



**DEVELOPMENT
CORRIDORS
PARTNERSHIP**

IMPACT ASSESSMENT FOR CORRIDORS: FROM INFRASTRUCTURE TO DEVELOPMENT CORRIDORS

Edited by:
Jonathan Hobbs and Diego Juffe Bignoli
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.

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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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Achieving the Sustainable Development Goals through Integrated Approaches to Development Corridor Planning

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ABSTRACT

Many corridors are developed with a long term 'vision' but this is usually limited to short-term- economic and geopolitical benefits. Rarely is there a vision based on sustainability principles. The United Nations' 17 Sustainable Development Goals have been agreed at the international level. In many cases they have also been 'domesticated' into national level development strategies, at least in part. Corridor plans need to relate to these and ensure that the long term 'vision' for them is supportive of, and aligned to, SDG attainment. To achieve this an integrated approach is needed that will address the disjointed sectoral approaches that currently prevail. An important tool by which to achieve this in a systematic and structured way is Strategic Environmental Assessment (SEA).

2.1 Introduction

The Sustainable Development Goals (SDGs) are a development framework led by the United Nations that, although non-legally binding, national leaders have committed to deliver within their own national contexts by 2030. The SDGs are mobilized around 17 development goals, 169 targets and a commitment to equitable development, captured in the pledge to "leave no one behind" (United Nations 2015). It is generally assumed that development corridors will contribute to the achievement of the SDGs. Indeed, the potential for the resources needed to achieve Agenda 2030 to be

unlocked through development corridors has been recognized at national and international levels.

"The Belt and Road Initiative, given its massive investments and financing flows, can potentially unlock the resources needed to achieve the 2030 Agenda for Sustainable Development"

United Nations Under-Secretary-General, Tegegnework Gettu at the 2018 High-Level Policy Forum on Global Governance (Gu, Corbett and Leach 2019).

Given the extensive financial and political resources that are being diverted to corridor implementation, it is essential that this potential is realized. Recent research, however, has highlighted that development corridors often generate very uneven impacts and exclude vulnerable populations (Hughes 2019; Lesutis 2019; Bersaglio et al. 2020; Chome 2020;). In fact corridors often involve a range of large-scale social, political, economic and environmental trade-offs.

In many ways, this is not surprising. A diverse range of development objectives are pursued through corridors and the SDG agenda is clear that the SDGs can produce a range of positive and negative interactions, wherein progress towards one goal may support or limit progress towards another. Using coal to further energy access targets under SDG 7, for example, could accelerate climate change and ocean acidification, counteracting progress to SDGs 13 and 14 (Nilsson, Griggs and Visbeck 2016). For these reasons, the SDG development framework emphasizes that SDG goals and targets must not just be ticked off, one by one. Rather, the SDGs, including the means of implementation, are “indivisible and interlinked” (United Nations 2015, p. 36) and they should be planned for coherently.

Achieving such integrated development planning, however, is not straightforward. The SDGs rely on governments and other stakeholders, determining their own strategies for ‘domesticating’ the SDGs into national development planning. Yet the governance challenges required to implement

such integrated policymaking goes largely unaddressed in the SDG framework. The conceptual underpinning of SDG interactions is also in its infancy (Nilsson, Griggs and Visbeck 2016; Fuso Nerini et al. 2018).



In this chapter, I draw insights from the SDG and development corridors governance landscapes in Tanzania and Kenya to outline ways in which integration of the SDGs is currently fragmented in development corridors; and fragmented to an extent that development synergies and trade-offs are not being considered holistically at any point in the development process. With this insight, I close this chapter with a discussion on impact assessment, asking whether and in what ways Strategic Environmental Assessment (SEA) processes might be able to overcome this fragmentation to support coherent delivery of the SDGs.



2.2 Domesticating the SDGs in Kenya and Tanzania

At the national level, Kenya and Tanzania have seemingly quite developed policy and institutional environments for implementing and monitoring the SDGs, which are summarized in their latest Voluntary National Reviews (VNRs) of the SDGs, presented to the United Nations High Level Political Forum (Republic of Tanzania 2019; Republic of Kenya 2020). Both countries pursue state-led development frameworks,¹³ which are operationalized in five-year, medium-term plans.

In their VNRs, Kenya and Tanzania are described as having mainstreamed the SDGs into these development blueprints through the latest five-year plans, as well as in the five-year County Integrated Development Plans under Kenya's devolved

governance system. These national five-year plans are intended to guide the activities of all ministries, departments and agencies (MDAs), and both countries accordingly give government agencies responsibility for mainstreaming the SDGs into sector plans. Both Kenya and Tanzania have also mobilized a range of institutional infrastructure to support SDG coordination, including through the national finance and planning ministries, and initiated national monitoring frameworks through the National Bureaus of Statistics.

Implementation and ownership of the SDGs nevertheless, remains varied and fragmented. The current five-year plans in both Kenya and Tanzania note their alignment with the SDGs (Republic of Tanzania 2016; Government

13 See – Kenya Vision 2030 (Republic of Kenya, 2007) and Tanzania Vision 2025 (Republic of Tanzania, 1999).

of Kenya 2018;). Yet, in practice, not all SDGs are explicitly addressed within either country's current five-year plan. Moreover, SDG synergies and potential trade-offs are not directly considered in these high-level development strategies, with other related documents, such as Kenya's Roadmap to SDG implementation, also failing to directly consider SDG synergies and trade-offs (Government of Kenya 2016).

Fragmentation is also seen at sector level. Many sectoral plans were developed before the SDGs were mainstreamed, meaning SDG integration often lags behind, or remains a parallel agenda, until the next sector plan is due. Where the SDGs have been introduced in sector plans, the extent to which the SDGs are given explicit consideration also varies. And in interviews conducted during our research with the Development Corridors Partnership (Gannon et al. 2022), respondents from national MDAs in Kenya and Tanzania suggested that the SDG framework has only a very limited role in directly shaping institutional strategies in practice.

Domestication efforts have also generally focused on vertical integration - mainstreaming the SDGs

into sectors from national to local levels - with less investment given to building horizontal linkages between sectors and departments. National policymakers and planners typically operate in silos and face a range of other budgetary and institutional barriers to working together (Pardoe et al. 2018; Averchenkova, Gannon and Curran 2019; Newell et al. 2019). As a result, sector development plans are typically being developed by individual sectors, with limited coordination. If these plans consider the SDGs, they generally focus on individual SDGs, related to their own mandates, in isolation from other goals.

What this means is that multiple public bodies - with different levels of commitment - ultimately have responsibility for different aspects of SDG implementation, and opportunities for strategic management of development synergies and trade-offs are inevitably limited by this structure. As such, Kenya's latest VNR explicitly identifies weak institutional coordination as "*the key challenge* to implementation of the SDGs" (Republic of Kenya 2020: p 9 emphasis added).

2.3 Delivering the SDGs in Development Corridors

Development corridors bring together different policies, institutions, and multiple interlinked investments. The Lamu Port, South Sudan and Ethiopia (LAPSSET) Corridor in Kenya, for example, includes a range of envisaged transportation infrastructure investments (port, oil pipelines, road and rail networks). But it also has other projects attached, such as hydropower development and a series of development zones and activities, focused particularly on agricultural development, tourism and urbanization. In this way, corridors cross-cut multiple SDG development objectives, and thus appear quite responsive to achieving the integrated

approach to development set out in the SDGs. By creating new spaces in which actors interact, and serving as a focal point in the activities of multiple sectors, corridors also have potential to serve as a particularly effective space to harness synergies across SDGs, to amplify and upscale their achievement.

This integrated planning, however, is not happening in practice, and there are some notable reasons for this. Firstly, institutions within corridor landscapes sit within the fragmented policy integration landscape already discussed. As a result, MDAs active in corridors often lack clear mandates to (holistically) consider their contribution

to the SDGs in their work. Secondly, development corridors are generally branded as a single initiative and African governments sometimes create an institution or agency to coordinate the development of a given corridor. In Kenya, the LAPSET Corridor Development Authority (LCDA), for example, was established in 2013 through a presidential order to “plan, coordinate and manage the implementation of [LAPSET]” (LCDA 2020), while the Southern Agricultural Growth Corridor of Tanzania (SAGCOT) Centre works as a broker and catalyst of partnerships in the Southern Agricultural Growth Corridor of Tanzania (SAGCOT 2018; and [Chapter 9](#)). Yet, despite this, corridors are actually being mobilized as a series of quite independent projects and programmes, which cut across the institutional mandates of different government departments and often develop quite incrementally.

Thirdly, countries are generally not adopting specific high-level strategic development corridor policies to guide corridor development. Where development corridor policies and plans do exist, attention given to the SDGs is mixed and often focuses on individual components of corridors.

This inevitably limits the opportunity for decision makers to consider cumulative impacts, and potentially synergistic or conflicting interactions, across different elements of the corridor.

Fourthly, corridor coordinating bodies do not necessarily have the political power to enforce a corridor strategy, even if they were to develop one (see [Chapter 3](#)). Fifthly, systematically considering and evaluating the relationships between the SDGs and planned corridor interventions

is no easy task. There is limited empirical or theoretical research understanding how the SDGs and corridors interact, in theory or in practice, and policy makers do not necessarily have the tools and capacity to coherently assess potential and realized development interactions and trade-offs over time and space in corridors.

The implication of these fragmented corridor governance landscapes is that they rely on the MDAs of individual sectors to take the lead on mobilizing - and coordinating - the SDGs within corridors. There is likely to be a lack of clarity across sector MDAs, surrounding how policies will be jointly implemented. Weaker MDAs, such as environment ministries, are likely to be less well positioned to negotiate terms of collaboration and ensure policy alignment (Averchenkova, Gannon and Curran 2019). Not having a highly placed institution with a clear strategy and mandate to lead and coordinate implementation can also limit opportunities for the public sector to signal direction to other stakeholders. This is especially relevant in corridors where delivery hinges on international investment and private sector finance.

Such fragmentation also risks parallelism, duplication of efforts and incompatibility across activities and initiatives, as well as conflicting and inefficient plans and actions. It also inevitably means opportunities to maximize efficiencies and synergies across SDGs and development action are being missed. And trade-offs will likely be made, at least in part, as an outcome of the power structures between individual actors, rather than as a result of strategic management decisions.

2.4 Development synergies and trade-offs in development corridors

Monitoring and evaluation of the development outcomes of corridors, especially in relation to the SDGs, are also fairly limited. This is

exacerbated by notable data gaps and challenges, which in some cases are made worse by political and legal sensitivities surrounding

corridor implementation limiting data access. As a result, there has often been limited understanding of how corridors are delivering on the SDGs and of what kind of development is being realized through corridors, and for whom. Recent research from inside and outside the Development Corridors Partnership, however, has observed some of these trade-offs materializing in East Africa's development corridors with enormous social and environmental consequences.

In recent research published in Gannon et al. (2022), for example, with colleagues from the Development Corridors Partnership, we explored the way in which development actors understood the SDGs to be interacting within five development corridors in Kenya and Tanzania, using a research design based on Q-Methodology. Through this approach, which uses factor analytic techniques, we identified shared understandings around the ways in which key actors involved in the design and delivery of these corridors perceive corridors to be likely to support, or limit, achievement of the SDGs within the Agenda 2030 timeline. In doing so, we also mapped key interactions between SDG goals and targets identified by these stakeholders using the SDG interactions framework developed by Nilsson, Griggs and Visbeck (2016).

The most prominent interactions identified by respondents, and the perceived likelihood of these occurring, are represented in Fig 2.1. These viewpoints ('factors') identified in the research highlight perceived trade-offs and inequalities in progress towards SDG goals and targets in corridor development trajectories, suggesting notable opportunity for learning and reorientation. Specifically, they identify ways in which, following current corridor trajectories, progress towards some SDGs is likely to directly threaten progress towards other goals and targets. Of particular note, the analysis identifies biodiversity conservation (SDG 14/SDG 15), sustainability (SDG 11, SDG 12, SDG 13) and secure and equal access to land (SDG 2.3) to be potential trade-offs to other development gains in current corridor trajectories and suggests corridors are not on track to achieve

the Agenda 2030 pledge to 'leave no one behind'.

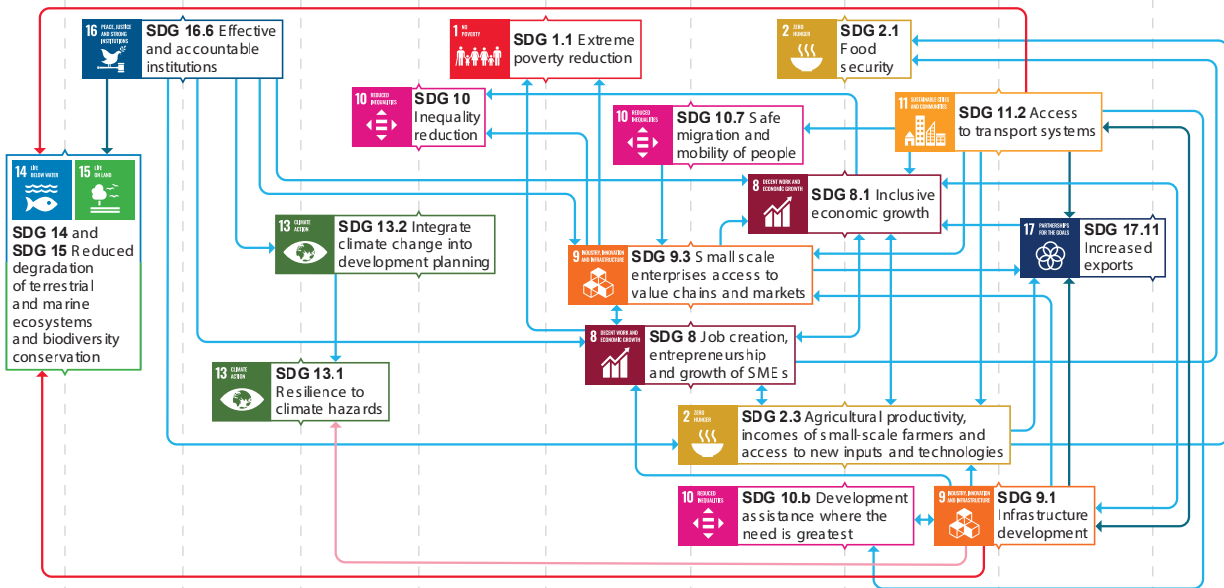
Our analysis nevertheless also suggested stakeholders mostly find SDG goals and targets to be synergistic in corridor landscapes (i.e. progress towards one of the goals creates conditions that aid the achievement of others). It also identified specific clusters of goals and targets that stakeholders consider to be directly mutually reinforcing and which should be strengthened and addressed in parallel, to harness synergies, and upscale and maximize development within corridors.

Successful development corridors were seen to depend, for example, on the development of a backbone of supportive infrastructure (SDG 9); to connect remote regions (SDG 10 and SDG 11); to enable trade and exports and promote economic growth (SDG 17 and SDG 8); to attract and remove barriers to further investment (SDG 17); to mobilize an enabling environment for businesses (SDG 9); to support, particularly agricultural, value chain development (SDG 2); and to support economic productivity and growth (SDG 8). Indeed, in our research these development objectives were seen as inextricably linked to the achievement of each other in corridors.

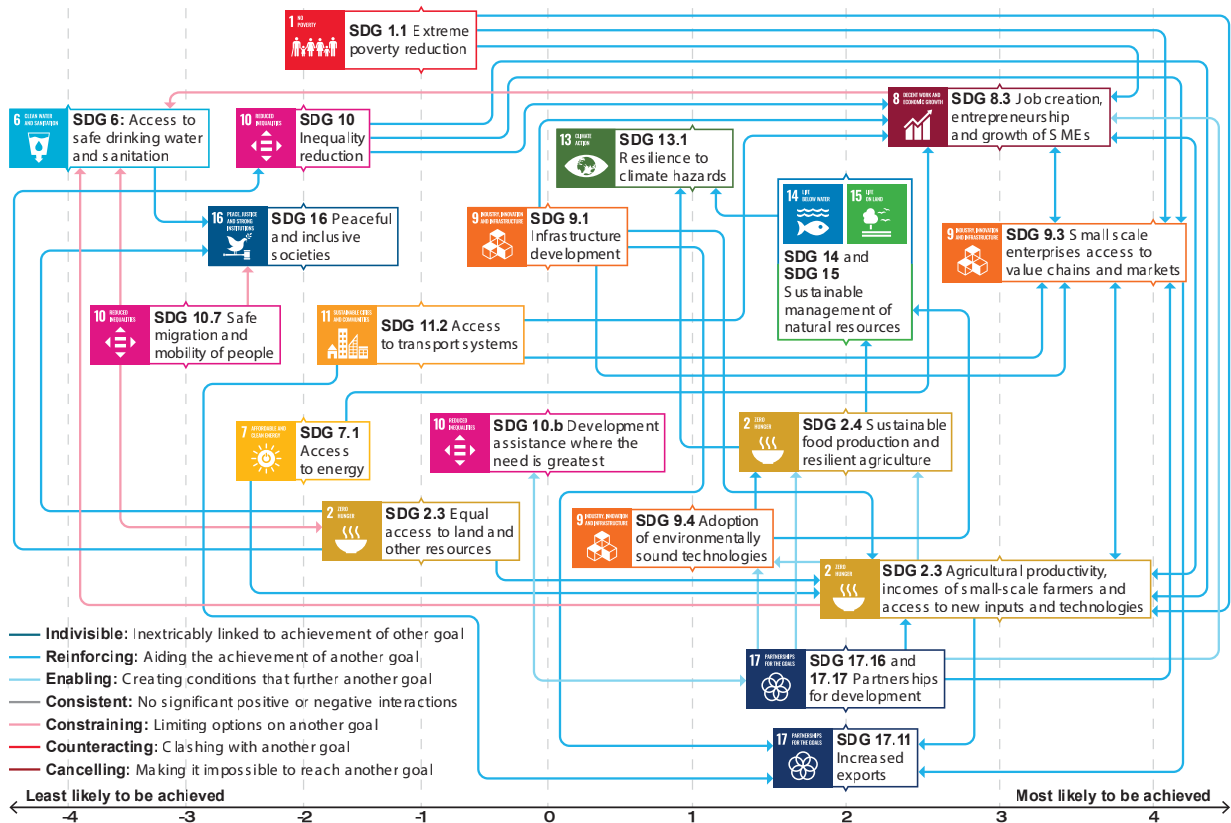
The research, however, also emphasized that hard infrastructure investments alone will not deliver the broader social benefits, agricultural transformation and employment creation that is envisaged within corridor development paradigms. Rather, if corridors are to benefit surrounding communities and mobilize wider investment, the social, economic and physical development of corridors requires strategic coordination, and packaging of investments, to harness synergies and address broader barriers in business-enabling environments and economic participation. It was apparent that the development actors interviewed in our research did not consider these synergies to be being maximized in any of the corridors explored within the study.

Figure 2.1. Key SDG synergies and trade-offs envisioned in development corridors by each factor viewpoint. Reproduced from Gannon et al. (2022)

Factor 1: Corridors can mobilise development through infrastructure and trade, but they are not developing in environmentally sustainable ways

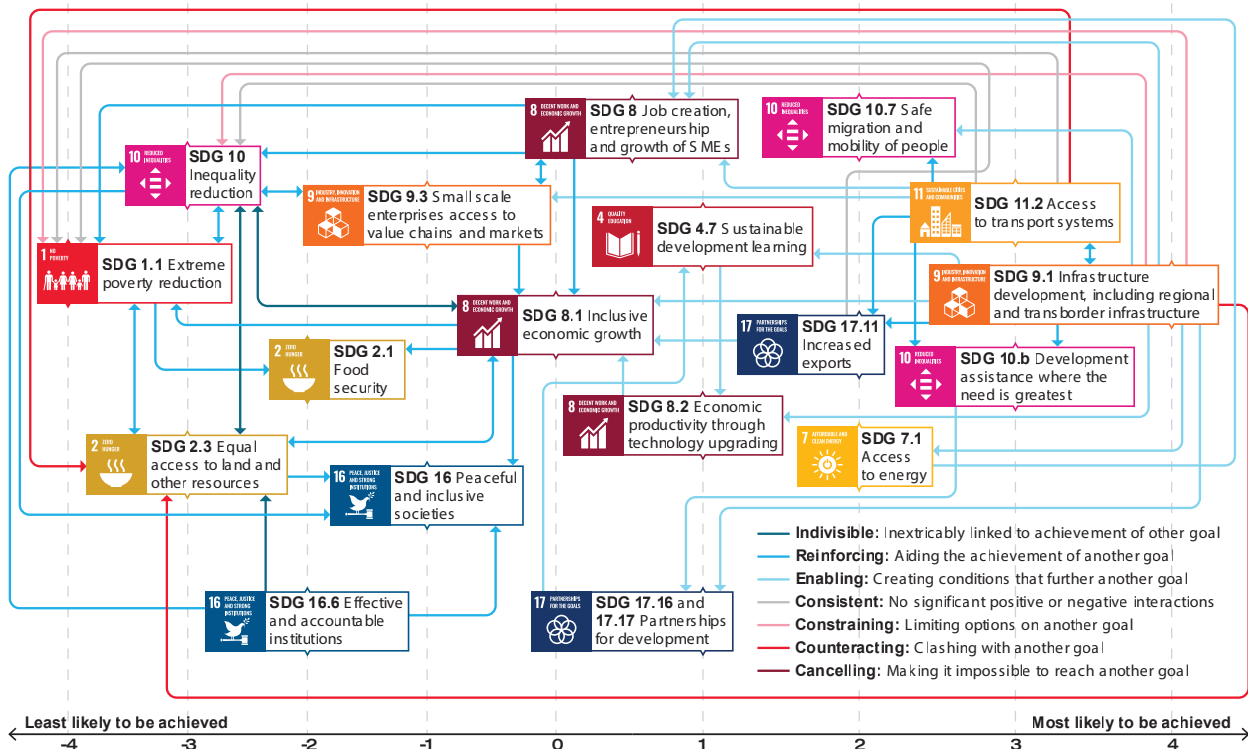


Factor 2: Development corridors provide a space to coordinate investments and activities to overcome multiple barriers in business environments, upscale agricultural productivity and commercialise smallholder agriculture



SDG interactions interpreted through the Q-Methodology factors in Gannon et al., (2022) are represented using Nilsson et al.'s (2016) seven-point SDG interaction framework. Uni-directional relationships (objective A affects B, but B does not affect A) are indicated with a uni-directional arrow, and bi-directional relationships (objective A affects B, and B affects A) are indicated with a bi-directional arrow. Key SDG goals and targets for each factor are arranged along an x-axis, according to the position their corresponding Q-statement was given on the Q-Methodology grid in the original study.

Factor 3: Development corridors are recreating existing inequalities and will not deliver on the Agenda 2030 pledge to 'leave no one behind'



2.5 Delivering the SDGs through corridors: An integrated governance challenge

Notably, participants in our research in Gannon *et al.*, (2022) did not view any of the SDGs to be fundamentally incompatible in corridors (International Council for Science 2016; Nilsson, Griggs and Visbeck 2016). Instead, negative interactions between SDGs were seen to signal priority areas for policy reorientation, and where new or strengthened safeguards are required, to maximize positive SDG interactions and minimize negative ones. Managing development trade-offs - and maximizing development synergies - in corridors is therefore a governance challenge.

In the context of the fragmented governance landscape outlined above, the scale of this challenge cannot be underestimated. Indeed, more generally, the institutional landscape is an area where our research suggested development actors in Kenya and Tanzania consider corridors to be

currently performing least well. Among those included within the study, SDG 16.6, "Build effective, accountable and transparent institutions" was the SDG target that respondents considered least likely to be achieved within corridors (Gannon *et al.* 2022).

Corridors are a product of their broader institutional and political environments, so many corridor governance challenges can only be addressed at national levels. For example, equitable and sustainable development in corridors is likely to require notable investments in land tenure institutions and in reforming weak land tenure to protect corridor communities, and women in particular (PRIndex 2020), who may otherwise lose access to resources, rather than benefit from the arrival of a corridor. However, the idea that governance challenges often coalesce around policy enforcement, rather than an

absence of sustainability, environmental protection and inclusion policies, was an idea echoed by respondents in our research in both Kenya and Tanzania. Respondents suggested, for example, that there is little evidence of the integration of climate risks into Kenya's development corridor planning

processes, despite Kenya having a strongly developed climate change strategy and institutional structures. Strengthening enforcement of existing policies is therefore also likely to be an important step in enhancing the delivery of SDGs in corridors.



Image credits: Kate Elizabeth Gannon

The appearance of these trade-offs and synergies in corridor contexts, however, also reemphasizes the need to develop more coordinated and cross-sectoral forms of corridor planning. This needs to support high-level, systematic and proactive assessment of potential interactions across different policies, investments, projects, institutions and sectors, and to make space to account for the trade-offs and complementarities that emerge around action taken to mobilize interdependent

SDGs.

Overcoming current fragmented and siloed corridor and SDG governance landscapes will require learning from the growing literature on policy coherence and integration (Pardoe et al. 2018; Averchenkova, Gannon and Curran 2019; Newell et al. 2019), which suggest a number of specific policy recommendations outlined below.

Recommendation 1:	The importance of cross-sectoral coordination on the SDGs, and within development corridors, needs to be recognized at a high level (Office of the President).
Recommendation 2:	Reaffirming and strengthening responsibilities for delivering and coordinating on the SDGs among corridor coordinating authorities (such as LAPSSET Corridor Development Authority and SAGCOT Centre), as well as across other public MDAs active in corridors, is likely to be key.
Recommendation 3:	MDA SDG monitoring frameworks should be strengthened to identify broader responsibilities for delivering the SDGs, outside of sector silos, and coherent SDG indicators should be integrated within corridor monitoring and evaluation (M&E) frameworks (e.g. researchers from the Development Corridors Partnership, in collaboration with the SAGCOT management authority [SAGCOT Centre], have sought to directly seed SDG indicators within the evolving M&E framework: the SAGCOT Strategic Plan Results Framework).
Recommendation 4:	Continuing to enhance, enable and resource interministerial and multi-stakeholder corridor fora may support inter-agency strategic management of SDG interactions in corridors and support policy coherence.
Recommendation 5:	Consultative and participatory development of an overarching corridor strategy, which sectoral ministries can use to update and review their own policies and plans, may also support SDG policy coherence in corridors.
Recommendation 6:	MDAs need to be compelled or encouraged to collaborate in strategic corridor management processes (e.g. through empowering corridor coordinating authorities or allocating specific budgets for cross-sectoral corridor planning and projects).
Recommendation 7:	Investments in capacity-building and tool development are needed, to support decision makers to navigate integrated corridor development planning.

2.6 A way forward through Strategic Environmental Assessment?



Image credits: Kate Elizabeth Gannon

Strategic Environmental Assessments (SEAs) are environmental assessment processes carried out at strategic levels of decision-making. Research recommends their use by a range of development actors, including national governments and their development partners, to support a high-level, upfront, proactive and integrated assessment of sustainability issues in the design of policies, plans and programmes, including in assessment of policy objectives and alternative strategies. Within complex, multidimensional regional integration and spatial planning initiatives, such as development corridors, SEA processes may therefore be able to offer a key function as a systems-oriented tool to pre-emptively explore potential interactions across the different policies, investments, projects, institutions and sectors incorporated within corridors to

support an assessment of potential conflicts and synergies across high-level development objectives; and to facilitate more integrated assessment of their anticipated cumulative outcomes to inform decision-making (Madrid, Hickey and Bouchard 2011; Hegazy 2015). Such an approach may therefore be responsive to examining interdependencies across SDGs in corridor landscapes and to making strategic choices about managing the environmental, social and economic trade-offs associated with the SDGs, across multistakeholder groups, that are currently overlooked within the current fragmented governance landscapes.

However, SEA is also not reliably or routinely being applied in corridors. Meanwhile, the more widely employed Environmental Impact Assessment - which is focused on assessing

and managing the impacts of specific projects – faces well-recorded challenges around late application in the decision-making process, low technical standards, enforcement and buy-in. Many of these have been outlined in [Chapter 1](#) and are elaborated on in later chapters.

A final specific recommendation from this research is, therefore, that opportunities to revise and enhance SEA approaches, to support coordinated alignment of development corridors with an integrated SDG agenda, should be investigated and prioritized

by corridor coordinating institutions, national governments and their development partners. Particular consideration should be given to the questions of at what stage and by whom SEA should be undertaken, if SEA is to avoid reproducing and reinforcing the current fragmentation in corridors and eschew outcomes led by institutional hegemony, rather than strategic balancing of development objectives. There is much to be learned from the following chapters of this publication to facilitate this process.

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