company’s CEO had mentioned biodiversity in a public speech. Alcoa, for example, has Kathryn Fuller sitting on their Board of Directors since 2002; Fuller was the former President and Chief Executive Officer of the World Wildlife Fund (WWF) in the United States.⁸

Table 2: Companies' Demonstrated Leadership Commitment to Environment

CATEGORY	QUESTION	NUMBER OF COMPANIES WITH "YES" ANSWER TO QUESTION	
Leadership Commitment: <i>Is there a demonstrable leadership commitment to environment and biodiversity through...</i>			
	Environmental representation on Group Board?	1	
	Group body at Board level to address CSR issues?	4	
	CEO / President mention of biodiversity in public speech?	1	

Several areas were explored in each company's environmental policy or highest level environmental statement, as illustrated in Table 3 on the next page. In that highest-level environmental policy or statement, three of the four companies acknowledge the importance of stakeholder consultation or engagement; for example, BHP Billiton's Sustainable Development policy commits the company to "engage regularly, openly and honestly with people affected by our operations, and take their views and concerns into account in our decision-making." Three of the four companies' policies also include the following areas: strive for continuous improvement (an ISO 14001 concept), encourage going beyond legal compliance, and encourage environmental reporting. All 4 companies incorporate environmental auditing into their policies.

Table 3: Companies' Environmental Policy Content

CATEGORY	QUESTION	NUMBER OF COMPANIES WITH "YES" ANSWER TO QUESTION
Environmental policy / highest level environmental statement: <i>Does the environmental policy...</i>		
	Include stakeholder (including community) engagement?	3
	Strive for continuous improvement?	3
	Encourage going beyond environmental compliance?	3
	Encourage environmental reporting?	3
	Include auditing / assurance process?	4

Specific to the companies' high-level treatment of biodiversity, as conveyed in Table 4 on the next page, two of the four companies have a public strategy, policy, position, or standard specifically on biodiversity, either as a stand-alone document or integrated into another more broadly-focused document. Rio Tinto, for example, has a stand alone Biodiversity Strategy that the company published in 2004.⁹ All four companies mention the importance of potentially biologically sensitive sites such as World Heritage Sites and protected areas. Newmont's 2007 sustainability report, *Beyond the Mine*, goes even further, revealing their operations overlap with a number of areas of biological importance: "we do not operate any mines in any IUCN Category I-III, Alliance for Zero Extinction or Key Biodiversity Areas; however we do hold mine leases that overlap with an IUCN Category IV area, a RAMSAR wetland and an Important Bird Area."¹⁰ And two of the four companies mention the importance of biologically sensitive species (e.g. endemic, IUCN Red List, restricted range, etc.). None of the companies are reporting at a corporate level on work related to biodiversity offsets, and only one is discussing work on biodiversity action or management plans.

Table 4: Companies' Biodiversity Incorporate into Policies

CATEGORY	QUESTION	NUMBER OF COMPANIES WITH "YES" ANSWER TO QUESTION
Biodiversity in High Level Policy: <i>Does the company address the following biodiversity issues in their corporate level policy / statement:</i>		
	Public strategy, policy, or position on biodiversity?	2
	Mention of importance of sensitive sites (e.g. WHSs, PAs, KBAs, etc.)?	4
	Mention of importance of sensitive species (e.g. endemic, IUCN Red List, restricted range, etc.)?	3
	Biodiversity action / management plans?	1
	Biodiversity offsets?	0

There was an array of findings in the realm of environmental performance, as illustrated in Table 5 found on the next page. Only one company has a biodiversity performance goal; Rio Tinto has set the corporate goal to have a net positive impact on biodiversity. Additionally, one has biodiversity performance targets, two measure their biodiversity performance in some way, and just one company explicitly mentioned involvement in a landscape planning initiative. All companies mention partnerships related to biodiversity with NGOs and other stakeholders. Regarding land use and rehabilitation performance, no company set a high level performance goal, but one company set a target in this realm; BHP Billiton set a land rehabilitation target in their 2007 sustainability report of a “10 percent reduction in the land requiring rehabilitation by 30 June 2012.”¹¹ All four companies reported on their land use and rehabilitation performance. As for climate change and energy use, no company set a goal in this area, but three of the four companies both set targets and reported on their performance. Finally, one company set a water environmental performance goal, while three set targets and all four reported on their performance.

Table 5: Companies' Environmental Performance

CATEGORY	QUESTION	NUMBER OF COMPANIES WITH "YES" ANSWER TO QUESTION
Performance: Does the company have corporate level...		
	Biodiversity goals?	1
	Biodiversity targets?	1
	Biodiversity performance measurement?	2
	Public partnerships with environmental organizations?	4
	Landscape planning / regional conservation initiatives?	1
	Land use / rehabilitation goals?	0
	Land use / rehabilitation targets?	1
	Land use / rehabilitation performance?	4
	Climate / energy goals?	0
	Climate / energy targets?	3
	Climate / energy performance measurement?	3
	Water goals?	1
	Water targets?	3
	Water performance measurement?	4

Regarding environmental reporting (see Table 6), all four companies have web content on biodiversity; published CSR, sustainability, or sustainable development reports that included content on biodiversity; and reported against the Global Reporting Initiative (GRI) and Carbon Disclosure Project (CDP) indicators. However, only one of the four companies mentioned biodiversity in their Corporate Annual Report (Rio Tinto), and two companies report on how much money they expend annually on biodiversity-related efforts (Alcoa and BHP Billiton).

Table 6: Companies' Environmental Reporting

CATEGORY	QUESTION	NUMBER OF COMPANIES WITH "YES" ANSWER TO QUESTION
Reporting: <i>Does the company transparently communicate on environmental and biodiversity initiatives through...</i>		
	Web content on biodiversity?	4
	CSR / Sustainability / SD report with biodiversity content?	4
	Mention of biodiversity in Annual Report?	1
	Biodiversity investment reporting disclosing annual spending?	2
	Reporting against Global Reporting Initiative measures?	4
	Carbon Disclosure Project reporting?	4

Following this comparative research exercise to evaluate each company's web-published information on environmental policies, strategies, and performance, structured interviews were conducted to round-out the data set for the project.

Interviews

Of the seventeen people that were interviewed in May, June, and July of 2008, nine were company representatives and eight were CI representatives. Of the company representatives interviewed, four were from the corporate-level health, safety, environment, and communities (HSEC) staff, and four were business unit personnel from a range of posts. From the CI staff interviewed, three are field-based, and the remaining five are headquarters-based representatives from the field support, science, and private sector engagement divisions. All interviews followed the protocols outlined in Appendices 2 and 4.

Following administration of interviews, excerpts from the notes of each interview were compiled and coded for key concepts pertaining to corporate environmental policies and strategies and their implementation. From there those key concepts were organized into four thematic groupings: policy elements, policy development, environmental performance, and recommendations. Appendix 6 provides a high-level summary of the interview findings, organized along these four thematic groups.

Corporate interviewees identified those elements that were common to their environmental policies and strategies. At the corporate-level, most companies described having an environmental policy that was supported by a combination of standards, strategies, goals, and metrics against which auditing could be conducted. Alcoa's articulation of environmental performance expectations is a bit different, in that their approach is captured in corporate values and principles; however, these express largely similar sentiments to those of other companies' environmental policies. Environmental policies at the project-level are linked strongly to corporate policies, reflecting the mitigation hierarchy and ISO 14001 / continuous improvement approaches for addressing impacts, and being captured within project Environmental Management Plans (EMPs) and Environmental Management Systems (EMSs).

The process and drivers for environmental policy development were also discussed by corporate interviewees. Commonly for these companies, the policy development process involved setting environmental goals and targets and engaging and consulting with key stakeholders internal and external to the company. Key drivers for developing a standard corporate approach to environmental performance included the desire to: create a global internal performance benchmark, develop a competitive differentiation (desire to be perceived as leader), build a good reputation that will allow future access to capital and land, meet stakeholder expectations, recruit and retain qualified employees, and to create a mechanism for being transparent on performance. One respondent from Rio Tinto described a safety

disaster that occurred a decade ago, resulting in several deaths, as the impetus for the company to put corporate-level policies and standards across HSEC issues into place.

Both company and CI interviewees provided thoughts on issues related to corporate environmental performance. In defining successful environmental performance, generally respondents defined it as achievement of various environmental goals and targets, whether outlined at the corporate level or at the project level through EMPs. Performance is therefore measured against a series of goals and targets. Several respondents mentioned that some environmental issues, such as greenhouse gas (GHG) emissions and energy consumption, are easier to set global goals and targets for, because the associated environmental impacts are also global in nature. In contrast, because by their nature water and biodiversity impacts are so site-specific—water may be extremely scarce at one mine site and incredibly abundant at another, and species found at one site are often very different to the next—it is much more difficult to set relevant global performance goals and targets.

All company representatives described participating in internal auditing and external reporting on their environmental performance at the corporate level, and multiple respondents mentioned what time-consuming process auditing and reporting is. Project representatives interviewed who are involved in exploration stage projects are not yet subject to external reporting regimes, but do still have to participate in internal performance audits. Some companies are also beginning to track the link between environmental performance and reputation, though this is typically done in an *ad hoc* fashion at the project level. One Alcoa representative cited a case in Australia where regular stakeholder opinion polling has shown dips in stakeholder perception on the company's environmental performance when either Alcoa or another mining company in the area has an environmental performance challenge.

Regarding performance that pertains specifically to biodiversity, company and CI interviewees discussed several ways they believe biodiversity impacts have been incorporated at the corporate and project levels. Rio Tinto has developed a corporate goal to have a net positive impact on biodiversity, and they and other companies have developed policies and strategies that explicitly incorporate biodiversity considerations. All of the companies address biodiversity impacts through NGO partnerships, and many have used biodiversity risk mapping exercises to identify the overlap of operations with biologically sensitive sites. Each company has also done early project phase biological data collection at various projects, including employment of the Initial Biodiversity Assessment and Planning (IBAP) approach spear-headed by CI. The companies are using some of that information to feed into baseline data for their project Environmental Impact Assessments (EIAs).

Many CI and company interviewees felt that because many of the projects, where partnerships exist, are at an early point in the project development lifecycle, it is difficult to assess what results have been achieved for biodiversity conservation and how successful the companies have been in achieving their environmental performance goals and targets, at least at the outcome level in terms of what the long-term impact has been on the environment. Along that vein, multiple CI interviewees pointed out that there is a difference between gathering information on biodiversity and actually acting on it to achieve a positive conservation result. Furthermore, multiple corporate interviewees said it is difficult to rate how successful they have been in achieving their environmental and biodiversity performance aims, as the definitions of what constitute global environmental best practice and leadership are constantly evolving.

However, many results from the partnerships between CI and companies were identified that may contribute in the future to positive outcomes for biodiversity conservation. In many cases, the biological assessments conducted have led to a generation of new biodiversity knowledge; an increase in awareness on biodiversity and mining issues amongst communities, governments, company staff, and other companies in the project regions; capacity building of local institutions and scientists; and provided information earlier in project development to increase the chances of impact avoidance or mitigation. For example, through mining partnerships with Rio Tinto, Alcoa, and Newmont in West Africa, five new biological surveys were conducted over five years, providing invaluable training opportunities for local scientists and contributing significant data towards defining important sites for biodiversity conservation known as Key Biodiversity Areas (KBAs). Furthermore, in some cases interviewees mentioned that implementation of corporate-driven environmental approaches has led to informal protection of sites through better management. Other efforts by companies have led to direct conservation investments. Another result many interviewees pointed to was the creation of new models by which sustainable mining could take place, including much earlier project development phase intervention through approaches such as IBAP, and in the case of Newmont in Ghana employment of the tools being developed by the Business and Biodiversity Offsets Program (BBOP).

Finally, both corporate and CI interview respondents identified a number of factors internal and external to companies that contributed to successes and challenges in environmental performance. Factors identified as contributing to success included: the existence of corporate policies and standards, which raise awareness of issues in a company and create expectations for performance; an enabling corporate culture and values; a strong leadership commitment; appropriate financial resources; the right mix of staff at the project level to form solid working relationships founded on trust; NGO partnerships; and

stakeholder consultation and engagement. Alcoa, for example, provides financial incentives to individuals for good environmental performance.

Several internal and external factors were also identified as creating challenges for successful environmental performance. Many respondents mentioned limited government capacity or awareness of environmental or biodiversity issues, and related government objectives for development that are perceived to compete with environmental sustainability, and in some cases political instability or volatility. Several respondents also mentioned limited company staff capacity to provide technical support on environmental issues at corporate- and project-level as a challenge; some companies have one environmental specialist expected to cover the gamut of environmental issues, when the knowledge and expertise required for one environmental issue (e.g. GHG emissions) is typically quite different from another (e.g. biodiversity). Other factors internal to companies that were identified as creating challenges include competition for financial resources to address environmental issues (vs. other HSEC issues, for example), changes in company project staffing, the relatively decentralized structure of these large mining companies (ranging in size from 15,000 to 107,000 employees) creating communications and policy enforcement issues, and a relative lack of models or guidelines at project level for how to implement environmental policies (especially related to biodiversity).

Also identified by multiple respondents was the challenge of competing expectations for environmental performance between international stakeholders (e.g. NGOs and campaign organizations asking for adherence to global environmental best practice) and national or local stakeholders (e.g. government and communities with an interest in development and income generation). More generally, challenges of external communications between companies and CI, either unclear or lacking openness and trust, and related, internal tensions between headquarters and the site level offices (both at CI and within companies) over roles and responsibilities were cited. Finally, sheer project size and scale was cited by one respondent, with reference to the Rio Tinto Simandou project in Guinea¹ as one example, as a challenge to successful environmental performance.

Recommendations related to several areas of corporate environmental policy development and implementation were also articulated by several interviewees, and will be discussed further in the Recommendations section of this paper.

¹ Rio Tinto's Simandou project in Guinea, as currently conceived, entails development of a mine that would yield 70 million tons of iron ore per year, is expected to cost in the order of US\$6 billion (see http://www.riotinto.com/media/5157_7081.asp), and in addition to a mine includes construction of a roughly 1000 kilometer railway and deep water port for ore transport and export.

Analysis and Conclusions

As discussed in the previous section, existing literature on the implementation effectiveness of corporate environmental policies is scant. Through the website review and interview process, some reasons for that dearth of information may have emerged. While corporate interview respondents all agreed that goals, targets, and metrics were important components of environmental strategies, investigation into the actual incorporation of these elements into corporate strategies reveals that the firms studied have set very few long term environmental goals. Furthermore, there seemed to be wide nomenclature confusion surrounding what constitutes a goal vs. a target vs. a metric, indicating that perhaps these concepts are still not well understood. Given this wide disparity in interpretation on how to measure environmental performance from companies within the same industry, then, perhaps it is not so much of a surprise that little scholarly work has emerged yet in this realm. As environmental reporting becomes increasingly sophisticated and more standard through efforts such as the Global Reporting Initiative (GRI), it would be interesting to revisit the issues of linkages between corporate environmental policies and positive environmental performance. In the meantime, for the purposes of this research a consensus opinion seemed to emerge that effective or successful implementation of corporate environmental policies could be defined as meeting environmental performance goals and targets to have a positive impact on the environment.

Similarly, research results seem to indicate that it is too early to evaluate if CI's partnerships with mining companies are leading to positive biodiversity conservation results, at the outcome level. Most partnerships are surrounding projects that have not yet actually received final project approval, so only time will tell the full story of if and how these partnerships have led to positive biodiversity conservation outcomes. However, it is important to note that many biodiversity conservation results that may contribute to positive conservation outcomes one day were identified, including increasing scientific knowledge through research and awareness raising activities, earlier provision of biodiversity information to developing projects, and capacity building.

Regarding the issue of capacity, especially among governments and companies, the need to raise capacity levels to address complex environmental issues was raised in nearly every interview. With governments, especially in developing countries where CI tends to operate on the ground, there is a tremendous amount of work to be done to simply raise government awareness of important environmental issues such as biodiversity, and how its protection can lead to more sustainable development and long-term health and prosperity of people. From there, an educated government can make land use planning decisions that take

into account development needs as well as environmental sensitivities. And for cases when development does take place in biologically sensitive places, a better educated government will be able to require what is needed of companies to ensure that their performance does not adversely impact biodiversity. CI has worked with both companies and governments on biodiversity issues, but up to this point has not made a concerted, strategic push to marry those efforts in this way to address development threats to biodiversity more proactively.

Regarding the capacity of companies, despite their large number of employees and annual revenues, they still face capacity challenges in implementing environmental policies at the project level. By nature of being so large, all the mining companies studied operated in a fairly decentralized fashion. When it comes to implementation, there are typically just a handful of specialists at the corporate level available to provide technical guidance to business units. Compounding this is a global mining industry labor shortage due to the minerals boom, which makes qualified technical environmental specialists at the project level even harder to come by. One strategy practiced by all four companies, and mentioned by several interviewees, that can help fill this technical gap is partnerships with environmental NGOs, which gives the companies access to some of the world's leading biodiversity experts through NGO staff and their networks.

Recommendations

Stemming from preceding analysis and conclusions, some key recommendations emerged from this research for Conservation International and other NGOs engaging the private sector, companies, and academia.

As previously mentioned, while it is too soon to evaluate if CI's partnerships have led to biodiversity conservation outcomes, they do appear to have contributed to factors that may enable achievement of outcomes in the longer term. In order to better evaluate this potential linkage in the coming years, CI could establish measures for monitoring their partnerships contributions to outcomes, building these performance measures into all partnerships through relationship agreements or other appropriate mechanisms. Independent auditing of CI's performance against established measures, while potentially expensive, could also be considered to add a layer of objectivity in the assessment. Related, better documentation of results from these partnerships could allow CI to better communicate with interested internal (i.e. field staff) and external stakeholders. Finally, based upon the findings of periodic monitoring against relationship performance measures, holding a regular forum for feedback between CI and partner companies would prove helpful in tweaking relationship activities as appropriate to best achieve desired outcomes.

Another key finding of this research was that while companies have identified performance goals and targets as important, they have not consistently set them for important environmental issues such as biodiversity, water, and GHG emissions. With this in mind, companies could benefit from revisiting and establishing clear environmental performance goals and targets that are measurable and, when achieved, will have a positive environmental impact. Furthermore, because technical capacity of companies on environmental issues, and biodiversity more specifically, is still limited at the project level, companies could consider using NGO partnerships to supplement their technical gaps. Additionally, as early project development phase intervention has been identified as key to address critical environmental issues such as biodiversity, companies can benefit (in terms of longer term cost savings and less project delays) from building this approach into their environmental systems. This research also highlighted that companies tend to underestimate the investment of time, money, and staff needed for proper environmental policy implementation, so companies could benefit from generously estimating these resource needs when embarking on the implementation process.

Government capacity was also an issue raised as key to successful corporate environmental performance. There are several measures both CI and companies could take to support capacity building and awareness-raising of governments on environment issues such as biodiversity. Both CI and companies could support regional planning by governments before concessions are awarded to reduce conflicts over environmentally-sensitive areas and development. Further, companies (especially those in this study with already fairly well developed corporate environmental policies) could help educate governments about why their corporate policies include the components they do (such as consideration for sensitive sites and species); this may encourage governments to in turn require broader private-sector consideration of such issues in development projects. Finally, CI and other NGOs may wish to consider training of and working with governments to explore how biodiversity considerations may better be included in EIAs, as this research highlighted that biodiversity is often not adequately addressed in EIAs currently.

Finally, given the lack of existing scholarly work on corporate environmental performance and implementation of environmental policies, further research in this area could be extremely useful to companies at the beginning or in the midst of developing or implementing an environmental policy. Growing information from reporting initiatives like GRI and CDP, coupled with information from CI and other environmental groups if they track the environmental results achieved from corporate partnerships, could develop a rich data set over the next several years to inform further research into the trends in corporate environmental reporting and performance.

Appendices

Appendix 1: Summary of Targeted Company Research

The following table summarizes information obtained from the corporate websites of Alcoa,¹²¹³¹⁴¹⁵¹⁶¹⁷¹⁸¹⁹ BHP Billiton,²⁰²¹²²²³ Newmont,²⁴²⁵²⁶²⁷ and Rio Tinto.²⁸²⁹³⁰³¹³²³³

CATEGORY	QUESTION	NUMBER OF COMPANIES WITH "YES" ANSWER TO QUESTION
Leadership Commitment: <i>Is there a demonstrable leadership commitment to environment and biodiversity through...</i>		
	Environmental representation on Group Board?	1
	Group body at Board Level to address CSR issues?	4
	CEO / President mention of biodiversity in public speech?	1
Environmental policy / highest level environmental statement: <i>Does the environmental policy...</i>		
	Include stakeholder (including community) engagement?	3
	Strive for continuous improvement?	3
	Encourage going beyond environmental compliance?	3
	Encourage environmental reporting?	3
	Include auditing / assurance process?	4
Biodiversity in High Level Policy: <i>Does the company address the following biodiversity issues in their corporate level policy / statement:</i>		

	Public strategy, policy, or position on biodiversity?	2
	Mention of importance of sensitive sites (e.g. World Heritage Sites, Protected Areas, Key Biodiversity Areas, etc.)?	4
	Mention of importance of sensitive species (e.g. endemic, IUCN Red List, restricted range, etc.)?	3
	Biodiversity action / management plans?	1
	Biodiversity offsets?	0
Performance: Does the company have corporate level...		
	Biodiversity goals?	1
	Biodiversity targets?	1
	Biodiversity performance measurement?	2
	Public partnerships with environmental organizations?	4
	Landscape planning / regional conservation initiatives?	1
	Land use / rehabilitation goals?	0
	Land use / rehabilitation targets?	1
	Land use / rehabilitation performance?	4
	Climate / energy goals?	0
	Climate / energy targets?	3

	Climate / energy performance measurement?	3
	Water goals?	1
	Water targets?	3
	Water performance measurement?	4
Reporting: <i>Does the company transparently communicate on environmental and biodiversity initiatives through...</i>		
	Web content on biodiversity?	4
	CSR / Sustainability / SD report with biodiversity content?	4
	Mention of biodiversity in Annual Report?	1
	Biodiversity investment reporting disclosing annual spending?	2
	Reporting against Global Reporting Initiative measures?	4
	Carbon Disclosure Project reporting?	4

Appendix 2: Company Interview Research Protocol

1. What are the key elements of your company's environmental policy and / or strategy (e.g. environmental impacts / issues it addresses, goals and targets, actions outlined for address environmental impact, etc.)?
2. What were the main drivers for your company developing an environmental strategy?
3. Please describe the process undertaken to develop your company's environmental strategy (e.g. CEO commitment, identifying environmental issues, setting goals and targets, engaging stakeholders, etc.).
4. Does your company have a definition or articulation of successful environmental performance (e.g. key performance indicators, goals, targets)?
 - a) If yes, how is successful environmental performance defined or articulated?
 - b) Is environmental performance measured, and if so, how (i.e. reporting on key performance indicators, etc.)?
 - c) Does your company report on environmental performance, and if yes, how (i.e. Global Reporting Initiative, Carbon Disclosure Project, corporate sustainability report, etc.)?
 - d) A company's reputation regarding environmental performance is important. Do you, and if so how do you, measure reputation and other intangible benefits associated with your environmental performance?
5. Have impacts to biodiversity and conservation considerations been incorporated into your environmental strategy design and execution?
 - a) If yes, how have biodiversity impacts and conservation considerations been incorporated?
6. What, if any, biodiversity conservation results have been achieved through implementation of your company's environmental strategy?
 - a) How have you measured biodiversity results specifically? What are the problems, etc.?
7. What are the most important factors internal and external to your company (e.g. leadership commitment, NGO pressure, etc.) that have contributed to successes, if any, in implementing your environmental strategy and incorporating biodiversity conservation considerations into project development?
8. What are the most important factors internal and external to your company (e.g. lack of implementation support tools, government regulation, etc.) that have created challenges, if any, to implementing your environmental strategy and incorporating biodiversity conservation considerations into project development?

9. Please rate how successful your company has been thus far in implementing your environmental strategy, on a scale of 1 to 5, with 1 being “Not at all successful, our strategy has not been implemented at all” and 5 being “Completely successful, our strategy has been fully implemented.”
 - a) How would you articulate ‘full’ implementation? When do you know when a strategy is fully implemented (e.g. the cycle from policy statement, to pilot programs, to professional function around the issue, to full incorporation into individual deliverables, operating systems, and performance indicators)?
10. Please rate how successful your company has been thus far in integrating biodiversity conservation considerations into project development, on a scale of 1 to 5, with 1 being “Not at all successful, biodiversity conservation considerations have not been integrated into project development at all” and 5 being “Completely successful, biodiversity conservation considerations have been fully integrated into project development.”
 - a) Please explain why you have rated your company in this fashion.
11. Please feel free to discuss here any additional information you think is relevant to this study.

Appendix 3: Company Informed Consent Form

INFORMED CONSENT FORM

For Prospective Research Participants

Please read this consent form carefully and ask as many questions as you like before you decide whether you want to participate in this research study. You are free to ask questions at any time before, during, or after your participation in this research.

PROJECT INFORMATION

Project Title: Implementation of Corporate Environmental Policies and Strategies	Organization: Duke Univ., Nicholas School of Environment & Earth Sciences
Principal Investigator: Marielle J. Canter Weikel	Phone: +1 703-341-2619 / +1 443-695-5625
Location: Durham, NC/ Washington, DC area	Other Investigators: None

PURPOSE OF THIS RESEARCH STUDY

You are being asked to participate in a study designed to better understand implementation of corporate environmental policies and strategies, and linkages to achieving biodiversity conservation. Information gathered in this survey will be useful in informing the future work of Conservation International, NGOs engaging business to advance their missions, and companies striving to meet their environmental responsibilities.

PROCEDURES

You will be asked about your organization's development and implementation of corporate environmental policies and strategies. You will be asked about key elements of your environmental policy, the process of developing your corporate environmental strategy, how your organization is defining and measuring successful corporate environmental performance, and important internal and external factors contributing to success and challenges of strategy adoption. You will also be asked whether and how biodiversity risk and conservation considerations are incorporated into your

policy and strategy design and execution, and what biodiversity conservation results may have been achieved through implementation of your corporate policies and strategies.

USE OF THE RESEARCH MATERIAL

Your responses to the interview questions will be used in a research paper that is a requirement to complete a master's degree in environmental management at Duke University.

FINANCIAL CONSIDERATIONS

There is no financial compensation for your participation in this research.

CONFIDENTIALITY

I will ask you to write your name, workplace, and contact information in your survey response. That way I can contact you if I seek follow-up information, and also I will know which notes pertain to your survey if you want me to add or delete anything. At the end of the survey, I will ask you if I can use your name and workplace in my final research paper. Whatever you prefer is fine. In much of my writing, I will describe my findings without referring to individuals by name, but there may be instances where I would like to attribute a unique or distinctive idea to the person who said it, if the person has agreed to be identified. If you (or any other participant) make remarks about other persons, I will not include that individual's name or position in the company in either my notes or my paper/publications.

PARTICIPATION IS VOLUNTARY

You are free to choose whether or not to participate in this study. There will be no negative consequences if you choose not to participate. You are free to answer questions as briefly or in detail as you wish and to skip questions. You can decide to stop participating at any time, and you can decide if you want me to keep or delete the information you have given me.

FOR MORE INFORMATION

Please contact me, the Principal Investigator (contact information at the top of this form), and I will

be happy to answer your questions. You may also contact my advisor with any questions or concerns: Dr. Deborah Gallagher, deb.gallagher@duke.edu and 919-613-8138.

If you would like to participate, please fill in the lines below. Please keep the second copy of this sheet so that you have this information.

Participant Name: _____

Date: _____

Participant Signature: _____

Appendix 4: Conservation International Research Protocol

1. Please describe the nature of CI's engagement with company X in location Y, including a brief description of any partnership objectives and activities.
2. Have impacts to biodiversity and conservation considerations related to the company's work in location Y been incorporated into mining project development?
 - a. If yes, how have biodiversity impacts and conservation considerations been incorporated?
3. What, if any, biodiversity conservation results have been achieved through the company's work in location Y and / or their partnership with CI?
4. Please describe any factors internal and external to company X that have created challenges or contributed to their success in achieving biodiversity conservation results.
5. Please rate how successful company X has been thus far in integrating biodiversity conservation considerations into mining project development at location Y, on a scale of 1 to 5, with 1 being "Not at all successful, biodiversity conservation considerations have not been integrated into project development at all" and 5 being "Completely successful, biodiversity conservation considerations have been fully integrated into project development."
6. Please feel free to discuss here any additional information you think is relevant to this study.

Appendix 5: Conservation International Informed Consent Form

INFORMED CONSENT FORM

For Prospective Research Participants

Please read this consent form carefully and ask as many questions as you like before you decide whether you want to participate in this research study. You are free to ask questions at any time before, during, or after your participation in this research.

PROJECT INFORMATION

Project Title: Implementation of Corporate Environmental Policies and Strategies	Organization: Duke Univ., Nicholas School of Environment & Earth Sciences
Principal Investigator: Marielle J. Canter Weikel	Phone: +1 703-341-2619 / +1 443-695-5625
Location: Durham, NC/ Washington, DC area	Other Investigators: None

PURPOSE OF THIS RESEARCH STUDY

You are being asked to participate in a study designed to better understand implementation of corporate environmental policies and strategies, and linkages to achieving biodiversity conservation. Information gathered in this survey will be useful in informing the future work of Conservation International, NGOs engaging business to advance their missions, and companies striving to meet their environmental responsibilities.

PROCEDURES

You will be asked about the nature of CI's work with mining companies. You will be asked about if and how biodiversity and conservation considerations have been incorporated into mining project development in your country, what biodiversity conservation results have been achieved, and overall how successful companies have been in integrating biodiversity considerations into project development. Additionally, you will have the opportunity to discuss any additional information you think is relevant to this study.

USE OF THE RESEARCH MATERIAL

Your responses to the interview questions will be used in a research paper that is a requirement to complete a master's degree in environmental management at Duke University.

FINANCIAL CONSIDERATIONS

There is no financial compensation for your participation in this research.

CONFIDENTIALITY

I will ask you to write your name, workplace, and contact information in your survey response. That way I can contact you if I seek follow-up information, and also I will know which notes pertain to your survey if you want me to add or delete anything. At the end of the survey, I will ask you if I can use your name and workplace in my final research paper. Whatever you prefer is fine. In much of my writing, I will describe my findings without referring to individuals by name, but there may be instances where I would like to attribute a unique or distinctive idea to the person who said it, if the person has agreed to be identified. If you (or any other participant) make remarks about other persons, I will not include that individual's name or position in the company in either my notes or my paper/publications.

PARTICIPATION IS VOLUNTARY

You are free to choose whether or not to participate in this study. There will be no negative consequences if you choose not to participate. You are free to answer questions as briefly or in detail as you wish and to skip questions. You can decide to stop participating at any time, and you can decide if you want me to keep or delete the information you have given me.

FOR MORE INFORMATION

Please contact me, the Principal Investigator (contact information at the top of this form), and I will be happy to answer your questions. You may also contact my advisor with any questions or concerns: Dr. Deborah Gallagher, deb.gallagher@duke.edu and 919-613-8138.

If you would like to participate, please fill in the lines below. Please keep the second copy of this sheet so that you have this information.

Participant Name: _____

Date: _____

Participant Signature: _____

Appendix 6: Summary of Interview Responses

Policy elements

- Corporate-level policies contain common elements
 - Policy
 - Standards
 - Strategies
 - Principles
 - Values
 - Goals
 - Metrics
 - Audit
- Project-level policies based on corporate policies
 - Reflect the mitigation hierarchy and ISO 14001 / continuous improvement
 - Are captured in project Environmental Management Plan (EMP) and Environmental Management System (EMS)

Policy development

- Process involves
 - Set environmental goals and targets
 - Internal corporate consultation
 - Stakeholder consultation / engagement
- Drivers include
 - Creating a global internal performance benchmark
 - Competitive differentiation (desire to be perceived as leader)
 - Reputation
 - Access to capital
 - Access to land
 - Stakeholder expectations
 - Employee retention
 - Desire for transparency on performance

Environmental performance

- Definition of success

- Corporate level—some define as achieving goal of net positive impact (NPI), others define it as achieving other targets
- Project level—some defined as achieving NPI, others define it as achieving the EMP
- How is performance measured
 - Reporting against goals and targets that are regionally / locally appropriate—it is easier to set global goals surrounding GHG emissions and energy consumption, more difficult for environmental components such as water and biodiversity that are so site-specific
 - Some companies are beginning to measure the link between environmental performance and reputation, but still done in ad hoc at the project level
- How is it reported
 - Corporate level—companies issue internal and external reports which are very time consuming to compile
 - Project level—projects are required to report as well, though those still in the exploration phase are not reporting externally; however, all are subject to internal auditing processes
- How are biodiversity impacts incorporated into corporate and project decision-making
 - Net positive impact goal
 - Biodiversity policies / strategies
 - Biodiversity position statement
 - Address through partnership
 - Risk mapping exercises
 - Biological information gathering
 - Environmental Impact Assessments
- What biodiversity results have been achieved
 - Biological assessments leading to new biodiversity information generated
 - Raise awareness on biodiversity and mining issues amongst communities, governments, company staff, and other companies
 - Capacity building of local institutions and scientists
 - Protection of sites through better management or formal protection
 - Direct conservation investments
 - Impact avoidance / mitigation

- New models for more sustainable mining, including much earlier project development phase intervention
- Difference between intentions vs. actions, gathering information vs. acting on information
- How would you rate corporate and project-level success on a scale
 - Difficult because of ever-shifting definitions of what is environmental best practice and leadership
- Internal and external factors contributing to successful implementation
 - Existing corporate policies and standards raise awareness of issues in company and create expectations for performance
 - An enabling corporate culture and values
 - Leadership commitment
 - Financial resources—at highest level down to incentives to individuals for good environmental performance
 - Right staff at the individual level to form good relationships
 - NGO partnerships
 - Stakeholder consultation / engagement
- Internal and external factors creating implementation challenges
 - Limited government capacity or awareness, development objectives that are perceived to compete with environmental sustainability, and political instability
 - Limited company staff capacity to provide technical support at corporate level, or expertise at the project level
 - Financial resources competition
 - Company organizational changes
 - Decentralization of large companies - inability to communicate and enforce corporate policies at project level
 - Lack of models at project level for how to implement policies; need new models like the Initial Biodiversity Assessment and Planning (IBAP) approach
 - Reporting time consuming
 - CI and company HQ vs. business unit / field interaction—tension, sometimes unclear roles and responsibilities
 - Communication—poor, or lacking openness and trust
 - Competing international vs. national / local stakeholder expectations
 - Resistance of scientific community to work with private sector

- Project scale
- Fear of less reputable companies taking existing companies' places

Recommendations

- NGO partnerships are very useful in helping companies implement their environmental policies and strategies
- Early project phase / exploration intervention is key to address critical environmental / biodiversity issues
- Companies tend to underestimate investment of time and money needed for proper policy implementation Champions at within company are key to successful performance
- Need for more internal and external documentation on CI partnerships and approaches to help inform field staff and stakeholders in region
- Regular forum for feedback on partnerships between CI and companies would prove helpful as well
- Governments are a critical part of the equation in enabling good environmental performance
 - Regional planning is a proactive measure CI and companies should be supporting so conflicts over sensitive areas and development arise before a concession is awarded
 - Companies could help educate governments about why their corporate policies include components they do (such as consideration for sensitive sites and species)
- Demand for mine or mine product environmental certification could drive greater change in industry

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