



**DEVELOPMENT  
CORRIDORS  
PARTNERSHIP**

# **IMPACT ASSESSMENT FOR CORRIDORS: FROM INFRASTRUCTURE TO DEVELOPMENT CORRIDORS**

Edited by:  
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**2022**

# The Development Corridors Partnership

The Development Corridors Partnership (DCP) is a research and capacity development initiative. It is a collaboration between institutions from China, Kenya, Tanzania and the UK. The main objective is to deliver effective research and capacity-building to help improve corridor planning and management. It aims to ensure that development corridor decision-making is based on sound scientific evidence and effective use of available planning tools and procedures, to ensure that risks are

avoided and opportunities exploited. The DCP comprises partners from the University of York, the University of Cambridge, London School of Economics, Sokoine University of Agriculture, the University of Nairobi, as well as the UN Environment Programme World Conservation Monitoring Centre (UNEP-WCMC), African Conservation Centre, the World Wide Fund for Nature (WWF), the Chinese Academy of Agricultural Sciences and the Chinese Academy of International Trade and Economic Cooperation (CAITEC).

DCP Partners:



For the purposes of this publication, DCP collaboration was extended to experts representing Netherlands Commission for Environmental Assessment, the Centre for Energy, Petroleum and Mineral Law and Policy at the University of Dundee, the University of Queensland, the Columbia Centre on Sustainable Investment, the GOBI

Framework for Sustainable Infrastructure Initiative (comprising the University of Oxford, University of Central Asia and the Independent Research Institute of Mongolia), The Biodiversity Consultancy, the Wildlife Institute of India, the Endangered Wildlife Trust and Ecotecnia Ingenieros Consultores SRL.

Expert Organisations:



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# Foreword

In the course of a long and varied working life, I have been privileged to work with, or learn from, a stimulating panoply of individuals who are committed to contributing to the economic, social, and environmental development of all aspects of the United Nations Sustainable Development Goals.

Jon Hobbs and Diego Juffe-Bignoli are, thankfully, two of these individuals. I was delighted to learn that they had come together to produce, for the Development Corridors Partnership, a rich and stimulating collection of research reports, case studies and assessments relating to the array of efforts made under the rubric of 'development corridors'. They were determined to express the conviction that decisions made, primarily by governments, regarding the planning and building of Corridors, really must be informed by an evidence-based understanding of the consequences - positive or negative - of these decisions. And they have succeeded. But Jon Hobbs will never read these words. He was hospitalized after the bulk of the work was complete, and, to the deep sadness and regret of all who knew him, he passed away at the end of September, 2021.

Jon and Diego sought out and recruited a daunting array of researchers, scholars and stakeholders to shed light on the processes currently underlying the world of development corridors today. They certainly succeeded.

The work was initiated before the onset of the COVID-19 pandemic, and as governments turn to the formidable challenge of restoring

economic vitality without further damage to the climate, it becomes even more imperative that impact assessment be understood, embraced and improved. Jon and Diego have shown us the way forward for a journey which absolutely must be embarked upon.

They would be first to recognise that the Development Corridors Partnership as a whole must be commended for showing - in many different ways and places - that, not only is the need for impact assessment clear and present, but so are the skills and commitment of researchers, scholars and stakeholders. These are to be found in an impressive coming together of universities, civil society organizations and business groups, and communities.

All are part of an outstanding initiative, funded by the UK Research and Innovation Council, and managed by the UNEP-WCMC. This initiative has been embraced by some of the best minds that have been turned to the task of ensuring that - while we attempt to bring economic and social benefits to people, in line with the United Nations Sustainable Development Goals - we do not risk significant environmental and social costs, and thus actually undermine long-term development successes.

So, I urge you to read this book, and figure out how you might improve your own contribution to the challenges ahead. Jon and Diego have set out a case. It needs to be taken up, not set aside; acted on, not just talked about. It is in your hands.

**John Harker**

Chair of the Development Corridors Partnership Independent Advisory Board,  
Nova Scotia, Canada.

Dedicated to the memory of Jon Hobbs  
who was the architect and driving force of this book

# Executive Summary

**Driven by increasing globalisation, the development aspirations of nations, and the need to access resources, an infrastructure boom is impacting many regions of our planet.** New infrastructure projects are traversing diverse landscapes over hundreds of kilometres, often crossing international borders and penetrating into remote areas previously unaffected by industrialisation and urbanisation. These large-scale projects, mostly spanning several regions in a same country, but often linear and transnational in nature, are generically called corridors. Depending on the nature and objectives, they can be transport, infrastructure, growth, resource or economic corridors.

The rapid development of corridors globally presents environmental planning professionals with numerous challenges. **The primary need is to ensure that decisions about these developments are informed by an evidence-based understanding of their consequences - both positive and negative.** This will enable infrastructure development to meet development needs without adversely impacting ecological systems or human welfare. Improving the quality of infrastructure policies, plans, programmes and projects, by ensuring they include the necessary environmental and social scrutiny, is urgently required now - and will be for the foreseeable future. This challenge is the unifying theme of this publication.

**Using insights from Africa, Asia and South America, this sourcebook compiles 24 contributed papers written in 2021, covering many facets of the**

**opportunities and challenges presented by the rapidly growing number of infrastructure and corridor developments around the world.** Prevailing planning practices are reviewed through case studies along with the efficacy of some of the available tools to conduct systematic and comprehensive impact assessments. The latter includes Strategic Environmental Impact Assessment (SEA) and Environmental Impact Assessment (EIA).

As the title suggests the underlying thesis of this publication is that, where they are justified, **there are significant benefits in ensuring that corridors that contain single purpose infrastructure developments (utility, infrastructure or transport) progress through a carefully planned sequential process of diversification and expansion to ensure the maximisation of benefits in full-blown 'development corridors'.** In this book, development corridors are therefore aspirational. They comprise areas identified as priorities for investment to catalyse economic growth and development. They should be developed with multiple stakeholders and social, economic and environmental interests and interdependencies in mind. With the integration of sustainability principles and appropriate environmental and social standards, development corridors could become true '(sustainable) development corridors'. They should be planned to maximise positive opportunities and minimise negative risks. Without this, today's short-term successes will become tomorrow's challenges and long-term human welfare and ecosystem integrity will be undermined.

# Overview of contents

This book brings together a wide range of perspectives from experts, researchers, and practitioners around the world with the purpose to foster greater collaboration and increase our global understanding of corridors and their benefits and potential negative impacts. 13 of the 24 chapters are written by independent experts and researchers from Australia, Bolivia, Brazil, China, India, Kenya, Mongolia, South Africa, Tanzania, UK, and the USA. The book also includes 11 chapters containing material gathered by the Development Corridors Partnership, a programme of work led by UN Environment Programme World Conservation Monitoring Centre (UNEP-WCMC) and funded by the UK Government via their Global Challenges Research Fund.

The collection of papers in this sourcebook is divided into five sections. First an introductory section where we introduce some key terms and definitions that underpin this work ([Chapter 1](#)). We then explore some key principles and aspirations of corridors such as delivering the Sustainable Development Goals ([Chapter 2](#)), ensuring theory and practice align ([Chapter 3](#)), ensuring financial sustainability ([Chapter 4](#)), properly assessing environmental sensitivity ([Chapter 5](#)) respecting human

rights ([Chapter 6](#)), or maximising, co-benefits ([Chapter 7](#)).

In the next three sections, we present 15 case studies from three continents: Africa, Asia, and Latin America. These case studies explore key challenges and lessons learned from specific planned, ongoing, and already implemented developments. They are presented as individual stories that readers can explore.

The final and fifth section aims to summarise lessons learned from a 4-year research and capacity building programme specifically aiming to understand the key challenges and opportunities around corridors and that has been the major driving force of this work: The Development Corridors Partnership project (DCP). DCP is a collaborative partnership across UK, Kenya, Tanzania and China, funded by the UK Research and Innovation Global Challenges Research Fund (see [Chapter 23](#)).

The book finishes with an overview of the lessons learned from the contributed papers included in this book and develops ten principles for corridor planning and delivering a meaningful and comprehensive impact assessment ([Chapter 24](#)), which we summarise here as ten key messages.

## Key messages

1

Corridors must seek to achieve positive sustainability outcomes:

The mindset underwriting environmental planning of most infrastructure developments has been to mitigate negative impacts. The planning of few existing corridors is based on their role in supporting a sustainability vision for a country or region in which they are situated. Corridor developments must therefore be based on sustainability principles and support progress towards national, regional and international sustainable development goals. A true development corridor will seek to do good, as well as to mitigate negative impacts.



2

### Integrated and inter-disciplinary approaches are needed:

Corridor developments are extensive, complex, multifaceted features traversing many landscapes. They can bring about significant transformational change to physical, economic, social, and cultural systems, and serve as interconnecting features. Yet engagement in corridor planning is often constrained by limited disciplinary and institutional involvement, with projects often superimposed upon communities. Corridor developments need diverse expertise and experience in their planning and management, including local stakeholder knowledge, avoiding disciplinary, institutional, or sectoral silos, that can result in policy conflicts, contradictions, and inconsistencies.

3

### Corridor proponents should clearly demonstrate consideration of alternatives:

Corridor options should not be limited to a preferred proposal favoured by an elite. Corridor developments must consider all feasible alternatives (including maintenance of the status quo and no corridor development) and make the risks and opportunities of each option explicit and transparent through meaningful consultation. An important requirement in all corridor planning is to justify the need for a wide choice of options and an explanation of the potential benefits it will bring and to whom, in comparison with the alternatives. Any necessary trade-offs and how any significant potential negative impacts will be effectively managed, and opportunities created must be explained.

4

### Public participation and stakeholder engagement should be at the core of corridor planning:

Corridor planning frequently fails to include meaningful participation of all stakeholders. Corridors can profoundly affect the lives and rights of indigenous peoples and local communities, potentially for generations. A common failing is that the first opportunity for local stakeholders to engage arises only after all strategic decisions have already been made and the only option remaining is for them to react negatively to a fait accompli. The meaningful engagement of all stakeholders is necessary to ensure their role is more than reactive. The way corridors are viewed by different stakeholders must be identified, understood, and addressed. Corridor developments must ensure that all interested and affected people are provided with adequate information about a proposal and have meaningful ways to engage in decision-making processes from the outset of strategic planning.

5

### Mainstreaming and tiering are fundamental for corridor success:

Corridor planning requires a tiered assessment process, ensuring that environmental and social issues are considered alongside financial and technical considerations from the start of strategic planning or programme development, right through to project specifics. Conceptual corridor planning is frequently dominated by technical and financial suitability criteria with environmental, social, cultural, and human rights sensitivity issues being considered, at best, as externalities, retrospectively, once issues and problems arise. Strategic planning is important because it is when the full range of options is still open for discussion. It also establishes the parameters that will frame and implement a corridor plan or programme. Environmental and social considerations (and the interactions between them) should be considered early in strategic decision-making alongside (and to inform) technical, financial, and economic considerations.

6

### An iterative process is needed:

Corridors exist in dynamic environments and need to be responsive to changing circumstances and priorities. Planning must adjust as circumstances and available information changes. The process should identify, map, and engage all interested and affected stakeholders from the earliest stage of corridor planning and throughout the planning and management of the corridor. New concerns and evidence will likely emerge as a corridor development progresses. Corridor planning frequently places undue emphasis on the production of a report (Environmental Impact Report) and its influence on the decision to proceed. The process may not be so linear in nature. It may involve many adjustments and decisions as new evidence emerges and predictions improve. A good-quality report and recommendations is necessary, but they are dependent upon a comprehensive process of ongoing dialogue and engagement with all stakeholders.

7

#### Corridors must ensure effective use of available tools:

Many corridor environmental impact assessments fail to meet required international standards. Corridor planning and management should make systematic and adequate use of available impact assessment procedures, methods, techniques, and tools to ensure good-quality decisions. The available procedures discussed in this publication (notably Strategic Environmental Assessment and Environmental Impact Assessment) and their associated methods, tools and techniques should be used when appropriate to help ensure that a systematic process identifies all significant potential benefits and development outcomes, and that they outweigh the costs and risks to affected people and their livelihoods and environments. The objectivity and quality of corridor decisions are dependent upon the effective use of the available tools.

8

#### Plan corridors with resilience and adaptability in mind:

Prevention will always be better than cure in addressing the negative impacts of corridors, and this should be the priority. However, some circumstances dictate an inevitability of negative impacts. Corridors, therefore, need to be designed to be made resilient to anticipated changes and adaptation measures may be necessary as 'coping' mechanisms or to offset unavoidable impacts, such as the impacts caused by climate change. The suitability of measures will require ongoing monitoring and adaptation as needs arise.

9

#### Seek impact, influence, and implementation capacity:

The decision to proceed with a corridor is ultimately the responsibility of decision makers. They are usually the representatives of all stakeholders' interests and custodians of their natural resources. Any impact assessment report must provide adequate information to ensure sufficiently good-quality decisions. If they are to be effectively implement the recommendations provided. Attempts to improve the performance of planning and associated assessment processes of corridors must tackle the ways in which outcomes are shaped by political contexts and institutional capacities. Approaches to working on assessment processes should integrate political economy analyses and institutional capacity assessment from the outset and on an ongoing basis. Resulting insights should inform the design and implementation of interventions intended to improve planning practice.

10

#### Evolve from Infrastructure to Development Corridors:

The prospects for linear infrastructure projects to evolve into comprehensive development corridors are often left to chance and spontaneity. Infrastructure projects are often developed in isolation and in an incremental way. For infrastructure projects to progress and become true development corridors, the transition must be systematically sequenced into planning from the start. Assessments must include consideration of potential induced, secondary, synergistic, transboundary, and cumulative impacts likely to result from the corridor development. The progression from infrastructure to development corridors must be based on a systematic, comprehensive, and integrated assessment of the potential positive environmental, social and economic opportunities and the rigorous avoidance or management of negative impacts.

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# Tackling the EIA Impact Gap: Addressing Political Economy Realities to Bring Actual Practice Closer to Best Practice

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## ABSTRACT

Environmental impact assessment (EIA) processes are intended to serve as crucial mechanisms to identify and address social and environmental impacts of proposed development projects, including corridors. In practice, key aspects of these processes – the production of EIAs, consultations around the findings and implications of reports, and the actual use of the content of reports to inform key project decisions – are at times considerably distorted by power and incentive dynamics rooted in the political economy of a given context. The result is too often watered-down ‘box-ticking’ exercises in which the impact of the EIA process on social and environmental protection is greatly reduced. Technocratic approaches that emphasize best practices and capacity on their own will not improve the performance of EIA processes. Politically savvy approaches are needed to address the political challenges associated with EIAs. In exploring these issues, this chapter concludes with some specific examples of what politically informed approaches to more impactful EIA processes might entail.

## 3.1 Introduction

Successful development policies and reforms must bring together form and function; that is, ideas for ‘good practice’ with real-world steps to put these into meaningful practice. Without the latter, the former can become superficial victories which fail to have a meaningful impact. That is, institutions and policies that do not end up doing the main things they

were created to do. Unfortunately, reforms on paper are often unmatched in reality when it comes to various areas of development practice.<sup>14</sup> Environmental impact assessment (EIA) processes are no exception.

<sup>14</sup> These points were underscored in the World Development Report by World Bank (2017) and have animated the work of development practitioners across the world, including those contributing to the TWP Community of Practice such as Laws and Marquette (2018).

At a broad level, EIA processes are intended to:

- » produce timely, relevant and reasonably comprehensive analyses that anticipate the main environmental and social ramifications of a particular development project;
- » engage the broader population of a community, region or country for input, scrutiny and feedback on these findings; and
- » deploy the outcomes of the assessment and subsequent feedback to inform decision-making about whether projects should proceed or not and, if so, what plans can be put in place to avoid or mitigate negative social and environmental consequences of the project and measures needed to enhance potential positive impacts.

However, even while becoming fairly ubiquitous legal requirements, EIA processes rarely function as intended, falling short at various points along the way and too often becoming mere 'box-ticking' exercises, particularly in developing countries.<sup>15</sup>

While much attention has been paid to the technical causes of EIA under-performance, there is another set of factors that merits close consideration. Major misalignments on the political front often prevent the potential of EIA from being realized. These misalignments of power and interests - long recognized in the literature,<sup>16</sup> but rarely tackled in EIA practice - cannot be adequately addressed through technocratic interventions focused on increasing knowledge of best practices and capacity to implement these. This chapter explores how political context can contribute to EIA impact gaps, and how these concerns can be addressed more systematically to enhance EIA performance moving forward.

## 3.2 EIA processes - best practice versus actual practice

### 3.2.1 EIA production

The cornerstone of an EIA process is the actual assessment itself, the piece on the basis of which subsequent discussions, planning and action would be built, and key decisions informed. The activities and decisions associated with the production of an EIA would ideally involve the decision to carry out an EIA for a relevant project and the production of as complete, accurate, unbiased, and contextualized an assessment of the anticipated environmental and social risks as possible, based on the best available information and analysis. Table 3.1 compares notions of best practice in various aspects of EIA production with some of the suboptimal practices that often actually emerge in their place.



15 See Kolhoff et al. (2018) on EIA performance in low and middle income countries, assessed on both procedural and substantive grounds.

16 Formby (1990) almost in its entirety resonates with many of the political factors impeding EIA performance three full decades later.

Table 3.1. Best practice vs Actual practice in Environmental Impact Assessment production

	Best practice	Actual practice
<b>Screening</b>	Decisions about whether an Environmental Impact Assessment (EIA) is required made on the basis of project size, anticipated scale of impact, nature of project or sensitivity of potential area in question.	Government decisions are sometimes made on the basis of a desire to minimize costs and inconvenience to project developers, resulting in some projects not requiring an EIA when they should on the basis of best practice criteria around significance and/or magnitude of impact (e.g. a project may be split into smaller components so it does not reach the size or impact threshold that would trigger an EIA process). <sup>17</sup>
<b>Scoping</b>	Identification of the issues, types of impact, indicators and geographic areas to be covered in the assessment on the basis of relevance and appropriateness.	Inadequate or incomplete coverage of the reach and of important variables shaping likely environmental and social impacts. <sup>18</sup>
<b>Prediction</b>	Forecasting likely social and environmental effects of projects, specifying their probability and magnitude with reasonable accuracy, and adequately contextualized.	Absence of specification of assumptions behind predictions and of range of uncertainties, resulting in inaccurate or partial assessments and misdirecting where to focus mitigation efforts. <sup>19</sup>
<b>Evaluation</b>	Unbiased assessment of significant impacts and the acceptability of unavoided or unmitigated impacts.	Biased reports <sup>20</sup> and acceptability decisions skewed in favour of projects proceeding; <sup>21</sup> thresholds are set too high, allowing more risks to stay unmitigated.

17 For example, see Enriquez-de-la-Salamanca (2016) for a discussion of “project-splitting” as a way to circumvent EIA requirements.

18 For instance, a study of Sonter et al. (2017) finds that by controlling for broader spatial determinants of deforestation caused by mining project, the actual impact of project is 12 times higher than that the figure stated in respected mining leases. Yet, because of the inadequacies of the original EIA, the burdens of the cost for addressing such colossal difference between the anticipated impact and actual impact are passed from company to society (Laurence and Salt, 2019)

19 For instance, through an analysis of environmental impact statements and decision documents, Tenney et al. (2006) found that 43% of such documents do not mention uncertainty or indicate potential variability in the numbers presented and 23% in of the documents, uncertainty was alluded to but not explicitly referred to as uncertainty.

20 See, for instance, Human Rights Watch’s (2012) reporting on inaccurate, at times deliberately falsified, EIA reports. One of the cases they looked at of EIA reports in India involved significant amounts of the text having been cut and pasted from an EIA for a bauxite mine in Russia.

21 The Grez et al. v. Environmental Evaluation Service of Chile climate change litigation case in Chile underscores the non-technical basis for some determinations of acceptability/favorability (2018).

### 3.2.2 EIA consultations

In theory, meaningful public participation in EIA processes is a fundamental tenet of good environmental governance.<sup>22</sup> Public consultations are the main vehicle for such participation, typically by way of public hearing or workshop (although in some developing country and remote rural situations this may

include other forms of popular engagement in some circumstances such as role play). There are some generally accepted principles of good practice in EIA consultation,<sup>23</sup> which are set out alongside the typical reality of each of these, in Table 3.2.

Table 3.2. Best practice vs Actual practice in Environmental Impact Assessment consultation

	Best practice	Actual practice
<b>Participants</b>	Inclusive participation, drawing on a range of relevant stakeholders (both interested and affected) <sup>24</sup> including marginalized groups, e.g. indigenous and local communities, women, youth, etc.	Often limited or narrow groupings of participants chosen on the basis of their likelihood of acquiescing or supporting a project, rather than more comprehensive representation of interested and/or most affected parties. <sup>25</sup>
<b>Nature of participation</b>	Meaningful dialogue among participants sharing their different perspectives and being confident that their views will influence outcomes.	One-way information transfer from companies or governments to participants, more like passive 'briefings' than active discussions; exercise to collect a list of participants and appear to have consulted them, while actually doing little more than assembling them. <sup>26</sup>

22 Arnstein (1969) provides a useful typology for understanding different forms of participation, including those that are far from "meaningful" and amount to masked non-participation or some form of tokenism.

23 For instance, the International Association for Impact Assessment has compiled a FasTips series -- an expansive list of different forms of IA -- aimed at assisting EIA professionals with practical insights on applying best practices (IAIA, 2018).

24 See Hobbs (2020) for discussion of "affected" versus "interested" stakeholders and the different perspectives they represent. The latter tend to be most concerned with whether or not mining is desirable at a national economic level while the former are most concerned with the more localized and immediate effects of mining projects. While there is not yet agreement on best practice around interested versus affected parties in EIA consultations, one might assume that ideally there should be some combination of the two and that decisions on participation would be made on the basis of relevance/appropriateness rather than the anticipated speedy acquiescence of certain stakeholders.

25 See Wells-Dang (2016) for various examples of this from the Mekong region. Another study, in the Maldives, found no regulation in place that would ensure the notification of affected communities prior to either for the report preparation phase nor the preview phase and suggests that criteria for participation can lead to de facto exclusion of various groups (Zuhair and Kurian, 2016, p.134).

26 Capturing this problem, a study in South Africa concluded that in the mining and gas industries, stakeholders, during participatory processes, expressed "concern that despite engaging with the public participation process they do not feel confident that their concerns would be incorporated into the decision making. They were specifically concerned that their raised issues would be subordinated to the economic and strategic resource development agenda of the development" (Simpson and Basta, 2018, p.67).

<b>Capacity/ technical expertise</b>	Participants have requisite expertise to engage with subject matter of consultations effectively, or access to intermediaries to help them to do so.	Major asymmetries between project proponents and participants, the latter often lacking the capacity (including language skills) and access to technical expertise to participate effectively. <sup>27</sup>
<b>Timeframe</b>	Sufficient time is allocated for participants to digest relevant information and prepare for effective participation.	Short timeframes that do not allow participants to review information, meaningfully deliberate and formulate an informed response. <sup>28</sup>
<b>Timing and frequency</b>	Begins early enough in project development to have an influence on eventual decision-making and is iterative/ongoing throughout the lifetime of a project.	Typically, a one-off event that takes place after key decisions have already been made and sometimes, even after projects are already under way. <sup>29</sup>
<b>Inputs</b>	Transparency of (and access to) all relevant information on key issues covered in the assessment, provided in an impartial, contextualized, accessible and culturally appropriate form.	Information given to participants is sometimes biased, misleading (including inflating potential benefits) or incomplete; and often is presented in long, highly technical reports that are inaccessible to anyone who is not a technical expert; dissemination often culturally insensitive. <sup>30</sup>
<b>Outcomes</b>	Consultations inform and influence subsequent decisions to grant or refrain from granting an environmental license, and actions taken to mitigate environmental and social impacts of project in question. <sup>31</sup>	Consultations tend to be one-way information transfers to those being 'consulted' and rarely do they serve to collect and apply input to key decisions or actions, some of which may well have already been taken prior to the consultation in question. <sup>32</sup>

27 Simpson and Basta (2018) also note that mismatches between educational and language requirements and the realities of would-be participants, could impede meaningful participation by local populations (Simpson and Basta, 2018, p.67).

28 For instance, meaningful Aboriginal participation in EIA in Canada has been undermined by shorter timelines, in the name of government efficiency and industry desire to streamline EIA processes. They require the communities to provide comments or concerns in writing within 21-45 days, with the anticipated timeline for government's decisions 30-90 days from time of notification (Udofia, Noble and Poelzer, 2017).

29 For instance, in India, in 2012 the Ministry of Coal pressured the Ministry of Environment to exempt coal project expansion under a certain production thresholds from public hearings in order to hasten clearance (Government of India. Ministry of Environment and Forests, 2014).

30 From a study of EIA in Sub-Saharan Africa, the authors noted "Project documents are often drafted in technical language, preventing proper understanding except for the well-educated few. Such lack of understanding may be to the advantage of government authorities who wish to ensure that project implementation is not unduly delayed" (Kakonge, 2012, p.311).

31 Good participatory EIA consultations should "allow directly affected communities to influence decisions about whether a project should go ahead in their area; to negotiate social and economic benefits to compensate for environmental degradation and loss of land; to increase the accountability of companies to communities; and to guide a company/government in managing the conflict and tensions that often arise in response to large-scale extractive projects" (McCullough, 2016, p.2).

32 Wells-Dang et al. (2016), p. 43.

In short, although there are examples of better performance, the reality of public participation in the EIA process can deviate considerably from good practice in almost every way (Udofia, Noble and Poelzer 2017, p. 172).<sup>33</sup> Indeed, in some contexts public participation in EIA consultations has been described as “a sham process intended to legitimize development projects rather than give communities the power to reshape or veto projects” (Barandiaran and Rubiano-Galvis 2019, p. 1). In other contexts, formal participatory tools have been described as “empty bureaucratic procedures” and circumscribed spaces to merely formalize “irreversible decisions” (Merino 2018, p. 75 and p. 77). As Merino notes, one of the risks of such weak participatory mechanisms in EIA processes is the possibility of precipitating conflict as communities and civil society feel that their rights, concerns and frustrations are not being meaningfully addressed through existing formal channels.<sup>34</sup>

### 3.2.3 EIA use

A good EIA process does not end with the production of a report and a consultation deliberating on some of its findings. Rather, these should serve as inputs into subsequent decisions around whether or not to proceed with a project and, if so, how to address anticipated social and environmental challenges (as noted in the introduction to this volume).<sup>35</sup> However, even when solid assessments are completed and feedback is collected through participatory mechanisms and integrated into decision-making processes EIA impact can be undermined by subsequent inaction. As Wells-Dang *et al.* (2016, p. 36) note, “impact assessment frequently has become a bureaucratic and technical exercise emphasizing the writing and approval of a scientific document, rather than part of a holistic planning process to inform decision-making.”

33 Interviews of EIA experts from a variety of stakeholder groups and working on a range of geographies, conducted by CCSI, underscored this point across the board.

34 For instance, conflict erupted at the Conga Mine in Peru, when the Ministry of Energy and Mines approved an EIA over the objections of communities both to key provisions of the EIA EMPs and to the limited consultations on it. The conflict escalated, with 5 casualties and 10 of protestors injured in 2011, followed by protracted struggles that ultimately ended in the project being abandoned in 2016 (Merino, 2018, pp.76-78).

35 As Formby (1990, p.193) notes, “the ultimate purpose of EIA is not just to assess impacts: it is to improve the quality of decisions (...) EIA in its most useful sense is not just a quasi-scientific exercise in predicting the impacts of proposals on the natural environment. It should be an effective part of the decision-making process which integrates elements of social and natural scientific research, public participation, administrative review and political decision-making.”



Table 3.3 Best practice vs Actual practice in Environmental Impact Assessment use

	Best practice	Actual practice
<b>Impact on decisions on fate and terms of project</b>	Environmental impact assessment (EIA) report and consultations would inform decisions about whether or not to proceed with a project and terms for doing so.	Key project decisions often already made even before EIA report is completed and report “sits on a shelf” without further action being taken. <sup>36</sup>
<b>Development of environmental management plans</b>	Design of an overarching environmental management plan (EMP) containing layers of action plans to effectively manage key anticipated environmental and social impacts; these would include assignment of responsibility for different aspects of these plans to specific actors with the capacity to undertake such responsibility effectively; and the above would be undertaken prior to start of operations. <sup>37</sup>	Under-developed, ill-specified or non-existent EMPs <sup>38</sup> incomplete plans that address, at best, natural environmental, but not social impacts; in those cases, where plans are developed, they can often be weak (e.g. covering little beyond compensation for damage)and/or inactionable, not adequately specifying requirements, steps to be taken and parties to be responsible for these (this last point is a particular problem for social impacts as appropriate responsible parties are not always obvious), nor ensuring capacity for responsibilities to be effectively undertaken.
<b>Implementation, monitoring and enforcement of implementation plans</b>	Efforts to put action plan commitments in practice, with mechanisms and requisite capacities among relevant agencies to monitor progress, update EIA report as project unfolds, monitor compliance of conditions of approval, and enforce commitments.	Uneven implementation of EMPs, with little effective oversight and few consequences for non-implementation.

36 See Zhang et al. (2012) on the importance of EIA use (or lack thereof) in decision-making processes and factors that influence this based on an extensive literature review through 2011. Locating the crux of EIA impact in EIA use, they argue that “to achieve the substantive effectiveness of EIA, the linkage between EIA and decision-making plays a crucial role in the extent to which EIA can make a difference” (Zhang et al., 2012, p. 153). Jay et al. (2017) also underscores the limited impact of EIA on decision-making.

37 These principles are derived from the World Bank’s (2018) analysis of responsible agricultural investment.

38 See, for instance, a case study from India. Rathi (2018, p.421) refers to environmental management plans as “the most important output of the EIA process especially for the developing countries where priority is on the economic development by way of development projects and the EIA process has inherent weaknesses.” However, the study of over 80 EIA reports for environmentally approved projects found that environmental management programs were generally weak and not taken seriously by either EIA professionals or decision-makers.

### 3.3 Political realities and EIA performance

When it comes to the question of why EIA practice frequently diverges from principles of good environmental governance, the technical reasons have been widely explored, and in some cases addressed.<sup>39</sup> There can be no doubt that capacity limitations (institutional deficits) can undermine EIA performance, particularly in developing countries. However, EIA performance, including the capacity considerations above,<sup>40</sup> can also be compromised by the political contexts within which EIA processes unfold as the “implementation of EIA is highly constrained by extensive politicization and bureaucratic intervention” (Zhang, Kørnøv and Christensen 2013, p. 153). This reality is regularly confronted by EIA professionals who can find the impact of their best efforts at technically strong assessments, capacity development, and theoretically sound processes being significantly undermined by the decisions and actions of actors powerful enough to manipulate or flout national policies, regulations and guidelines around EIA without major repercussions. No amount of technical knowledge or capacity transfer will address such impediments to better EIA performance. As Formby notes:

*The disadvantage of the technocratic view of EIA is that it can blind those concerned to the political realities of the EIA process and the need to take account of these. This hinders*

*research into the political and social aspects of EIA. Worse, it hinders adaptation of the EIA process towards a closer integration with political decision-making processes. The danger of the technocratic approach to EIA is that while EIA continues to be carried out, it becomes decreasingly related to actual decisions. While the EIA is being conducted, political or commercial decisions are made which preempt its conclusions. (Formby 1990, p.193)*

Thus, alongside work on advancing ‘best practice’ laws, regulations, and procedures, as well as the capacity to implement these, improving EIA performance will also require tackling political determinants of performance head-on.<sup>41</sup>

Politics is ultimately a story of power and interests and whether/how these align with the intended goals - in this case - of EIA processes.<sup>42</sup> The integrity and quality of EIA production, consultations, use and impact can be profoundly compromised by the competing interests and incentives driving the decisions and actions of powerful political and economic elites.<sup>43</sup> They may also be potentially propelled under the right set of power and incentive dynamics (Zhang, Kørnøv and Christensen 2013, p. 154). Until such political considerations are more clearly understood and actively

39 A range of analyses have focused on the capacity gaps and legal or procedural factors contributing to problematic EIA performance. For a sample and overview of these, see, for instance, Wood (2003), Clausen et al., (2011), Zhang et al. (2012).

40 Boesen and Therkildsen (2005) discuss the relationship between relative capacity of different organizations or agencies and political dynamics.

41 A very recent analysis of EIA practice in Uganda illustrates how apparently technically sound processes (“EIA is well legislated and institutionalized in Uganda”) can be distorted “on the ground” by a number of factors, political influence and interference identified among the key most important (George et al., 2020). Cashmore and Richardson (2013) highlight how the very enterprise of doing environmental assessments in and of itself is a mechanism to overcome or shift the interests of powerful decision-makers in historically side-lining environmental and social considerations. They note that environmental assessment “and the actors who implement it, can thus be interpreted as constitutive of an explicit attempt to affect power dynamics within society by reforming the values and practices of decision making” (Cashmore and Richardson, 2013, pp. 2-3).

42 We are intentionally departing from the tradition of relying on the vague and unhelpful concept of “political will,” choosing instead to unpack this concept and analyze political realities in a way that is more conducive to action. For more discussion and critiques of the concept of “political will” see Green (2009), Hudson et al. (2018) and Marquette (2020).

43 In the name of stimulating economic growth and creating employment opportunities, many governments want to encourage resource development projects and therefore push to speed up decision-making through EIAs. England and Wales for instance, wanted to change the National Planning Policy Framework to speed development decisions (Morgan, 2012, pp.11-12). These dynamics are being exacerbated in some countries during the COVID-19 pandemic, as a combination of rising budgetary pressures and the desire to hasten economic recovery have been leading some governments to try to minimize or circumvent a variety of social and environmental regulations to get deals and infrastructure projects through quickly. See, for instance, Fields (2020); Bancroft (2020), Gillespie (2020); Bracken (2020); Spring (2020) and Boyd and Munoz (2020).

addressed, the risk of EIA processes and practical progress toward their intended goals being derailed in these ways will continue.<sup>44</sup>

This analysis complements more technocratic approaches to EIA performance by highlighting illustrative examples of how power and interest misalignments can undermine the effectiveness of EIA processes oriented around the following questions:

- » **Who are the key actors involved?**
- » **Who has power over whom and what realm of activity?**
- » **What interests and incentives drive the key players? And**
- » **How do all of these factors shape outcomes?**

### 3.3.1 Key players, power and interest dynamics

The fate of EIA processes is significantly shaped by the power and interest dynamics across the various actors involved from government, private sector and society. It appears, fairly consistently, that environmental and social protection are not the highest priorities for those with the most power over how different aspects of EIA processes unfold. Indeed, these might even be seen by powerful political and economic elites as competing with their primary professional and personal interests. At worst, when the key actors involved in conducting EIAs – project proponents, government authorities and the individuals who actually carry out EIAs ('experts') – have incentives to undermine EIA processes for personal and company gain, EIA processes run significant corruption risks (Dougherty 2015; Williams and Dupuy 2016, p. 5). The result of all this is that these actors

can use direct control and indirect influence to weaken performance throughout EIA processes.

Because their financial and technical resources are in high demand, private sector proponents of corridor projects tend to be in a very powerful position when it comes to EIA processes. Sometimes, this power can be wielded to influence legislation and decision-making to reduce the number or demands of EIAs (Kohloff, Driessen, and Runhaar 2009, p. 279). They can also have a significant amount of direct influence over EIA production and indirect influence over the other aspects of the process through government ties and leverage; the latter of which can potentially involve bribery and threats of violence (Dougherty 2015). Some argue that whether or not projects will proceed, and the quality of EIAs conducted, "depends mainly on investors' commitments, not on government policies or regional institutions" (Wells-Dang *et al.* 2016, p. 44). A former high-level government official interviewed for this project argued that government regulations and activities were not what ultimately determined the fate of EIA processes in his mineral and liquid natural gas-rich country. Rather, good EIA outcomes would only come about when the company developing the project was driving this; that is, when that company was a 'major', listed on international stock exchanges, with extensive reputational exposure and the internal capacity to develop and sustain relatively high environmental and social standards. Such companies, he argued, hope to attract more licenses and contracts in the future and avoid costly community conflicts or delays. Therefore, they want to avoid the risks of being associated with very socially or environmentally damaging projects and show their commitment to good EIA practices.<sup>45</sup>

44 This analysis draws on some of the insights of Cashmore and Richardson (2013), introducing a special issue of Environmental Impact Assessment Review on "Power and environmental assessment" (EA) in which the authors underscore the importance of power to understanding EA performance and the different ways in which this relationship might be framed.

45 This interview was carried out on 13 October 2020 with a former high-level official who had worked in an extractives ministry for six years.



At a general level, within governments, typically, it is pro-investment actors - for example, finance and economy ministries; ministries of oil, gas, mining and energy; the president/prime minister - rather than social and environmental ministries and agencies that tend to have the greatest actual influence over the direction and outcomes of EIA processes (Wells-Dang *et al.* 2016).<sup>46</sup> Indeed, despite their nominal authority over EIA processes, environmental ministries can be considered by other ministries as “barriers to economic growth” and, therefore, their strength and autonomy are often discouraged (Kohloff, Driessen and Runhaar 2009). Because the priority of the most powerful government actors is typically the imperative to attract and retain investment, their decisions and actions tend to be driven by the interests of those of the companies and investors they are hoping to attract. As such, they generally favour and put in place EIA processes that prioritize cost- and time-savings, reduce administrative burdens, cede little or no power to other stakeholders who might compromise any of these through participatory mechanisms, and do not tie their hands on major decisions about the fate of projects, regardless of EIA findings.

Finally, “when it comes to EIAs, most communities are the politically and economically weak party seeking to counter the proposals of powerful multinational corporations and their allies in government. Scholars have found that public participation procedures often fail to level the power

asymmetries that characterize the relationships between developers, state agents and communities” (Barandiaran and Rubiano-Galvis 2019, p. 2).<sup>47</sup> As such, communities, as well as civil society groups, can do relatively little to shape EIA processes, other than through protest about inadequate application of procedures and weak outcomes that they oppose, which might delay the project, but will rarely change the final outcomes.

### 3.3.2 When politics meet EIA processes

Consider a sampling of specific examples from the overview of suboptimal outcomes emerging during EIA production in Tables 3.1, 3.2 and 3.3. Screening to determine whether or not an EIA is undertaken at times has “been decided not so much by objective review of the likely impacts, as by the realities of inter-departmental or inter-governmental politics” (Formby 1990, p. 191), or by the ability of companies to design projects in such a way as to fall just below the EIA requirement threshold (Wells-Dang *et al.* 2016). Company influence can also profoundly shape EIA reports themselves. On occasion, examples have been exposed of this influence being exerted directly through company staff interfering with the content of EIA reports. For example, in Peru it was reported that “mining company employees routinely sneaked in to [the mining ministry] to help edit environmental impact

46 In interviews conducted by CCSI, the same perspective was shared by EIA experts from a variety of stakeholder groups and working on a range of geographies.

47 While there may be exceptions to this - e.g. in the presence of wealthy communities that can deflect projects away from their properties and land - in general, communities are not made up of well-connected elites.

studies” (Bajak 2014). Indirect company influence and pressure can also be used to skew reports in favour of corporate interests over environmental and social concerns (Williams and Dupuy 2016). For instance, as many have noted, the underlying conflict of interest inherent in companies financing and hiring the consultants who perform EIA can bias the contents in favour of company interests, prioritizing speed, favourable reports and consultant relationships with government officials.<sup>48</sup> The result can be reports that, even based on the available information and technology, are imbalanced, incomplete (limited in scope) or inaccurate, under-reporting negative impacts that might jeopardize or increase the costs of projects.<sup>49</sup> While there is some evidence that public or community pressure can potentially drive consultants to produce better reports,<sup>50</sup> in many low- and middle-income countries limited capacity, limited coordination and constrained civic space undermine the power of these groups and the prospect of their driving better performance.

Powerful government and corporate actors can also impede the deployment of EIA consultations as regular and meaningful mechanisms for public participation. The fact that “too often, participation is designed to convey information rather than integrate the community’s input into the final decision”. That is, consultation processes that do not allow adequate time for participant review and preparation, exclude key stakeholders, use reports that are not transmitted in culturally appropriate and technically accessible ways, and constrain the scope of discussions to favour passive listening by participants over active engagement reflect the relative weakness of these communities vis-à-vis the other major stakeholders (Barandiaran and Rubiano-Galvis 2019, p. 2). These social actors have very little influence over the rules

of the game. That is, decisions regarding who will be consulted, and when, where, how and to what end. As a result, “public participation is used as an opportunity for the developers to exercise power and to persuade the public to do what they would like to do, without real consideration of needs and inputs from the public side, which distorts the original expectation for implementing public participation” (Zhang, Kørnøv and Christensen 2012, p. 151).

Finally, whether or not EIA reports and consultations ultimately inform policy decisions, their implementation, monitoring and enforcement are all, again, in the hands of key actors who often face competing incentives or perceive competing interests that drive actual practice away from notions of best practice. A common concern among EIA professionals is that their reports are unused if their content is viewed as politically or economically inconvenient. That is, “if the conclusions of the EIA are not politically acceptable, they are circumvented or ignored” (Formby 1990, p. 193). In other cases of reports being intentionally ignored, a leader can simply declare that projects be approved, regardless of what is in the EIA (Dougherty 2015, p. 12). Similarly, political pressure to expedite project approval can fundamentally undermine the use of EIA in decision-making.<sup>51</sup> Consider the critical issue of whether or not a corridor project should proceed. In theory, for environmental practitioners, this should be a decision that would be significantly informed by the findings of an EIA (and framed by an SEA of the policy, programme or plan choices if undertaken). That is, the question of whether the social and environmental risks merit proceeding with a corridor programme or a specific project, and whether the risks can be managed, should be influencing the decisions about the fate of a project. Yet, as numerous experts point out,

48 See for instance: Dougherty, M. L. (2019) or Wells-Dang et al. (2016).

49 See for instance: Sonter et al. (2017); Laurence and Salt (2019) and Garrard (2015), Alamgir et al. (2018), and Tenney et al. (2006).

50 Morrison-Saunders et al. (2001) looked at the determinants of EIA quality (including emphasis on science) in Western Australia and found public or community pressure (alongside the expectations of regulators) to be most prominent among those surveyed.

51 Zuhair and Kurian’s study of EIA processes in Maldives found that “political influence was identified as the biggest barrier for an effective EIA promoting deliberative decision-making. Politically influenced decisions mean the capacity of EIA to address social and environmental concerns through the decision-making process is greatly reduced and, hence, the potential of the process to lead to sustainable development is jeopardized”(Zuhair and Kurian, 2016, p.138).

these decisions are often made on the basis of vested interests and not science. Indeed, as noted before and in other chapters in the publication, at times construction is already under way before an EIA is completed (Chen 2014, p. 77). Through such sequencing, companies and governments determined to proceed with their project basically take the no go option off the table and significantly constrain the possibilities for EIA use.<sup>52</sup>

In sum, all of this tends to boil down to a troubling paradox, underscored by Wells-Dang *et al.* (2016, p. 52). That is, those who are most supportive of strong EIA processes tend

to be those who have the least power to act on this, while those most directly responsible for the current weak implementation of EIA processes are the most powerful and least likely to support reform of the current system.<sup>53</sup> They note that “as long as power rests in the hands of project approval agencies without public accountability, Environmental Impact Assessments will remain a technical exercise that can be manipulated by investors, consultants, and government agencies to fit a predetermined development agenda” if they so desire (Wells-Dang *et al.* 2016, p. 52).

### 3.4 Towards more impactful EIA processes: dealing with political context head-on

While the importance of political factors in shaping EIA processes is widely, if not always systematically, appreciated by EIA professionals at an anecdotal level, work in this field continues to focus on technocratic interventions to improve performance. The underlying logic is that change will come from enhancing information, systems, procedures, resources, skills, technologies and institutional practices.<sup>54</sup> However, as noted above, even the most technically sound and capacitated EIA processes can still be derailed by political factors.

Moving beyond the standard static and immutable treatment of these factors as a “lack of political will,” and unpacking them, as is done here, practitioners can engage with these issues more productively and

proactively. To complement the technical work being done to improve EIA processes and better integrate political considerations into EIA practice, more attention must be paid to addressing the most relevant incentives, interests and power dynamics that shape the outcomes of EIA processes in a given context. The specifics will vary from one context (i.e. country, region, project, sector etc.) to the next, and no single solution will apply across them all. The following sections, however, provide some insights to begin to grapple with politics more deliberately, practically and hopefully more effectively, in practice.

So, what does this mean in practice for global actors hoping to support EIA processes that better contribute to sustainable development? What does addressing political realities look

52 Case in point, the Central Taiwan Science Park Phase 3 developmental project. The project was divided in two parts and each was submitted for EIA separately. The EPA approved one of the projects but one day later, nine of the 21 EIA review commission members called a press conference, criticizing political interference with the EIA review and questioning the division of the project into its two parts. The Taipei High Administrative Court revoked EPA's decision, but meanwhile AU Optronics Co. Ltd., a leading TFT-LCD manufacturer, began and continued construction at the science park regardless (Chen, 2014, p.72).

53 “Those with the greatest influence on EIA policy and implementation also possess the strongest incentives to keep the system as it is, as they have themselves been invested in creating the policies and practices that are currently applied. Those with more distance from the EIA process, whether in government, civil society, or academia, are more in favour of reform but have less influence over policy outcomes” (Wells-Dang *et al.* 2016, p.52).

54 Boesen and Therkildsen (2005) provide a useful discussion of functional versus political approaches to understanding organizations and organizational change. Another formulation could understand the technocratic focus of external actors with regard to EIA processes to be itself politically motivated -- a strategic calculation to avoid upsetting local political and economic elites by focusing on anodyne technical approaches.

like at a practical level? A basic starting point would be some sort of political economy analysis (PEA) for a particular context. This maps the key actors, but goes beyond a mere institutional stakeholder mapping to cover their relative power and realms of formal and informal influence, the interests or incentives that drive their actions, and relevant qualities of the political system (e.g. key institutional and historical factors) within which they operate.<sup>55</sup> A PEA helps illuminate who might be allies for and opponents to specific EIA reforms, the opportunities and constraints around specific reforms within a given system, and the interests and incentives that need to be addressed in order to bring about meaningful improvements in EIA performance.<sup>56</sup> This kind of analysis can prove a valuable complement to stakeholder assessments focused on formal institutional responsibilities and capacities.

With the insights of a PEA in hand, one can then turn to the matter of acting on this information. Since systemic and historic factors are beyond the reach of most interventions (but provide important contextual information, nonetheless), the focus is on addressing power and interest dynamics. We provide some illustrations of what this might entail, based on three types of responses - that is, change, navigate and circumvent - to inauspicious political conditions.

### 3.4.1 Changing power and incentive dynamics

One approach to addressing challenging power and interest alignments is to try

to change one part of the equation. While changing power dynamics across the key players may appear daunting in the short term, over the longer term, it will likely be critical to improving performance.<sup>57</sup> This could involve focusing efforts on bolstering the power of actors who support EIA processes that prioritize environmental and social protection. One way that this can be pursued is through mechanisms to identify and connect these actors - within government, civil society, companies, society, media and so on - into strategic coalitions. Working together, members can amplify their influence and have greater prospects of advancing their shared interests than they would in isolation.<sup>58</sup> In doing so, they might find the power to be able to amplify community roles in defining the terms of EIA production and subsequent monitoring, thereby potentially increasing the impact of existing efforts to support communities through technical capacity support.

Another pathway to better outcomes may be by changing the incentives and reframing interests that drive current unproductive choices and behaviours. Within government or among consultants, this might entail “changing sanctions and rewards, enforcing hiring and promotions based on merit, building internal coalitions for change, introducing performance-based payments, actively discouraging rent-seeking” (Boesen and Therkildsen 2005, p. 14). A study of interventions around environmental audits may hold some lessons for changing incentives in EIA processes (Duflo *et al.* 2013). Targeting a financial relationship between

55 CCSI has aggregated a number of PEA resources on our website, read for instance CCSI (2019).

56 On the difference between PEA and stakeholder analysis, see Poole (2011). “Analytic tools that Bank staff are already familiar with—stakeholder analysis, analysis of winners and losers, institutional and governance analysis, historical analysis, analysis of rents, risk assessments—all can play a valuable role in PE assessments. However, none of these in itself is a PE assessment; in fact, using any of these tools in isolation risks missing important elements. For example, stakeholder analysis rarely explains the historical legacies that constrain policy choices today, or indicates the institutional and organizational context in which stakeholders act; while an institutional and governance analysis misses the incentives of players in and around the institutions. PE assessment is more systematic and comprehensive. A problem-driven approach to PE assessment includes not only looking at the problem and its institutional underpinnings, but also drilling into the drivers that explain why the problem is there and then examining what can be done. Such an approach may include using elements of multiple tools—perhaps elements of an institutional review, rent analysis, historical analysis, and stakeholder analysis” (Poole, 2011, p.2).

57 As Wells-Dang *et al.* (2016, p.53) note, “The missing factor, public accountability, will not come about through reform of procedural documents, but only through longer-term changes in power relations in each country. For potential reform actors to challenge entrenched interests, they first need to work together, and then build a domestic constituency that backs their demands.”

58 For some examples of how such coalitions have been effectively mobilized around an array of development reforms in the Philippines, see Sidel and Faustino (2019).

companies and environmental consultants that was resulting in inaccurate environmental audits, a research experiment in Gujarat, India, attempted to change the incentives of the consultants by breaking their dependence on, and bias towards, the firms they were auditing. To do so, consultants were: paid out of a central pool of funds; given fixed-rate salaries at a higher rate than companies were willing to pay directly, which matters when hiring local consultants in poor settings; subject to backchecks to monitor (in)accuracy of reports to influence their prospects for future contracts; and informed that their future remuneration would be made contingent on the results of this monitoring. Collectively, these interventions seemed to shift incentives to under-report, and led to audits that were noticeably more accurate than those produced under the prior model and, in turn, led to meaningful remediation activities. Another approach to separating auditor selection from the companies whose projects are affected is being implemented around environmental audits in Ghana and Cote D'Ivoire by the Rainforest Alliance.<sup>59</sup> Similar interventions might be developed to break similar conflict of interests common in EIA production. More stringent, merit- and performance-based qualification and certification schemes for consultants,<sup>60</sup> ideally overseen by third parties,<sup>61</sup> could also help address the perverse incentives driving some of the under-performance of EIAs and might be supported

by independent monitoring mechanisms.<sup>62</sup>

Supporting mass mobilization by communities, civil society and/or the media can also potentially serve as a disincentive to companies, investors and government officials when it draws attention to their contribution to poor EIA processes (or bad outcomes of these). This approach has been frequently pursued, with mixed results. On the other side of the coin, efforts to spotlight and celebrate examples of good practice in government or company EIA practices when they do occur and to attach names or agencies to this practice, may incentivize more of this in the future.<sup>63</sup> Bolstering their existing Performance Standard requirements,<sup>64</sup> development banks and International Financial Institutions may also be able to create deeper incentives for good EIA performance. For instance, they may require EIA action or mitigation plans prior to project commencement and make continued financing contingent on showing meaningful progress on implementing these. Lastly, in certain contexts, citizen-initiated administrative appeals or judicial review may be (or already are) an avenue to challenge shortcomings in an EIA process, and a potentially valuable option for increasing disincentives for under-performing EIA processes. Such an approach would work best when courts are free of political or corporate capture such as, for instance, in Chile's environmental courts.<sup>65</sup>

59 See Rainforest Alliance's report "Audit Allocation System Implementation in Ivory Coast and Ghana" for a detailed description of the audit system (2020).

60 In Chile, a public registry for environmental consultants is managed by the Environmental Evaluation Service (SEA) within the Ministry of the Environment. Consultants apply for government certification through an online portal where they are required to provide information about potential conflicts of interest as well as meet technical and experiential qualifications. Chilean scholars have however published an extensive report examining EIA effectiveness, in which they call for even more rigorous certification processes to ensure impartiality of consultants in hopes of improving the integrity of EIAs they produce. To the current criteria for certification, it suggests adding education, minimum experience, good track records with few disputes, and regular performance assessment. For more see Servicio de Evaluación Ambiental (2020) and Instituto de Sociología Universidad Católica (2018).

61 Williams and Dupuy (2016, p.7) discuss the potential risks for certification schemes run by governments.

62 Kumacaya is an example of how to undertake independent, locally-driven monitoring and verification, funded indirectly by companies, that might be transplanted to the EIA field. The work was piloted in Riau, Indonesia and is now expanding to East Kalimantan and Aceh provinces in Indonesia, with further expansion to Liberia, Ivory Coast and Ghana, <https://www.kumacaya.org/kumacaya.php#why>

63 This approach to highlighting integrity or "naming and faming" is already being implemented beyond EIA by Accountability Lab in their Integrity Icon project: <https://integrityicon.org/>.

64 See, for example, IFC Performance Standard 1, Assessment and Management of Environmental and Social Risks and Impacts.

65 For more on this read Bary (2020), Rani (2020) and Tribunal Ambiental (2014).





### 3.4.2 Navigating the status quo

Sometimes referred to as working with the grain<sup>66</sup>, this approach to addressing political obstacles takes power and incentive dynamics and alignments as reasonably fixed in the short- to medium-term and focuses on trying to navigate these most effectively in a given context. In essence, this approach is focused on pragmatically trying to make progress wherever possible within a given set of dynamic political realities. That is, taking a best fit approach, rather than pursuing a more comprehensive slate of best practices (Ramalingam, Laric and Primrose 2014). Here, knowledge of a particular political landscape from PEAs would be used to work opportunistically, to help identify the issues, policies, individuals or moments that are most conducive to real-world incremental progress, and to focus on these.

There is no model or top-down template for EIA reform in this approach. In one case, the best chance for real progress might be pursued through capitalizing on informal relationships. For example, support for an environmental minister who has the ear of the president. In another case, more extensive use of the courts might be the most promising path for trying to improve EIA use/the implementation of EIA action plans when other parts of government are not committed to these outcomes (Chen 2014). In yet another case, streamlining with participatory mechanisms for navigating

other issues (e.g. prior consultation and consent processes) might provide a strategic opening for improving EIA consultations. In all situations, where possible, collaboration with large, reputation-sensitive companies on a project-by-project basis could help achieve some increment of progress. Elections or environmental or social crises may provide moments of opportunity to try to redouble efforts to reform EIA processes. While specific openings or opportunities are difficult to anticipate, this approach prioritizes flexible and adaptive programming driven by local actors with the expertise to identify opportunities and constraints on an ongoing basis and develop appropriate strategies in response.

### 3.4.3 Circumventing political obstacles

A final option to address political obstacles is to try to work around challenging power and interest dynamics by seeking alternative mechanisms through which to advance a particular goal. This might mean developing alternative pathways for identifying and addressing anticipated social and environmental risks, relying on different actors to those currently leading underperforming EIA efforts. In practice, this could entail greater focus on citizens' involvement in data collection, impact assessment and monitoring efforts. For example, this could be

66 <https://workingwiththegrain.com/>

through community-led impact assessments, or through genuinely collaborative multi-stakeholder impact assessments.<sup>67</sup> All of these approaches should be designed in a way that is mindful of their potential political implications. In the case of community-led approaches, for instance, this means ensuring that community engagement is actively inclusive of a range of voices, not just the most powerful, and also that communities have the ability to keep their independence and act free from coercion or co-optation by more powerful actors. The latter would involve taking steps to ensure that individuals or groups would not fear retaliation or loss of benefits for reporting negative impacts (e.g. that community-led monitoring is not financed by the company, the community's right to monitor is protected by authorities, the bulk of those community members performing these functions do not rely on the mine for their livelihood).<sup>68</sup>

Another way of trying to circumvent existing political roadblocks would be to try to relocate authority or resources to work around conflicts of interest that undermine current EIA models. For instance, rather than allowing companies to select, finance and guide consultants directly, an alternative would be to delegate these roles to third parties in the hope of neutralizing conflicts of interest that may be contributing to EIAs. This might entail a combined mechanism in which third parties oversee the hiring of consultants, their

ongoing management and the allocation of disbursements from a glass box or basket fund (into which companies would be required to make certain predetermined payments, but would then play no role in assigning disbursements; Szoke-Burke and Cordes 2019). Doing so might entail mandating a multi-stakeholder body – comprising subnational government agencies and environmental and social NGOs, among other stakeholders – to manage a mandatory roster of independent and accredited consultants,<sup>69</sup> preventing companies from selecting consultants whose interests and performance they can readily influence. For example, the Environmental Service of Salzburg (ESS) is a joint initiative of the City of Salzburg, the Chamber of Commerce of Salzburg, the Austrian Federal Ministry of Agriculture, Forestry, Environment and Water Management, and the Salzburg AG utility provider. ESS maintains a mandatory roster of independent consultants with high-level qualifications to perform environmental consultancies. ESS serves as an intermediary and assigns consultants based on expertise to projects with which they have no professional or financial ties. Moreover, selected consultants must meet certain education and neutrality criteria and be registered with the Austrian Energy Agency, which continuously checks their status. Additionally, ESS shares the cost of consultants with companies with funding pooled from different member agencies.<sup>70</sup>

## 3.5 Conclusion

When it comes to EIA processes, too often notions of good practice on paper fail to translate into reality. Yet, the demand for effectively identifying and addressing the environmental and social impacts of investment

projects has perhaps never been more urgent among a wide array of actors. The COVID-19 pandemic and, particularly, the drive within many developing countries to try to fill budget shortfalls through quick deals and rapid

67 The modalities of collaborative approaches to impact assessment have been considered in the context of human rights impact assessments. For more, see Cordes et al. (2017).

68 See, for instance, Pareja et al. (2018), Boakye et al. (2018), and Pareja, Xavier and Daitch (2019).

69 This note explains how to get right technically and politically to contribute to the improvement of the EIA process (Netherlands Commission for Environmental Assessment, 2014).

70 For more on this, see the Environmental Service of Salzburg initiative: <https://www.umweltservicesalzburg.at/de/ueberuns/index.asp>

development project mobilization, seem to be leading some to try to further streamline or even sideline EIA processes. While buttressing the effectiveness and impact of EIA processes would be important under any circumstances, these developments make the case for doing so even more urgent. With growing attention to climate change and to environmental, social and governance issues more broadly, there may well be some opportunities to advance this agenda.

Technical capacity limitations are often held to blame, and are the focus of interventions to improve EIA performance. These are indeed important given the nature of the issues and activities at stake. However, there is another set of factors that are often profoundly determinative of outcomes which, while widely acknowledged in informal discussions, are rarely systematically addressed in practice: political realities. As illustrated above, the relative power and preferences of key actors

within a given political context can shape everything, from the timing and substance of an assessment, to the ultimate actions it does or does not eventually precipitate. Looking ahead, if they are to be impactful, any attempts to improve the performance of EIA processes in practice will have to tackle the very real ways in which outcomes are shaped by the realities of political context. Approaches to working on EIA processes moving forward should integrate political economy analyses from the outset and on an ongoing basis. The insights from these should inform the design and implementation of interventions intended to improve EIA practices. This will mean, alongside generating ideas for best practice and identifying and filling various capacity gaps, that those seeking to see more effective EIA processes will actively identify and address power and incentive (mis)alignments, in order to see best practice become actual practice.



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## References

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- Alamgir, M., Campbell, M.J., Sloan, S., Phin, W.E. and Laurence, W.F. (2018). Road risks & environmental impact assessments in Malaysian road infrastructure projects. *Jurutera*, February 2018, 13-16.
- Arnstein, S.R. (1969). A Ladder of Citizen Participation. *Journal of the American Institute of Planners* 35(4), 216-224.
- Bajak, F. (2014). "Peru mining boom leaves highlanders behind." *AP News*, 7 June. <https://www.business-humanrights.org/en/latest-news/peru-mining-boom-leaves-highlanders-behind/>. Accessed 21 July 2021.
- Bancroft, D. (2020). Curtailing work on impact assessments due to COVID-19 is unjustified. *International Association for Impact Assessment*. <https://www.iaia.org/news-details.php?ID=123>. Accessed 16 November 2020.
- Barandiaran, J. and Rubiano-Galvis, S. (2019). An empirical study of EIA litigation involving energy facilities in Chile and Colombia. *Environmental Impact Assessment Review* 79, 106311.
- Bary, A. (2020). Barron's stock pick: Buy Alliance Bernstein for its dividend and its growth. *Barron's*. <https://www.barrons.com/articles/why-alliancebernstein-stands-out-51602279243>. Accessed 14 November 2020.
- Boakye, B., Cascadden, M., Kuschminder, J., Szoke-Burke, S. and Werker, E. (2018). Implementing the Ahafo Benefit agreements: Seeking meaningful community participation at Newmont's Ahafo gold mine in Ghana. <https://cirdi.ca/wp-content/uploads/2018/07/Ahafo.community.agreement.2018.pdf>. Accessed 16 November 2020.
- Boesen, N. and Therkildsen, O. (2005). A results-oriented approach to capacity change. [https://www.jica.go.jp/cdstudy/library/pdf/20071101\\_07.pdf](https://www.jica.go.jp/cdstudy/library/pdf/20071101_07.pdf). Accessed 12 October 2020.
- Boyd, D. R. and Munoz, S. G. (2020). The Americas: Governments should strengthen, not weaken, environmental protection during COVID-19 pandemic. <https://www.ohchr.org/EN/NewsEvents/Pages/DisplayNews.aspx?NewsID=26165&LangID=E>. Accessed 23 November 2020.
- Bracken, A. (2020). "Alberta minister says it's a 'great time' to build a pipeline because COVID-19 restrictions limit protests against them", *The Globe and Mail*. <https://www.theglobeandmail.com/canada/alberta/article-alberta-minister-says-its-a-great-time-to-build-a-pipeline-because/>. Accessed: 23 November 2020.
- Cashmore, M. and Richardson, T. (2013) Power and environmental assessment: Introduction to the special issue. *Environmental Impact Assessment Review* 39, 1-4.
- Chen, L.C. (2014). Institutional roles of political processes, expert governance, and judicial review in environmental impact assessment: A theoretical framework and a case study of Taiwan. *Natural Resources Journal* 54(1), 41-80.
- Clausen, A., Vu, H.H. and Pedrono, M. (2011). An evaluation of the environmental impact assessment system in Vietnam: The gap between theory and practice. *Environmental Impact Assessment Review* 31, 136-143.
- Climate Case Chart. (2018). *Grez et al. v. Environmental Evaluation Service of Chile*. <http://climatecasechart.com/non-us-case/grez-et-al-v-environmental-evaluation-service-of-chile/>. Accessed 14 October 2020.
- Columbia Center for Sustainable Investment. (2019). Approaches to working in politically informed ways. *The executive session on the politics of extractive industries*. <http://ccsi.columbia.edu/2019/11/21/approaches-to-working-in-politically-informed-ways/>. Accessed 27 November 2020.
- Szoke-Burke, S., Cordes, K.Y., Bansal, T., Aubrey, M., Le Louarn, A., Perelman, J. and Poirot, M. (2017). A collaborative approach to human rights impact assessments. *Columbia Center on Sustainable Investment, Danish Institute for Human Rights and Sciences Po Law School Clinic*. [https://scholarship.law.columbia.edu/sustainable\\_investment\\_staff\\_pubs/171/](https://scholarship.law.columbia.edu/sustainable_investment_staff_pubs/171/). Accessed 21 July 2021.

- Dougherty, M.L. (2015). "By the gun or by the bribe: Firm size, environmental governance and corruption among mining companies in Guatemala". *U4 Issue*, 2015 (17). <https://www.u4.no/publications/by-the-gun-or-by-the-bribe-firm-size-environmental-governance-and-corruption-among-mining-companies-in-guatemala.pdf>. Accessed 1 April 2021.
- Dougherty, M.L. (2019). Boom times for technocrats? How environmental consulting companies shape mining governance. *The Extractive Industries and Society* 6(2), 443-453.
- Duflo, E., Greenstone, M., Pande, R. and Ryan, N. (2013). Truth-telling by third-party auditors and the response of polluting firms: Experimental evidence from India. *The Quarterly Journal of Economics* 128(4), 1499-1545.
- Enrriquez-de-Salamanca, Á. (2016). Project splitting in environmental impact assessment. *Impact Assessment and Project Appraisal* 34(2). <https://doi.org/10.1080/14615517.2016.1159425>. Accessed 12 November 2020.
- Environmental Services Salzburg (n.d.) Rundum Umweltservice mit geförderter Beratung. <https://www.umweltservice-salzburg.at/de/ueberuns/index.asp>. Accessed 16 November 2020.
- Fields, S. (2020). Environmental impact assessments and Indigenous rights should not be sacrificed for the sake of rapid post COVID-19 economic recovery. *The Firelight Group*. <https://firelight.ca/2020/07/29/environmental-impact-assessments-and-indigenous-rights-should-not-be-sacrificed-for-the-sake-of-rapid-post-covid-19-economic-recovery/>. Accessed 16 November 2020.
- Formby, J. (1990). The politics of environmental impact assessment. *Impact Assessment* 8(1-2), 191-196.
- Garrard, G. (2015). Detectability, threatened species & environmental impact assessments. *Decision Point*. <http://decision-point.com.au/article/detectability-threatened-species-environmental-impact-assessments/>. Accessed 12 October 2020.
- George, T.E., Karatu, K. and Edward, A. (2020). An evaluation of the environmental impact assessment practice in Uganda: Challenges and opportunities for achieving sustainable development. *Heliyon* 6(9). <https://doi.org/10.1016/j.heliyon.2020.e04758>. Accessed 16 November 2020.
- Gillespie, A. (2020). Unless we improve the law, history shows rushing shovel-ready projects comes with real risk. *The Conversation*. <https://theconversation.com/unless-we-improve-the-law-history-shows-rushing-shovel-ready-projects-comes-with-real-risk-141530>. Accessed 23 November 2020.
- Green, D. (2009). Why demanding 'political will' is lazy and unproductive. *From poverty to power*. <https://oxfamblogs.org/fp2p/why-demanding-political-will-is-lazy-and-unproductive/>. Accessed 17 November 2020.
- Government of India. Ministry of Environment and Forests. (2014). Guidelines for granting Environment Clearance for expansion of coal mining projects involving one time production capacity expansion in the existing operation - reg [online]. Available at: [http://moef.gov.in/wp-content/uploads/2017/09/OM%20Dt%2002.09.2014\\_6%20MTPA\\_onetime%20expansion.pdf](http://moef.gov.in/wp-content/uploads/2017/09/OM%20Dt%2002.09.2014_6%20MTPA_onetime%20expansion.pdf). Accessed 21 July 2021.
- Hobbs, J. (2020). Is responsible mining sufficient? *Extractives Hub*. <https://www.extractiveshub.org/servefile/getFile/id/7633>. Accessed 16 November 2020.
- Hudson, D., Mcloughlin, C., Roche, C. and Marquette, H. (2018). Inside the black box of political will: 10 years of findings from the Developmental Leadership Program. *The Development Leadership Program*. <https://www.dlprog.org/publications/research-papers/inside-the-black-box-of-political-will-10-years-of-findings-from-the-developmental-leadership-program>. Accessed 17 November 2020.
- Human Rights Watch. (2012). Out of Control: Mining, Regulatory Failure, and Human Rights in India. <https://www.hrw.org/report/2012/06/14/out-control/mining-regulatory-failure-and-human-rights-india>. Accessed 21 July 2021.
- Instituto de Sociología, Universidad Católica. (2018). Encuesta nacional de medio ambiente 2018, Licitación N° 608897-110-LE17. *Dirección de Estudios Sociales*. <https://mma.gob.cl/wp-content/uploads/2018/03/Informe-Final-Encuesta-Nacional-de-Medio-Ambiente-2018.pdf>. Accessed 16 November 2020.
- International Association of Impact Assessment (n.d.). FastTips. <https://www.iaia.org/fasttips.php>. Accessed 15 October 2020.
- International Finance Corporation. (2012). Performance standard 1, assessment and management of environmental and social risks and impacts. [https://www.ifc.org/wps/wcm/connect/topics\\_ext\\_content/ifc\\_external\\_corporate\\_site/sustainability-at-ifc/policies-standards/performance-standards/ps1](https://www.ifc.org/wps/wcm/connect/topics_ext_content/ifc_external_corporate_site/sustainability-at-ifc/policies-standards/performance-standards/ps1). Accessed 14 November 2020.
- Jay, S., Jones, C., Slinn, P. and Wood, C. (2007). Environmental impact assessment: Retrospect and prospect. *Environmental Impact Assessment Review* 27(4), 287-300.
- Kakonge, J.O. (2012). Problems with public participation in EIA process: Examples from Sub-Saharan Africa. *Impact Assessment* 14(3), 309-320. <https://doi.org/10.1080/07349165.1996.9725906>. Accessed 12 October 2020.
- Kolhoff, A.J., Driessen, P.P.J. and Runhaar, H.A.C. (2009). The contribution of capacities and context to EIA system performance and effectiveness in developing countries: towards a better understanding. *Impact Assessment and Project Appraisal*, 27(4), 271-282.

- Kolhoff, A.J., Driessen, P.P.J. and Runhaar, H.A.C. (2018). Overcoming low EIA performance - A diagnostic tool for the deliberate development of EIA system capacities in low and middle income countries. *Environmental Impact Assessment Review* 68(2018), 98-108. <https://www.sciencedirect.com/sdfe/pdf/download/eid/1-s2.0-S0195925516301275/first-page-pdf>. Accessed 16 November 2020.
- Kumacaya (2021). <https://www.kumacaya.org/kumacaya.php#why>. Accessed 15 November 2020.
- Laurence, W.F. and Salt, D. (2019). Environmental impact assessments aren't protecting the environment. *ENSIA*. Available at: <https://ensia.com/voices/environmental-impact-assessment/>. Accessed 15 October 2019.
- Laws, E. and Marquette, H. (2018). Thinking and working politically: Reviewing the evidence on the integration of politics into development practice over the past decade. TWP Community of Practice. <https://twpcommunity.org/wp-content/uploads/2018/04/Thinking-and-working-politically-reviewing-the-evidence.pdf>. Accessed 27 November 2020.
- Marquette, H. (2020). Political will: What it is, why it matters for extractives and how on earth do you find it? Columbia Center on Sustainable Investment. <http://ccsi.columbia.edu/2020/02/13/political-will-what-it-is-why-it-matters-for-extractives-and-how-on-earth-do-you-find-it/>. Accessed 17 November 2020.
- Mccullough, A. (2016). Advancing the governance of extractives at the local level: Towards politically smart support. *Overseas Development Institute*. <https://odi.org/en/publications/advancing-the-governance-of-extractives-at-the-local-level-towards-politically-smart-support/>. Accessed 21 July 2021.
- Merino, R. (2018). Re-politicizing participation or reframing environmental governance? Beyond indigenous' prior consultation and citizen participation. *World Development* 111(C), 75-83.
- Morgan, R.K. (2012). Environmental impact assessment: The state of the art. *Impact Assessment and Project Appraisal* 30(1). <https://doi.org/10.1080/14615517.2012.661557>. Accessed 12 October 2020.
- Morrison-Saunders, A., Annandale, D. and Cappelluti, J. (2001). Practitioner perspectives on what influences EIA quality. *Impact Assessment and Project Appraisal* 19(4), 321-325.
- Netherlands Commission for Environmental Assessment. (2014). EIA accreditation: What and how? *Environmental Assessment Building Block Series*. [https://api.commissiemer.nl/docs/mer/diversen/ncea\\_eia\\_accreditation\\_building\\_block\\_draft\\_nov\\_2014.pdf](https://api.commissiemer.nl/docs/mer/diversen/ncea_eia_accreditation_building_block_draft_nov_2014.pdf). Accessed 21 July 2021.
- Pareja, C., Xavier, A., Daitch, S. (2019). Participatory environmental monitoring committees in mining contexts: Lessons from nine case studies in four Latin American countries. *United Nations Development Programme*. <https://www.undp.org/content/undp/en/home/librarypage/poverty-reduction/participatory-environmental-monitoring-committees-in-mining-cont.html>. Accessed 13 November 2020.
- Pareja, C., Honey-Rosés, J., Kunz, N. C., Fraser, J. and Xavier, A. (2018). What participation? Distinguishing water monitoring programs in mining regions based on community participation. *Water* 10(10), 1325.
- Poole, A. (2011). How-to-notes: Political economy assessments at sector and project levels. *GSDRC*. <http://www.gsdr.org/docs/open/pe1.pdf> Accessed 16 November 2020.
- Rainforest Alliance. (2020). Audit allocation system implementation in Ivory Coast and Ghana. <https://www.rainforest-alliance.org/business/resource-item/audit-allocation-system-implementation-in-ivory-coast-and-ghana/> Accessed 21 July 2021.
- Ramalingam, B., Laric, M. and Primrose, J. (2014). From best practice to best fit: Understanding and navigating wicked problems in international development. *Overseas Development Institute*. [https://www.eccnetwork.net/sites/default/files/media/file/BestPracticetoBestFitWorkingPaper\\_DraftforComments\\_May2014.docx.pdf](https://www.eccnetwork.net/sites/default/files/media/file/BestPracticetoBestFitWorkingPaper_DraftforComments_May2014.docx.pdf). Accessed 21 July 2021.
- Rani, K.S.A. (2020). Barrick accepts environmental court ruling, continues to seek new opportunities in Chile. *NS Energy Business*. <https://www.nsenerybusiness.com/news/barrick-accepts-environmental-court-ruling-continues-to-seek-new-opportunities-in-chile/>. Accessed 16 November 2020.
- Rathi, A.K.A. (2018). Development of environmental management program in environmental impact assessment reports and evaluation of its robustness: an Indian case study. *Impact Assessment and Project Appraisal* 37(5), 421-436.
- Servicio de Evaluación Ambiental. (2020). Consultants Registry. <https://www.sea.gob.cl/evaluacion-ambiental/registro-consultores>. Accessed 16 November 2020.
- Sidel, J.T. and Faustino, J. (2019). Thinking and working politically in development: Coalitions for change in the Philippines. *The Asia Foundation*. <https://asiafoundation.org/publication/thinking-and-working-politically-in-development-coalitions-for-change-in-the-philippines/>. Accessed 16 November 2020.
- Simpson, N.P. and Basta, C. (2018). Sufficiently capable for effective participation in environmental impact assess-

- ment? *Environmental Impact Assessment Review* 70, 57-70. <https://doi.org/10.1016/j.eiar.2018.03.004>. Accessed 27 November 2020.
- Sonter, L.J., Herrera, D., Barrett, D.J., Galford, G.L., Moran, C.J. and Soares-Filho, B.S. (2017). Mining drives extensive deforestation in the Brazilian Amazon. *Nature Communications* 8(1), 1-7. <https://www.nature.com/articles/s41467-017-00557-w>. Accessed 16 October 2020.
- Spring, J. (2020). Brazil minister calls for environmental deregulation while public distracted by COVID. *Reuters*. <https://www.reuters.com/article/us-brazil-politics-environment/brazil-minister-calls-for-environmental-deregulation-while-public-distracted-by-covid-idUSKBN22Y30Y>. Accessed 23 November 2020.
- Szoke-Burke, S. and Cordes, K.Y. (2019). Innovative financing solutions for community support in the context of land investments report. *Columbia Center for Sustainable Investment*. <http://ccsi.columbia.edu/files/2019/03/CCSI-Innovative-Financing-report-Mar-2019.pdf>. Accessed 12 November 2020.
- Tenney, A., Kværner, J. and Gjerstad, K.I. (2006). Uncertainty in environmental impact assessment predictions: The need for better communication and more transparency. *Impact Assessment and Project Appraisal* 24, 45-56.
- Tribunal Ambiental. (2014). Environmental Court of Santiago. <https://www.tribunalambiental.cl/environmental-court-of-santiago/>. Accessed 16 November 2020.
- Udofia, A., Noble, B. and Poelzer, G. (2017). Meaningful and efficient? Enduring challenges to Aboriginal participation in environmental assessment. *Environmental Impact Assessment Review* 65. <https://doi.org/10.1016/j.eiar.2016.04.008>. Accessed 16 October 2020.
- Wells-Dang, A., Nyi Soe, K., Inthakoun, L., Tola, P., Socheat, P., Nguyen, T.T.V. et al. (2016). A political economy of Environmental Impact Assessment in the Mekong region. *Water Alternatives* 9(1), 33-55.
- Williams, A. and Dupuy, K. (2016). Deciding over Nature: Corruption and Environmental Impact Assessments. *U4 Issue* 2016(5). <https://www.u4.no/publications/deciding-over-nature-corruption-and-environmental-impact-assessments.pdf>. Accessed 1 April 2021.
- Wood, C. (2003). Environmental Impact Assessments in developing countries. *International Development Planning Review* 25(3), 301-321.
- World Bank. (2017). World Development Report 2017: Governance and the Law. <https://www.worldbank.org/en/publication/wdr2017>. Accessed 27 November 2020.
- World Bank. (2018). Responsible Agricultural Investment (RAI): Knowledge into action notes series. <https://www.worldbank.org/en/topic/agriculture/publication/responsible-agricultural-investment>. Accessed 16 November 2020.
- Zhang, J., Kørnøv, L. and Christensen, P. (2013). Critical factors for EIA implementation: Literature review and research options. *Journal of Environmental Management* 114(15), 148-157. <https://doi.org/10.1016/j.jenvman.2012.10.030>. Accessed 21 November 2020.
- Zuhair, M.H. and Kurian, P.A. (2016). Socio-economic and political barriers to public participation in EIA: Implications for sustainable development in the Maldives. *Impact Assessment and Project Appraisal* 34(2), 129-142. <https://www.tandfonline.com/doi/full/10.1080/14615517.2016.1176404>. Accessed 16 October 2020.