



**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.

CONTENTS

FOREWORD.....	5
EXECUTIVE SUMMARY.....	7
INTRODUCTION	19
1. Context and Definitions.....	20
1.1 Why this publication?	20
1.2 Drivers of infrastructure growth	21
1.3 Defining infrastructure.....	22
1.4 Defining corridors.....	23
1.5 Conclusion	38
Acknowledgements	39
References.....	39
2. Achieving the Sustainable Development Goals through Integrated Approaches to Development Corridor Planning	40
2.1 Introduction	40
2.2 Domesticating the SDGs in Kenya and Tanzania	42
2.3 Delivering the SDGs in Development Corridors	43
2.4 Development synergies and trade-offs in development corridors	44
2.5 Delivering the SDGs through corridors: An integrated governance challenge.....	47
2.6 A way forward through Strategic Environmental Assessment?	50
Acknowledgements	51
References.....	51
3. Tackling the EIA Impact Gap: Addressing Political Economy Realities to Bring Actual Practice Closer to Best Practice.....	53
3.1 Introduction	53
3.2 EIA processes - best practice versus actual practice.....	54
3.3 Political realities and EIA performance.....	60
3.4 Towards more impactful EIA processes: dealing with political context head-on	64
3.5 Conclusion	68
Acknowledgements.....	70
References.....	70

4.	The Role of Lender Safeguards in Addressing Biodiversity Risks Associated with Large-scale Infrastructure Projects.....	74
	4.1 Lender safeguards for biodiversity	75
	4.2 Challenges in applying lender safeguards.....	78
	4.3 Conclusions	83
	References.....	83
5.	Environmental Sensitivity Mapping for Corridor Planning	85
	5.1 Introduction	86
	5.2 Defining and differentiating sensitivity.....	88
	5.3 Moving beyond a binary vision of sensitivity.....	90
	5.4 Strengthening impact assessments.....	91
	5.5 Connecting impact assessments with other policies at the landscape level	92
	5.6 Conclusion	94
	Acknowledgements.....	94
	References.....	95
6.	Putting Social Issues on the Infrastructure Agenda: Getting to a Rights-based Approach to Corridor Development.....	97
	6.1 Introduction	98
	6.2 Key challenges in putting social issues on the infrastructure corridor agenda	99
	6.3 What is different about a corridor?.....	105
	6.4 Conclusion	107
	6.5 Recommendations	109
	Acknowledgements.....	110
	References.....	110
7.	Accounting for Sustainable Development Co-benefits: Insights from Local Experiences with Climate Resilience Interventions	113
	7.1 The concept of co-benefits	115
	7.2 Insights from climate resilience: integrating co-benefit appraisal into planning and decision-making processes	116
	7.3 Examples of co-benefit appraisals in projects relevant for the development corridor context.....	119
	7.4 Conclusions	124
	Acknowledgements	126
	References	127

AFRICAN CASE STUDIES 129

8. The Mtwara Development Corridor in Tanzania: Strategic Environmental Assessment of a Planned Corridor..... 130

8.1	Introduction	131
8.2	The Mtwara development corridor in Tanzania	132
8.3	Biodiversity and ecosystem services within the Mtwara corridor	135
8.4	Review of existing impact assessments	136
8.5	National sectoral SEA for the Transport and Trade Systems Development Plan of Tanzania (2013)	137
8.6	Regional SEA for the Mtwara and Ruvuma development plans	141
8.7	Conclusions	144
	Acknowledgements	146
	References	147

9. Managing the Environmental and Social Impacts of Agricultural Transformation: Southern Agricultural Growth Corridor of Tanzania..... 153

9.1	Introduction	154
9.2	Key players and stakeholders	155
9.3	Impact assessment in Tanzania	156
9.4	Environmental impact assessment	157
9.5	Strategic environmental assessment	159
9.6	Inclusive Green Growth Tool	161
9.7	Discussion and recommendations	162
	References	164

10. The Importance of Building Climate Resilience into Environmental Assessment Processes: The Case for the Southern Agricultural Growth Corridor of Tanzania..... 166

10.1	Introduction	167
10.2	Current climate change adaptation measures in SAGCOT	168
10.3	Proposed methodology for a strategic climate change adaptation plan for SAGCOT.....	169
10.4	Conclusions	174
	Acknowledgements	175
	References	175

11.	Public Participation in the Environmental Impact Assessment Process for Development Corridors in Kenya.....	176
11.1	Introduction	177
11.2	The SGR and LAPSSET corridors.....	178
11.3	The environmental and social contexts	178
11.4	The Environmental Impact Assessment framework.....	180
11.5	The EIA process.....	180
11.6	EIA and development projects.....	182
11.7	The study.....	183
11.8	Issues identified	184
11.9	Comparative EIA public participation process analysis	185
11.10	Stakeholder participation in the EIA for the corridor projects	188
11.11	Determinants of stakeholder participation in EIA.....	189
11.12	Stakeholder attitudes towards the EIA for the corridors	190
11.13	Conclusion and recommendations	191
	Acknowledgements	193
	References	193
12.	Exploring the Potential of Scenario Planning for More Effective Environmental Assessments: Standard Gauge Railway Development Corridor, Kenya	200
12.1	Introduction	201
12.2	Brief history of a flagship infrastructure project shrouded in controversy	202
12.3	Method.....	204
12.4	Results and discussion	208
12.5	Environmental impacts.....	211
12.6	Economic impacts.....	214
12.7	Social impacts.....	215
12.8	Conclusions: scenarios as tool for strategy development in EIAs and SEAs.....	219
	References	220
13.	Community Engagement in Corridor Planning and Implementation in Kenya	229
13.1	Introduction	229
13.2	National regulations on community engagement in Kenya	231
13.3	Case study: LAPSSET	233
13.4	Case study: SGR	235

13.5	Conclusions	237
	Acknowledgements	238
	References.....	239

14. Guidelines on Mitigating the Negative Impacts on Biodiversity of Road, Rail and Power Corridors: South African Experiences.....240

14.1	Infrastructure development in South Africa.....	241
14.2	Legal framework for addressing the environmental and social impacts caused by development corridors.....	242
14.3	Implementing and enforcing the mitigation hierarchy	245
14.4	Tools and solutions to assess and manage environmental impacts.....	246
14.5	Conclusions	248
	Acknowledgements.....	249
	References.....	249

15. Lessons Learned from the Maputo Development Corridor: An Environmental and Social Perspective255

15.1	Introduction	255
15.2	Problem statement.....	259
15.3	Linkages with environmental and social environmental assessment in planning and management of corridors	260
15.4	Conclusion	264
	Acknowledgements.....	265
	References.....	265

ASIAN CASE STUDIES.....267

16. Environmental Safeguards for the Belt and Road Initiative: Current Status and Future Prospects.....268

16.1	Belt and Road Initiative: scale and scope	268
16.2	Environmental impact of infrastructure development	270
16.3	Environmental impact of BRI	271
16.4	Environmental impact-related risks of BRI projects	273
16.5	Environmental safeguards for BRI.....	274
16.6	MDB safeguards as a benchmark	275
16.7	Assessing BRI safeguards	276
16.8	The way forward.....	278
	Acknowledgements	282
	References.....	282

17. Sensitive Planning and Design of Transportation Corridors: Vital Elements for Protecting India's Wildlife286

17.1 Introduction 286

17.2 Conservation challenges associated with transportation corridors traversing natural landscapes 287

17.3 Environmental legislation for regulating transportation projects in India 288

17.4 Structural mitigation measures for connecting fragmented habitats: prospects and challenges 289

17.5 Structural mitigation measures applied to transportation projects in India 289

17.6 Relevance of SEA in the planning of multiple linear corridors to 295

17.7 Recommendations 296

Acknowledgements 297

References..... 298

18. The Mekong River Corridor: A Critical Test for EIA/SEA Effectiveness300

18.1 Introduction 301

18.2 The Mekong river 302

18.3 Development pressures 303

18.4 Governance 305

18.5 The Greater Mekong Sub Region (GMS) 306

18.6 The Mekong River Commission (MRC)..... 306

18.7 The Lower Mekong Initiative 310

18.8 The Lancang-Mekong Cooperation 311

18.9 Review of hydropower developments 311

18.10 Environmental planning and management..... 312

18.11 Conclusion 315

18.12 Upper Mekong 317

18.13 Lower Mekong 320

18.14 The Mekong Delta 327

Acknowledgements 328

References..... 328

19. The Belt and Road Initiative in Mongolia: Infrastructure Development and Impact Assessment331

19.1 Introduction: the China-Mongolia-Russia corridor overview..... 332

19.2 The China-Mongolia-Russia corridor 334

19.3 The Mongolian Steppe Road Programme..... 335

19.4 Mongolia and the Belt and Road Programme 336

19.5 Impact assessment in Mongolia: the legal context..... 337

19.6 Effectiveness of impact assessment policies and procedures 341

19.7 Impact assessment in planning and management of corridors..... 343

19.8 Key recommendations for Central Asia 343

Acknowledgements..... 344

References 344

LATIN AMERICAN CASE STUDIES.....347

20. Carajás Corridor in Brazil: Could a SEA have Reconciled Shared-use Infrastructure & Environmental Protection?348

20.1 Historical background and current status of shared use of the Carajás corridor..... 349

20.2 Long-term social and environmental implications of a pro-economic development agenda..... 351

20.3 Could a SEA have reconciled shared-use and environmental protection in Carajás?..... 353

20.4 Conclusions 358

Acknowledgements..... 359

References..... 359

21. Lessons Learned from SEAs of Road Infrastructure Developments in Bolivia: Santa Cruz-Puerto Suarez Corridor361

21.1 Background and context..... 361

21.2 Characterization of the corridor development area..... 362

21.3 From EIA to SEA 364

21.4 The SEA process..... 365

21.5 Results of the implementation of the SEA 367

21.6 Lessons learned..... 367

Acknowledgements..... 368

References..... 368

22. Strategic Environmental Assessment for a Sustainable Mining Corridor: Addressing the Social and Environmental Risks of Tailings Dam Disasters after Mariana and Brumadinho369

22.1	Introduction	370
22.2	Background	371
22.3	The Mariana and Brumadinho TD disasters: losses and reactions	372
22.4	The EIA in Mariana and Brumadinho: failures in the social and environmental protection and evolving laws	376
22.5	Approaches of the SEA for iron ore in Minas Gerais	379
22.6	Conclusion and policy implications.....	381
	References.....	382

LESSONS LEARNED 385

23. Lessons learned from a corridor focused research and capacity-building programme386

23.1	Introduction	386
23.2	Lessons learned.....	387
23.3	Conclusion	400
	Acknowledgements.....	401
	References.....	401

24. Principles for development corridor planning402

Authors Profiles.....407

Public Participation in the Environmental Impact Assessment Process for Development Corridors in Kenya

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ABSTRACT

Kenya is a major gateway for East African links to the belt and road initiative (and its maritime silk road component). Under the Northern Corridor Transport network, Kenya has initiated high-profile projects, including the Lamu Port-South Sudan-Ethiopia transport (LAPSSET) and the standard gauge railway (SGR) corridors. Although these corridors are beneficial, they also have negative social and ecological effects, highlighting the need for impact assessment. Guidance on avoiding these impacts during their planning has been limited and attention is now focused on mitigating their impacts during construction and operation. This chapter explores the recommended Environmental Impact Assessment (EIA) process and its implementation in practice within the SGR and LAPSSET corridors based on the review of the EIA reports. We surveyed 974 community members within a 10km buffer along the corridors and interviewed key stakeholders. This chapter reveals that, although Kenya's EIA framework has good ambitions and is anchored on a sound legislative framework and institutional set-up, it lacks public confidence, effective participation and government capacity to implement appropriate measures to effectively address social and environmental impacts associated with corridors. The system is faced with lack of funding, limited capacity, corruption, duplication of regulations and a misunderstanding by society-at-large of the benefits of EIAs. The administrative system has little oversight of development projects with potentially significant environmental impacts, largely affected by the undue influence that the project proponent has over the EIA consultants, calling into question the impartiality of the process. There is a need for improvements in EIA practice to include capacity-building, transparency and stakeholder engagement. Importantly, recommendations will be made on how to better engage communities in the planning process for future developments.

11.1 Introduction

Infrastructure development projects have assumed great significance in global, regional and national social, cultural and economic growth. However, there is an emerging paradigm shift focusing on the concept of development corridors, away from traditional incremental infrastructure developments. As noted in the Introduction to this publication, there is no universally agreed definition of development corridors. However, they can generally be considered programmatic frameworks for spatially targeted investments to catalyse economic growth and development. They should be developed with multi-stakeholder and sectoral interests and their interdependencies in mind. True development corridors should include the integration of sustainability principles and appropriate environmental and social standards in their planning and development (see [Chapter 1](#)). Many governments, particularly in developing countries, have embraced corridors as flagship initiatives in national development policies (Schindler and Kanai 2019), as demonstrated by the numerous corridors implemented or planned, for instance, in sub-Saharan Africa (Laurance *et al.* 2015).

Kenya, a key economic hub of eastern Africa, and a maritime gateway to central African countries has initiated corridor projects in line with the country's Vision 2030 development agenda (Government of Kenya National and Economic Council 2007). These include the LAPSSSET corridor and the SGR within the Northern corridor transport network to facilitate investment and to provide inexpensive and efficient mobility for people and cargo (Kithinji 2016). Several projects based on hard infrastructure such as roads, rails, water transfer, power generation, oil and gas pipelines, electricity transmission projects, technology and resort cities and ports have been mobilized (Development Corridors Partnership Kenya 2019). Although these projects contribute to overall national growth and development, they may often be accompanied by negative social and ecological externalities,

Figure 11.1 SGR and LAPSSSET corridors



leading to loss of ecosystem functioning and integrity, loss of livelihoods for local communities and, subsequently, the erosion of the development gains (Laurance *et al.* 2015, Development Corridors Partnership Kenya 2019, Teo *et al.* 2019).

Historically, the choice of new development projects was primarily based on economic viability alone. However, environmental and social considerations have increasingly been recognized as an essential requirement, creating a more balanced, triple-bottom-line approach to economic, environmental and social considerations in project viability and acceptability (Modak and Biswas 1999). Ensuring social and environmental security should be under-written by meaningful public participation in environmental decision-making. In Kenya, public participation in the EIAs for development projects is required by the Environmental Management and Coordination Act of 1999 (EMCA) and the Environmental Impact Assessment and Audit Regulations

(EIAAR) No.56 of 2003 and further backed by the various provisions of the Constitution of Kenya, such as Article 232(1)(d) and (f) (Republic of Kenya 2000; Republic of Kenya 2003; Republic of Kenya 2010). These provisions are meant to ensure that development projects gain public support for successful implementation (Omunge *et al.* 2020). The SGR and LAPSET corridor projects attempted to include public participation during the EIA and Strategic Environmental Assessment (SEA) processes (Africa Waste and

Environment Management Centre 2012, Habitat Planners 2016, REPCON Associates 2017). Nevertheless, projects faced controversy and antagonism during their implementation (e.g. Kamau 2015; Wasuna 2016; Rajab 2017; Wafula 2018). This calls into question the effective use of the available EIA guidelines and the process as they relate to public involvement. This paper explores the recommended EIA process and its implementation in practice within the SGR and LAPSET corridors in Kenya.

11.2 The SGR and LAPSET corridors

The construction of the SGR began in 2014 in three phases. The operation of phase I began in 2017, phase II in 2019, while phase III is still under construction. The two completed phases of the SGR cover a total of 610km, connecting the coastal town of Mombasa through Nairobi to Naivasha Industrial Park in Enosupukia (Fig. 11.1 1). The major stakeholders are government agencies, local communities, civil society organizations, private sector, county and local administration, services and utility providers and political leadership. The project was funded through a 90 per cent loan from the Exim Bank of China and 10 per cent from the Kenyan government (Kithinji 2016). The prime contractor on the railway was the China Road and Bridge Corporation (Development Corridors Partnership Kenya 2019).

The LAPSET is ambitious. It comprises seven key infrastructure projects including: a new 32-berth port at Lamu (Kenya); interregional highways from Lamu to Isiolo, Isiolo to Juba

(South Sudan), Isiolo to Addis Ababa (Ethiopia), and Lamu to Garsen (Kenya); a crude oil pipeline from Lamu to Isiolo, Isiolo to Juba; a product oil pipeline from Lamu to Isiolo, Isiolo to Addis Ababa; interregional SGR lines from Lamu to Isiolo, Isiolo to Juba, Isiolo to Addis Ababa, and Nairobi to Isiolo; three International Airports, one each at Lamu, Isiolo, and Lake Turkana; three tourist resort cities, one each at Lamu, Isiolo and Lake Turkana; and the multipurpose High Grand Falls Dam along the Tana River (LAPSET Corridor Development Authority 2016; Development Corridors Partnership Kenya 2019). Unlike the SGR, the timing for construction and operation of these components has been varied. For instance, the Lamu Port construction was launched on 2 March 2012 and is still ongoing, whereas an airport in Isiolo is already complete. Similarly, the road that links Isiolo to Moyale on the Ethiopian border was completed in 2016 (LAPSET Corridor Development Authority 2016).

11.3 The environmental and social contexts

The SGR and LAPSET corridor projects have been lauded, with promises of social and economic benefits, including regional integration (Browne 2015, Kithinji 2016). However, the two projects traverse a vast region of great

physical, sociocultural and economic diversity, and run through or near sites renowned for their cultural and/or natural heritage, such as the Lamu Archipelago, Marsabit, Tsavo and Nairobi National Parks (Habitat Planners

2016, REPCON Associates 2017). From the onset, social evidence has pointed to exclusion rather than inclusion of rural producers and their communities within these regions. For example, some early evidence from the pastoral communities along the LAPSSET corridor suggests that the LAPSSET enhanced pastoralists' livelihoods and well-being through quicker and more affordable access to the livestock markets (Letai and Tiampati 2013, Onditi 2018). However, the corridor also created new socio-political challenges for pastoralists such as exclusions from the consultation during planning phases, inadequate, inconsistent or no compensations for land acquisition and gender insensitive employment opportunities (Guguyu 2015, Ngala 2020). Furthermore, the development of the

SGR and LAPSSET corridors led to the displacement of people and institutions and loss of property to create room for their construction (Letai and Tiampati 2013, Ngala 2020). On the other hand, these projects have been linked to escalation in natural resource conflicts, especially between pastoralists, dryland farmers and fishermen (Laher 2011). There is a growing concern that the construction of the SGR and the LAPSSET and associated projects will lead to environmental impacts including damage to water infrastructure and ecosystem services such as grazing land and wildlife habitats through fragmentation of rangelands (Laurance et al. 2015, Obrein 2016, Lala et al. 2021, Nyumba et al. 2021).



Image credits: Rob Marchant

11.4 The Environmental Impact Assessment framework

The government of Kenya formally introduced the EIA in 2000 under the EMCA (1999, amended in 2015) in response to growing concerns and demand from donor agencies for the integration of environmental concerns in economic development to foster sustainable development (Modak and Biswas 1999, Republic of Kenya 2000, Government of Kenya 2015). Prior to the EIA legislation, sectoral policies and laws, and international guidelines and procedures formed the basis for Kenya's EIA processes (Horberry 1985; Kameri-Mbote 2000; Angwenyi 2004). The enactment of the EMCA 1999 and associated regulations firmly grounded the EIA process within environmental management activities in Kenya, including the creation of the National Environment Management Authority (NEMA) to regulate and enforce environmental compliance and the coordination and implementation of the EIA guidelines (Republic of Kenya 2000). In addition to EMCA and the EIAAR, subsequent legislation and regulations have been passed to address emerging issues, and further guide the EIA process, such as waste management, water quality, conservation of biological diversity, fossil fuel emission control, wetlands,

riverbanks, lakeshores and seashore management, and noise and excessive vibration pollution (Mwenda and Kibutu 2012, p. 86).

Sections 58 and 59 of EMCA 1999 provide for EIA including inter alia obligations of the project proponent to undertake at his/her own expense an EIA and preparation of an environmental impact report (EIR). The operationalization of the EMCA 1999 is based on a set of EIA guidelines and administrative procedures designed to protect both the social and environmental systems. The provisions prohibit the proponent from implementing a project that is likely to have a negative environmental and social impact, or for which an EIA is required (as determined through a screening process) under the Act or regulations, unless an EIA process (summarized in an EIR) has been concluded and approved. Of importance to this study is that the EIA process must include the participation of communities, state and non-state actors, and demand accountability from project proponents on the assessment and management of the impacts of their proposed projects.

11.5 The EIA process

The EMCA 1999 defines EIA as a "systematic examination conducted to determine whether or not a programme, activity or project will have any adverse impacts on the environment" (Republic of Kenya 2000, p. 56). Subsequently, the Second Schedule of the Act identifies projects that must undergo an EIA including general projects that are likely to have significant negative impacts and may result in major changes in land use such as: urban development; transportation; projects on dams, rivers and water resources; aerial spraying; and mining, including quarrying

and open-cast extraction (metals, stones, ores, coal, limestone, stone, sand, clay, petroleum, alluvial gold). Others are: forestry-related activities; agriculture; processing and manufacturing industries; electrical infrastructure; management of hydrocarbons; waste disposal; natural conservation areas; nuclear reactors; and major development in biotechnology (including the introduction and testing of genetically modified organisms) (Republic of Kenya 2000, p. 172-174). The EIA should be undertaken in the early stages of project planning and design to shape development

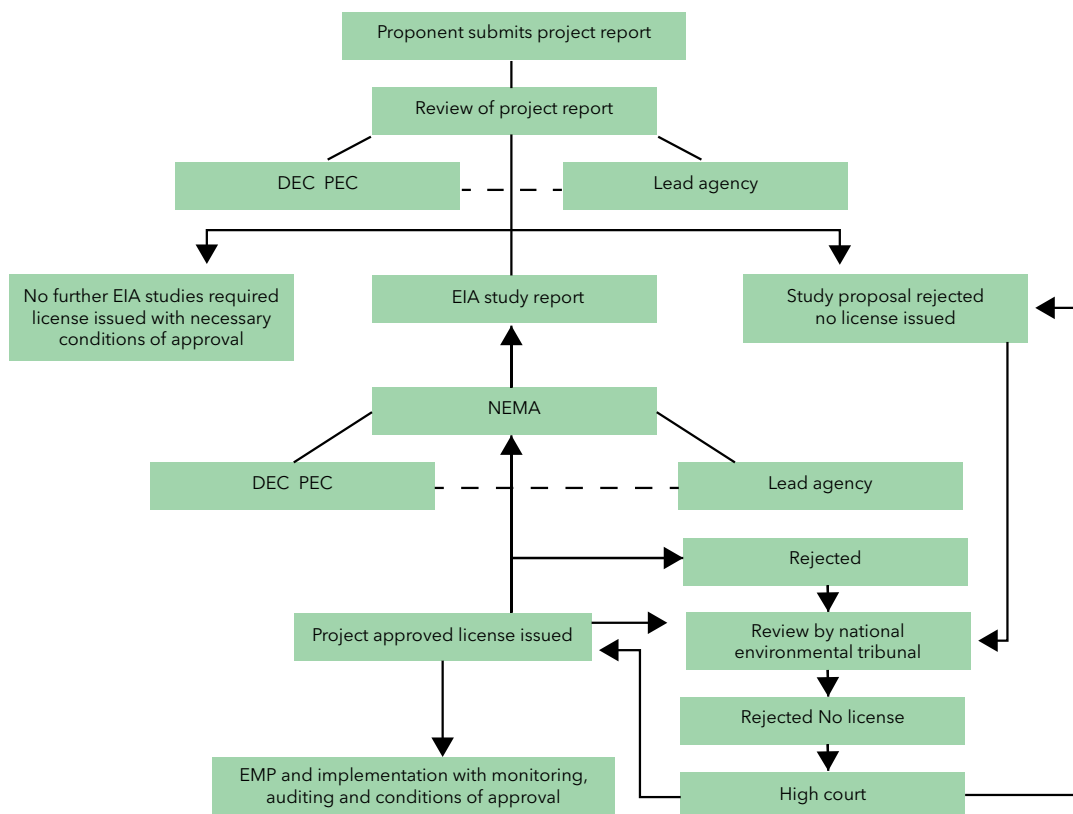
in a manner that safeguards local social and environmental systems based on the recognition that natural resources are finite and incapable of absorbing the unchecked demands of modern society.

Kenya's recommended EIA process is consistent with international best practice, incorporating screening, scoping, assessment and review stages (André *et al.* 2006; Omenge *et al.* 2020). The EIA process is accomplished in two main phases: initial environmental examination (IEE), and the environmental impact studies (EIS) or detailed EIA. The IEE is an important phase for an initial determination of the occurrence and significance of potentially adverse environmental impacts of a proposed project and whether they can be avoided, or simple mitigation measures can be implemented to address them. Relying on readily available information, the IEE is considered the prefeasibility phase of project planning and gives an indication as to whether a detailed study is needed. Despite the seemingly simple nature of the process, the IEE must be

undertaken by a qualified and licensed expert, as described in Sections 42 and 44 of the EMCA 1999 (Republic of Kenya 2000). Where the outcome of the IEE determines that a detailed study is needed and, if necessary, then the second phase of EIS begins.

A detailed EIA to examine the environmental and social impacts of a proposed development project and to ensure that these are taken into account in project design should follow. These impacts can manifest in social, economic and ecological systems and, therefore, the EIS must adopt a multidisciplinary approach and should be done very early, at the feasibility stage of a project. The EIS consists of a series of phases from screening to monitoring, as shown in Fig. 11.2. The EIA guidelines provide for public participation, but this seems to be limited in practice to selected affected parties only and, consequently, this limits the opportunities for non-directly affected but interested parties from influencing decision-making.

Figure 11.2 Generalized EIA process



Source: [Adapted from] Republic of Kenya (2000).

In 2011, the Kenyan government developed the national SEA guidelines to address, inter alia, cumulative, synergistic, secondary and long-term impacts of policies, plans and programmes (National Environment Management Authority 2011). The SEA guidelines are based on an adaptation of the steps that are characteristic of the EIA extending the aims and principles of EIA upstream in the decision-making process (Mutia 2019) (i.e. an impact-centred approach to SEA; see Introduction). To align with international best practice,

Kenya's SEA guidelines and procedures have been adapted from the International Association for Impact Assessment (IAIA) and involve four stages that are subdivided into steps/tasks. These are: establishing the context for the SEA; implementing the SEA; informing and influencing decision-making; and monitoring and evaluation (National Environment Management Authority 2011). Like the EIA, SEA should be a participatory process that involves all relevant stakeholders contributing inputs to strategic decision-making.

11.6 EIA and development projects

As discussed earlier, the EMCA 1999 outlines various projects that must undergo a comprehensive EIA before implementation. For such projects, the Act requires that the project proponent or its delegated agent publicize information on the EIA and solicit opinions from relevant experts and the affected members of the public over the course of the project feasibility study, the results of which are submitted for administrative approval. The Kenyan government has reported tremendous progress in the implementation of EIA for development projects, including disclosing information and addressing the public's concerns. However,

our research suggests that the voices of the public in the planning, design, construction and operation of public projects have been largely ignored. Numerous instances where ecological and environmental costs absorbed by citizens directly affected by the projects have been overridden by the desire for economic development and political will have been reported (Wafula 2018). Consequently, some negatively affected citizens and interested parties have mobilized opposition to make their voices heard (e.g. Kamau 2015; Wasuna 2016; Rajab 2017).



Kenya has seen rapid growth and extensive investment in megaprojects, particularly within the LAPSSET and SGR corridors, to boost the economy. The LAPSSET and SGR projects have undertaken SEAs and EIAs, respectively, and it is expected that any additional projects within these corridors will undertake the same. In this context, it is important to encourage public participation to increase environmental and social transparency and accountability in their design, planning and implementation. According to the World Bank (2006), public engagement is critical to projects' success and sustainability. Documented evidence suggests that completed projects within the corridors did undertake EIAs, and particularly engaged the public and experts in the process (e.g. Habitat Planners 2016; REPCON Associates 2017). However, given the geographical extent and complexity of these corridor projects, public participation alone is not sufficient. Instead, there is a need for a deep transformation of cultural norms to ensure the public themselves, the government and EIA consultants appreciate the meaning and value of public participation.

Kenya, like other developing countries, has not developed effective mechanisms for public engagement and traditionally excludes the

general public in project decision-making (Ronoh *et al.* 2018; Mbithi and Juma 2019). Nevertheless, the country is among the few African countries with a vibrant civil society that has managed to overcome resistance by the government that considers public participation a hindrance to development. Over the years, civil society has managed to mobilize local communities to demand accountability over development projects including the SGR and LAPSSET corridor projects (Kameri-Mbote 2000). Furthermore, the country's new constitution has increased public participation in various forums, including social, economic and environmental planning and decision-making through devolved governance units: the county governments (Republic of Kenya 2010). Although Kenya through the EMCA 1999 has outlined principles and guidelines for public participation in the EIA process, experiences have shown that attitudes towards, and capacity for, effective public participation cannot be achieved naturally and spontaneously through regulatory arrangements (Mitchell 2005). Factors such as entrenched cultural norms, political and ethnic interests, and financial and investment considerations play a major role in shaping such participation.

11.7 The study

Although the SGR and the LAPSSET corridors are expected to bring in numerous benefits and growth to Kenya, and indeed to the East African region, they are aligned within critical ecological and human systems with consequential environmental and social problems, requiring early identification and mitigation through the EIA process (Browne 2015; Onditi 2018; Development Corridors Partnership Kenya 2019). The evidence so far indicates that environmental impact identification and mitigation studies were conducted, but it is not clear if the processes followed the laid down guidelines with a particular emphasis on public participation. Given this context, the two corridors provide an opportunity to

examine the application of EIA principles and guidelines to a large infrastructure project. This paper explores the recommended EIA process and its implementation in practice within the SGR and LAPSSET corridors in Kenya.

This study utilized critical-comparative document review of the EIA reports for the two phases of the SGR and the SEA for LAPSSET corridor projects (Africa Waste and Environment Management Centre 2012; Habitat Planners 2016; REPCON Associates 2017). Focusing on the public participation component of the processes, we reviewed the implementation process and compared the

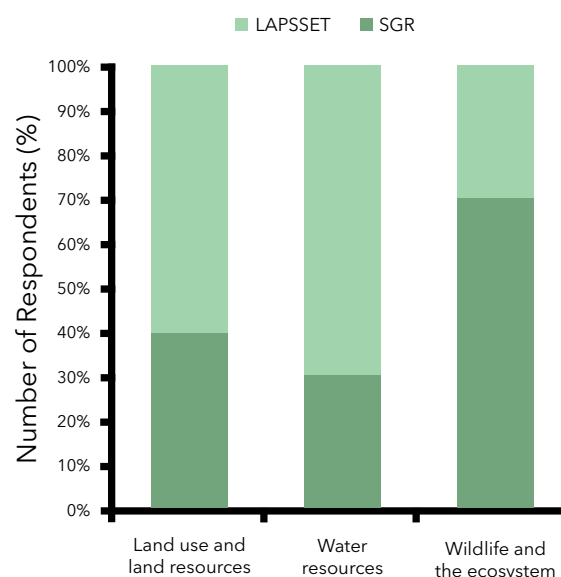
process with the international best practices (Partidário 2003; André et al. 2006; Omenge et al. 2020) and the approved EMCA 1999 guidelines (Republic of Kenya 2000, National Environment Management Authority 2011). Furthermore, we conducted (qualitative and

quantitative) interviews with local communities and experts in Nairobi, Suswa/Narok and Isiolo along the two corridors. The data were transferred to Statistical Package for Social Sciences (SPSS) PC version 23.0 software (IBM Corp 2013) for further statistical analysis.

11.8 Issues identified

Although we delineated our sampling within the 10km buffer of both corridors, the majority of respondents lived within 4.4 ± 2.8 km of the corridor alignment. Nearly half of the respondents from both corridors felt the projects had impacted negatively on land use and land resources in their communities. In particular, respondents along the LAPSSET corridor felt that water resources were the most impacted compared with those along the SGR, who felt that wildlife and ecosystems were the most affected (Fig. 11.3). Our study along the LAPSSET corridor focused on communities within Isiolo County. Isiolo is an arid and semi-arid landscape dominated by livestock production and small-holder irrigated and rain-fed farming and hence water resources are of major concern to the local communities, for domestic, livestock and irrigation purposes. On the contrary, communities along the SGR corridor are predominantly dependent on wildlife conservation activities and tourism, which depends largely on habitat quality and ecosystem services. Furthermore, the SGR traversed key wildlife conservation areas (Tsavo West, Tsavo East and Nairobi national parks, and Ngong forests, community conservancies) and drew a lot of attention during the construction, on its ecological impacts. These observations can be further reinforced by the findings of a recent preliminary study by Nyumba *et al.* (2021) along the two corridors.

Figure 11.3 Impacts of the corridors



Other studies have established that citizens' capacity to participate in public projects under the EIA frameworks determines whether public participation can generate positive and desired results, including the identification of potential environmental impacts, collection of meaningful information, impact mitigation implementation and monitoring (Wood 2003; Doelle and Sinclair 2006; Chi, Xu and Xue 2014). In this study, the persistence of negative environmental impacts that should have otherwise been identified and avoided or mitigated during the EIA process points to challenges with the EIA process, as discussed in the subsequent sections.

11.9 Comparative EIA public participation process analysis

Here, we provide a comparison of the EIA processes and the recommended guidelines (see summary in Table 11.1 and a detailed account in [Annex 2](#)). In general, the EIA process for the SGR project aligned well with various guidelines, such as the explanation of the project and its effects. For example, in most of the meetings, all the EIA reports acknowledge that “the consultant and proponent explained that the proposed development would involve the construction of [the Standard Gauge Railway line from Mombasa to Nairobi], to be used by high-speed trains.” In addition, the consultants were articulate in their approach to impact identification and mitigation as reported in the documents, for example, “the purpose [for the interviews] was to identify the potential positive and negative impacts and subsequently promote proposals on the best practices to be adopted and mitigate the negative impacts respectively [...] in identifying any other miscellaneous issues which may bring conflicts in case project implementation proceeds as planned”.

The analysis further indicates that, under critical circumstances, the project proponents and consultants did not provide for meaningful participation and engagement of all stakeholders. For example, whereas the international best practice and the EMCA 1999 calls on the proponents to ensure the process is “well-planned and focused on negotiable issues, provides support to participants through, for example, adequate diffusion of information on the proposal and on the public participation process, equitable access to funding or financial assistance, and capacity-building, facilitation and assistance to groups who don’t have the capacity



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to participate”, evidence from the EIA process shows that information on proposed projects was only available at the website of the environmental agency (NEMA) and relevant proponent archives, whereas the diffusion of information on public participation process was limited to what was provided during the EIA

meetings and there was no provision for funding support to enable all interested parties to satisfactorily participate in the EIA process. This perpetuates the notion of “the quicker we can come to a decision, the quicker we can get on and solve the problem” and hence the adoption of the decide-announce-defend (DAD) approach, which is characterized by the involvement of fewer more powerful people, use of professional expertise to come up with clever solutions, hierarchy and power structures to ensure decisions get made, and orders are followed, regardless of opposition (Walker 2009).

Evidence suggests that for complex projects, engagement with a wide range of stakeholders and enabling them to deliberate together leads to smoother, more widely supported and faster implementation of such projects. Thus, the engage-deliberate-decide (EDD) approach is promoted (Walker 2009). Wood (2003) and Bull, Petts and Evans (2010) identify lack of knowledge regarding both EIA and the nature of public projects, limited access to information, unequal opportunity to participate, lack of time and resources to organize public participation, and remoteness and lack of communication infrastructure as the major individual and institutional barriers to meaningful public participation. Our findings point to similar barriers for the Kenyan EIA processes.

The process needed to be adapted to the social organization of the impacted communities, including cultural, social, economic and political dimensions. Our analysis shows that the EIA process for the SGR largely ignored the local contexts of the impacted people as the proponents already decided and only communicated this without considerations on the local community’s capacity and ability

to participate. In contrast, there is some evidence that the SEA for the LAPSSET considered the local context through participatory approaches, such as focus group discussions. The report expressly states that culturally sensitive issues were discussed with specific communities (religious, gender, occupation) to ensure maximum disclosure. For example, “the Turkana community at Kapendo observed that they rely on advice from leaders in the traditional faith system whose operating bases are shrines. Each age set also has their different shrines which, together with communal burial grounds should be isolated from LAPSSET activities”.

Finally, our analysis indicates that, despite the attempt by the proponents to ensure credibility and rigour in their work, as outlined in the best practice and “EMCA 1999 recommendations”, thus: adherence to established ethics, professional behaviour and moral obligations and facilitation by a neutral facilitator, there is no evidence that the public meetings and interviews were led by neutral facilities as they were all led by a “Lead EIA Expert” and “NEMA official”. Furthermore, there are no indications to whether the expert mix included those from “inter- or trans- or multidisciplinary backgrounds”. This has far-reaching implications for the quality of information obtained, deliberative engagement with the local communities and participation in the implementation and monitoring (e.g. Wood 2003; Doelle and Sinclair 2006; Bull, Petts and Evans 2010; Chi, Xu and Xue 2014). It is our observation that when the process is not aligned with the recommendations, negative public sentiments, perceptions and attitudes may arise, with serious implications for the acceptance and support of the project (Kameri-Mbote 2000; Wood 2003; Omenge *et al.* 2020).

Table 11.1 Public participation practice during the EIA/SEA process in Kenya's development corridor projects

Recommended procedures		SGR		LAPSSET
International Best Practice (André et al. 2006 and adapted from Omenge et al. 2020)	EMCA 1999	SGR-I: Mombasa to Nairobi Consultant: Africa Waste and Environment Management Centre	SGR-II: Nairobi to Narok (Suswa) Consultant: HABITAT PLANNERS	LAPSSET Consultant: REPCON Associates
Initiated early and sustained	Undertaken mainly during project planning, in implementation and decommissioning phases	Stage of public involvement is not explicitly stated but falls within the prefeasibility and feasibility stages	Stage of public involvement is not explicitly stated but falls within the prefeasibility and feasibility stages	Stage of public involvement is explicitly stated, detailing approaches in all the SEA stages
Well planned and focused on negotiable issues	Involve the affected persons, lead agencies, the private sector, among others	Focused on methods of stakeholder engagement; (recruitment, invitation and facilitation); explaining the project and its effects	Focused on methods of stakeholder engagement; (recruitment, invitation and facilitation); explaining the project and its effects	Process focused on rights and resource user groups; disclosure and impact identification mitigation approaches. Engagement was iterative and comprehensive
Supportive to participants: adequate diffusion of information on the proposal and the public participation process	Ensure effective distribution of the relevant project information to the affected persons to mitigate against unnecessary delays in decision-making and project implementation	Little or no information available or accessible; little or no funding for interested parties to satisfactorily participate in the EIA process	Little or no information available or accessible; little or no funding for interested parties to satisfactorily participate in the EIA process	Little or no information available or accessible; little or no funding for interested parties to satisfactorily participate in the process
Tiered and optimized in time and space to ensure more willing participation	Undertaken mainly during project planning, in implementation and decommissioning phases and through appropriate methodologies	Prefeasibility and feasibility stages through public meetings and expert consultations. Different parties engaged variously depending on the level of information and input required	Prefeasibility and feasibility stages through public meetings and expert consultations. Different parties engaged variously depending on the level of information and input required	Public meetings/hearings before EIA report is compiled; comments received once the EIA report has been compiled; Public invited by notices, posters and radio announcement
Open and transparent	Ensure effective distribution of the relevant project information to the affected persons to mitigate against unnecessary delays in decision-making and project implementation	Facilitation to participate; participant lists availed and report compiled, but only in English (available at NEMA, website, print and electronic media)	Facilitation to participate; participant lists availed and report compiled, but only in English (available at NEMA, website, print and electronic media)	Accountability through signed attendance and interview lists; report compiled and made available for public scrutiny; the document is available in English language only; facilitation dependent on the budgets

Context oriented: adapted to the social organization of the impacted communities	Involve the affected persons, lead agencies, the private sector, among others	Local contexts of the impacted people were mostly ignored; no considerations on the capacity and ability to participate	Local contexts of the impacted people were mostly ignored; no considerations on the capacity and ability to participate	Local contexts critically considered; culturally sensitive issues discussed with specific communities
Credible and rigorous: adhere to established ethics, professional behaviour and moral obligations	Utilize a range of methodologies to engage the affected persons, lead agencies, private sector, among others	The public meeting and interviews led by Lead EIA Expert and NEMA official; no explanations on the expert mix	The public meeting and interviews led by Lead EIA Expert and NEMA official; no explanations on the expert mix	The public meeting and interviews led by lead EIA expert and NEMA official; no explanations on the expert mix

11.10 Stakeholder participation in the EIA for the corridor projects

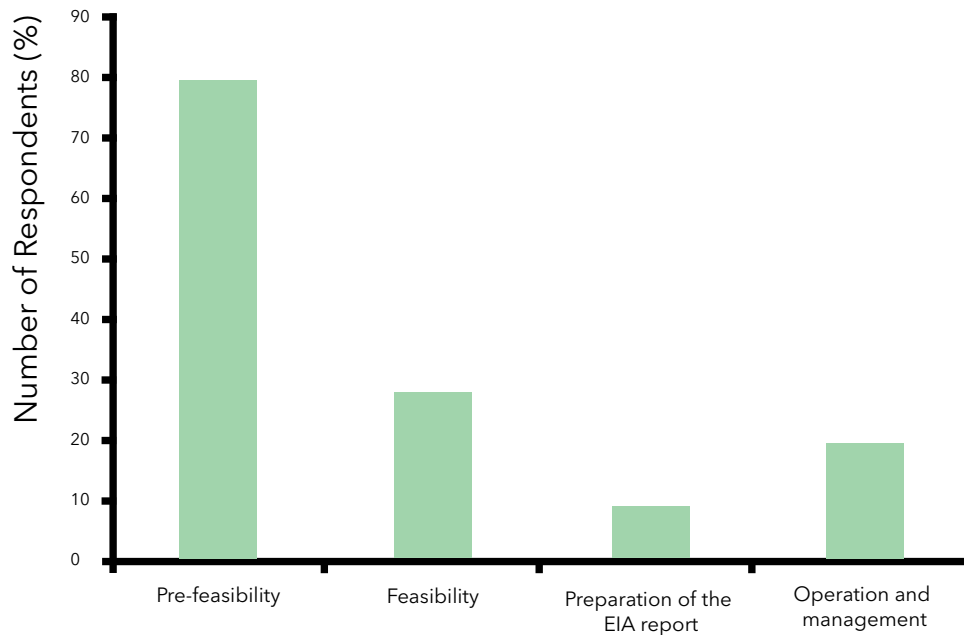
Participation in different forms of public opinion or consultation processes among the respondents was of a major concern in both corridors. Locals expressed a lack of participation and/or involvement in any form of public consultations and meetings around the LAPSSET and SGR corridor projects. Such experiences might lead to feelings of lack of adequate public involvement, reinforced by the failure of the project proponents and other

agencies to report back their findings to the public, as expressed in Table 11.2. These feelings are further exacerbated by the project proponents' skewed involvement of the locals in the EIA process. Within the two corridors, it was evident that, on the few occasions where locals were involved, they were heavily consulted during the prefeasibility stage, and just slightly during the rest of the stages (Fig. 11.4).

Table 11.2 Response to statements about EIA/SEA

	SGR		LAPSSET	
	Yes	No	Yes	No
1. Have you or any other household member participated in any form of public opinion or consultation process in your community?	25.3(152)	74.7(449)	22.1(80)	77.9(282)
2. Have you heard of any EIA meetings on development corridor project(s) identified in earlier, in your community?	13.6(83)	86.4(528)	14.1(51)	85.9(311)
3. Over the past five years, have you attended any EIA or planning meetings concerning the development corridor project(s) identified earlier in your community?	6.5(40)	96.6(590)	6.1(22)	93.9(340)
4. Do you think the general public was adequately involved/represented in the meetings?	12.1(69)	87.9(502)	8.0(29)	92.0(333)
5. Were the results of the public input into the EIA process ever reported back to the public?	3.4(21)	96.6(590)	2.0(7)	98.0(355)

Figure 11.4 Public involvement in the EIA/SEA process



11.11 Determinants of stakeholder participation in EIA

We used generalized linear models in SPSS to explore a range of factors that determine participation in the EIA process. For this study, continuous explanatory variables included age and distance between the respondent's homestead or property and the corridor alignment, whereas categorical explanatory variables included gender, education level of the respondent and length of residency in the study area. The results of the analysis showed that having no education and primary level education significantly

predicted participation, while secondary level education marginally predicted participation. Meanwhile, those who lived far from the corridor alignment were more inclined to participate in the EIA process. In terms of length of residency, recent migrants (<10 years) and those who had stayed between 11 and 20 years in the area were more inclined to participate. Other variables, in particular, gender, age and long-term residency did not appear to influence participation in the EIA of the corridor projects (Table 11.3).

Table 11.3 Generalized linear model results for participation in the EIA process

Parameter	B	Std. Error	95% Wald Confidence Interval		Hypothesis Test		
			Lower	Upper	Wald Chi-Square	df	Sig.
(Intercept)	1.839	.0425	1.755	1.922	1875.551	1	.000
Gender = male	-.012	.0160	-.043	.019	.570	1	.450
Education level (none)	.087	.0295	.029	.144	8.576	1	.003
Education level (primary)	.073	.0236	.027	.119	9.583	1	.002
Education (secondary)	.044	.0230	-.001	.089	3.670	1	.055

Age of respondent	.000	.0006	-.002	.001	.534	1	.465
Distance from homestead	.006	.0029	4.354	.011	3.901	1	.048
Corridor purpose (yes)	.020	.0160	-.011	.052	1.601	1	.206
Residency (<10 years)	.062	.0223	.018	.105	7.641	1	.006
Residency (11-20 years)	.047	.0242	-.001	.094	3.735	1	.053
Residency (21-30 years)	.019	.0253	-.031	.068	.554	1	.457
(Scale)	.058	.0026	.053	.064			

11.12 Stakeholder attitudes towards the EIA for the corridors

Finally, we sought the opinion of residents on various statements about EIAs of the SGR and SEA for the LAPSET corridor projects. Our results show that the majority of respondents along the LAPSET corridor remained neutral on six out of the eight statements as they did not enough information to enable them to respond to the questions.

On the contrary, respondents along the SGR expressed negative and strong negative sentiments to four out of the eight statements and only remained neutral to four statements. Both sets of respondents felt that public

participation did not play an important role in the EIA processes of the corridor projects and that not all interested parties were allowed to participate in the EIA process. Specifically, respondents from the SGR corridor expressed strong negative opinions on the assumptions that project developers identified interested parties, that their concerns and values surrounded the proposed projects and that local people's use, value or dependence on natural resources were taken into account (see Table 11.4 for the full list of statements and responses).

Table 11.4 Response to statements about EIA/SEA

Statement		Strongly agree	Agree	Neutral	Disagree	Strongly disagree
1. Public participation played an important role in the EIA processes of the development corridor projects	SGR	12.0(71)	11.8(70)	22.7(135)	28.6(170)	24.9(148)
	LAPSET	16.9(61)	6.8(23)	23.1(78)	28.7(97)	23.4(79)
2. The project developers had clear goals with public involvement in the EIA process	SGR	13.9(82)	16.9(100)	37.9(224)	20.6(122)	10.7(63)
	LAPSET	7.4(25)	7.4(25)	33.7(114)	31.1(105)	20.4(69)

3. Project developers identified interested parties, their concerns and values surrounding the proposed projects	SGR	9.9(60)	15.4(93)	15.9(96)	22.4(135)	36.4(220)
	LAPSSET	4.4(15)	10.9(37)	36.7(124)	27.8(94)	20.1(68)
4. All interested parties were given the opportunity to participate in the EIA process	SGR	11.0(66)	17.6(105)	21.7(130)	29.9(179)	19.7(118)
	LAPSSET	6.5(22)	13.9(47)	29.3(99)	29.6(100)	20.7(70)
5. Gathering of scientific knowledge about the development projects and affected areas was the most important thing in the EIA process	SGR	4.7(28)	14.4(86)	47.9(286)	25.0(149)	8.0(48)
	LAPSSET	11.5(39)	16.0(54)	37.3(126)	20.4(69)	14.8(50)
6. Givers of opinion (opinion leaders) had much influence in the EIA process	SGR	13.5(80)	27.1(160)	36.9(218)	11.3(67)	11.2(66)
	LAPSSET	7.4(25)	20.1(68)	35.5(120)	21.0(71)	16.0(54)
7. Offers given by the project developers to participate were genuine	SGR	10.5(63)	22.2(133)	34.2(205)	19.0(114)	14.2(85)
	LAPSSET	3.6(12)	13.3(45)	49.4(167)	16.0(54)	17.8(60)
8. Local people's use, value or dependence on natural resources were taken into account	SGR	12.5(75)	14.0(84)	16.0(96)	25.7(154)	31.7(190)
	LAPSSET	3.6(12)	16.9(61)	28.5(103)	24.9(84)	22.8(77)

11.13 Conclusion and recommendations

This study has unpacked the issue of the environmental assessment processes and public engagement in the context of development corridor projects in Kenya. These projects should be subject to the EIA and SEA processes as recommended by law (Republic of Kenya 2003; National Environment Management Authority 2011). The current forms of public participation in the EIA and SEA processes in Kenya have been used for close to two decades and there is little doubt that these approaches have contributed to improving public awareness and participation on matters about the environment. However, this study shows mixed outcomes in the delivery of the EIA and SEA processes in relation to the international best practices and national guidelines in effective public engagement.

Whereas efforts were made to convene public meetings and consult stakeholders, questions can still be asked about the participants' limited capacity, facilitation, selection process and contextualization and design of the EIAs. The EIA for the SGR largely failed to adhere to the recommendations whereas the SEA for the LAPSSET followed the recommendations to a greater extent. However, this has not had a broader positive influence on public perceptions and hence lack of public confidence, effective participation and little or inappropriate measures to mitigate both social and environmental impacts associated with the development corridors. This is not surprising, since the EIA Act in Kenya places responsibility on the project proponents to "undertake or cause to be undertaken at his own expense an

Environmental Impact Assessment study and prepare a report thereof prior to the implementation of the project” (Republic of Kenya 2000). Subsequently, proponents avoided delays and additional costs and hence the process suffered from lack of funding, leading to corruption and a misunderstanding by society-at-large of the benefits of the EIAs.

The fact that the EIA/SEA processes failed to align with most of the international best practice and the national guidelines demonstrate a clear lack of oversight by the regulators and the public, and the undue influence of the project proponents with a direct interest in the outcome of the process on the EIA/SEA consultants. As alluded to by most of the respondents in this study, public participation alone is not sufficient. Instead, there is a need for a deep transformation of cultural norms to ensure the public themselves, the government and EIA consultants appreciate the meaning and value of public participation. A system of education and dissemination of information must be implemented, with the ultimate goal being the construction of a social consensus. Fortunately, the study has observed that the majority of residents within these corridors have some level of education and that education is one of the key determinants of public participation in the process. This demography is more capable of

using information technology in acquiring information and communicating with the wider society.

Finally, the authorities should reconsider centralizing the funding for the EIA/SEA process away from the project proponents to effectively reduce the influence of the project proponents on the process. Consideration should be given to a different model, where the proponent underwrites the cost for the EIA but the amount is deposited with the regulatory agency, which independently engages a certified EIA expert to undertake the assessment according to best international guidelines. This will allow for more objective oversight by NEMA. This will ensure that adequate funds are made available to facilitate stakeholder facilitation, including capacity-building, transparency and stakeholder engagement. Project proponents need to demonstrate a credible commitment to public participation in the EIA/SEA processes to build public confidence in the process, provide a sense of importance and the perception of the efficacy of the processes, and motivate active participation and collective impact identification and monitoring. This will require a review of the public engagement approaches that build on new trans- and interdisciplinary techniques and international best practices.



Image credits: Rob Marchant

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Annex 1 Sociodemographic characteristics of respondents

Sociodemographic characteristic		SGR (N=611) %(No)	LAPSET (N=362) %(No)
Age	18-25	11.1 (68)	14.4(52)
	26-35	29.8 (182)	28.7(104)
	36-45	24.2 (148)	26.5(96)
	46-55	17.0 (104)	14.6(53)
	56-65	9.3 (57)	8.6(31)
	66-75	5.1 (31)	5.8(21)
	76 >	3.4(21)	1.4(5)
Gender	Male	49.6(303)	42.3(153)
	Female	50.4(308)	57.7(209)
Education	None	14.1(86)	18.5(67)
	Primary	29.3(179)	40.3(146)
	Secondary	37.6(230)	26.8(97)
	Tertiary	19.0(116)	14.4(52)
Main occupation	Business person	29.6(181)	48.0(174)
	Civil servant	2.6(16)	4.7(17)
	Farmer	47.3(289)	19.1(69)
	Other	15.1(92)	23.8(86)
	Teacher	5.4(33)	4.4(16)
How long have you lived here?	<10 years	32.6(199)	28.7(104)
	11-20 years	19.0(116)	21.3(72)
	21-30 years	13.4(82)	20.4(69)
	> 31 years	32.7(200)	27.5(93)
Do you live here most of the time?	Yes	97.7(597)	93.4(338)
	No	2.3(14)	6.6(24)
What is the size of your land (in Acres)?	<1	43.5(266)	61.3(222)
	1-2	25.9(158)	30.1(109)
	3-4	7.7(47)	5.5(20)
	5-10	10.6(65)	1.9(7)
	10>	12.3(75)	1.1(4)

Annex 2 Public participation practice during the EIA process in Kenya's development corridor projects

Recommended procedures		Development corridor project		
International Best Practice (André et al. 2006 and adapted from Omenge et al. 2020)	EMCA 1999	SGR-I: Mombasa to Nairobi Consultant: Africa Waste and Environment Management Centre	SGR-II: Nairobi to Narok (Suswa) Consultant: HABITAT Planners	LAPSSET Consultant: REPCON Associates
Initiated early and sustained: (i) Public to be involved before major decisions are made (ii) Public to be involved regularly in the EIA process	Public participation should be undertaken mainly during project planning, in implementation and decommissioning phases (i) Prefeasibility (ii) Feasibility (iii) Detailed survey design (iv) Construction and operation	Stage of public involvement is not explicitly stated but falls within the prefeasibility and feasibility stages through: (i) key informant interviews and discussion (N=217)*; (ii) one technical consultative forums and dialogue meetings (N=14); and (iv) eight public consultation meetings (PMCs) (N=944).	Stage of public involvement is not explicitly stated but falls within the prefeasibility and feasibility stages through: (i) 13 key informant interviews and discussion (N=940); (ii) two technical consultative forums and dialogue meetings (N=96); and (iv) 12 public consultation meetings (PMCs) (N=1333).	The public is involved at scoping and detailed EIA stages: (i) 17 key informant interviews and discussion (N=17); (ii) 27 public consultation meetings (PMCs) (N=1846); (iii) two focus group discussions (N=10)
Well planned and focused on negotiable issues: (i) All impact assessment stakeholders should know the aims, rules, organization, procedure and expected outcomes of the public participation process undertaken (ii) Emphasize understanding and respect for the values and interests of participants	It should involve the affected persons, lead agencies, the private sector, among others.	(i) Process focused on methods of stakeholder engagement; (recruitment, invitation and facilitation): "In general, the entire consultation process mapped out institutions and individuals interested in the process; compiled a database of the interested and affected parties and administered the relevant data collection tools" (ii) Focused on explaining the project and its effects: "the consultant and proponent explained that the proposed development would involve the construction of a Standard Gauge Railway line from Mombasa to Nairobi, to be used by high-speed trains". (DAD[A] versus EDD)	(i) Process focused on methods of stakeholder engagement; (recruitment, invitation and facilitation) (ii) Focused on explaining the project and its effects: "After the proponent [KRC] gave the history of Kenya Railways and the background, description of SGR project [including a map of the route] and the envisaged benefits of the project to the meeting, participants raised the following concerns and issues" (DAD[A] versus EDD) ⁷⁷	(i) Process focused on methods of stakeholder engagement; (recruitment, invitation and facilitation): "Fundamental Right Holders (FRH) to strategic resources" and "Legal Mandate Holders (LMH)" within target jurisdiction. (ii) Focused on explaining the project and its effects: "As a basis for discussion, each meeting started with a brief explanation/disclosure of the EIA Mission and an overview of LAPSSET.... they [public] were invited to give comments on their specific mandates/interests and how they were likely to interface with the proposed development." (DAD[A] versus EDD)

77 Decide, announce and defend (abandon) versus engage, deliberate and decide (Walker 2009)

<p>(iii) Focus on negotiable issues relevant to decision-making</p>		<p>(iii) Focused on impact identification and mitigation approaches: "The purpose [for the interviews] was to identify the potential positive and negative impacts and subsequently promote proposals on the best practices to be adopted and mitigate the negative impacts respectively". In addition, it focused on "identifying any other miscellaneous issues which may bring conflicts in case project implementation proceeds as planned".</p>	<p>(iii) Focused on impact identification and mitigation approaches: "The purpose [for the interviews] was to identify the potential positive and negative impacts and subsequently recommend the best practices to be adopted to mitigate the negative impacts while optimizing the positive impacts".</p>	<p>(iii) Focused on impact identification and mitigation approaches: "Iterative consultations have been carried out during the study in order to identify priority issues that require in-depth analysis". "and exploring means of continuously improving beneficial environmental and social effects associated with the implementation of the project"</p>
<p>Supportive to participants: (i) Adequate diffusion of information on the proposal and the public participation process (ii) Equitable access to funding or financial assistance (iii) Capacity-building, facilitation and assistance to groups who don't have the capacity to participate</p>	<p>It is the responsibility of the project proponent to adequately ensure effective distribution of the relevant project information to the affected persons to mitigate against unnecessary delays in decision-making and project implementation.</p>	<p>(i) Information on the proposed SGR project is only available at the website of the environmental agency and relevant government departments and proponent archives. (ii) Diffusion of information on the public participation process is limited to what is provided during the EIA process (iii) There is no provision for funding support to enable all interested parties to satisfactorily participate in the EIA process</p>	<p>(i) Information on the proposed SGR project is only available at the website of the environmental agency and relevant government departments and proponent archives (ii) Diffusion of information on the public participation process is limited to what is provided during the EIA process (iii) There is no provision for funding support to enable all interested parties to satisfactorily participate in the EIA process</p>	<p>(i) Information on the proposed SGR project is only available at the website of the environmental agency and relevant government departments and proponent archives (ii) Diffusion of information on the public participation process is limited to what is provided during the EIA process (iii) There is no provision for funding support to enable all interested parties to satisfactorily participate in the EIA process</p>

<p>Tiered and optimized: (i) Public participation should occur at the most appropriate level of decision-making (ii) The public should be invited to participate regularly, with emphasis on the appropriate time for involvement (iii) Optimization in time and space to ensure more willing participation</p>	<p>(i) Public participation should be undertaken mainly during project planning, in implementation and decommissioning phases (ii) The methodology for public participation may include: meetings and technical workshops with affected communities; interpersonal contacts; Dialogue with user groups and local leaders; Questionnaire/ survey/interview; and participatory rural appraisal or rapid rural appraisal techniques</p>	<p>(i) The project engaged the public through public meetings and expert consultations before the EIA report was compiled Different parties were engaged variously depending on the level of information and input required (ii) Public participation was invited by notices, posters and radio announcement; local leaders mobilized for participation and selected participants to the meetings</p>	<p>(i) The project engaged the public through meetings and expert consultations before the EIA report was compiled Different parties were engaged variously, depending on the level of information and input required (ii) Public participation was invited by notices, posters and radio announcement; local leaders mobilized for participation and selected participants to the meetings</p>	<p>Public participated in public meetings before EIA report is compiled, in the public hearing and send comments once the EIA report has been compiled (ii) Public invited by notices, posters and radio announcement</p>
<p>Open and transparent: (i) Access to all relevant information by all stakeholders (ii) Provision of information and facilitation to ensure participation</p>	<p>It is the responsibility of the project proponent to adequately ensure effective distribution of the relevant project information to the affected persons to mitigate against unnecessary delays in decision making and project implementation</p>	<p>(i) Consultants accounted for the participants in the EIA process through signed attendance and interview lists (available at NEMA, website, print and electronic media) (ii) EIA report compiled and made available for public scrutiny; the document is available in English language only (iii) Proponents provided financial and other related facilitation for participants to take part in the EIA process; dependent on the available budgets</p>	<p>(i) Consultants accounted for the participants in the EIA process through signed attendance and interview lists (available at NEMA, website, print and electronic media) (ii) EIA report compiled and made available for public scrutiny; the document is available in English language only (iii) Proponents provided financial and other related facilitation for participants to take part in the EIA process; dependent on the available budgets</p>	<p>(i) Consultants accounted for the participants in the EIA process through signed attendance and interview lists (available at NEMA, website, print and electronic media) (ii) EIA report compiled and made available for public scrutiny; the document is available in English language only (iii) Proponents provided financial and other related facilitation for participants to take part in the EIA process; dependent on the available budgets</p>

<p>Context oriented: (i) Be adapted to the social organization of the impacted communities, including the cultural, social, economic and political dimensions</p>	<p>It should involve the affected persons, lead agencies and private sector, among others</p>	<p>Local contexts of the impacted people were mostly ignored as the proponents already decided and only communicate this; no considerations on the capacity and ability to participate (DAD versus EDD)</p>	<p>Local contexts of the impacted people were mostly ignored as the proponents already decided and only communicate this; no considerations on the capacity and ability to participate (DAD versus EDD)</p>	<p>(i) Local contexts of the impacted people seemed to have been critically considered (FGDs organization) (ii) Culturally sensitive issues were discussed with specific communities (religious, gender, occupation) to ensure maximum disclosure “The Turkana community at Kapendo observed that they rely on advice from leaders in the traditional faith system whose operating bases are shrines. Each age set also have their different shrines which, together with communal burial grounds should be isolated from LAPSSET activities”</p>
<p>Credible and rigorous: (i) Adhere to established ethics, professional behaviour and moral obligations (ii) Facilitation by a neutral facilitator</p>	<p>The methodology for Consultations and Public Participation (CPP) may include meetings and technical workshops with affected communities; interpersonal contacts; dialogue with user groups and local leaders; questionnaire/ survey/interview; and participatory rural appraisal or rapid rural appraisal (PRA/ RRA) techniques</p>	<p>The public meeting and interviews were led by lead EIA experts and NEMA officials; there were no explanations as to whether the expert mix included those from inter-, trans- or multidisciplinary backgrounds</p>	<p>The public meeting and interviews were led by lead EIA experts and NEMA official; there were no explanations as to whether the expert mix included and those from inter- or trans- multidisciplinary backgrounds</p>	<p>The public meeting and interviews were led by lead EIA expert and NEMA official; there are no explanations as to whether the expert mix included and those from inter- or trans- or multidisciplinary backgrounds</p>