Development Banks and Sustainability in the Andean Amazon

This book explores what development banks, governments, and communities have learned in the last decade of careful negotiation between social and environmental protections in the Andean Amazon, and the pressures of a surging infrastructure and development boom.

While mega-dams, highways, and ports are filling up the pipelines of planners, the national governments of Andean and Amazon-basin countries and major development banks have enacted ambitious social and environmental protections. The book traces the development of social and environmental protections after years of struggle by affected communities, going beyond official policies to discover how these reforms work in practice, and ultimately whether they are enough to stem the risks of infrastructure mega-projects. As Chinese public banks play an increasingly important role in the region, the book also demonstrates that there is a risk of governments undercutting their own standards. By contrast, this book shows that making infrastructure work for everyone involved requires mutually reinforcing networks of support and accountability among communities, governments, and development banks.

This book, led by an expert multi-disciplinary, international team, will be of considerable interest to researchers in the fields of development and development economics, geography, anthropology, and ecology, as well as practitioners in development banks and in government regulatory and foreign aid agencies.

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Development Banks and Sustainability in the Andean Amazon
Edited by Rebecca Ray, Kevin P. Gallagher, and Cynthia A. Sanborn
Development Banks and Sustainability in the Andean Amazon

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1 Standardizing sustainable development?

Development banks in the Andean Amazon

Rebecca Ray, Kevin P. Gallagher, and Cynthia A. Sanborn

Introduction

Over the last 15 years, the Andean Amazon has seen a stepwise increase in infrastructure projects, especially in areas that contain high levels of biodiversity and indigenous territory. However, the Andean nations and international development finance institutions (DFIs: multilateral development banks as well as export credit agencies and national development banks operating abroad) involved with these projects have also enacted ambitious social and environmental protections. This combination of events raises the question: to what extent have international DFIs, national governments, and civil society deployed environmental and social safeguards to ensure that infrastructure projects bring shared economic benefits to nations while mitigating risks to ecosystems and communities?

Tropical forests, when they suffer tree cover losses, can drive climate change by becoming net sources of CO₂ emissions, rather than mitigating it through their traditional role as ecological sinks for the world’s carbon pollution. Though seemingly a source of clean energy at first glance, hydroelectric power plants in tropical forests can accentuate climate change significantly. Comprehensive reviews of estimates find that topical hydroelectric plans can emit up to two to three times more emissions than gas, oil, or coal plants (Barros et al., 2011; Steinhurst et al., 2012). This is because methane emissions are more potent from tropical dams, and because new roads and infrastructure sprout as a result of these dams, causing further carbon-emitting deforestation (Fearnside, 1997, 2015; Fearnside and Pueyo, 2012).

Infrastructure expansion, such as paving roads through wilderness areas, often generates severe impacts on ecosystems and species, ranging from deforestation to illegal mining and land speculation (Laurance et al., 2015). Projects relating to natural resource exploitation have similar environmental impacts. Huge changes caused by large dams can lead to the loss of aquatic biodiversity, coastal erosion, and other problems. These environmental impacts are exacerbated when local regulations are relatively weak. For example, in the Brazilian Amazon, every kilometer of legal road in wilderness areas is often accompanied by three kilometers of illegal roads (Barber et al., 2014).
Even improvements of local roads and highways may exacerbate the negative impacts because better road conditions facilitate more and faster traffic in sensitive areas, which, in turn, increases the likelihood of road kill of animals (Benítez-López, Alkemade, and Verweij, 2009; Laurance, Goosem, and Laurance, 2009). Similar impacts can be found around large hydroelectric plants and mining projects in remote areas, as they often depend on the construction of roads and power transmission networks.

Beyond its role in mitigating climate change, the Amazon rainforest also plays a crucial role as the home and the source of livelihood for forest-dwelling people. As Seymour and Busch (2016) state, tropical forests serve a dual purpose of mitigating climate change and supporting human development. Recent estimates suggest that approximately 1 million indigenous people currently live in the Amazon basin, though these estimates are imprecise by their nature (GITPA, 2005; Heck, Loebens, and Carvalho, 2005; INE, 2011; INEI, 2016; Kambel, 2007; Renshaw, 2007; Reyes and Herbas, 2005; SIAT-AC, n.d.). In addition, tens of thousands of rubber-tapping seringueiros, Maroons, and others depend on intact forests for hunting, fishing, and gathering. Deforestation and tree cover loss within the Amazon basin has often been associated with displacement of these traditional communities. For example, Brazil’s Polonoroeste highway project, financed in part by the IBRD and IADB in the early 1980s, resulted indirectly in the arrival of approximately a half-million new settlers into the Amazon rainforest, displacing existing communities. The resulting social conflict garnered international attention and inspired both the IBRD and IADB to adopt new safeguards, ushering in the modern era of environmental and social risk management (ESRM) in DFIs (Blanton, 2007; Eckholm, 1984; Rich, 1994).

The social role of intact forests is especially important in the western Amazon studied here. The area on both sides of the border of Brazil with Peru and Bolivia is known as the “uncontacted frontier,” as it is home to the world’s highest concentration of uncontacted and voluntarily isolated indigenous communities (Survival International, n.d.). While social conflict is frequently a risk whenever new sections of the Amazon are opened to development, in the case of the uncontacted frontier the risks are even higher, as uncontacted tribes by definition have not been exposed to many diseases common in other areas (Shephard et al., 2010; Kimerling, 2008). Both socially and environmentally, then, tropical forests – and especially the Andean Amazon – are indispensable. For that reason, it is important to examine whether the ESRM strategies employed by international DFIs and national governments are effectively ensuring sustainable, broadly shared development.

Given how high the stakes are for the environmental and social outcomes of infrastructure projects in this region, a team of researchers from four countries has examined the role of DFI safeguards and national regulatory frameworks, through a series of case studies found in this volume and listed in Table 1.1.
Table 1.1 National and regional research contributing to this project

<table>
<thead>
<tr>
<th>Country</th>
<th>Authors</th>
<th>Scope of analysis</th>
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<tr>
<td>Bolivia</td>
<td>Lykke E. Andersen, Susana del Granado, Agnes Medinaceli, and Miguel Antonio Roca, Instituto de Estudios Avanzados en Desarrollo (INESAD)</td>
<td>Case studies of three highways: La Paz–Oruro (CAF)</td>
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<td></td>
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<td>Montero–Yapacaní (IADB)</td>
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<td>San Buenaventura–Ixiamas (World Bank)</td>
</tr>
<tr>
<td>Brazil</td>
<td>Julie Michelle Klinger, Boston University</td>
<td>Case study of the Stonipé Ioway ecotourism project (Fundo Amazonia)</td>
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<tr>
<td>Ecuador</td>
<td>María Cristina Vallejo, Betty Espinosa, Víctor López, Susana Anda, and Francisco Venes, Facultad Latinoamericana en Ciencias Sociales (FLACSO)</td>
<td>Case studies of two dams: Baba Multipurpose Dam (IADB initially, though this participation was later cancelled)</td>
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<tr>
<td></td>
<td></td>
<td>Coca-Codo Sinclair Dam (China ExIm Bank)</td>
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<tr>
<td>Peru</td>
<td>Juan Luis Dammert, Universidad del Pacifico</td>
<td>Case studies of the CVIS Highway (CAF) and the Inambari Dam (cancelled, though originally expected to be financed through BNDES)</td>
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Four in-depth qualitative case studies provide the core of this project, exploring the role of national government and DFIs’ ESRM policies in the environmental, social, and economic outcomes of individual infrastructure projects in Bolivia, Brazil, Ecuador, and Peru. In each case study, authors used a variety of qualitative research methods, including field visits, focus groups with key stakeholder groups, and semi-structured interviews with representatives of government ministries, DFIs, project contractors, and civil society groups, as well as archival and legal research. In Ecuador, María Cristina Vallejo, Betty Espinosa, Francisco Venes, Víctor López, and Susana Anda investigated the histories of the Coca-Codo Sinclair Dam, financed by the Export-Import Bank of China, and the Baba Multipurpose Dam, originally financed initially by the IADB (Inter-American Development Bank, though the IADB later cancelled their participation in the project). In Peru, Juan Luis Dammert researched the performance of the Corredor Vial Interoceánico del Sur (CVIS) highway, routes 2–4, financed by CAF (the Development Bank of Latin America), and the Inambari Dam, initially expected to be financed by BNDES (Brazil’s National Bank for Economic and Social Development), though the project’s cancellation meant that BNDES was never formally involved. In Bolivia, Lykke E. Andersen, Susana del Granado, Agnes Medinaceli, and Miguel Antonio Roca explored three highway projects: one from La Paz to Oruro, financed by CAF; a second from Montero in the outskirts of Santa Cruz to Yapacaní on the way toward Cochabamba, financed by IADB; and a third from San
Buenaventura to Ixiamas in the northwestern Bolivian Amazon, financed by the World Bank. Finally, as a separate, contrasting case, Julie Michelle Klinger worked with the planning process for the Stonipê Ioway eco-tourism project, funded through the Fundo Amazonia, a BNDES-managed fund for participatory sustainable development projects.

This introduction synthesizes the results of these studies. The first section reviews the varying ESRM strategies across DFIs and how they have evolved over time. The second section shows the surge of infrastructure projects in the region since 2000, and the social and environmental problems that have resulted. The third section delves into case studies, showing the obstacles to effective use of environmental and social safeguards in the projects examined here. Specifically, it highlights three areas of shortcomings that have emerged in our research: effective stakeholder engagement, comprehensive environmental impact assessments, and transparency and accountability for government, DFI, and implementing actors. A discussion section then draws lessons from all of the work presented here, showing how these obstacles can only be overcome with the formation of mutually supporting networks incorporating DFI, government, and community stakeholders.

Environmental and social risk management in international development finance institutions and Andean governments

ESRM has become a major focal point of reforms in international DFIs as well as among Andean governments, especially with regards to infrastructure projects. Over the last several decades, in response to campaigns by communities affected by projects, partnering with global NGOs, international DFIs and governments have adapted a series of environmental and social safeguards (ESS), “rules or institutions that help ensure that investments meet minimum social, environmental, and governance standards” (Larsen and Ballesteros, 2013). International DFIs can employ these safeguards at various stages of the project cycle: initial screening, due diligence prior to approval, the approval decision itself, and monitoring throughout project completion (Nolet et al., 2014). National governments can employ them through related ministries that oversee projects (including transportation, communication, or energy ministries), ministries that oversee government performance across sectors (such as labor, environment, and culture ministries), and, when problems arise, their judicial systems.

ESRM aims to bring significant benefits — and limit costs — for project stakeholders of all types, by ensuring that projects do not bring unforeseen environmental damage, social conflict, or governance misconduct. Correctly designed and implemented ESRM can help ensure that the economic goals of a project are met, that it is completed on time, and that the experience strengthens the capacity of all of the institutions involved, as Table 1.2 illustrates.
Table 1.2 Benefits of effective ESRM

<table>
<thead>
<tr>
<th>Stakeholder(s)</th>
<th>Benefits</th>
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<tbody>
<tr>
<td>Global</td>
<td>Equitable use of resources</td>
</tr>
<tr>
<td></td>
<td>Enhancement of global public goods</td>
</tr>
<tr>
<td>Development banks</td>
<td>Greater project effectiveness</td>
</tr>
<tr>
<td></td>
<td>Mitigation of environmental and social risk</td>
</tr>
<tr>
<td></td>
<td>Realization of broader development goals</td>
</tr>
<tr>
<td>Borrower governments</td>
<td>Better management of natural resources</td>
</tr>
<tr>
<td></td>
<td>Strengthened institutional capacities</td>
</tr>
<tr>
<td></td>
<td>Mitigation of environmental and social risk</td>
</tr>
<tr>
<td></td>
<td>Realization of broader development goals</td>
</tr>
<tr>
<td>Local communities</td>
<td>Enhanced voice and ownership</td>
</tr>
<tr>
<td></td>
<td>Reduced vulnerability</td>
</tr>
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<td></td>
<td>Improved livelihoods</td>
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Source: Gallagher and Yuan (2017).

**Governance tensions between DFIs and national governments**

Infrastructure projects financed by international DFIs bring to bear a tension intrinsic to what Casaburi et al. (2000) refer to as the “triangular relationship” between development banks, borrowing governments, and civil society. This relationship has evolved dramatically over the last half-century in the Amazon basin. As this section describes in detail, all three of these sets of actors have become more active in overseeing the governance of infrastructure projects. With civil society pressure, national governments and DFIs have enacted sweeping protections for affected communities.

Casaburi et al. (2000, 499) argue that as MDBs’ interaction with governments in project oversight evolved, they developed an “almost monopolistic” claim over definitions of “good government” and the components of effective project management. Civil society actors reacted by pushing for greater transparency and participation. Borrower nations, meanwhile, grew to have an ever more important share of the global economy and, in the words of Humphrey and Michaelowa (2003), began to exercise their ability to “shop” among MDBs for the most favorable terms for their project pipelines, taking into account the different characteristics of Casaburi et al.’s “triangular relationship” when working with different DFIs. For example, Nelson (2000) argues that the World Bank developed a “prescriptive” approach to safeguard implementation, while the IDB developed an approach that allowed “staff and borrowers to negotiate within broader policy guidelines” (406).

Because of these differences in DFI approach, MDBs with relatively more deferential approaches to ESRM (as described in more detail below) may have an advantage in attracting project proposals. Humphrey (2015) describes the “hassle factor” of DFI safeguards, quoting an interview source with an IDB staffer who remembered Brazilian resistance to working with the IDB as
a reaction summarized as “Not on our life, you’ll come running in here with your safeguards.” Thus, borrowing countries’ new bargaining power, together with new competition in the development finance sector by newcomer and growing DFIs such as the AIIB, NDB, and China’s DFIs, has raised concerns among observers about the possibility of a “race to the bottom” among DFIs to maintain their relevance (see for example Hecan, 2017; Hillman, 2018; Wang, 2017).

Furthermore, the World Bank has stated that what Nelson (2000) refers to as a “prescriptive” approach to safeguard application circumvents national institutions, creating new obstacles for them while not supporting them in developing and enforcing their own standards and practices. The World Bank Independent Evaluation Group (IEG, 2010) found that its surveys of borrowing countries uncovered an awareness of World Bank Group staff of “the discouraging effect of safeguards and Performance Standards on clients” (53). Specifically, the majority of investment officers surveyed were unsatisfied with WBG impact on building borrower capacity. Given these concerns, it is perhaps unsurprising that the World Bank’s recent safeguard reforms, expressed in its Environmental and Social Framework (ESF), replace rules that projects must meet with values that they must uphold, accompanied by non-binding “guidance notes” and templates for governments to use in reporting how their projects meet the stated values. The World Bank’s stated goal in this transition is to ease the tension between MDB and government, and shift from project oversight to supporting local institutions in their managerial capabilities (World Bank, 2017).

Nonetheless, civil society statements regarding the World Bank’s less prescriptive approach indicate concern that national governments may not be equipped to have exclusive oversight over projects. The Bretton Woods Project (2018) characterizes the reactions of civil society groups active in monitoring development finance as “apprehensive” and Markowitz (2018, 2) states that “These actors are concerned that the new ESF dilutes the World Bank’s standards, allowing the use of countries’ weaker policies and limited implementation capacities, which may compromise project impacts on the environment or nearby communities.”

Borges and Cruz (2018) examine case study evidence on the impact of this greater reliance on “country systems” of standards and enforcement, through the World Bank’s ESF as well as the emergence of newcomer development finance sources, in Brazilian infrastructure finance. Their assessment is that this approach has the potential to ensure national “buy-in” for the environmental and social standards that are applicable, but that to date major shortcomings still exist in the Brazilian governments’ capacity to oversee projects. Furthermore, they find that DFIs largely lack policies for how to respond when national governments roll back existing standards (as discussed further in Box 1.1, below).

The findings of Borges and Cruz (2018) reflect the broader tensions intrinsic in shared governance between DFIs and national governments. The case
Our work shows important gains in national protections across the Andean region since the turn of the millennium. For example, during the planning for the CVIS highway system in Peru, CAF assisted the national government in establishing oversight bodies for infrastructure projects (Dammert Bello, 2018). Furthermore, in 2008, Peru’s Environment Ministry was established, creating an institutional platform for project oversight (Lanegra, 2014). Ecuador ratified a new constitution enshrining the rights of nature, meaning in practice that anyone can represent Pachamama (Mother Nature) and sue polluters (Tanes-escu, 2013). All three countries have enacted prior consultation protections for indigenous communities, codifying their ratification of ILO Convention 169 on Indigenous and Tribal Peoples (Ray, 2018).

However, these protections create considerable tensions in countries whose economies are heavily concentrated in mining, oil, and gas projects, which are often located in environmentally sensitive and/or indigenous territories (Lalander, 2015; Martínez Alier, 2015). Indeed, Andean governments have faced intense pressure to roll back these protections in the wake of the end of the most recent commodities supercycle. In Ecuador, for example, this tension between codified environmental rights and a drive to expedite new oil development was manifested in limits placed on environmental NGOs, culminating in the forced closure of the nation’s largest environmental organization, Fundación Pachamama, in 2013 (Appé and Barragán, 2017). In Peru, government officials anxious to accelerate investment have tried to avoid granting the right to prior consultation of communities regarding proposed extractive and infrastructure projects in their territories, either by questioning their indigenous identities or by arguing that concessions were already granted to investors before the Law of Prior Consultation came into effect (Pozo, 2012; Sanborn et al., 2016). All three countries’ governments have lessened the limits on development in parks and other protected zones (Ballón et al., 2017).

This rapid fluctuation of environmental and social protection levels is intrinsically linked to the Andean nations’ dual identities as extractive countries and democracies. However, it underlines the need for mutually reinforcing partnerships with DFIs during infrastructure planning and execution. National protections reflect not only the will of the voters, but also the governmental priorities at different points in business and commodity price cycles. International DFIs have the capacity – if properly put into action – to be active partners in the oversight of infrastructure projects in sensitive territories.

Studies in this volume elaborate more on how the interactions between these actors can reinforce each other’s capabilities or leave gaps. For example, Ray’s quantitative analysis shows that DFI-financed infrastructure projects had the least associated deforestation in cases where both the national government and DFI had safeguard policies in place. However, the Ecuadorian case
study of the Baba Multipurpose Dam shows an instance in which even a DFI with ambitious safeguards in place (the IDB) had limited recourse when a project did not meet their standards. After the IDB pulled out of Baba, the project continued with Ecuadorian government funds, without the accountability mechanism of the IDB to serve as a forum for stakeholder grievances. Thus, the evidence in this volume points to the conclusion that for this shared governance arrangement to yield sustainable and inclusive outcomes, it must consist of mutually reinforcing networks between lenders and governments.

**ESRM: Amazon-basin governments**

Over the last few decades, Andean governments have enacted legislation that seeks to enhance environmental integrity and protect the rights of communities – especially indigenous communities – affected by new development projects. New constitutions in Ecuador (2008) and Bolivia (2009) enshrine environmental conservation and sustainable development as key roles for the central government. Ecuador’s constitution goes so far as to recognize rights for nature itself, effectively allowing all parties to sue on behalf of nature in cases of environmental degradation, without having to first show that their private property was damaged in the process (Art. 71). Peru established its Environment Ministry in 2008 and tasked it with overseeing national environmental policy and performance, and giving technical assistance in environmental management to national and sub-national governments.

Regarding the rights of indigenous communities, all four nations studied in this volume enshrine the right to free, prior, and informed consultation regarding proposed projects that affect them. Table 1.3 traces the history of the adoption of prior consultation rights across the four nations studied in this volume. New constitutions, the ratification of International Labour Organization Convention 169 on Indigenous and Tribal Peoples (commonly referred to as ILO 169), and the adoption of national legislation codifying commitments made in ILO 169 emerged in the 1990s and 2000s, in the context of newly empowered coalitions of indigenous and environmentalist organizations.

The new constitutions listed in Table 1.3 enshrine indigenous rights, though they vary in their specificity. For example, Peru’s 2009 constitution recognizes indigenous law and languages, but does not call for consultation in particular cases (Congreso Constituyente Democrático, 1993, Art. 48, 89). Brazil’s 2008 constitution calls for to prior consultation in cases of the use of water and mineral resources on indigenous lands (Congresso Nacional do Brasil, 1988, Art. 231). Ecuador calls for free, prior, and informed consultation, but only relating to non-renewable natural resources therein (Asamblea Nacional Constituyente de Ecuador, 2008, Art. 57, sec. 7). Bolivia’s constitution is the broadest in scope, declaring that indigenous communities have the right “to be consulted through appropriate procedures, and in particular through their own institutions, each time legislative or administrative measures
Table 1.3 Major milestones in the codification of indigenous consultation rights

<table>
<thead>
<tr>
<th>Country</th>
<th>Constitution</th>
<th>ILO 169 ratification</th>
<th>National policy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bolivia</td>
<td>2009</td>
<td>1991</td>
<td></td>
</tr>
<tr>
<td>Ecuador</td>
<td>2008</td>
<td>1998</td>
<td>2010 Ley Orgánica de Participación Ciudadana</td>
</tr>
<tr>
<td>Peru</td>
<td>1993</td>
<td>1994</td>
<td>2011 Ley del Derecho a la Consulta Previa a los Pueblos Indígenas u Originarios</td>
</tr>
</tbody>
</table>


are foreseen which might affect them” (Asamblea Constituyente de Bolivia, 2009, Art. 30, authors’ translation).

All four countries have also ratified the International Labour Organization’s Convention 169, the Indigenous and Tribal Peoples Convention of 1989. ILO 169 enshrines indigenous communities’ rights to decide their own priorities for the process of development as it affects their lives, beliefs, institutions and spiritual well-being and the lands they occupy or otherwise use, and to exercise control, to the extent possible, over their own economic, social and cultural development.

(ILO, 1989, Art. 7)

Furthermore, it calls on governments to “consult the peoples concerned, through appropriate procedures and in particular through their representative institutions, whenever consideration is being given to legislative or administrative measures which may affect them directly” (Art. 6). In addition to ILO 169, all of these countries have also approved the 2007 United Nations Declaration on the Rights of Indigenous Peoples, which states that

Indigenous peoples shall not be forcibly removed from their lands or territories. No relocation shall take place without the free, prior and informed consent [FPIC] of the indigenous peoples concerned and after agreement on just and fair compensation and, where possible, with the option of return.

(UNGA, 2007, Art. 10)

The importance of ILO 169 should not be understated. As Baluarte (2004) and Larsen (2016) note, the convention brought a seismic shift in how governments and communities approached resource disputes. It enshrines the
rights of indigenous communities to participate in decisions impacting them and to decide if, when, and how they are to integrate with surrounding cultures. However, ratification is only the first of several steps in the process of enacting the convention. ILO 169 requires that signatories ensure that agencies or other appropriate mechanisms exist to administer the programmes affecting the peoples concerned, and shall ensure that they have the means necessary for the proper fulfilment of the functions assigned to them … [including] the proposing of legislative and other measures to the competent authorities and supervision of the application of the measures taken, in co-operation with the peoples concerned.

(Congreso de la República, 2011, Art. 33)

Ecuador and Peru have enacted national laws that codify these commitments. Peru’s Prior Consultation Law is by far the more exacting of the two, requiring a process of seven steps that include a central role for indigenous organizations and institutions (Art. 8). For more on these legal protections, see Sanborn, Hurtado, and Ramirez (2016), Ray and Chimienti (2017), Sanborn and Chonn Ching (2017), and Saravia López and Rua Quiroga (2017).

**Historical context: Buen Vivir and ESRM policies in Amazon-basin countries**

It is important to note that these reforms often emerged from the government acknowledgment and incorporation into formal law of the concepts related to the Buen Vivir (living well) framework, which joins together the existing Andean indigenous concepts of the Kichwa (Alli Kawsay and Sumak Kawsay), Quechua (Sumak Kawsay), Awajún (Tajimat Pujut), Aymara (Sumak Qamaña), and other communities (with local variations in spelling) (Merino, 2016; Viteri Gualinga, 2002). Many scholars (including Hidalgo-Capitán and Cubillo-Guevara, 2017, Merino, 2016, and Viteri Gualinga, 2002, among others) have noted that these concepts are not monolithic but rather multifaceted and varying across the Andean region. Nonetheless, commonly cited values include spiritual transcendence, social harmony, and living in balance with nature.

Scholars differ on tracing the connections between these traditional concepts and legal documents that establish the framework for economic and social development. Viteri Gualinga (2002) argues that the concept of development is itself alien to Andean indigenous cultures, which in some instances lack words or concepts to define material deprivation. Hidalgo-Capitán and Cubillo-Guevara (2017) nonetheless trace three aspects of Buen Vivir (spirituality, social relations, and environmental sustainability) to tripartite coalitions (among indigenous activists, economic leftists, and environmentalists) that supported and participated in the drafting of new constitutions in Ecuador and Bolivia. Merino (2016) notes that the framework is not as relevant in
Peruvian political discourse, though the concepts have been more generally incorporated into a broader “agenda of self-determination, territority, and environmental regulations” (282).

The Ecuadorian and Bolivian constitutions explicitly reference these indigenous concepts of Sumak Kawsay (in Ecuador) and Sumak Qamaña (in Bolivia) (Asamblea Constituyente de Bolivia, 2009, Art. 8; Asamblea Nacional del Ecuador, 2008, Art. 14). But as Merino (2016), Radcliffe (2012), and Viola Recasens (2014) explain, these two documents diverge in the emphasis they give to the social and environmental priorities within the Buen Vivir framework. Bolivia’s constitution gives more emphasis to the social aspect of Buen Vivir, explicitly recognizing the right to formal autonomy for indigenous communities and their right to be consulted regarding any use of natural resources in their territories (Art. 403). Ecuador’s constitution gives more emphasis to the environmental aspects of Buen Vivir: while it does not recognize the same indigenous rights as Bolivia’s constitution, it gives Pachamama (Mother Nature) her own rights, which anyone can champion in the courts, effectively allowing lawsuits to be brought against cases of environmental damage without requiring plaintiffs to first show that their private property was affected (Art. 71).

Acosta (2008) argues that despite these national variations, an underlying commonality in all of the legal reforms discussed here is the right of indigenous communities to define and work toward their own goals for themselves. In contrast, Viola Recasens (2014) lays out a tension between this vision of self-determination and the more concrete national development plans and legal frameworks for natural resource use, which often refer to more developmentalist concepts of efficiency, productivity, and competitiveness. These themes, of community-defined goals and the tension between that vision and policy-makers’ pipelines of growth-oriented projects, are central to this volume.

This tension reflects policy-makers’ dilemmas in answering competing calls to favor the demands of coalitions formed around conservation or growth interests, and their challenge of deciding how seriously and how soon to take into account the views of affected communities, who may or may not see these projects as amenable with their self-identified goals for their quality of life. The contrast in these approaches to infrastructure development is especially visible in the case studies of Peru and Brazil in this volume. Both Peruvian case studies serve as cautionary tales against designing and moving forward project plans before incorporating the interests of the local populations. While Peru’s CVIS highway routes 2–4, profiled here, had post-hoc safeguards applied, those safeguards were not present in the decision process prior to project approval and could only partially mitigate the environmental devastation linked to these highway routes. The Brazil case study stands in stark contrast, showing that it is possible for planners to follow the lead of local communities, waiting for the stakeholders themselves to state their own goals and develop projects around those priorities. Indeed, the Brazil case
study here has a uniquely important place in this volume. By describing a process of community-driven development planning, it casts a contrasting light on the other, more traditional cases presented here, and demonstrates the distance that can emerge between project outcomes and stated governmental goals of inclusion and sustainability.

**ESRM: international DFIs**

The current ESRM strategies of the DFIs studied here came about through pressure from affected communities and civil society, as well as the opportunity for concessional financing through new global sustainability initiatives. The history of the adoption of these safeguards shows that they are best characterized as neither the product of enlightened DFI management nor impositions by distant DFIs onto host countries, but rather as reactions of DFIs to changing contexts both within borrowing nations and globally.

The history of DFI safeguard development is especially relevant in South America, given the catalytic function that (Brazilian) Amazonian deforestation played in spurring international DFI ESS reform, as Rich (1994) and Blanton (2007) explain. Between 1981 and 1983, the World Bank lent $443.4 million to Brazil for projects related to Polonoroeste, Brazil’s Amazonian highway and agricultural expansion program. Blanton (2007, 254) refers to the Polonoroeste project, financed by the IBRD (and to a lesser extent the IADB), as the “paradigm case of controversial World Bank projects and effective NGO opposition.” Although World Bank involvement was conditioned on government commitments to respect established indigenous territories and nature reserves, the ensuing rapid migration of a half-million settlers into the newly accessible forest outpaced legal protections, leading to widespread deforestation and displacement of traditional communities. In response, civil society united in so-called “glocal” efforts, bringing together global NGOs and local affected communities and winning allies within the US government, which holds significant sway on the decision-making bodies of MDBs such as the World Bank and the IADB. Plater (1988), Wirth (1998), and Rich (1994) credit these alliances with spurring a wave of DFI reforms. By the end of 1985, the World Bank had halted its involvement in Polonoroeste, and both the World Bank and the IADB had begun to develop the safeguards they currently employ. Within a few years the World Bank had systematized its policy on environmental impact assessments (EIAs, 1990) and prior consultation with affected indigenous peoples (1991). The IADB likewise enshrined (1990) and later codified (1995) the principle of prior consultation.

CAF and the Export-Import Bank of China adopted their safeguards in response to different, though still external, pressure. In 1992, the Global Environment Facility was established in the preparations for the Rio Summit, to support qualifying sustainable development projects. In 2009, the Green Climate Fund was established at the United Nations Climate Change Conference
Development banks in the Andean Amazon

in Copenhagen, with a similar mission. In order to qualify for accreditation by these two organizations, CAF had to establish its own formal ESS out of the general principles that had guided its lending beforehand (CAF, 2010). In 2015, CAF published formal safeguards to govern its joint projects with GEF (CAF, 2015) and received GEF accreditation (GEF, 2015). In 2016, CAF published overall ESS and received accreditation with the GCF (CAF, 2016; GCF, 2016).

Unlike the MDBs listed above, the Export-Import Bank of China (CHEXIM) introduced reforms after pressure from its own national government rather than from civil society or international organizations. The China Banking Regulatory Commission (CBRC), together with China’s Ministry of Environmental Protection, published a new “Green Credit Policy” in 2007, calling on banks to take responsibility over the environmental impact of their lending projects (Aizawa and Yang, 2010). Five years thereafter, the CBRC issued another decree, the “Green Credit Guidelines,” encouraging banks to create their own criteria for environmentally responsible lending (CBRC, 2012). In 2016, CHEXIM complied by publishing its “White Paper on Green Finance,” which makes specific commitments to “foreground” and mitigate social and environmental risks in its loans.

Currently, the international DFIs that operate in the Andean Amazon have developed a wide variety of their own ESRM approaches, as Table 1.4 shows. Multilateral development banks (MDBs) based in the global North (the World Bank and the Inter-American Development Bank) have honed their practices over decades of work, yielding high standards that are applied to each loan application, regardless of the varying national standards that may apply in different borrowing country contexts. They condition their loans on meeting harmonized global standards, so Table 1.4 refers to these DFIs as practicing a “conditional harmonization” ESRM approach. The public-sector lending windows of these DFIs (which Table 1.4 refers to as the IBRD and IADB) also can offer concessional financing and even grants for occasions where borrowing governments find themselves unable to meet those standards, so Table 1.4 refers to them as following a “capability enhancement” approach. On the opposite end of the ESRM spectrum, developing countries’ national development banks, when operating abroad, usually recognize the standards used by borrowing countries, and they do not condition their loans on countries’ ability to meet their own standards. Nor do they offer borrowers assistance in reaching their own standards.

Between these two extremes are the private-sector windows of the Northern-based MDBs (the International Finance Corporation and the Inter-American Investment Corporation), which practice conditional harmonization but do not offer capability enhancement. The other DFI between the extremes is the Development Bank of Latin America (CAF). CAF recognizes the national standards of each proposed project but offers
concessional finance for public-sector borrowers that need help reaching their own standards: a national recognition strategy with capability enhancement.

Table 1.5 explores these differences in more detail. All of the DFIs shown here require environmental impact assessments, and also require that projects meet host country environmental standards. Those with *capability enhancement* offer concessional loans when needed to help borrowing countries meet those standards. Those with *conditional harmonization* bring their own standards to bear as well, including prior consultation protections in all cases, and grievance mechanisms in most cases. Within the last decade, the World Bank has also enacted requirements for projects to have the free, prior, and informed *consent* of affected indigenous communities before receiving approval through either the IBRD or IFC, though too few projects have been completed under this framework to compare their outcomes to other projects across the board.

As the case studies discussed below show, there is no “one-size-fits-all” approach that is appropriate for every project. CAF’s approach of national recognition with capability enhancement has been crucial, at times, to give space to locally specific priorities and building institutional capacity to meet those priorities. At other times, the conditional harmonization of the IBRD expanded the scope of environmental considerations beyond what national law would foresee and managed *indirect* as well as *direct* causes of deforestation. Thus, while these four categories of lending denote four different approaches to project oversight, they do not necessarily prejudge DFIs’ ability to carry out successful projects.¹

Furthermore, even DFIs without conditionality associated with harmonized standards often have general guidelines meant to steer lending activities toward more sustainable outcomes. For example, CAF’s “Environmental Strategy” and the “White Paper on Green Finance” by the Export-Import Bank of China set out the principles that their loans are expected to follow (CAF, 2010; CHEXIM, 2016). Table 1.6 explores the coverage of guidelines and principles on a thematic basis. All of the international DFIs that are active in the Andean Amazon have publicly committed themselves to the importance of fostering development projects that further social inclusion and environmental sustainability.

<table>
<thead>
<tr>
<th>Capability deference</th>
<th>National recognition</th>
<th>Conditional harmonization</th>
</tr>
</thead>
<tbody>
<tr>
<td>BNDES</td>
<td>IFC</td>
<td></td>
</tr>
<tr>
<td>CDB</td>
<td>IIC</td>
<td></td>
</tr>
<tr>
<td>CHEXIM</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Capability enhancement</th>
<th>National recognition</th>
<th>Conditional harmonization</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAF</td>
<td>IADB</td>
<td></td>
</tr>
<tr>
<td>IADB</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Adapted from Gallagher and Yuan (2017).
<table>
<thead>
<tr>
<th>National recognition</th>
<th>Capability deference</th>
<th>Capability enhancement</th>
<th>Conditional harmonization</th>
<th>Capability deference</th>
<th>Capability enhancement</th>
</tr>
</thead>
<tbody>
<tr>
<td>BNDES</td>
<td>CDB</td>
<td>CHEXIM</td>
<td>CAF</td>
<td>IFC</td>
<td>IIC</td>
</tr>
<tr>
<td>Environmental impact assessments</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Host-country environmental standards</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Assistance for meeting standards</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>International competitive bidding processes</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Formal prior consultation processes</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Formal prior consent (FPIC) processes</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Grievance mechanisms</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Project-level grievance mechanisms</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

Source: Adapted from Gallagher and Yuan (2017).
Table 1.6 Thematic coverage of guidelines and safeguards of international DFIs active in the Andean Amazon, by ESRM category

<table>
<thead>
<tr>
<th></th>
<th>National recognition</th>
<th>Conditional harmonization</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Capability deference</td>
<td>Capability enhancement</td>
</tr>
<tr>
<td></td>
<td>BNDES</td>
<td>CDB</td>
</tr>
<tr>
<td>Environmental Safeguards</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pollution prevention</td>
<td>N/A</td>
<td>X</td>
</tr>
<tr>
<td>Biodiversity/natural habitats</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Climate change mitigation</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Social Safeguards</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rights of indigenous peoples</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Involuntary resettlement of people</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Labor, health, safety</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Cultural heritage</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Source: Adapted from Gallagher and Yuan (2017), IFC (2012), and IIC (2013).
In this context of varying institutional ESRM frameworks, it is important to explore what recent experience can show regarding the efficacy of risk management reforms. This question is especially pressing now, in the midst of a boom in infrastructure building in the Andean Amazon, which has exacerbated environmental degradation and social conflict.

Researchers in four countries – Bolivia, Ecuador, Peru, and the United States – explored this question through quantitative analysis and in-depth case studies. In many cases, researchers found challenges obtaining information that might reasonably be expected to be public. Often, project EIAs were not initially public; DFI, country, and contractor representatives were initially unwilling or unable to discuss their decisions, and DFI records were incomplete. However, after over a year of fieldwork, the team has been able to find answers to the overarching research question, at both the local and regional level.

We find that several individual safeguards (stakeholder engagement, comprehensive EIAs, and contractor accountability) can have significant impacts in mitigating the environmental and social costs of projects. However, we also find that no one party can enact all of these safeguards alone; instead, mutually reinforcing networks between banks, governments, and civil society must cooperate in order to ensure the economic benefits of these projects while navigating their many risks.

An infrastructure surge in sensitive territory: triggering social conflict, accentuating environmental degradation, and jeopardizing economic goals

The Andean Amazon is currently experiencing a surge in infrastructure projects. From 2000 to 2015, 60 international DFI-financed infrastructure projects took place in Ecuador, Peru, and Bolivia, and 57 new projects have continued since then. These projects are pushing further and further into the Amazon: just 27 of the 60 projects from 2000 to 2015 were in the Amazon basin, but 45 of the 57 new ones are planned to be there. Moving forward, there are upwards of $70 billion in planned investments in the broader Amazon-basin region, including those financed by development banks and the private sector, between now and 2020 (GVF-IFC, 2017).

Figure 1.1 shows international DFI-financed infrastructure projects approved and completed between 2000 and 2015. As the map shows, international DFI infrastructure lending in Amazon-basin countries has been concentrated in highway construction and improvement, with dams comprising another important segment. Power generation projects include eight thermoelectric plants and two biomass plants, as well as 16 wind farms (with 14 in Brazil alone) and two solar farms. Geographically, the projects are concentrated along the coasts of Brazil and Peru, Southern Bolivia, and the edge of the Amazon basin in Ecuador.
The environmental and social costs of these projects vary dramatically across the countries studied here. In Bolivia and Peru, for example, the majority of projects are outside of the Amazon basin and the most biodiverse territories, and yet satellite data shows that the territory around these projects experienced forest cover loss at much higher rates than the rest of those two countries. Table 1.7 shows the results of this analysis. It is somewhat less surprising that Brazil, where projects were located mostly along the coast and out of high-biodiversity areas, had much better results. Ecuador is an interesting case, where projects were mostly located within the Amazon basin and yet the related forest cover change was slightly better than the rest of the country, on the aggregate. The total tree cover loss within 10 km\(^2\) of these projects comes to 10,390 km\(^2\).
Table 1.7  Tree cover in Bolivia, Brazil, Ecuador, and Peru, 2000–2015, nationally and within 10km of DFI-financed infrastructure projects

<table>
<thead>
<tr>
<th></th>
<th>Bolivia</th>
<th>Brazil</th>
<th>Ecuador</th>
<th>Peru</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Entire countries:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Forest cover, 2000 (thousands of km²)</td>
<td>520.04</td>
<td>4,867.87</td>
<td>150.21</td>
<td>729.15</td>
<td>6,267.27</td>
</tr>
<tr>
<td>Forest cover change by 2015 (thousands of km²)</td>
<td>−38.10</td>
<td>−523.68</td>
<td>−3.68</td>
<td>−20.95</td>
<td>−586.41</td>
</tr>
<tr>
<td>Forest cover change, percent)</td>
<td>−7.3%</td>
<td>−10.8%</td>
<td>−2.4%</td>
<td>−2.9%</td>
<td>−9.4%</td>
</tr>
<tr>
<td><strong>Within 10km of infrastructure projects</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Forest cover, 2000 (thousands of km²)</td>
<td>22.75</td>
<td>22.54</td>
<td>2.70</td>
<td>30.78</td>
<td>78.77</td>
</tr>
<tr>
<td>Forest cover change by 2015 (thousands of km²)</td>
<td>−4.54</td>
<td>−1.74</td>
<td>−0.02</td>
<td>−4.09</td>
<td>−10.39</td>
</tr>
<tr>
<td>Forest cover change, percent)</td>
<td>−19.9%</td>
<td>−7.7%</td>
<td>−0.8%</td>
<td>−13.3%</td>
<td>−13.2%</td>
</tr>
<tr>
<td><strong>Not within 10km of infrastructure projects</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Forest cover, 2000 (thousands of km²)</td>
<td>497.29</td>
<td>4,845.32</td>
<td>147.51</td>
<td>698.38</td>
<td>6,188.50</td>
</tr>
<tr>
<td>Forest cover change by 2015 (thousands of km²)</td>
<td>−33.56</td>
<td>−521.94</td>
<td>−3.66</td>
<td>−16.86</td>
<td>−576.02</td>
</tr>
<tr>
<td>Forest cover change, percent)</td>
<td>−6.7%</td>
<td>−10.8%</td>
<td>−2.5%</td>
<td>−2.4%</td>
<td>−9.3%</td>
</tr>
<tr>
<td>Relative forest cover change with 10km of projects (log diff. w/rest of country)</td>
<td>−15.3%</td>
<td>+3.4%</td>
<td>+1.7%</td>
<td>−11.8%</td>
<td>−4.4%</td>
</tr>
</tbody>
</table>
of deforestation. In terms of its climate impact, this level of tree cover loss is equivalent to 462 million metric tons of new CO₂ emissions: five years of Ecuador’s total emissions, 3.5 years of Bolivia’s total emissions, or three years of Peru’s total emissions (WRI, 2017). Conservative estimates of the social cost of these emissions (taking into account the climate change-related costs but not the loss in local forest-based livelihoods) range between $3.3 billion USD and $16.4 billion USD, using estimates from the Interagency Working Group on Social Cost of Carbon for 2010 (US Government, 2013).²

Among the case studies examined here, the most significant damage was associated with Bolivia’s Highway 4 from Puerto Suarez to the outskirts of Santa Cruz. Approximately 1,660 km² of forest cover within 10 km of that highway was lost by 2015. The next highest forest cover loss was associated with Peru’s Southern Interoceanic Highway, Route 3: the subject of one of the Peruvian case studies in this volume. Over 15% of the forested area within 10 km of the 403 km road (or a total of 1,265 km² of tree cover) was deforested by 2015. This forest loss was a result of both direct impacts from construction and indirect impacts from new migration to the area fueled by illegal gold mining, which itself is a major driver of water contamination from the heavy metals used in ore processing.

Furthermore, each of the case studies examined here – other than the Brazilian project, which is not yet complete and took a dramatically different approach to stakeholder engagement – shows that largely inadequate ESRM has led to significant social conflict, as Table 1.8 shows. Triggers for conflict include workplace complaints, difficulties maintaining traditional livelihoods in the areas affected by projects, community displacement, and access to natural resources for the surrounding communities.

Consistent with a recent analysis of 200 infrastructure projects in Latin America over four decades (IADB, 2017), we find that poor planning, lack of benefit sharing, and lack of community consultation were often the triggers for the social conflicts arising across the projects we studied. As Table 1.8 shows, such conflicts appear to arise even in projects financed by DFIs with high-level safeguards, indicating that such policies were not adequate or sufficiently enforced to prevent and mitigate conflict.

The environmental damage and social conflict shown here is not merely the cost of ensuring economic benefit for countries and the communities therein. Instead, our work shows that these problems can jeopardize those economic benefits. Several infrastructure projects could not be included in the tree cover loss results shown in Table 1.7, because they were cancelled or had their financing revoked after social and environmental problems arose. In one case (the Inambari Dam in Peru), civil society reaction to the project’s inadequate consideration of social and environmental impacts resulted in the cancellation of the project itself, as well as the shelving of a multi-dam, bilateral energy agreement between Peru and Brazil (and the expected financing, through BNDES), of which this was to be the first project. In the long term, this one problematic project denied BNDES several years of potential business in Peru.
<table>
<thead>
<tr>
<th>Country</th>
<th>Project</th>
<th>DFI</th>
<th>Social conflict trigger(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ecuador</td>
<td>Baba Multipurpose Dam</td>
<td>IADB(^1)</td>
<td>Community displacement</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Inadequate replacement of old livelihoods</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Less water available for well-dependent households</td>
</tr>
<tr>
<td></td>
<td>Coca-Codo Sinclair Hydroelectric Plant</td>
<td>CHEXIM</td>
<td>Fewer local jobs than expected</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Unsafe working conditions</td>
</tr>
<tr>
<td>Peru</td>
<td>CVIS Rtes. 2–4</td>
<td>CAF</td>
<td>Community displacement and water contamination from new informal mining settlements</td>
</tr>
<tr>
<td></td>
<td>Inambari Dam (cancelled)</td>
<td>BNDES(^2)</td>
<td>Community displacement</td>
</tr>
<tr>
<td>Bolivia</td>
<td>La Paz–Oruro</td>
<td>CAF</td>
<td>Low quality and lack of safety of final road</td>
</tr>
<tr>
<td></td>
<td>Montero–Yapacaní</td>
<td>IADB</td>
<td>Unpaid subcontractors from contractor abandonment of project</td>
</tr>
<tr>
<td></td>
<td>San Buenaventura–Ixiamas</td>
<td>IBRD</td>
<td>Unpaid workers and subcontractors from contractor abandonment of project</td>
</tr>
</tbody>
</table>

Notes
1 The Baba dam project was initially financed by the IADB, which later cancelled its participation.
2 The Inambari Dam was initially announced as a BNDES-supported project, but as the project itself was cancelled, BNDES participation was never formalized.
These risks and costs show no sign of abating. Instead, evidence suggests that they will accelerate, as projects currently in international DFI pipelines are increasingly concentrated within the Amazon basin. In the Andean countries considered here, from 2000 to 2015, 30 out of the 64 DFI projects approved were in the Amazon basin. From 2015 until this writing, 58 new projects have already been completed or had their DFI financing approved, and 46 of them are within the Amazon basin (Ray, 2018).

Furthermore, these future projects are increasingly expected to be financed by Chinese policy banks, which are relative newcomers with deferential ESRM frameworks. Of these 58 new and pipeline projects, 27 are financed (or slated to be financed) by DFIs that rely on national environmental and social standards – and all 27 of those projects are in the Amazon basin, indigenous territory, or both. Roughly half of those 27 projects have received or are expected to receive financing from China. As these projects come through the pipeline, it will be important for newcomer DFIs to avoid becoming ensnared in the riskiest projects, some of which have been unable to secure financing from more traditional sources with more active ESRM strategies.

Limitations of ESRM frameworks in Andean Amazon infrastructure projects

Despite the de jure ESRM approaches and safeguards illustrated in Tables 1.4 through 1.6, our work shows that ESRM has not been sufficiently implemented to prevent environmental degradation and social conflict. Through case studies in Ecuador, Peru, and Bolivia, we find three core limitations that have led to this outcome:

- Inadequate stakeholder engagement,
- Environmental impact assessments (EIAs) that come late in the process and do not incorporate all aspects of projects or all types of risks, and
- Project governance that is lacking in transparency and accountability.

Nonetheless, we also find evidence that positive efforts in these three areas can mitigate social and environmental costs, and that projects where international DFIs and national governments actively worked to avoid these pitfalls were generally characterized by better outcomes. For example, prior consultation protections for affected indigenous communities appear to be associated with significant mitigations of project-related deforestation.

Stakeholder engagement

By 2015, all of the national governments studied here – and about half of the DFIs studied here – had publicly committed themselves to the principle of prior consultation with affected indigenous communities. A few of the
international DFIs have also instituted requirements for free, prior, and informed consent (FPIC) of affected indigenous people, though too few projects have been completed under that framework in the Andean region to compare their results to other projects across the board. However, infrastructure stakeholder consultation extends beyond the confines of prior consultation between central governments and indigenous communities: active engagement of local communities – indigenous or not – can be crucial to avoiding later conflict, as the Ecuadorian Coca-Codo Sinclair dam project (discussed below) shows. Furthermore, the existence of stakeholder engagement requirements does not guarantee that the process is conducted in such a way as to discover unforeseen risks or ensure that affected communities’ concerns are adequately incorporated into project design. As the IADB itself notes in a recent publication, effective engagement requires not only information sharing but also the opportunity for stakeholders to impact project design and implementation (Kvam, 2017). For this reason, we find that when a project’s DFI and its national government both have stakeholder engagement requirements, these two bodies can serve as a mutually reinforcing network of support, insuring against either entity’s inability to ensure an adequately open process.

Peru’s Southern Interoceanic Highway (CVIS for its acronym in Spanish) serves as a stark example of the risk of inadequate stakeholder consultation when only one party requires it. CVIS segments 2 through 4 were approved in 2005, after Peru ratified International Labour Organization Resolution 169, enshrining the rights of indigenous communities to have a voice in projects that affect them. However, they were approved before Peru enacted its 2011 Consulta Previa law, which codified access to the rights laid out in ILO 169 with a formal seven-step process. The CVIS highway project received financing from CAF, which follows an ESRM strategy of national recognition with capability enhancement: it deferred to Peru’s national standards and could offer concessional financing to help reach those standards.

Given that Peru had committed itself to the principle of prior consultation but had not yet enacted national legislation carrying it out, it might have been reasonable to expect CAF to assist with concessional financing for institutional capacity building to create a prior consultation mechanism. In fact, CAF did assist the government of Peru with institutional capacity, in several different areas. For example, CAF funded the highway segments’ EIRs, supported the Ministry of Transportation and Communication in its development of an General Office for Social and Environmental Affairs, and also supported the creation of the Commission for the Formalization of Informal Property within the Housing, Construction, and Sanitation Ministry, in order to mitigate the potential for a massive displacement of existing communities as the highway made these territories more easily accessible to newcomers. However, CAF did not have a formal standard for prior consultation, and so assisting Peru with establishing such a mechanism or building institutional capacity to oversee it did not find a home among these many demands for concessional finance associated with the CVIS road segments.
The resulting highway segments, shown in Figure 1.2, did not go through the prior consultation process that Peru requires today. Instead, project planners routed the CVIS in such a way as to mostly avoid indigenous territory. Despite the efforts of Peru and CAF to establish safeguards against displacement of existing communities, Figure 1.2 shows (in dark gray) the dramatic deforestation along segment 3. This deforestation is directly related to new migration to the area, fueled by informal gold mining. The gold mining, in turn, has led to contamination of rivers and groundwater from the heavy metals (especially arsenic and mercury) used in informal gold mining. While the highway itself mostly avoids indigenous territory, there is no guarantee that rivers and groundwater will do likewise. Indigenous communities, who were not included formally in project planning, are already beginning to bear the health hazards associated with its environmental costs.

The failed Inambari dam project in Peru also shows the importance of full community engagement. As mentioned above, Inambari was to be the first of...

Figure 1.2 Deforestation and indigenous territory near Peru’s CVIS Highway 3 and the proposed Inambari Dam.

Source: Compiled from Dammert Bello (2018), Hansen et al. (2013), and LandMark (no date).
five dams financed and overseen by a Bilateral Energy Agreement between Peru and Brazil, with the expected cooperation of BNDES and both governments, resulting in electricity generation for both countries’ markets. However, plans for Inambari did not adequately take into account social and environmental impacts, and local civil society successfully challenged the project. The remaining dam projects were then delayed indefinitely. If project planners had adequately engaged with stakeholders before finalizing the plans for Inambari, perhaps some elements of the bilateral energy agreement may have been salvaged.

Despite these cautionary tales, there is reason for hope in the significant power of effective community engagement. Across all of the infrastructure projects approved and completed between 2000 and 2015 in Ecuador, Peru, and Bolivia, our work shows substantial evidence that incorporating greater stakeholder input can help limit environmental damage. Additional findings from the statistical work on deforestation around infrastructure projects (shown in Figure 1.1) shows that when national governments enact formal processes for prior consultation with indigenous communities affected by projects – or when DFIs require nations to carry out these processes in order to secure financing – those projects are associated with significantly less deforestation. Table 1.9 shows the average tree cover change rates around infrastructure projects approved and completed between 2000 and 2015 in Bolivia, Brazil, Ecuador, and Peru, with and without prior consultation protections. Projects that took place within a regulatory framework that required prior consultation with affected indigenous communities tended to have significantly less tree cover loss. A statistical analysis of these results shows that they are significant even when taking into account differences in types of projects, years, or the DFIs involved. These requirements are associated with better outcomes regardless of whether they originate from the DFI requirements or national government laws (Ray, 2018). In other words, banks and national governments form mutually reinforcing networks when they both pursue high-level ESRM, insuring against any difficulty in the other’s application of its own safeguards (Box 1.2).

<table>
<thead>
<tr>
<th>Areas without projects</th>
<th>Bolivia (%)</th>
<th>Brazil (%)</th>
<th>Ecuador (%)</th>
<th>Peru (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Areas within 10km of projects</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>With P.C. guarantees</td>
<td>–19.4</td>
<td>–5.8</td>
<td>–0.7</td>
<td>–3.1</td>
</tr>
<tr>
<td>Without P.C. guarantees</td>
<td>–25.1</td>
<td>–8.6</td>
<td>–0.0</td>
<td>–14.3</td>
</tr>
</tbody>
</table>

Box 1.2 A new paradigm in Brazil? The Fundo Amazonia’s empowerment of affected communities

In addition to the case studies shown in Table 1.1, which each triggered significant social conflict, parallel research in Brazil (Klinger, 2018) shows that indigenous communities are not limited to consideration as an afterthought or complication in the project design and approval process. Rather, it is possible for them to take on leadership roles and determine the direction of projects under their supervision.

The Brazilian government, in cooperation with the United Nations Framework Convention on Climate Change, established the Fundo Amazonia in recognition of the importance of the Brazilian Amazon in global carbon sequestration, and BNDES manages its operations within Brazil. It accepts applications for concessional financing from Amazonian communities for projects that they themselves have designed and planned. Klinger (2018) profiles one such project, the Stonipë Ioway ecotourism plan conceived by the Yanomami people in and around the Pico de Neblina National Park. Pico de Neblina – the highest mountain peak in Brazil – resides within Yanomami territory. However, the Yanomami have not traditionally benefited from the ecotourism associated with the mountain but have had to contend with the use of local resources by the tourists themselves. The Stonipë Ioway project may change this scenario. After three years of community meetings, its funding has been approved and work is beginning to bring it to reality. It is far too soon to say whether it will meet its objectives of creating a more environmentally and socially sustainable approach to local ecotourism. But the evidence to date shows that indigenous communities are capable of not just participating in projects, but also directing them. This finding is consistent with a new comprehensive assessment by the IFC and others that locally designed stakeholder-led financial arrangements may be the most optimal for the Amazon region (GVF-IFC, 2017).

Comprehensive EIAs

As Table 1.5 shows, every major international DFI active in the Andean Amazon requires EIAs before projects can be approved. Nonetheless, most of the projects studied in our case studies experienced significant environmental degradation, including deforestation, water contamination, and affected nature preserves. Table 1.8 shows these cases, along with two additional projects that could not be considered among the case studies because – although the DFIs in question cancelled their participation owing to environmental concerns – they are currently under construction without DFI support. These two additional projects are Bolivia’s Rurrenbaque-San Buenaventura bridge and a highway through Bolivia’s Isiboro Sécure National Park and Indigenous Territory (TIPNIS, for its Spanish acronym). Both of these proposals lost their DFI financing because of environmental conflicts, but the Bolivian
Development banks in the Andean Amazon

government has pressed forward with them. As of this writing the full extent of the environmental damage from them has yet to be determined.

One reason why infrastructure projects continue to have adverse environmental impacts despite EIA requirements is that they do not necessarily require those EIAs to be comprehensive, taking into account the direct and indirect risks of entire projects. EIAs can also be quite limited in scope, with different project segments receiving scrutiny separately. This distributed approach to EIAs can result in missed environmental risks, and also allow for a “race to the bottom” of environmental standards among DFIs. When risky projects have comprehensive EIAs, the environmental risks and costs of the entire project should become obvious, precluding the involvement of the DFIs with the highest standards. Without those DFIs’ involvement, large interconnected projects may not be able to go forward. However, by segmenting these projects and pursuing partial EIAs for segments separately, DFIs with high standards can take the safest segments, leaving those DFIs least equipped to oversee risk with the segments most in need of oversight. The “race to the bottom” effect is an indirect one: DFIs whose missions ordinarily prevent them from enabling environmentally costly projects can end up enabling those very projects, by taking on the least risky segments.

Peru’s CVIS segments 2 through 4, discussed above, fall into this category of environmentally risky project made possible by segmented EIAs. In addition to CAF, the IADB also financed the CVIS project, through other segments not entering the Amazon.3 In contrast, DFIs with more deferential ESRM frameworks took the remaining segments, including the CAF-financed segments 2 through 4 shown in Figure 1.6. As long as DFIs differ in their levels of ESRM, pursuing comprehensive EIAs is necessary to prevent the riskiest sections of projects moving forward with financing from the DFIs least prepared to handle the risks involved.

Comprehensive EIAs can also alert planners to the ways in which risks in one part of a project can affect other parts of the project. In Ecuador, the IADB planned to finance the construction of the Coca-Codo Sinclair dam but pulled out amidst the eruption of the Reventador volcano (shown near the dam in Figure 1.3). After the IADB withdrew, CHEXIM took on both parts of the project through separate loans with separate EIAs. Interacting risks between different parts of a project can be disregarded, even when all of the relevant parts receive financing from the same source, in cases such as this one. Instead of a mutually reinforcing network, the relationship between national government and lender formed a mutually enabling network in this case. CHEXIM enabled Ecuador’s pursuit of the project without having to take into consideration all of its environmental risks, and Ecuador enabled CHEXIM to take on unnecessary reputational and relationship risks in its work in Ecuador.

As Figure 1.3 shows, the Coca-Codo Sinclair hydroelectric project is situated in the Ecuadorian Amazon, in a heavily forested area on one of the key watersheds feeding into the Amazon River. It is also located near two major natural landmarks: the Reventador volcano and the San Rafael waterfall. Reventador is
an active volcano that has been undergoing a continuous eruption for the last 10 years, characterized by seismic activity, ash plumes, and lava flows from 2008 through the beginning of 2018 (Smithsonian Institution Global Volcanism Program, n.d.), as indicated by the red deforested areas around the volcano in Figure 1.8. The San Rafael waterfall is the largest in Ecuador, at 150 meters high and 14 meters wide. It carries importance not only as a cultural landmark but also as an important ecotourism draw. Given the serious risks that Reventador can pose to the project, or that the project can pose to the San Rafael waterfall, it is vital for risks to be assessed as thoroughly as possible.

Finally, comprehensive EIAs can take into account indirect as well as direct causes of environmental degradation. For example, the World Bank-financed highway between the towns of Ixiamas and San Buenaventura in the Bolivian Amazon does not pass through or even border protected territory, negating any possible directly caused deforestation. However, it does pass close enough to the Madidi National Park (coming within 5 km) that additional traffic and in-migration could cause indirect deforestation. Thus the project EIA takes into account the “induced future” expected to be brought about by the project, and has laid out a plan to mitigate these impacts.

**Transparency and accountability**

A final way in which DFIs and national governments can form mutually reinforcing networks is through working to increase coherence throughout the project cycle. In every infrastructure case study examined in this project,
transparency and accountability mechanisms either faltered or were absent, leading to the social conflicts listed in Table 1.10. Many of the cautionary examples cited here show government actors torn between conflicting incentives of expediting projects and managing their risks. Those incentives become better aligned when projects have sufficient transparency – so that all stakeholders are aware of commitments and have the same expectations – and greater accountability to those commitments.

Neither of these goals is possible without the active participation of international DFIs, national governments, and civil society. DFIs’ large international portfolios give them unparalleled institutional capacity for

<table>
<thead>
<tr>
<th>Country</th>
<th>Project</th>
<th>Environmental damage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Region-wide</td>
<td>All projects</td>
<td>Tree cover loss at a rate of four times that of surrounding territory (see Figure 1.3)</td>
</tr>
<tr>
<td>Bolivia</td>
<td>Rurrenbaque–San Buenaventura bridge</td>
<td>IADB participation cancelled after a formal grievance was filed alleging an inadequate EIA</td>
</tr>
<tr>
<td></td>
<td>Montero–Yapacaní highway</td>
<td>Uncontrolled deforestation, despite specific IADB requirements for a flora census and relocation of affected fauna</td>
</tr>
<tr>
<td></td>
<td>TIPNIS highway</td>
<td>BNDES participation cancelled amidst protests regarding its impact on nature preserves</td>
</tr>
<tr>
<td>Ecuador</td>
<td>Coca-Codo Sinclair dam</td>
<td>Sedimentation, reduced water flow, and reduced fish stocks downstream, including at the San Rafael waterfall</td>
</tr>
<tr>
<td></td>
<td>Baba multipurpose dam</td>
<td>Elevated heavy metal reservoir contamination from nearby plantation runoff and affected fish stocks, both to an unknown extent as studies ceased despite a continued mandate for them</td>
</tr>
<tr>
<td>Peru</td>
<td>CVIS highway</td>
<td>Widespread deforestation from informal mining settlements enabled by the road</td>
</tr>
<tr>
<td></td>
<td>Inambari dam</td>
<td>Project cancelled amidst protests regarding heavy expected deforestation and community displacement</td>
</tr>
</tbody>
</table>
incorporating lessons learned into future project design. But national
governments and local communities ultimately interface daily with projects
and have deep institutional knowledge of local conditions. Thus, it is crucial
for international DFIs, national governments, and communities to be clear
about their goals at the outset of project planning and to establish transparent
monitoring processes to ensure that these goals are met.

Unfortunately, too often, project plans and commitments have been kept
out of reach of affected communities. Furthermore, in the majority of the
case studies examined here, team researchers encountered significant resistance
in their searches for EIAs, community consultation results, and project
performance – information that should be public if stakeholders are to effect-
ively hold each other accountable. In other cases, researchers discovered that
information legally required to be made public was inaccessible. For example,
the results of environmental audits of the works associated with the Coca-
Codo Sinclair hydroelectric project were restricted, contrary to transparency
requirements, and the information that was made public – on water flow and
hydrological balances for the affected watershed – was out of date to the
point of being uninformative.

Regionally, inadequate incorporation of transparency into infrastructure
projects has led to a major, still-unfolding corruption scandal (known as lava
jato – car wash – for its money-laundering aspects) across Latin America. The
lava jato scandal centers on Brazilian state-owned oil company PetroBras and
major Brazilian construction firms including Odebrecht, the region’s largest
infrastructure contractor and one of the major contractors involved in the
CVIS highway project profiled here. Allegations of illicit dealings with
Odebrecht have led to the resignation of Peruvian President Pedro Pablo
Kuczynski, and the criminal prosecution of former Brazilian President Luiz
Inácio Lula da Silva and former Peruvian President Ollanta Humala. As of
this writing, former Peruvian President Alejandro Toledo – during whose
tenure the CVIS highway was implemented – is facing extradition to face
allegations related to the lava jato scandal. In some cases, allegations included
bribes for contracts and contract budget inflation, hurting national government
coffers and denying communities the possible benefit of competition and fair
contractor selection. While the MDBs studied here require competitive
bidding for contractors, the same cannot be said for national development
and policy banks operating abroad, such as BNDES, the CDB, and the China
ExIm Bank. In those cases, for the sake of the communities who depend on
national budgets and the final quality of the infrastructure itself, national
commitments to transparency are crucial.

The benefits of transparency are evident in the case study of the Bolivian
highway from La Paz to Oruro, which was expanded with CAF financing.
During the construction, pre-Inca, Inca, and colonial era artifacts were
uncovered. Before work could continue, an archeological dig was established.
During this process, community members were present and incorporated into
the proceedings, presenting offerings to Pachamama according to custom.
However, it is important to note that this accomplishment was not due to cooperation between CAF and the Bolivian government in establishing a transparent process. In fact, interviews with staff at the Ministry of Culture’s Archeology and Museums Unit show that this level of attention and diligence is highly unusual during highway construction in Bolivia, and in this case it was due in no small part to the heavy media attention this controversial project had already received. The artifacts were preserved by the good fortune of public scrutiny, but good fortune is not a strategy to ensure similar results in the future, and no substitute for mutually reinforcing networks between bank staff and public officials.

The Ecuadorian Coca-Codec Sinclair dam, discussed above for its inadequate environmental impact assessment, also shows the danger of insufficiently transparent commitments. Although no formal FPIC process occurred – as the nearby communities are not indigenous – project representatives did carry out a “socialization” process of sharing plans with local stakeholders. Interviews with residents in the surrounding communities show that the socialization process gave a near-universal impression of promises of local employment as well as opportunities for local small businesses to supply food, lodging, and other services to the dam construction workforce. However, no precise commitments were made regarding these expectations. Significant social conflict later erupted around the fact that “local” employment was defined in such a way as to include Ecuadorian workers from other parts of the country (in contrast to Chinese workers), rather than expanding employment opportunities for workers from the immediate vicinity or even the greater Amazonian region of Ecuador. Furthermore, many community members relied on expectations from the “socialization” process and borrowed heavily to establish or expand catering or restaurant businesses or to expand their houses to rent out rooms, but were later excluded from opportunities to sell these services to construction workers.

Once clear commitments and expectations have been established, enforcement of those commitments is crucial – and requires the participation of all parties. In case studies associated with this project where performance commitments were clearly stated at the outset of projects, gaps in accountability measures still allowed these commitments to be unmet. As Fox (2007) and Daniel et al. (2016) point out, DFI accountability measures often lack specific sanctions for unfulfilled commitments or require communities to navigate complex layers of bureaucracy embedded in formal grievance mechanisms, leaving stakeholders with few options in cases of conflict.

Here again, the Coca-Codec Sinclair dam serves as a cautionary example. From 2009 to 2011, the project’s environmental monitoring occurred through a specially organized municipal oversight committee. But midway through construction, that monitoring was folded into the contractor’s responsibilities, and public access to related environmental reports diminished significantly. Accountability to stakeholders was effectively supplanted by self-regulating.
The three case studies in Bolivia also illustrate this point. As Figure 1.4 shows, these three projects occurred in a variety of environments and were financed by DFIs with a variety of ESRM approaches. The two highways in the Amazon basin (the Ixiamas–San Buenaventura highway in northwest Bolivia and the Montero–Yapacaní highway outside of Santa Cruz in central Bolivia) were both financed by DFIs that follow an ESRM strategy of conditional harmonization with capability enhancement. In other words, the two highway projects that posed the greatest environmental and social risks were financed by the DFIs with the greatest oversight. The remaining project, the La Paz–Oruro, was financed by CAF and is located outside of the Amazon basin, in an open desert environment.

Nonetheless, regardless of the differing ESRM strategies and levels of environmental and social risks, all three projects failed to be completed according to their original plans. Two contractors abandoned the projects altogether, leaving subcontractors and workers unpaid, and one finished the project but cut corners on safety and quality measures, leading to dangerous and sometimes fatal results.

The Montero–Yapacaní highway (project 3 in Figure 1.4) received IDB financing, and with it high-level standards meant to protect affected ecosystems, communities, and employees. The IADB allowed for two years prior to approving the loan for the Technical, Economic, Social, and Environmental Assessment (TESA) to be completed. Unfortunately, however, within

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**Figure 1.4** Location of case study roads and tree cover change in Bolivia.

Source: Compiled from Andersen, del Granado, Medinaceli, and Roca (2018), Hansen et al. (2013), and LandMark (n.d.).
two years of the project’s approval, the contractor (the Mexican firm Tradeco) had already been removed from the project for failing to make adequate progress, completing only 3% of the committed work within the first 16 months of the project. Interviews with project laborers show that the departure left many without pay, but none are willing to bring a formal complaint for fear of losing the opportunity to work with the next contractor, the Chinese firm Sinohydro. These stakeholders have effectively been removed from the relevant redress processes because of the lack of transparent accountability mechanisms and contractor monitoring.

The refurbishment of a second highway – connecting the Amazonian towns of San Buenaventura and Ixiamas (project 1 in Figure 1.4) – received IBRD financing in 2011 after four years of pre-investment studies. Prior consultation processes were carried out with indigenous communities and civil society groups, and their feedback was incorporated into the project plans. However, none of these preparations could ensure a successful project, because the contractor (the Spanish firm Corsán-Corviam) abandoned the project in 2017, without warning the state or the bank, and without paying local subcontractors, many of whom had taken on significant debts in order to open or expand their businesses to work on this project. The government received indemnification in the form of a performance bond payment, and has announced that it will consider assigning the remaining work to one of the firms who lost the initial bidding process, but has not announced, as of this writing, any relief for subcontractors. A group of about 20 representatives of those awaiting payment brought a complaint to the World Bank, but were not given relief, as the World Bank has no jurisdiction over contractor–subcontractor conflicts. Thus, while the World Bank requires transparency in contractor selection, even those safeguards have not been able to help prevent significant labor problems without an equivalent commitment from the national government.

Finally, the refurbishment and expansion of the highway between La Paz and the southern city of Oruro (project 2 in Figure 1.4), financed by CAF in 2009, was successfully completed – at the cost of quality and safety. Transparency and accountability failures throughout the project cycle have led to a counterproductive outcome: instead of improving the safety and quality of the road, the upgrading project resulted in a highway plagued with problems in those two areas. The loan was granted before the TESA was completed, and the contracting process set a price ceiling on any bids received. Thus, cost took a primary role in decision-making. Furthermore, an inadequate stakeholder engagement process failed to include measures for the contractor (the Bolivian firm Brabol) to acquire gravel from local sites. Taken together, these two problems meant that when the price of asphalt rose in 2011, Brabol could not complete the assigned work. The contract was rescinded and reassigned to Corsán-Corviam, the same firm that has abandoned the Ixiamas–San Buenaventura highway discussed above. Corsán-Corviam was able to complete the project, but not on time or to the agreed-upon quality. Most
notably, facing increased costs, the contractor and government agreed to a revised engineering plan that omitted several onramps and a significant portion of the required safety signage. These changes were more than simple technical tweaks: insufficient transparency in the process of changing the plans has created a public safety hazard in which drivers frequently enter the highway in the wrong direction, often leading to collisions. Whereas the refurbishment project was intended to improve driver safety, a lack of contractor oversight allowed for the creation of new hazards instead.

As all three of the Bolivian case studies show, international DFI-financed infrastructure projects often involve large contractors that work on infrastructure projects in many countries. Ensuring accountability and retaining institutional memory of commitments – met and unmet – may require the use of international fora such as COSIPLAN (the South American Council of Integration and Planning, composed of ministers of planning and/or integration from UNASUR countries), which oversees the IIRSA integration projects including Peru’s CVIS. Alternately, international DFIs themselves have an international reach of operations and thus have an advantage in forming and maintaining mutually reinforcing platforms for information sharing. International DFIs and fora like COSPLAN carry institutional knowledge about the past performance of national governments and contractors, while national governments only have institutional knowledge of DFIs and contractors when they have worked on local projects. This is not to say that DFIs have a monopoly on the knowledge necessary for project monitoring. As the following section shows, the local knowledge of communities and national legal systems is also crucial in accountability and monitoring. Thus, while international DFIs are well positioned to establish information-sharing platforms, they must be mutually reinforcing systems that incorporate local voices.

Discussion and recommendations: the importance of mutually reinforcing networks

Infrastructure is by definition the foundation of economic activity. It can support – or impede – national goals of directing economic activity toward more sustainable, inclusive economic models. Given the unique characteristics of this region, integrating the tropical Andean Amazon through large-scale infrastructure projects should be advanced via inclusive and transparent multi-stakeholder platforms. The analyses in this study show that development banks, national governments, and local communities should each have a say in infrastructure design and direction, regarding the extent to which infrastructure advancement in the Andean Amazon is in the interest of long-run economic development that is consistent with the Sustainable Development Goals and the Paris Climate Agreement. Perhaps the key question is: to what extent does a series of processes contribute to the long-run sustainable economic development of the nation and region, in a manner that is less carbon-intensive and more socially inclusive, with special attention to
the need of the region to engage in a process of structural transformation toward economies that are more complex, diversified, relatively less carbon intensive, and more socially inclusive?

Our work shows that these conditions are more likely to be met when international DFIs, national governments, and local communities can form mutually reinforcing networks. Where either DFIs or national governments have forfeited their role in overseeing the conditions of infrastructure lending, this introduces the possibility for those conditions to be neglected. These gaps mean that effective oversight networks may require the use of international fora such as COSIPLAN for information sharing about the relative risks of projects and the performance of actors involved in them. However, while the ministers who comprise COSIPLAN stand to benefit from such information sharing, they may also face contrary incentives to facilitate and expedite infrastructure despite these risks, as discussed below. In that case, international DFIs themselves may be wise to consider the establishment of high-level platforms for information sharing regarding related networks of projects, such as those comprising IIRSA. Regardless of the institutional context of this information sharing, it must not be limited to participation from one type of actor or another: it must also input on national laws from government officials and the contributions of affected communities to prevent environmental degradation and social conflict.

Our work also shows that the mere existence of standards is not sufficient to guarantee positive outcomes. The case studies examined here reveal three key reasons why government ministries and regulators – who oversee daily project operations – can sometimes fail to implement those standards because of the conflicting incentives they face: facilitating and expediting investment while following their own social and environmental protections. These failures can be triggered by a perceived need to save time, to save money, or to save face. The case of the CVIS highway in Peru shows an example of saving time, as a Supreme Decree exempted the project from some of the usual feasibility study requirements for transportation projects. The Bolivian highway connecting La Paz and Oruro suffered from efforts to save money, as an inability to adapt to rising asphalt prices led to shortcuts on road safety and quality. Finally, particularly ambitious “showcase” projects such as Ecuador’s Coca-Codo Sinclair dam can create particularly strong temptations to save face, by falling short of transparency requirements such as the mandate to publish relevant environmental audits to enable stakeholders to monitor the project’s progress and impacts.

However, while inadequate project planning and oversight may be driven by a desire to expedite infrastructure completion, it often results in the opposite: delays, cost overruns, and project cancellations. As Table 1.11 shows, many of the projects in the case studies discussed here ultimately brought complications for the DFIs involved because of inadequate planning or collaboration with national governments. Perhaps most striking is the case of the Inambari dam. As mentioned above, this project was to be the first of
five dams supplying energy to both Peru and Brazil. Because of serious weaknesses in the environmental and social considerations of the project plan, it was met with community opposition that successfully challenged the project. The remaining four projects have been shelved indefinitely. As BNDES never formally participated in the project – because it was cancelled before any construction services would merit the involvement of an export credit agency like BNDES – it avoided becoming ensnared in an embarrassing failure. Nonetheless, the cancellation of the five-dam project series ultimately cost BNDES a significant portion of its share in the regional infrastructure market. Given the current overall infrastructure surge in the region, it is unlikely that any international DFI would want to repeat that experience.

Ecuador’s Coca-Codo Sinclair (CCS) dam offers a sobering example, in which all oversight fell to the state, although sharing information between DFIs, contractors, and local governments could have prevented significant social conflict. The project received financing by the Export-Import Bank of China, which practices an extremely deferential approach to ESRM, in 2010, but by 2011, workers had already filed 26 official labor complaints with the Ecuadorian government. One major theme of these complaints was the lack of adequate attention to worker safety, which contributed ultimately to the deaths of 13 workers (10 Ecuadorian and three Chinese workers) when a work platform collapsed. Another problem involved the quality of water provided for worker hydration and showers at the camp, which health personnel blamed for typhoid fever and bacterial infections among project staff. After these formal complaints and health problems, as well as multiple strikes, national Labor Minister Francisco Vacas visited the worksite to resolve these

Table 1.11 Difficulties for DFIs and national governments due to inadequate collaboration and oversight

<table>
<thead>
<tr>
<th>Country</th>
<th>Project</th>
<th>Difficulty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bolivia</td>
<td>Montero–Yapacaní highway</td>
<td>Unsatisfactory progress due to an inability to renegotiate the budget for rising materials cost</td>
</tr>
<tr>
<td></td>
<td>San Buenaventura–Ixiamas highway</td>
<td>Paralyzed project because the Bolivian government has not held the contractor accountable for their debts upon leaving, or found a replacement</td>
</tr>
<tr>
<td>Ecuador</td>
<td>Baba multipurpose dam</td>
<td>Project had to be re-designed, and lost its IADB financing, after a successful legal challenge to its environmental license</td>
</tr>
<tr>
<td>Peru</td>
<td>Inambari Dam</td>
<td>This project was cancelled – and four others shelved – amidst protests regarding inadequate social and environmental planning</td>
</tr>
</tbody>
</table>
Development banks in the Andean Amazon

recurring problems. Fieldwork interviews with project workers show that after Min. Vacas’ visit, conditions have improved dramatically. Water quality has ceased to be a concern, and workers even mentioned their appreciation for workplace perks such as free internet and a volleyball court. Clearly, intervention by the national government helped address serious workplace concerns. But in the absence of a proactive lender with their own standards, and without collaboration between the lender and the national government to ensure that standards were being met, that compliance took unnecessary years and cost lives.

The same can be said for situations in which a DFI has sufficient capacity and institutional will, but the national government does not. The other Ecuadorian case study covered by this project, the Baba Multipurpose Project (a dam with the goal of electricity generation, flood control, and irrigation), shows this lesson all too clearly. The IADB financed the pre-investment studies for this project and approved it in 2007, with conditions including community relocation and alternative livelihood development for affected households. Later that same year, though, the IADB cancelled its participation in the project. The project continued with national government funding, but without the IADB’s support in coordinating the safeguard implementation. In this case, the affected communities found partial relief by filing a complaint with the Constitutional Guarantee Tribunal, which found in their favor in 2008, leading to a reformulation of the project to displace only 43 households instead of 240. Households that were not displaced, however, still felt the impact of the project through changes in the water table, requiring deeper wells for household water use. Furthermore, although some reports of reduced fish stock and water contamination have emerged, they cannot be verified through official reports, because the required environmental audits ceased to be performed after the IADB withdrew its participation.

A more positive example emerges from the Peruvian CVIS highway, discussed above. When that loan was approved, Peru did not have the institutional capacity to oversee the social and environmental risks of such a project. CAF’s assistance to Peru in establishing oversight offices shows that DFIs and countries can accomplish better results when they share an understanding of the possible risks from the outset of the project, and approach those risks together. Although the CVIS highway project ultimately brought other, significant social and environmental problems beyond what Peru’s new institutions could manage, the fact remains that CAF showed itself to be able to assist national governments in addressing gaps in regulatory oversight.

Thus, as the infrastructure boom continues in the Andean Amazon, projects must take these risks into account if they are to avoid the repetition of past problems. Specifically, we recommend the following guiding principles:

**STAKEHOLDER ENGAGEMENT** early in the project cycle. This includes not only guaranteeing the right of free, prior, and informed
consultation regarding already-planned projects, but also incorporating local voices into project design and maintaining engagement throughout the project cycle. The example of the Inambari dam in Peru shows that neglecting to take into account local voices in the planning process can result in untenable project designs, endangering not only specific projects, but also development banks’ reputation, so dramatically as to jeopardize their project pipelines. The example of Brazil’s Fundo Amazonia, in contrast, shows that indigenous communities are capable of participating fully in – and even leading – project design.

**COMPREHENSIVE UPSTREAM AND DOWNSTREAM ENVIRONMENTAL IMPACT ASSESSMENTS**, which take into account not only environmental risks associated directly with each separate loan application, but also with the entire project. As the Peruvian CVIS highway case study shows, the environmental impacts of a project can still be significant even if they are indirect, brought about by new migration and economic patterns enabled by a project. The IADB’s approach of planning for the “induced future” brought about by the improvement of Bolivia’s Ixiamas–San Buenaventura highway shows an example of how the scope of EIAs can be expanded to take into account these indirect impacts. Special upstream attention should go toward designing infrastructure projects that unlock the region’s dependence on extractive industries and commodities that are characterized by the boom-and-bust cycles that have proven to plague long-run growth prospects and endemically accentuate social conflict and environmental degradation.

**INSTRUMENTS FOR TRANSPARENCY AND ACCOUNTABILITY** to be incorporated into project plans and commitments beginning early in the project cycle. Without public access to appropriate environmental reports, stakeholders cannot effectively gauge project risks or participate fully in community consultations. Where contractor obligations are not set forth clearly, and where a lack of transparency prevents civil society from monitoring outcomes, performance can easily fall short of commitments, leaving communities with unmet needs in employment, safety, and even access to infrastructure itself.

In order to address all of these potential gaps in project planning and oversight, it is imperative for international DFIs and national governments to form *mutually reinforcing networks* of support. Given that international DFIs are almost by definition intermediaries between governments, private sector contractors, and local communities, DFIs are uniquely poised to host platforms where all stakeholders can formulate and voice their preferences and concerns, and broker projects that maximize the benefits and minimize the risks for all parties involved.
Notes

1 It is worth noting that these safeguards are not static. Several of the DFIs shown in Tables 1.4 through 1.6 have revised their ESRM strategies – and specific ESS – over the course of the time period covered in this chapter. The World Bank in particular is revising its ESRM policies as of this writing. Thus, the ESS shown in Tables 1.4 through 1.6 reflect the state of their ESRM approaches as of this writing, though not necessarily during the time periods covered by the case studies discussed below.

2 These estimates use the most recent US Interagency Working Group on the Social Cost of Carbon estimates for the cost of emissions in 2010, the only estimate within the 2000–2015 time period: between $10 and $50 per tCO$_2$ (US Government, 2013). As Grieg-Gran (2008) points out, the cost of limiting emissions through forest conservation is well below this level: less than $5 USD per metric ton of CO$_2$. Furthermore, Ickowitz, Sills, and De Sassi (2017) explain that the social costs of Amazonian deforestation are likely to fall on poorer households, while the opportunity costs of limiting deforestation are disproportionally represented among those already well off.

3 The IADB-financed, non-Amazonian segments of the CVIS do not appear in the project maps in Figures 1.1 and 1.2 because they were approved before 2000. CVIS is part of the region-wide Initiative for the Integration of the Regional Infrastructure of South America (IIRSA, for its Spanish acronym) plan, but the IADB-financed segments occurred before IIRSA was established, so they do not appear in IADB records as IIRSA-related projects. This situation reflects a danger for DFIs with more deferential ESRM approaches: low-risk projects often secure financing long before riskier, complementary projects do so, leaving newcomers vulnerable to being left with less-desirable, riskier projects. It also reflects an inadequate level of information sharing across related projects associated with broader integration plans like IIRSA, as EIAs are not performed for entire networks of projects.

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It is our hope that this framework leads to a clearer and more policy-oriented set of empirical analyses that allows analysts to examine the extent to which various approaches lead to better environment and development outcomes. Furthermore, from a political economy perspective, further analysis is needed to examine the extent to which these various models are contested within and across development banks, and the extent to which the development banks from emerging market and development countries are playing a significant role in such contestation.

The literature surveyed would lead to a hypothesis that conditional harmonization ESS would result in the least amount of risk and uncertainty regarding social conflict and environmental degradation, but may also result in longer project preparation and less ownership on the part of the borrower. Deferential recognition may result in short project preparation periods, and more ownership on the part of the borrower, but higher levels of risk and uncertainty. That said, policies do not always determine performance. The World Bank has very stringent safeguards but had long been criticized for its lack of incorporation of environmental considerations (Rich, 1995, 2013). Whereas China’s banks and firms have weaker safeguards on paper, a recent study found that in some cases actors financed by China’s development banks performed better than their Western counterparts in mitigating social and environmental risk (Ray et al., 2015). Empirical case studies and statistical analyses are needed to examine the efficacy of different models and specific policies under each model.

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Databases
**Annual reports**


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**Safeguard documents**

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Development banks in the Americas


Kevin P. Gallagher and Fei Yuan


Our probit regression in Table 3.8 column (1) demonstrates that countries with weak environmental performance are more likely to receive green finance from development banks, and banks with shareholder environmental performance tend to make more green commitments. Moreover, countries that have higher HDI scores and left-leaning ruling political parties are more likely to receive green finance.

Table 3.8 columns (2)–(4) show the results of panel analyses. When controlling for country and/or year effects, donors’ environmental performance become the most important factor in determining the greenness of a bank’s lending. We find that a 1% increase in donor’s EPI is associated with 0.4–0.7 percentage point increase in the green share of total commitments to a country. This finding shows that donors’ environmental preference is the most important player in green lending at least during the period of our analysis. This is consistent with our findings in the third section that European banks with better environmental performance are usually more in favor of green lending. In fact, these banks are also the most important promoters of sustainable development across the world.

Conclusion

In this chapter, we take stock of green development commitments in LAC using a mapping approach developed by the IDFC. We demonstrate that the annual green finance from public development banks, including multilateral, regional, and international departments of national banks, stands at around $7 billion and climate finance is about $4.4 billion. The size of green commitments falls short of closing the climate finance gap in the region. In addition, unlike general multilateral lending where both demand and supply side play a role in lending allocation, in the field of green finance our econometric analyses show that development banks with a strong preference toward better environmental performance dominate the level of lending, which is consistent with the current development landscape.

Notes

1 A full list of IDFC members can be found here: www.idfc.org/members.
2 For tracking purposes, we estimate the amount of commitments instead of real disbursements and we acknowledge there might be discrepancies between these two. All the numbers reported in this chapter are based on commitments approved in each year.

References


Greening development lending


Conclusion

Though prior consultation is often conceptualized as a social safeguard, this chapter shows that it can have significant environmental impact, by making high-risk areas less attractive. It appears to work hand in hand with national governments’ environmental management progress, as reflected in their Environmental Performance Index scores. DFI safeguards may prevent national governments from overlooking their own standards, but the mere presence of them does not appear to have a significant impact on deforestation. In this sense, governments and banks may form a system of productive redundancy, in which each serves as an insurance policy for affected communities, so that if one institution rolls back its protections, prior consultation will be preserved. But this function is only as robust as the enforcement of these safeguards by their institutions, which highlights the importance of grievance mechanisms in ensuring accountability.

Notes

1 For example, CAF (2016) lists prior consultation under “Consultation and Community Relations” in its 2016 ESS framework, and the IDB (2006b) lists it as a crucial part of “support for indigenous peoples governance.”

2 The World Bank Group (WBG) and the Inter-American Development Bank (IDB) each have multiple lending bodies, which have their own governing structures and policies, and which financed different types of projects. The statistical analysis below considers four of these windows separately: the World Bank’s International Bank for Reconstruction and Development (IBRD, which provides sovereign loans to governments) and International Finance Corporation (IFC, which lends to private sector projects), and the Inter-American Development Bank’s main IDB (sovereign) lending window as well as its private-sector lending arm, IDB Invest (previously known as the International Investment Corporation, IIC). Where the phrase “World Bank” occurs, the intention is to indicate the WBG institution rather than a particular lending arm. For the IDB, context should be sufficient to distinguish institution from lender.

3 ILO 169 is a revision and replacement of the 1957 ILO Convention 107, which protected indigenous peoples from labor exploitation in European overseas colonies. In 1986, an ILO Committee of Experts concluded that ILO 107 was written for the benefit of indigenous peoples but without sufficient allowances for self-determination for the indigenous communities themselves. ILO 169 explicitly addresses the rights of indigenous communities to decide if, when, and how they are to integrate with surrounding cultures (ILO, n.d.).

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on previous versions of this work. Rosario Santa Gadea and Rosario Gomez also provided contacts for interviews and made suggestions for data collection which were very useful for the completion of this research. Tania Galvan was in charge of developing the maps and Diego Perez took pictures during fieldwork along the highway. Ramon Rivero provided guidance for fieldwork in Madre de Dios. Leolino Rezende and Rebecca Ray contributed by developing statistical tables that support this chapter. Cesar Gamboa, Ernesto Ráez-Luna, and Anthony Bebbington made comments on the central arguments of the study. The author thanks all of these individuals for their assistance but assumes full responsibility for any errors or omissions that this research may contain.

Notes

1 PhD in Geography, Clark University; consultant, Universidad del Pacífico.
2 Founded in February 1968, the Andean Development Corporation – CAF – was chartered as a multilateral financial institution for member countries of the Andean Community. A few years ago, after a long period of growth in the number of shareholder countries and contributions from other financial institutions, this entity became the Development Bank of Latin America but maintained its “CAF” acronym.
3 The authors draw from ideas of Logan and Molotch (1987).
4 It was not possible to conduct interviews with the construction companies to gather their views on these projects.
5 The author had already conducted previous fieldwork in the area during the years that the highway was being built.
7 The BR-364 continues to the north of Acre, which is a Brazilian state that borders with the Peruvian Amazon, the point to which the CVIS extends.
8 For a detailed description of the measures adopted by the Peruvian state to develop a strategic design to incorporate the state in the IIRSA and effectively drive the execution of priority project, see: Santa Gadea, 2012, 131–154.
9 Available at: www.contexto.org/pdfs/peru_brasil.pdf.
10 See: www.mtc.gob.pe/portal/home/concesiones/conces_perubrasil.htm.
11 For a detailed explanation of the types of contracts and financing schemes, see: Bravo Orellana, 2013.
12 For an analysis of the advances and challenges of prior consultation in Peru, see: Sanborn et al., 2016.
13 See: www.minam.gob.pe/minamcaf.
16 In the last regional elections prior to this writing, the president of the Mining Federation of Madre de Dios (FEDEMIN) and a visible proponent of the mining agenda was elected regional governor in Madre de Dios.
18 The members of this collective included the NGO Derecho Ambiente y Recursos Naturales; Sociedad Peruana de Derecho Ambiental; Wildlife Conservation Society; and Pronaturaleza, among others.
19 For a detailed description of this process, see: Ráez-Luna and Dammert, 2012.
20 The transition of power between the second government of Alan García and that of Ollanta Humala took place on 28 July 2011.

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participation in decision-making, both associated with transparency, fail. In terms of mechanisms for responsibility, the state plays a weak role, which complicates efforts to monitor and control project execution.

Based on these elements, the assessment that was conducted found that the sole existence of regulations does not strengthen compliance with safeguards and as such does not ensure sustainable development. A lesson that Ecuador should learn is that public policy efforts should focus on mechanisms for follow-up and independent assessment with the participation of civil society. The state would do well to examine the participative experiences where diverse actors congregate in hybrid forums (Latour, 1991; Callon et al., 2001). An example of this is the Marine Reserve of Galápagos (Heylings and Bravo, 2007). The communities intervene at all points of decision-making: dialogue, design, and implementation of policies that are executed in the corresponding territory, as analyzed by Funtowicz and Ravetz (1990, 1993) in their work on post-normal science, which they conceptualize as “extended communities of evaluators.” In this framework, during the decision process, more weight is put on the experience and commitment of experts than on their technical or scientific knowledge of the problem. It is important to include participatory mechanisms in national regulations that consider pluralism and the diversity of the actors involved (Cobbaut and Espinosa, 2019) when designing governance schemes for sustainable development.

Studies to address these serious problems for the population, territories, and nature should be ongoing to have an impact on both the policies of development banks and on national regulations. For future research, it would be a good idea to study the projects that have been financed by multilateral development banks to assess and predict the potential results of integrating their mechanisms in a scheme for social and environmental demands for new regional development banks, such as China Ex-im Bank or the Banco del Sur. This assessment will need to examine the adverse effects that may be generated by standardizing in a way that favors the least satisfactory option for quality, as indicated by Akerlof (1970).

Notes

1 EPC: Engineering, procurement, and construction.
2 Resolution No. 001/08 of 31 January 2008.
5 Decreto Ejecutivo No. 400, junio de 2010.
8 Interview of an official from SENPLADES, July 2017.
9 On 27 June 2013, President Correa inaugurated the Multi-Purpose project in the province of Los Ríos. He ended his speech with the following statement: “We have the planet’s greenest Constitution; the first to grant rights to nature. Now we have the greenest energy matrix.” http://webcache.googleusercontent.com/search?q=cache:M2erWCPXvWUJ:www.presidencia.gob.ec/wp-content/uploads/downloads/2013/07/2013-06-27-INAUGURACI%25C3%2593N-PROYECTO-MULTIPROP%25C3%2593SITO-BABA.doc+&cd=1&hl=en&ct=chk&gbl=ec.
10 SASAC: State-owned Assets Supervision and Administration Commission (Comisión de Supervisión y Administración de los Activos de las Empresas Centrales).
14 See note 11.
16 “Por dar facilidades a empresas chinas se incumplen normativas.” La Hora, 17 de diciembre de 2014. Acceso el 05 de agosto de 2017. https://issuu.com/la_hora/docs/diario_la_hora_loja_17_de_diciembre_a1e19a1851c539/11.
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18 Official from the Ministry of Policy, interview, 2017.

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environmental and social divisions of the construction company in charge of executing the infrastructure project. This study recommends that banks focus on identifying gaps in and problems with national regulations to adapt their safeguards and complement the content of laws.

• Finally, the study recommends that the development banks publish all information related to the projects that they finance. Principles of transparency emphasize that safeguards and corporate governance measures must be effectively applied given that without this information, it is difficult to learn lessons and improve practices.

In summary, the safeguards applied by international banks that finance infrastructure projects should contemplate a balance between social, labor, and environmental aspects. Additionally, a correct reading of the context is necessary so that all the processes involved in the application of safeguards are more efficient. Implementing safeguards from a desk far from the project, without knowledge of what is going on in the field, tends to delay the project and creates frustration among actors. As such, it is recommendable to identify the main environmental, social, and labor risks that exist on each project and seek to complement, support, or improve the provisions in national regulations. Specialists from the bank that are in charge of monitoring must visit the site to ensure adequate and contextualized implementation of the safeguards that back the principles of sustainability. The Bolivian regulatory framework for environmental, social, and labor issues is, in general, robust, but requires more supervision to ensure compliance and the safeguards should fulfill this function.

Although safeguards do not represent an infallible framework for sustainability, they offer two main benefits: they support local regulations and expressly require financing entities to take social and environmental responsibility for the use (or misuse) of funds. Implementation of safeguards can be effective when it is contextualized; social actors are involved from the outset of project and in accordance with standards for transparency; clear mechanisms for participation are in place; and a hierarchy of mitigation is respected. In Bolivia, institutional capacity is weak and the case studies analyzed indicate that financing entities need to support local capacities.

Notes
1 To show the increase in accidents as reported during the interview process, the authors asked the Bolivian Police for access to data on the number of accidents that occurred in 2008–2016. Nevertheless, the authors only received data from 2015–2016, which showed a decrease in accidents in Patacamaya from 50 to 42. The authorities and subcontractors contend that there has been an increase in comparison to previous years.
2 Operational Policy on Women in Development (OP-761).
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Further reading


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