This study was commissioned by the United Nations Office of the High Representative for the Least Developed Countries, Landlocked Developing Countries and Small Island Developing States (UN-OHRLLS). UN-OHRLLS gratefully acknowledges Mr. Gilbert Mbae Maeti for preparing the report.

The report was prepared under the overall guidance of Ms. Fekitamoeloa Katoa ‘Utoikamanu, Under-Secretary-General and High Representative for Least Developed Countries, Landlocked Developing Countries and Small Islands Developing States and the general supervision of Heidi Schroderus-Fox, Director and Sandagdorj Erdenebileg, Chief, Policy Coordination, Monitoring and Reporting Service, UN-OHRLLS. Gladys Mutangadura, Senior Economic Affairs Officer and Dagmar Hertova, Programme Management Officer supervised and guided the preparation and finalization of the report.

The report benefitted from discussions and comments made by participants of the meeting on Best Practices in Corridor Development and Management for the Benefit of LLDCs and Transit Countries held on 29-30 October 2019 in Ulaanbaatar, Mongolia.

The views expressed in this report are exclusively those of the author and do not necessarily reflect those of the United Nations.
Table of Contents

LIST OF TABLES, FIGURES AND BOXES ....................................................................................... 4
LIST OF ABBREVIATIONS AND ACRONYMS ............................................................................. 5
EXECUTIVE SUMMARY .................................................................................................................. 7
CHAPTER 1: INTRODUCTION .......................................................................................................... 9
  1.1 Background to Transit Transport for Landlocked Developing Countries .................. 9
  1.2 Corridor Approach in Trade and Transport ................................................................. 10
  1.3 Scope of Work .................................................................................................................... 10
  1.4 Structure of the Report ...................................................................................................... 11
CHAPTER 2: OVERVIEW OF CORRIDORS AND THEIR EVOLUTION ........................................... 13
  2.1 Definition of Corridors ....................................................................................................... 13
  2.2 Configuration of International Corridors ......................................................................... 16
  2.3 Evolution of Corridors in Trade Facilitation for Landlocked Developing Countries ...... 18
  2.4 Established Corridors Serving LLDCs ............................................................................ 19
CHAPTER 3: ROLE OF AGREEMENTS AND OTHER LEGAL INSTRUMENTS IN EFFECTIVE MANAGEMENT OF CORRIDORS ................................................................. 26
  3.1 Corridor Governance and Institutional Framework ......................................................... 27
  3.2 Trade and Transport Facilitation Issues .......................................................................... 29
  3.3 Transport Infrastructure ..................................................................................................... 29
  3.4 Transport Logistics Monitoring ....................................................................................... 30
  3.5 Stakeholder Coordination ................................................................................................. 30
  3.6 Corridor Budgetary Resources ......................................................................................... 30
  3.7 Consultation and Resolution of Bottlenecks .................................................................... 31
  3.8 Capacity Building of Stakeholders .................................................................................... 31
CHAPTER 4: LEGAL, REGULATORY AND INSTITUTIONAL FRAMEWORKS FOR COORDINATION AND MANAGEMENT OF CORRIDORS: SELECTED EXPERIENCES ............... 32
  4.1 Corridor Legal and Regulatory Frameworks ................................................................. 32
  4.2 Corridor Management Institutional Frameworks ............................................................ 34
  4.3 Corridor Infrastructure Development ............................................................................. 36
  4.4 Corridor Performance Indicators ..................................................................................... 38
CHAPTER 5: CHALLENGES IN ESTABLISHMENT, OPERATIONALISATION AND MANAGEMENT OF CORRIDORS ...................................................................................... 43
  5.1 Challenges in Establishment of Corridors ......................................................................... 43
  5.2 Challenges in Corridor Operationalization ....................................................................... 44
  5.3 Challenges in Corridor Management ................................................................................ 44
CHAPTER 6: REVIEW OF BEST PRACTICES IN CORRIDOR DEVELOPMENT AND MANAGEMENT .................................................................46
   6.1 Best Practices in Corridor Establishment .........................................................46
   6.2 Best Practices in Corridor Development .........................................................47
   6.3 Best Practices in Corridor Management .........................................................50
CHAPTER 7: CONCLUSIONS AND RECOMMENDATIONS ..................................................54
   7.1 Conclusions ........................................................................................................54
   7.2 Recommendations ............................................................................................55
       (i) Recommendations on Key Elements for Inclusion in Corridor Agreements ........55
       (ii) Recommendations on Corridor Management for LLDCs and Transit Countries ....56
       (iii) Recommendations on Stakeholder Participation ........................................57
       (iv) Recommendations on Sustainability of Corridors .......................................57
REFERENCES .............................................................................................................59

ANNEX: Outcome document of the meeting on Best Practices in Corridor Development and Management for the Benefit of LLDCs and Transit Countries held on 29-30 October 2019 in Ulaanbaatar, Mongolia .................................................................62
LIST OF TABLES, FIGURES AND BOXES

Table 1: Stages in Corridor Evolution and Associated Characteristics .............................................. 15
Table 2: Major international transport corridors involving landlocked countries by regions ............. 24
Table 3: Sample of major operational corridors established under formal agreements .................. 32
Table 4: Some African Corridors Under Formal Establishment .............................................................. 33
Table 5: Institutional arrangements of selected corridors ................................................................. 35
Table 6: Provisions on Coordination on Development of Corridor Infrastructure ............................ 37
Table 7: KPIs Impacting Corridor Hinterlands .................................................................................... 39
Table 8: Speed Performance Indicators for selected corridors ............................................................. 40

Figure 1: Model CMI Governance Organizational Structure ............................................................... 28

Box 1: Beijing-Brussels Caravan ........................................................................................................ 23
Box 2: Presidential Infrastructure Champions Initiative ................................................................. 49
Box 3: The Mombasa Port & Northern Corridor Community Charter .............................................. 53
<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Full Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACMA</td>
<td>African Corridor Management Alliance</td>
</tr>
<tr>
<td>ADB</td>
<td>Asian Development Bank</td>
</tr>
<tr>
<td>AfDB</td>
<td>African Development Bank</td>
</tr>
<tr>
<td>AU</td>
<td>African Union</td>
</tr>
<tr>
<td>ASEAN</td>
<td>Association of Southeast Asian Nations</td>
</tr>
<tr>
<td>BRI</td>
<td>Belt and Road Initiative</td>
</tr>
<tr>
<td>CAREC</td>
<td>Central Asia Regional Economic Cooperation</td>
</tr>
<tr>
<td>CCTT</td>
<td>Coordinating Council on Trans-Siberian Transportation</td>
</tr>
<tr>
<td>CCTTFA</td>
<td>Central Corridor Transit Transport Facilitation Agency</td>
</tr>
<tr>
<td>CFS</td>
<td>Container Freight Station</td>
</tr>
<tr>
<td>CIS</td>
<td>Commonwealth of Independent States</td>
</tr>
<tr>
<td>CMI</td>
<td>Corridor Management Institution</td>
</tr>
<tr>
<td>COMESA</td>
<td>Common Market for Eastern and Southern Africa</td>
</tr>
<tr>
<td>CNC</td>
<td>Core Network Corridor</td>
</tr>
<tr>
<td>DG MOVE</td>
<td>Directorate-General Mobility and Transport (EU)</td>
</tr>
<tr>
<td>DRC</td>
<td>Democratic Republic of Congo</td>
</tr>
<tr>
<td>ECCAS</td>
<td>Economic Community of Central African States</td>
</tr>
<tr>
<td>ECD</td>
<td>Economic Corridor Development</td>
</tr>
<tr>
<td>ECOWAS</td>
<td>Economic Community of West African States</td>
</tr>
<tr>
<td>EPZs</td>
<td>Export Processing Zones</td>
</tr>
<tr>
<td>ERDF</td>
<td>European Regional Development Fund</td>
</tr>
<tr>
<td>ESCAP</td>
<td>Economic and Social Commission for Asia and Pacific</td>
</tr>
<tr>
<td>GMS</td>
<td>Greater Mekong Subregion</td>
</tr>
<tr>
<td>ICD</td>
<td>Inland Container Depot</td>
</tr>
<tr>
<td>IGAD</td>
<td>Intergovernmental Authority on Development</td>
</tr>
<tr>
<td>INSTC</td>
<td>International North-South Transport Corridor</td>
</tr>
<tr>
<td>KPIs</td>
<td>Key Performance Indicators</td>
</tr>
<tr>
<td>LDCs</td>
<td>Least Developed Countries</td>
</tr>
<tr>
<td>LLDCs</td>
<td>Landlocked Developing Countries</td>
</tr>
<tr>
<td>MCLI</td>
<td>Maputo Corridor Logistics Initiative</td>
</tr>
<tr>
<td>NCTTCA</td>
<td>Northern Corridor Transit Transport Coordination Authority</td>
</tr>
<tr>
<td>NTBs</td>
<td>Non-Tariff Barriers</td>
</tr>
<tr>
<td>OSBP</td>
<td>One Stop Border Post</td>
</tr>
<tr>
<td>OSCE</td>
<td>Organization for Security and Co-operation in Europe</td>
</tr>
<tr>
<td>PICI</td>
<td>Presidential Infrastructure Champions Initiative</td>
</tr>
<tr>
<td>PIDA</td>
<td>Programme on Infrastructure Development for Africa</td>
</tr>
<tr>
<td>RECs</td>
<td>Regional Economic Communities</td>
</tr>
<tr>
<td>SAARC</td>
<td>South Asian Association for Regional Cooperation</td>
</tr>
<tr>
<td>SACU</td>
<td>Southern Africa Customs Union</td>
</tr>
<tr>
<td>SADC</td>
<td>Southern Africa Development Community</td>
</tr>
<tr>
<td>SGR</td>
<td>Standard Gauge Railway</td>
</tr>
<tr>
<td>TEN-T</td>
<td>Trans-European Transport Network</td>
</tr>
<tr>
<td>TFA</td>
<td>WTO Trade Facilitation Agreement</td>
</tr>
<tr>
<td>TRACECA</td>
<td>Transport Corridor Europe-Caucasus-Asia</td>
</tr>
<tr>
<td>UNCTACDA</td>
<td>United Nations Transport and Communications Decade in Africa</td>
</tr>
</tbody>
</table>
UNCTAD | United Nations Conference on Trade and Development  
UNECA | United Nations Economic Commission for Africa  
UN ECE | United Nations Economic Commission for Europe  
UN-ECLAC | United Nations Economic Commission for Latin America and the Caribbean  
UN ESCAP | United Nations Economic and Social Commission for Asia and the Pacific  
UN-OHRLLS | United Nations Office of the High Representative for the Least Developed Countries, Landlocked Developing Countries and Small Island Developing States  
VPOA | Vienna Programme of Action for Landlocked Developing Countries for the Decade 2014-2024  
WCO | World Customs Organisation  
WBCG | Walvis Bay Corridor Group  
WTO | World Trade Organisation
**EXECUTIVE SUMMARY**

The international community has long endorsed the rights of access to the sea by landlocked countries in order to enable them to participate effectively in international trade without undue disadvantages to their geographical condition. The challenges posed by lack of access to the sea by landlocked developing countries (LLDCs) are further compounded by their lack of adequate infrastructure, structural deficiencies and reliance on transit countries, many of which are also developing countries with similar challenges. Attempts have been made through global, regional and bilateral arrangements to ameliorate the negative impacts of landlockedness. The United Nations Office of the High Representative for the Least Developed Countries, Landlocked Developing Countries and Small Island Developing States (UN-OHRLLS) has taken an active role in promoting the implementation of the Vienna Programme of Action for Landlocked Developing Countries for the Decade 2014-2024 (VPoA) and promoting cooperation between LLDCs and transit countries in order to facilitate the smooth flow of trade and transport to serve their needs.

The corridor approach is increasingly being applied by LLDCs and their transit neighbours in various continents. This report examines transport corridors in Africa, Asia, Europe and South America and reviews the legal instruments under which they were established, their governance structures, management systems and funding mechanisms, among others. It also considers issues of coordination in development and maintenance of transport infrastructure and harmonisation of policy, regulatory and administrative instruments to facilitate trade and transport across corridor countries. While transit corridors with corridor management institutions have been in place in Africa for last three decades, they are emerging in Asia only more recently. Europe, which is a relatively small continent with densified and interconnected transport infrastructure in terms of roads, railways and inland waterways has had its own unique experience in the establishment of corridors.

In Africa and Asia, corridor management has largely been undertaken by corridor authorities or coordination bodies, designated as a Corridor Management Institution (CMI), established under enabling Corridor agreements. The CMI usually has a legal personality and is hosted in one of the Corridor States. However, there are cases where corridor coordination is entrusted to regional entities such as under the Central Asia Regional Economic Cooperation (CAREC) program where the Asian Development Bank serves as the Secretariat. Treaties, agreements and Memoranda of Understanding (MOUs) are the primary instruments applied in the establishment of corridors and its CMIs. The success in the development of corridors is deemed to be dependent on the initial enabling legal instruments which define their functions and establish the fundamental governance, institutional configurations including their management structures and financing mechanisms.

The challenges encountered in establishment of transport corridors include lack of consensus with respect to the identification and designation of corridor routes; negotiations, adoption and ratification of corridor agreements; funding the construction/rehabilitation of existing gaps in infrastructure; and establishment of the Corridor Management Institutions. Corridor operationalization may be encumbered by shortage of financial resources; insufficient equipment and office facilities; shortage of human capital and inadequate funding of CMIs programmes. Challenges external to the CMIs may relate to acquisition of data from service providers (ports, railways, roads, pipelines and transporters); provision of facilities transport infrastructure.
providers; functions by regulatory/oversight agencies; balancing the interests of all Corridor
stakeholders; and institutional constraints leading to lack of capacity to effectively fulfil mandates.

The report identifies and proposes key best practices for possible replication in establishment of
new corridors and for the development and management of new and existing ones. In the area of
enabling instruments, it is found that corridor agreements should typically incorporate corridors
functions; rights and obligations of corridor states; governance structures; provisions on transport
infrastructure development, trade and transport facilitation; and funding of the CMIs. Other good
practices include coordinated capacity building; development of sustainable funding mechanisms
for the implementation of the CMI programmes and projects; stakeholder consultations; peer
learning and sharing of institutions for capacity building.

The main observations made from this study are that the corridor approach is being increasingly
employed globally to provide designated and efficient transport routes to both transit and cross-
border transport and logistics operations between corridor states. Their public and private
stakeholders are being actively involved in order to enhance inclusion in decision making on the
ways in which business is conducted and regulated across their transit routes.

Finally, the report makes recommendations on structuring of corridor agreements, development
and effective corridor management for LLDCs and transit countries; stakeholder participation; and
long-term sustainability of transport corridors. More work needs to be undertaken to collect data
over time to develop a series of corridor observations tied with the state of infrastructure and the
interventions undertaken in trade and transport facilitation.
CHAPTER 1: INTRODUCTION

1.1 Background to Transit Transport for Landlocked Developing Countries

The important role of maritime transport in international trade has been acknowledged globally as various studies indicate that over 80 per cent of merchandise trade across the world is conveyed by sea. While majority of the countries in the world have direct access to the sea, a large number of states especially in Africa, Asia and Europe are landlocked and have to access the sea by transiting through other countries. The position of landlocked states is a matter of great concern because their imports have to transit through coastal states in order to reach them and their exports have to transit in order to reach their trading partners. In terms of numbers of Landlocked Developing Countries (LLDCs) by continent, Africa has sixteen, Asia has ten and Europe four LLDCs. Bolivia and Paraguay are the only LLDCs in South America though the latter has direct access to the sea through the navigable River Paraguay. There are no landlocked states in North America and Oceania.

The programming by the UN to address the challenges of LLDCs was accelerated following the Almaty Declaration and Programme of Action adopted by the International Ministerial Conference of Landlocked and Transit Developing Countries and Donor Countries and International Financial and Development Institutions on Transit Transport Cooperation held in Almaty, Kazakhstan in 2003. The Almaty Programme of Action was for a ten-year duration and was succeeded by the ongoing Vienna Programme of Action for Landlocked Developing Countries for the Decade 2014-2024 (VPoA), adopted at the Second UN Conference on LLDCs in Vienna, Austria in 2014.

The overarching goal of the Vienna Programme of Action is to coherently address the special development needs and challenges of LLDCs arising from landlockedness, remoteness and geographical constraints so as to contribute to their sustainable and inclusive growth contributing to the eradication of poverty. The following are specific goals to be achieved under the Vienna Programme of Action:

(i) Promotion of access to the sea on the basis of freedom of transit and in accordance with applicable rules of international law;
(ii) Reduction of transport and other transactions costs and improvement of services to increase export competitiveness and reduce costs of imports for landlocked developing countries for inclusive economic development;
(iii) Development of adequate transit transport infrastructure networks and completion of missing links connecting landlocked developing countries;
(iv) Promotion of growth and increased participation in global trade, through structural transformation related to enhanced productive capacity development, value addition, diversification and reduction of dependency on commodities
(v) Effective implementation of bilateral, regional and international legal instruments and strengthening of regional integration; and
(vi) Providing international support for landlocked developing countries to address their needs and challenges.
The VPoA contains six priorities that are identified in order to promote the access of LLDCs to the sea. The six priorities are:

(i) Priority 1: Fundamental Transit Policy Issues;
(ii) Priority 2: Infrastructure Development and Maintenance (encompassing infrastructure in transport, energy and ICT);
(iii) Priority 3: International Trade and Trade Facilitation (encompassing International trade and Trade facilitation);
(iv) Priority 4: Regional Integration and Cooperation;
(v) Priority 5: Structural Economic Transformation; and
(vi) Priority 6: Means of Implementation

1.2 Corridor Approach in Trade and Transport

The Corridor approach has been widely adopted for making important interventions with respect to infrastructure development and maintenance; trade and transport facilitation; transport logistics monitoring; and capacity building for stakeholders along specific transport routes. For the developing regions with large numbers of LLDCs, the UN regional agencies such as UNECA, UNECE and ESCAP underscored the importance of transport corridors.

In this respect, UNECA and ESCAP together with their counterpart development banks, the African Development Bank and the Asian Development Bank have promoted infrastructure projects preparation, funding and maintenance based on a corridor approach in order to optimize access to both the LLDCs and transit countries.

In Africa, where there are sixteen LLDCs, the Programme for Infrastructure Development (PIDA) which is the African Union flagship programme for the development of infrastructure in transport, energy, ICT and transboundary water resources mainstreams all projects along designated corridors. In Asia, there are programmes for the development of corridors covering the specific groups of countries in Greater Mekong Sub-Region (GMS) and the Central Asia Regional Economic Cooperation (CAREC) program. The region further participates in the larger Eurasian corridors that are akin to land bridges linking Asia to Europe.

The European Union has also demonstrated its appreciation of the importance of transport corridors under its Trans-European Transport Network (TEN-T) programme which is a plan to develop an elaborate network of roads, railways, airports and navigable waterways infrastructure for the entire Community. It consists of a Core Network Corridors with a primary aim of improvement of mobility, inter-modality and interoperability on the major transport axes across Europe. This is despite the fact that none of the EU members is currently an LLDC. With the growing importance of land transport links between Europe and Asia, the TEN-T network is being configured to interface with the rest of eastern Europe and subsequently the proposed Eurasian land bridges.

1.3 Scope of Work

This report was prepared as background document for a meeting on Best Practices in Corridor Development and Management for the Benefit of LLDCs and Transit Countries that was organized by UN-OHRLLS and the Government of Mongolia and held on 29-30 October 2019 in Ulaanbaatar, Mongolia. The meeting reviewed the state of institutional arrangements of existing
transit transport corridors and facilitated dialogue and experience sharing on corridor management amongst LLDCs and transit countries from different regions and identified recommendations to facilitate the development, functioning and effective management of corridors. The outcome document of the meeting is included in the annex to this report.

This study aims to identify best practices for effective transit transport corridor development and management. The study undertakes a comprehensive assessment of the state of transit transport corridor arrangements around the world, but with emphasis on those that serve LLDCs, to identify best practices for transit transport corridor development and management for the benefit of LLDCs and transit countries. Legal, regulatory and institutional frameworks of existing corridors will be reviewed, seeking to identify successes and challenges to making corridors effective and operational. An attempt is made to isolate and document practices that make some corridors more successful than others in terms of delivery of their mandates. Specifically, the study examines the following issues in existing corridors: Legal, Regulatory and Institutional Frameworks; Corridor Physical Infrastructure; Trade and Transport Facilitation; Trade and Transport Logistics Monitoring; Stakeholder Coordination; Budgetary Resources; and Capacity Building for Stakeholders.

The findings from the above issues will be applied to identify best practices and attributes such as the types of enabling legal and regulatory instruments, institutional framework, Corridor Management Institutions (CMIs) and logistics information systems that provide the favourable environment for the establishment, development and management of efficient and sustainable corridors. Through these attributes, the corridor will be well performing and capable of providing the ideal levels of transport infrastructure; trade and transport facilitation; and the human capacity required to provide quality transit transport services for the mutual benefits of both the LLDCs and coastal countries. Lastly, a set of policy recommendations will be made on structuring of corridor agreements, development and effective corridor management for LLDCs and transit countries; stakeholder participation; and long-term sustainability of transport corridors.

1.4 Structure of the Report

This report contains an executive summary and seven chapters. After the Introductory chapter, the four subsequent chapters cover the following: Overview of Corridors and their Evolution; Legal/Regulatory/Institutional Frameworks Coordination and Management of Transit Transport Corridors; Role of Agreements and other Legal Arrangements in Effective Management of Corridors; Challenges in Establishment, Operationalisation and Management of Corridors. The last two chapters are: Best Practices in Corridor Development and Management; and Conclusions and Recommendations.
CHAPTER 2: OVERVIEW OF CORRIDORS AND THEIR EVOLUTION

2.1 Definition of Corridors

A transport corridor when defined in the widest sense refers to a designated network of transport routes comprising road, railway, inland terminals and/or border posts. The corridor is usually established for purposes of enhancing transit trade and transport facilitation so the Customs and other regulatory agencies can effectively conduct oversight functions over the various stakeholders.

In this study, emphasis will be on land-based corridors which may be served by rail, road and pipelines. However, references may be made to hybrid corridors such as the Belt and Road Initiative (BRI) and the EU TEN-T networks which include water segments in their networks. In addition, the Paraguay River which traverses Paraguay, Brazil, Uruguay and Argentina is navigable from the coast up to the city of Asuncion in Paraguay and provides a waterway corridor serving these countries. Traffic from landlocked Bolivia can also be transported through the waterway with transshipment into road and rail at Asuncion.

The traditional land-based transport corridor is a surface transport link usually originating from a seaport and may contain road, rail or pipelines in part or the whole of its stretch into the hinterland. The Corridor may further contain border posts, dry ports and inland container terminals (ICDs). Some corridors may also contain segments of inland waterways or means of transport such as rail wagons where transshipment of cargo may take place.

The inland modes of transport usually interface with each other in order to complete the transport chain. This is the case with rail and road where the road lifts traffic in areas with no railway infrastructure or provides the last mile from the railheads. The provision of multi-modal transport services along corridors may also be obtained where individual consignments may be conveyed through two or more different modes of transport under a single contract with one carrier being liable in the legal sense for the entire carriage.

The concept of “Smart Corridor” has also been adopted and classifies corridors according to how their physical infrastructure facilities and logistics operations can be tracked and monitored with a target of monitoring the corridor operations on a real time basis.

As the economies of the states through which a corridor passes experience increased economic activities, the corridor may transform from simply a transport link connecting the origin and destination to one that provides access to various industries that develop along its route. As the corridor routes become more densified through increased logistics, distribution and other trade supporting services, the establishment of cities dotted with industries such as manufacturing, mining and with service industries such as tourism, entertainment, health and educational institutions the corridor becomes busier.

Typically, corridors progressively graduate through evolution from simple “Transport Corridor” to the more developed "Economic Corridor” stage. This evolution has been generally categorized into four stages where in the first stage it is just a simple transport corridor. The second stage is an “Integrated Multi-modal Corridor”, in the third stage it becomes a “Logistics Corridor” while the fourth stage is referred to as an “Economic Corridor”. It is important to note that there is no
universal definition of the different stages of corridors. These four corridor stages provided below are based on a set of criteria adopted by the African Development Bank (AfDB).1

In a simple “Transport Corridor”, the primary business is the movement of goods, people and transport equipment on a point to point basis. Many of the corridors in Africa such as Djibouti2, Beira3, Dar es Salaam, Nacala and Abidjan/Ouagadougou can be seen as transport corridors. They provide road or rail transport along some or all their segments and are not associated with any significant en-route transshipment or value addition as transport is conveyed along the corridors.

In the case of an “Integrated Multi-modal Corridor” stage, several modes of physical infrastructure serve to integrate the activities in a region. The corridor may begin to attract new investment as a result of improved transport linkages in the form of manufacturing facilities such as Export Processing Zones (EPZs). There may also be corridor institutions with core programmes for transport coordination across the corridor. The Northern, Central and the Lagos/Abidjan corridors can be considered to be at the integrated multi-modal stage.

In a “Logistics Corridor”, there is need for more investment attraction into manufacturing, agroprocessing, tradable services, etc., either clustered in specific locations or spread along the corridor. There would be more comprehensive harmonisation of regulations covering the movement of goods, services and people as well as investment and taxation regulations specific to key corridor sectors. There may be more elaborate institutional framework to manage the corridor and active promotion of investment of the corridor as a magnet for investment. The Maputo Corridor can be considered at the logistics corridor stage.

In the “Economic Corridor” case, the corridor is expected to have evolved further and generate economic activities en-route, bringing production units, services, tourism and settlements that take advantage of the facilities along the corridor. At this stage, there may be forward and backward linkages with new investment sectors providing spill-overs into the wider economy. Furthermore, complementary services and linked sectors develop. Few corridors have attained this stage, mainly those in the economically integrated European Union where the level of economic integration has attained a Customs Union and largely removed conventional international frontiers. The Rotterdam Rhineland Corridor can be considered an economic corridor for example.

Table 1 below, shows the stages in corridor evolution each listed with associated levels in terms of infrastructure, investment and harmonization with some examples provided.

---

1 AfDB Regional Integration Brief (2013). Developing Economic Corridors in Africa: Rationale for the Participation of the African Development Bank.
2 While Djibouti and Ethiopia have significant levels of policy and regulatory harmonisation on bilateral basis, the other Corridor countries (South Sudan, Sudan and Uganda) are not active parties to such harmonisation on a corridor level.
3 Mozambique and Zimbabwe have bilateral policy and regulatory harmonisation, but others served by the Beira Corridor (DRC, Malawi and Zambia) are not active parties.
Table 1: Stages in Corridor Evolution and Associated Characteristics

<table>
<thead>
<tr>
<th>Corridor Stage</th>
<th>Infrastructure</th>
<th>Investment</th>
<th>Harmonisation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stage 1</td>
<td>Single trans-boundary infrastructure (road or rail or waterway) linking a set of cities across states</td>
<td>Corridor attracts limited local investment in the form of shops, cafes etc.</td>
<td>No corridor-wide harmonisation of policies or regulations among the constituent Corridor states</td>
</tr>
<tr>
<td><em>Transport Corridor</em></td>
<td></td>
<td></td>
<td>Recognition of the corridor as an instrument for economic development is not endorsed by all corridor countries</td>
</tr>
<tr>
<td>Stage 2</td>
<td>Multiple modes of trans-boundary infrastructure linking two economic points</td>
<td>Corridor may begin to attract new investment as a result of improved transport linkages in the form of manufacturing facilities and amenities</td>
<td>Creation of cross-border trade agreements between constituent countries</td>
</tr>
<tr>
<td><em>Integrated Multi-modal Corridor</em></td>
<td></td>
<td></td>
<td>Recognition of the importance of the corridor for trade</td>
</tr>
<tr>
<td>Stage 3</td>
<td>Integration of multiple infrastructure components to improve functionality, either multi-modal or multi-sectoral</td>
<td>International investment attracted in manufacturing, tourism, tradable services etc., either clustered in specific locations or spread along the corridor</td>
<td>Active harmonisation of regulations covering the movement of goods, services and people as well as investment and tax, regulations specific to key corridor sectors etc.</td>
</tr>
<tr>
<td><em>Logistics Corridor</em></td>
<td></td>
<td></td>
<td>Establishment of institutional framework to manage the corridor and active promotion of investment and identification of the corridor as a magnet for investment</td>
</tr>
<tr>
<td>Stage 4</td>
<td>Provision of complementary infrastructure to facilitate flow of goods, services and people, attracting further investment (OSBPs, logistics and warehousing, industrial zones) The improvement of other infrastructure, such as water and power, to link priority areas</td>
<td>Forward and backward linkages from the new investment sectors are established with spill-overs into the wider economy Complementary services and linked sectors develop that generate economic activity and benefits in surrounding regions</td>
<td>Removal of all barriers to the flow of goods, services and people</td>
</tr>
<tr>
<td><em>Economic Corridor</em></td>
<td></td>
<td></td>
<td>Full harmonisation of regulations, policies, taxation regimes etc. to foster economic, social and spatial development</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Free trade area established covering the corridor</td>
</tr>
</tbody>
</table>

Notes: Adapted from AfDB Regional Integration Brief (2013). Developing Economic Corridors in Africa: Rationale for the Participation of the African Development Bank.

It is important to note that once a corridor reaches its fourth stage, the domestic traffic generated along it might be too high to the detriment of transit traffic, making the corridor not ideally suitable until expansion of infrastructure is made in order to reduce traffic congestion. Some corridors such
as the Maputo in Southern Africa and the Greater Mekong in South East Asia have been sometimes designed predominantly as economic corridors even though they carry large volumes of transit traffic.

### 2.2 Configuration of International Corridors

International transport corridors in their current forms can be considered as an outcome of efforts to customize various international instruments developed over time in order to facilitate transit and cross-border trade and movement of people across countries. Cooperation among coastal and landlocked states has been deemed essential in order to develop and adopt common rules, standards and procedures to operate across different countries. Cooperation in transit transport may be at different levels depending on the number and location of states involved and the modes of transport linking them. Below is a summary of four levels at which agreements may be made to provide for cooperation in matters concerning transit transport.

#### (i) Global Agreements

These types of global agreements are concluded at international level and focus on freedom of transit and transit and transport operations. The following agreements/conventions provide examples:

**International Conventions on Freedom of Transit**

- UN Convention and Statute on Freedom of Transit (Barcelona Convention, 1921);
- UN Convention on Transit Trade of Landlocked States (New York Convention, 1965);
- UN Customs Convention on the International Transport of Goods under Cover of TIR Carnets (1975);
- UN Convention on the Law of the Sea (The Law of the Sea Convention, 1982);

**International Conventions Governing Transit and Transport Operations**

- The International Convention to Facilitate the Crossing of Frontiers for Goods Carried by Rail (1952);
- The International Convention to Facilitate the Crossing of Frontiers for Passengers and Baggage by Rail (1952);
- The Customs Convention on the Temporary Importation of Private and Commercial Road Vehicles (1954);
- The Convention on Contracts for the International Carriage of Goods by Road (CMR, 1956);
- The Convention on Road Traffic (1968);
- The Convention on Road Signs and Signals (1968);
- The Agreement on International Carriage of Perishable Foodstuffs and on Special Equipment to be Used for such Carriage (1970);
- The Customs Convention on Containers (1975);
- The UN Customs Convention on the International Transport of Goods under Cover of TIRR Carnets (1975);
- The Vienna Convention on the International Sale of Goods (1980);
• The International Convention to Harmonisation of Frontier Control of Goods (1982);
• The Revised Kyoto Convention (2006);

(ii) Agreements under regional frameworks

The following are examples:

• The International Surface Transport Agreement of the Southern Cone Countries (1990);
• The SADC Protocol on Transport, Communications and Meteorology (1996);
• The ASEAN Framework Agreement on Facilitation of Goods in Transit (1998);
• The Multilateral Agreement on International Transport for Development of the Europe-Caucasus-Asia Corridor (1998);

(iii) Multilateral Agreements by Participating Corridor Countries

The following are examples of multilateral agreements:

• The MOU on the establishment of the Dar es Salaam Corridor (2003);
• Central Corridor Transit Transport Facilitation Agency Agreement (2006);
• The Northern Corridor Transit and Transport Agreement (2007).

(iv) Bilateral Agreements

The following are examples of bilateral agreements:

• Bolivia-Chile Treaty (1904);
• Agreement on Trade, Commerce and Transit between India and Bhutan (2016);
• Beira Corridor Agreement (between Mozambique and Zimbabwe) (1985);
• Mongolia – China Transit Agreement (1991);
• Kazakhstan – Russian Federation Rail Transit Treaty (1992);
• Malawi - Tanzania Agreement on Lake Shipping Services (1995);
• Nepal – India Transit Agreement (1999)
• China-Mongolia-Russian Federation Agreement on Economic Corridor Development (2016).

The purpose of concluding transit agreements is to facilitate the flow of trade and movement of people through transit countries from their initial origins to the final destination. Generally, the purpose of transit agreements is to provide for an orderly expansion of trade and integrated transport through realisation of the following in the participating states:

(i) Development and maintenance of adequate transit and transport infrastructure (port facilities, roads, railways, inland terminals, border posts);

(ii) Coordination of standards and methods for the movement of goods;
(iii) Coordination in development of the formalities and procedures used in trade and transport;
(iv) Coordination, simplification and unification of documentation in trade and transport;
(v) Provision of efficient transport infrastructure across the Corridor designated routes;
(vi) Establishment of preferential arrangements for different categories of cargo;
(vii) Development of shared information systems throughout the trading and transport system;
(viii) Resources Mobilization; and
(ix) Cooperation in capacity building at institutional and human capital.

The scope of the agreements will vary depending on the levels of cooperation intended by contracting parties. Agreements involving a large number of states will be more general granting rights and obligations that are acceptable to all the signatories. Agreements under regional frameworks will aim at regional integration and hence emphasise on integration of transport infrastructure and facilities to foster regional integration. These agreements will be more specific and generally provide more preferences and less restrictions on transit, transit routes, transit time, documentation, axle load controls, issues of visas to drivers, etc.

Agreements drawn under specific Corridor countries will be more specific, granting more rights to Corridors members traffic, allow for longer transit time, transit warehousing and more coordination in policy and regulatory matters, development of seamless infrastructure, monitoring of traffic and capacity building. Agreements drawn under Bilateral arrangements would be granting even more preferences to its signatories compared to multinational corridor agreements. Bilateral agreements may provide for more detailed coordination and cooperation including mutual recognition of certifications for cargo, vehicles and drivers, joint border control operations, joint border administration (OSBPs) and more elaborate data and information sharing.

Finally, Corridor agreements concluded under either multilateral and bilateral arrangements may provide for comprehensive corridor management institutions governance organs, executing agencies and annual budgets. These annual budgets will be based on long term corridor masterplans that are developed for implementation over medium term with five-year strategic plans in order to achieve the Corridor objectives.

### 2.3 Evolution of Corridors in Trade Facilitation for Landlocked Developing Countries

The earliest forms of trade and transport along dedicated routes can be traced to the Silk routes that served trade between Asia and Europe. These routes, though not served by motorized means of transport through road and rail, may be considered as the earliest forms of transport corridors. The routes were largely overland, save for short sea leg crossings over the Bosphorus Straits, the Aegean and Adriatic Seas. The caravan routes in Eastern and Central Africa regions were also specific cases of transport corridors conveying goods and people between the seaports and the extensive hinterland.

With the emergence of independence for many states especially in Africa and Asia in the last half of the 20th century, a large number of landlocked independent states came into being. Their international trade hence has had to transit through adjoining coastal states or other landlocked
ones. In Central Asia for example, the dissolution of the former USSR resulted in the emergence of five LLDCs namely Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan.

Negotiations and conclusions of bilateral or multilateral agreements for mutual granting of rights of transiting in beginning of the 20th century can be traced from the Barcelona Convention and Statute on Freedom of Transit negotiated under the auspices of the League of Nations\(^4\). The Convention provides for the rights and obligations of nations participating in providing passage to transit trade either as final beneficiaries or as littoral and other intermediate transit states.

While coastal countries also benefit from corridors originating from their seaports, they may tend to exercise more leverage on those that pass through their ports. Since the LLDCs do not have the same level of leverage, they usually endeavor to have alternative additional corridors passing through other countries in order to increase their routing options in case of any eventualities.

The Corridor approach was identified as potential instrument to implement the Almaty and Vienna Programmes of Action. This is because a Corridor can be well targeted for necessary interventions as it contains designated routes; physical infrastructure in terms of ports facilities, railways, roads, inland container depots and border posts; and vital utilities along its route.

In order to guarantee the rights of transiting, corridors are also expected to apply formally established transit regimes such as through bilateral, regional or international agreements. These agreements together with corridor operating procedures provide the legal basis for cooperation and coordination among corridor states to deal with any challenges that may cause bottlenecks which may arise during transiting across any state, including the ubiquitous Non-Tariff Barriers (NTBs).

In the Vienna Programme of Action, emphasis on corridor development was underlined through provisions of specific actions for LLDCs and transit countries with reference to the development and management of Corridors (… “collaborate to promote sustainable and resilient transit systems through, inter alia, regular upgrading and maintenance, development of corridors along transit highways, developing border-crossing mechanisms, including one-stop border crossings, as appropriate, and promoting economies of scale for transport systems through intermodal transport development, dry ports or inland container depots, trans-shipment facilities and similar logistic hubs”\(^5\) and “share best practices in customs, border and corridor management.”\(^6\)).

### 2.4 Established Corridors Serving LLDCs

While the concept of a Transport Corridor has been in existence since the 19th Century, its popularization emerged in the mid-1960s following the independence of many Africa countries which became landlocked and had to rely on neighbouring coastal countries to access the sea. The accompanying paragraphs provide a summary of corridor establishment by continent.

(i) **Africa**

\(^{4}\) The Barcelona Convention, 1921

\(^{5}\) Vienna Programme of Action for Landlocked Developing Countries for the Decade 2014-2024, para 32 (b).

\(^{6}\) Vienna Programme of Action for Landlocked Developing Countries for the Decade 2014-2024, para 52 (c).
In Africa, the designation of corridors to provide access to the sea for landlocked countries was spearheaded by the UN under the Economic Commission for Africa (ECA) and was part of continental connectivity programmes under the two UN African Transport and Communications Decades\(^7\) (UNTACDA I and UNTCDA II) which adopted the Trans-African Highways network, the priority continental rail interconnections, ports facilities and development of aviation sector among others.

The First United Nations Transport and Communications Decade in Africa (UNTACDA I) covering the period 1978-1988 was the first elaborate infrastructure programme to provide continental connectivity in transport and communications. On transport, the programme covered all the modes of transport and transport corridors were mainstreamed with both maritime (ports and shipping) and surface (road and rail) modes of transport.

The Trans-African highways programme was also developed as a continental initiative to construct, rehabilitate and provide maintenance for an inter-State road network and implementation of inter-State traffic facilitation. While the ECA initially worked together with the Organisation of African Unity which is the predecessor to the African Union, regional economic groupings such as COMESA, ECOWAS and SADC emerged and started implementing the UNTACDA agenda commencing in the mid-1980s.

While it was proposed that transport corridors be established and developed from the major African seaports, their actual establishment and formalisation took place in the second half of 1980s. The corridors have designated routes starting from major ports and passing through the transit country or countries to the hinterlands. The designated routes would be facilitated to address any emerging bottlenecks either enroute or at border posts. The development of One Stop Border Posts (OSBPs) was one of the measures employed to address the issues of delays due to duplication of border procedures as the same procedures in the exit country were repeated in the country of entry.

The first formal corridor with an enabling instrument was the Beira Corridor established through a bilateral agreement between Mozambique and Zimbabwe in 1984. This was followed by the Northern Corridor, established through a four-country multilateral agreement signed by Burundi, Kenya, Rwanda and Uganda in 1986 with a permanent Secretariat based in Mombasa, Kenya. Congo DR acceded to the agreement in 1987.

The next major Corridor established was the Maputo Corridor primarily serving Mozambique and South Africa but also Eswatini to a limited extent. The formal corridor institution was established in 2004 through an MOU signed by the main stakeholders using the Corridor. Unfortunately, due to lack of funding the Secretariat of the Corridor suspended its operations in February 2019.

Other corridors that have been established in the Eastern and Southern Africa region include the Walvis Bay, Central Corridor, Nacala Corridor. Currently plans are ongoing to establish the Djibouti Corridor. The Walvis Bay Corridor consists of four separate segments namely the Trans-Caprivi Corridor, Trans- Kalahari Corridor, Trans-Cunene and Trans-Orange corridors. The four segments established as corridors have been set up through Corridor Management agreements among the participating states. The four are coordinated and managed by the Walvis Bay Corridor Group (WBCG) based in Windhoek, Namibia.

\(^7\) UNTACDA I covered the period 1978-1988 while UNTCDA II covered the period 1990-2000.
The Central Corridor was established through a multilateral agreement signed by Burundi, Congo DR, Rwanda and Uganda. It has a Corridor Secretariat in Dar es Salaam. The Dar es Salaam Corridor serving Malawi, Zambia and the Copper Belt region of the Democratic Republic of Congo was also established through a Committee of Stakeholders and has a Coordination office in Dar es Salaam.

In West Africa, there are a number of corridors serving the three landlocked countries namely, Burkina Faso, Mali and Niger. The corridors commence from six coastal states namely Nigeria, Benin, Togo, Ghana, Cote d’Ivoire and Senegal. The level of West African corridor proactiveness has been slower than in East Africa though efforts are being made to raise their impact through establishment of permanent secretariats.

(ii) Asia and Europe

The continent of Asia has ten LLDCs with two in South Asia (Bhutan and Nepal), one in South East Asia (Lao PDR), one in North East Asia (Mongolia) and six in Central Asia (Afghanistan, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan).

In South Asia, both Bhutan and Nepal have corridors serving them through India and Bangladesh and have old-standing bilateral transit agreements with those countries. Afghanistan and Pakistan signed the bilateral Afghanistan–Pakistan Transit Trade Agreement (also known as APTTA) trade agreement in 2010, which provides for greater facilitation in the movement of goods between the two countries. In the case of India and Nepal, a treaty on Trade and Transport was concluded in 1960 and provides Nepal access to Indian ports through designated routes. Article VII of the Treaty provides for freedom of transit for goods intended for import into or export from the territories of either Contracting Party from or to a third country. In addition, there is no distinction to be made based on the flags of vessels, the place of origin, departure, entry, exit destination or ownership of goods. Bhutan and India have a similar agreement designated as “Agreement on Trade, Commerce and Transit” signed in 2016.

There is on the other hand the push under the Belt and Road Initiative (BRI) to provide for Eurasian overland transport routes that will serve the LLDCs and also link up coastal countries in the two continents through land bridges. The aim is to have the Belt and Road Initiative to become more competitive especially for high value cargoes between China and Europe. In addition, it is also envisaged that potential exists for transformation of goods to occur en-route resulting in incremental real value addition from end to end. Some of the corridors in Central Asia, South Asia and South East Asia interface with the BRI.

In Europe, the landlocked developing countries are Armenia, Azerbaijan, North Macedonia and Moldova. Armenia has access to the sea through Georgia and Turkey while Azerbaijan accesses the sea through Georgia and the Russian Federation. The two countries are also part of the Transport Corridor Europe-Caucasus-Asia (TRACECA) which fuses with the Central Eurasian Corridor. Macedonia has access to the sea through Albania, Greece, Bulgaria while Moldova has access to the sea through Ukraine and Romania.

There are important Eurasian corridors which serve the ten Asian LLDCs and the four European LLDCs. Three Eurasian corridors all originating from China traverse through the LLDCs and reach
coastal countries in Northwestern and Mediterranean Europe. The Eurasian corridors can be segregated into three: Northern, Central and Southern components.

The Eurasian Northern Corridor is serving China, Mongolia, Kazakhstan and Russia primarily through the Trans-Siberian Railway. China, Mongolia and Russia have also signed in 2016 an agreement to develop an economic corridor, comprising more than 30 projects in areas such as increasing tripartite trade volume, enhancing product competitiveness, strengthening transit transport facilitation and developing infrastructure.

The Eurasian Central Corridor consists of routes linking primarily the European Union to China, through the Russian Federation, the countries of Central Asia and the ports of the Arabian Sea. The Eurasian Central Corridor has the following main segments:

(i) Six Central Asia Regional Economic Cooperation (CAREC) corridors comprising Afghanistan, Azerbaijan, People's Republic of China, Georgia, Kazakhstan, Kyrgyzstan, Mongolia, Pakistan, Tajikistan, Turkmenistan and Uzbekistan

(ii) International North-South Transport Corridor (INSTC) comprising initially India, the Islamic Republic of Iran and the Russian Federation and later Azerbaijan, Armenia, Belarus, Bulgaria, Kyrgyzstan, Oman, Tajikistan, Turkey, Syria and Ukraine. The INSTC Corridor runs from the port of St. Petersburg in the Russian Federation to Mumbai port in India;

(iii) Transport Corridor Europe-Caucasus-Asia (TRACECA) based on the Basic Multilateral Agreement on International Transport for the Development of the Europe-Caucasus-Asia corridor, signed in 1998. Its member countries are Armenia, Azerbaijan, Bulgaria, Georgia, Kazakhstan, Kyrgyzstan, Republic of Moldova, Romania, Tajikistan, Turkey, Ukraine and Uzbekistan;

(iv) Trans-Caspian East-West Middle Corridor (Trans-Caspian Corridor) Initiative is a joint effort by Afghanistan, Azerbaijan, China, Georgia, Kazakhstan, Kyrgyzstan, Turkey and Turkmenistan to promote a multimodal connection between Asia and Europe; and

(v) The China – Pakistan Economic Corridor (CPEC) which progresses into Central Asia via the ancient Silk Route and is also a component of the Belt and Road Initiative.

The Eurasian Southern Corridor links China and the countries of Southeast Asia with the sea routes to Europe. The routes of the Eurasian Southern Corridor connect the countries of Southeast Asia to the world’s busiest ports: Guangzhou – Shenzhen area, Singapore, Malaysian ports and the large manufacturing areas in the world on the Pearl River Delta in China, Mumbai-Pune Region, Kolkata Area in India and the Kelang Valley around Kuala Lumpur in Malaysia. The main sub-regional initiatives working on the sections of the Eurasian Southern Corridor’s routes are the initiatives of the Association of Southeast Asian Nations (ASEAN) and the Greater Mekong Subregion (GMS) Economic Corridors initiatives. Lao PDR, which is the only landlocked country in the ASEAN subregion, is included in the above two initiatives.
Box 1: Beijing-Brussels Caravan

Studies have been conducted to establish viability of the Eurasian Corridors. In this respect, the Beijing-Brussels Caravan was set out in the context of the Euro-Asian Road Transport Conference. The Caravan set out in the context of the Euro-Asian Road Transport Conference on 27 September 2005 and ended in Brussels on 17 October 2005. It was initiated by KAZATO, IRU’s member association in Kazakhstan, and supported by Governments, international institutions and road transport associations. The aim of the project was to demonstrate that road transport was an effective means of shipping cargo by land between Europe and the countries of the Asia-Pacific region. The Caravan passed through Kazakhstan, Russia and into the EU. It was reported that as there was good road infrastructure along the 12,000 kilometers Beijing to Brussels route, the road trucks completed their trips successfully and with no technical complications.


(iii) South America

In South America, the East-West corridor links the ports located in the north of Chile and the south of Peru on Pacific coast with the ports of Santos and Paranaguá in Brazil on the Atlantic coast. This corridor serves the only two LLDCs in South America (Bolivia and Paraguay). The corridor also connects with the Eastern and Western railway networks. The Southern corridor connects with East-West corridor and links Buenos Aires in Argentina with Lima, Peru; and provides Paraguay access to the Pacific Ocean. Efforts are also ongoing to develop a Bi-Oceanic Railway Corridor, running from the continent’s western side all the way to the east, therefore connecting the Pacific and Atlantic Oceans and integrating Peru, Bolivia, Paraguay and Brazil.

Table 2 below shows the status of transport corridors serving the needs of countries at regional, continental and intercontinental levels. The listed corridors are not exhaustive as new ones keep on emerging, especially in Africa and Asia, where new ports continue to be developed and surface transport infrastructure is being rolled out to open up the less served areas to provide shorter and more efficient access to the sea.
<table>
<thead>
<tr>
<th>Continent</th>
<th>(Sub-)region</th>
<th>Corridors</th>
<th>Countries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Africa</td>
<td>Eastern Africa: Horn of Africa</td>
<td>Djibouti Corridor</td>
<td>Djibouti, Eritrea, Kenya, Somalia, Sudan</td>
</tr>
<tr>
<td></td>
<td></td>
<td>LAPISSET Corridor</td>
<td>Ethiopia, South Sudan</td>
</tr>
<tr>
<td></td>
<td>Eastern Africa: East Africa</td>
<td>Northern Corridor</td>
<td>Kenya, Tanzania</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Central Corridor</td>
<td>Burundi, Rwanda, Uganda</td>
</tr>
<tr>
<td></td>
<td>Southern Africa East Coast</td>
<td>Nacala Corridor</td>
<td>Congo DR, Mozambique, South Africa, Tanzania</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Beira Corridor</td>
<td>Botswana, Eswatini, Lesotho, Malawi, Zambia, Zimbabwe</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Maputo Corridor</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Durban Corridor</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Dar Es Salaam Corridor</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>North-South Corridor</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Southern Africa West Coast</td>
<td>Walvis Bay (Trans-Kalahari, Trans-Caprivi, Trans-Cunene, Trans-Orange) Corridors</td>
<td>Angola, Namibia, South Africa</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Benguela Corridor</td>
<td>Botswana, Zambia</td>
</tr>
<tr>
<td></td>
<td>Central Africa</td>
<td>Ponte Noire-Bangui Corridor</td>
<td>Cameroon, Congo DR, Republic of Congo</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Douala-Bangui Douala-N’djamena Corridor</td>
<td>Central African Republic, Chad</td>
</tr>
<tr>
<td></td>
<td>West Africa: Gulf of Guinea</td>
<td>Lagos-Abidjan Corridor</td>
<td>Benin, Cote d’Ivoire, Gambia, Ghana, Guinea, Guinea Bissau, Liberia, Nigeria, Sierra Leone, Togo</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lomé-Ouagadougou-Niamey Corridor</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Tema-Ouagadougou-Bamako Corridor</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Cotonou-Niamey Corridor</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Abidjan-Ouagadougou-Niamey-Bamako Corridor</td>
<td></td>
</tr>
<tr>
<td></td>
<td>West Africa: Senegambia</td>
<td>Dakar-Bamako- Niamey Corridor</td>
<td>Mauritania, Senegal</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>South Asia</td>
<td>SASEC land transport corridors</td>
<td>Bangladesh, India, Myanmar, Sri Lanka</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Bhutan, Nepal</td>
</tr>
<tr>
<td></td>
<td>South East Asia</td>
<td>Greater Mekong Subregion economic corridors:</td>
<td>China, Cambodia, Myanmar, Thailand, Vietnam</td>
</tr>
<tr>
<td></td>
<td></td>
<td>East-West Economic Corridor</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>North-South Economic Corridor</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Southern Economic Corridor</td>
<td></td>
</tr>
<tr>
<td>Europe</td>
<td>Europe</td>
<td>TEN-T Core Network Corridors:</td>
<td>Belgium, Bulgaria, Croatia, Cyprus, Denmark, Estonia, Finland, France, Germany, Greece, Ireland, Italy, Latvia, Lithuania, Malta, Netherlands, Norway, Poland, Austria*, Czech Republic*, Hungary*, Luxembourg*, Liechtenstein*, Slovakia*, Switzerland*</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Scandinavian-Mediterranean Corridor</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>North Sea-Baltic Corridor</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>North Sea-Mediterranean Corridor</td>
<td></td>
</tr>
<tr>
<td>Corridor Type</td>
<td>Region</td>
<td>Corridor Details</td>
<td>Countries (example)</td>
</tr>
<tr>
<td>--------------</td>
<td>--------</td>
<td>------------------</td>
<td>--------------------</td>
</tr>
<tr>
<td>Baltic-Adriatic Corridor</td>
<td>Orient/East-Med Corridor</td>
<td>Rhine-Alpine Corridor</td>
<td>Atlantic Corridor</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Corridor Type</th>
<th>Region</th>
<th>Corridor Details</th>
<th>Countries (example)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercontinental</td>
<td>Eurasia</td>
<td>Transport Corridor Europe-Caucasus-Asia (TRACECA)</td>
<td>Bulgaria, Georgia Moldova, Romania, Turkey, Ukraine</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CAREC Corridors:</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Corridor 1: Europe–East Asia</td>
<td>Corridor 2: Europe-Mediterranean–East Asia</td>
<td>Corridor 3: Russian Federation–Middle East and South Asia</td>
<td>Corridor 4: Russian Federation–East Asia</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>International North–South Transport Corridor (INSTC)</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Bangladesh, Cambodia, China, Greece, India, Iran, Malaysia, Myanmar, Pakistan, Russia, Thailand, Turkey, Vietnam</td>
<td>Afghanistan, Azerbaijan, Georgia*, Kazakhstan, Kyrgyzstan, Lao PDR, Tajikistan, Turkmenistan, Uzbekistan</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Belt and Road Initiative Land Corridors</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>New Eurasian Land Bridge Economic Corridor</td>
<td>China-Mongolia-Russia Economic Corridor</td>
<td>China-Central Asia-West Asia Economic Corridor</td>
<td>China-Indochina Peninsula Economic Corridor</td>
</tr>
</tbody>
</table>

| South America | South America | East-West Corridor | Southern Corridor | Paraguay-Parana Waterway | Chile, Peru, Brazil | Argentina, Brazil, Uruguay | Bolivia, Paraguay |

**Notes:**

*a: Does not include island countries.*

*b: The Belt and Road Initiative includes both land and maritime corridors linking Europe, Asia and Africa.*
CHAPTER 3: ROLE OF AGREEMENTS AND OTHER LEGAL INSTRUMENTS IN EFFECTIVE MANAGEMENT OF CORRIDORS

The establishment of transport corridors is usually undertaken through multilateral or bilateral instruments such as treaties, agreements, MOUs or other binding international instruments. The instruments are usually negotiated and concluded by the corridor member states who then process them through their national laws to attain ratification.

Broadly, corridor agreements have the following characteristics:

(i) Made by sovereign states or independent public law entities such as international organizations, intended to create rights and obligations among parties;
(ii) They are governed by international law; and
(iii) The legal instruments may be designated as agreements, treaties, conventions, MOUs, protocols, covenants, compacts, exchange of notes, or agreed minutes.

It is widely agreed that comprehensive multilateral agreements provide the most ideal legal basis for cooperation among corridor members (both transit and landlocked states). This is because it enables them to define their rights and obligations in developing and maintaining an efficient and cost competitive corridor. In view of the fact that transit trade and transport involve handling and transport of goods and movement of transport equipment and people across borders, it is important that the enabling bilateral or multilateral agreements address a wide range of issues so as to facilitate smooth transit operations across corridor networks.

The corridor agreements, treaties or MOUs will provide the Corridor objectives, define the functions of the corridor and also delimit their geographical trajectories by listing the designated routes. Usually, comprehensive agreements cover all the necessary elements of corridor planning, operations, cooperation among agencies and regulatory/oversight arrangements, together with the establishment of Corridor Management Institutions (CMIs) and their administrative and financial policies. Such agreements may also have provisions for future insertion of subsidiary instruments such as protocols, standards and recommended practices. For example, the Northern Corridor Agreement of 2007 contains eleven Protocols which were negotiated together with the agreement or later. These protocols are annexed to it.

In this respect, the following are the key issues typically contained in Corridor agreements:

(i) Corridor Governance and Institutional Framework;
(ii) Trade Facilitation Issues;
(iii) Transport Infrastructure
(iv) Transport Logistics Monitoring;
(v) Stakeholder Coordination;
(vi) Corridor Budgetary Resources;
(vii) Consultation and Resolution of Bottlenecks; and
(viii) Capacity Building of stakeholders.

The corridors already established across continents have had to deal with the above issues with different outcomes in terms of addressing them. From the experience of existing corridors, new
ones that are in the process of being established can make use of precedents so that they can structure their agreements and accompanying instruments to ensure better corridor performance. The important components on each of the above issues are summarized below.

3.1 Corridor Governance and Institutional Framework

While there may be a generic governance and institutional framework for a corridor, the details will depend on the functions and the levels of coordination, objectives, joint planning and the performance monitoring that the states and the various other stakeholders decide and agree to provide along their corridor. The exact configuration of the corridor structures also varies depending on the history of the corridor and the way in which it was set up. Accordingly, several management structures have been observed, including Public–private partnership management structures (such as Maputo Corridor Logistics Initiative); consensus-building structure (such as the Dar-es-Salaam Corridor Committee); project coordination structure (such as the Central Asia Regional Economic Corridor (CAREC) corridors); legislative management structure based on treaties between countries (such as the Northern Corridor Transit and Transport Coordination Authority (NCTTCA)) (Abdul Quium 2019).

At the same time, the institutional framework for corridor management, which is usually contained in the enabling corridor agreement and contains the governance structure of the corridor, typically includes the following organs: Summit Organ; Management and Coordination Organ; and an Executing Organ. The functions of these organs are summarised below.

(i) The Summit Organ
The Summit organ will be the highest policy making body on corridor matters. In cases where the signatories to the enabling instruments are governments, this organ is usually a Council of Ministers. It may be Annual General Meeting (AGM) or an Assembly where the enabling instrument has public and private stakeholders as signatories. In the case of the Northern and Central corridors in East Africa that are established through intergovernmental agreements, the apex policy organ is the Council of Ministers responsible for transport in their respective governments. In cases such as the Dar es Salaam Corridor which is established through a constitution, the apex body is the Annual General Meeting which comprises stakeholders in both public and private sector. Where apex policy making organ is intergovernmental such as Council of Ministers, it is deemed essential to provide for adequate public-private consultations during the process of policy making.

(ii) Management/Coordination Organ
The management or coordination organ is usually responsible for oversight of the operations of the corridor including administrative and financial matters. This could be considered as the Board of Directors in a public or private undertaking. It could include a Corridor Management Committee and is usually considered as a core entity in the corridor management. In the Corridors developed under the public sector the organ is made of Senior career civil servants at the level of Permanent Secretaries. In the Northern Corridor, the oversight entity is referred to as the Executive Board and on the Maputo Corridor it is known as the Board of Directors. The Board usually works through specialised technical committees that may be dealing with technical issues such as Policy, Trade and Customs, Infrastructure, Investment and Administrative and Budgetary matters.
(iii) **Executive Organ/ Secretariat**

The executive organ which is usually the Secretariat is the operating entity, located in one country, that executes and implements the decisions of the superior organs, through annual workplans that are budgeted in accordance with strategic plans of the corridor adopted by the policy organs. The executing agency takes a proactive role in corridor operations by taking part in identifying corridor needs, developing programmes and projects and coordinating their implementation with different stakeholders. The executing agency may also take part in project preparation and resource mobilisation for projects along the corridor network.

The established corridors such as NCTTCA and the Central Corridor TTFA have secretariats while others such as the Trans-Kalahari and Trans Caprivi corridors have a coordinator in the name of the Walvis Bay Group. The manning levels in establishment of the Secretariat will need to depend on corridor mandates and the cost of its full establishment proposed in the corridor management arrangements. In cases where the mandates are larger, new CMIs may require more time to build their human capital and supporting facilities as these usually take time typically due to budgetary and other resource constraints.

**Figure 1: Model CMI Governance Organizational Structure**

![Diagram of CMI Governance Organizational Structure]

*Source: Northern Corridor (NCTTCA) Strategic Plan (2017-2021)*

The governance of the corridor has often posed critical questions on how the policy organs should be structured and the roles to be played by governments and the private sector, with the latter being
the major player in the commercial business that takes place along the corridor. One of the ways where the private sector has been incorporated in governance has been through inviting them through their associations to participate as full members in the meetings of technical committees and to have an observer status at meetings of the top policy making organs. A model institutional structure in the form of an organogram is shown in Figure 1.

3.2 Trade and Transport Facilitation Issues

The following issues should be taken into consideration in corridor agreements:

(i) Delineation of corridor routes;
(ii) Transit facilitation across the corridor routes;
(iii) Definition of corridor and cargo access rights;
(iv) Transit regulations (Road safety, security, environmental issues);
(v) Procedures at ports, terminals, weighbridges and border posts;
(vi) Charges for use of facilities (port tariffs, road user charges);
(vii) Documentation and Information Sharing;
(viii) Transit bonds; and
(ix) Cargo and vehicle insurance.

3.3 Transport Infrastructure

The provision of transport infrastructure (ports, roads, railways, inland cargo terminals and weighbridges, border facilities) is critical to establishment of efficient corridors. In corridor agreements, there are important issues that need to be incorporated in the text when it comes to infrastructure development. The first is to define the Corridor in terms of the designated road and rail segments. This is relevant since good infrastructure needs to be available for efficient trade and transport. Secondly, it will be important to identify, agree and adopt common standards of infrastructure in roads and railways. Such standards will be applied in construction or maintenance of corridor transport infrastructure. The agreements may stipulate that along the designated routes, the road infrastructure will meet international or regional standards that are agreed upon with respect to pavement widths including shoulders, curvatures, axle load limits, gross vehicle mass (GVM) in order to be able to serve the traffic passing through. The railways will also be expected to meet appropriate standards with respect to track gauge uniformity, signaling and various aspects of railway interoperability.

In this respect, the following issues are crucial in corridor infrastructure development:

(i) Well defined transport infrastructure networks in ports, surface transport, (roads, railways), inland terminals and border posts;
(ii) Defined common standards of road and rail infrastructure, ports and facilities at border post;
(iii) The coordination of stakeholders in the construction, expansion, rehabilitation and maintenance of priority infrastructure facilities along the corridor;
(iv) Harmonization of infrastructure configurations and procedures including for weighbridges, One Stop Border Posts (OSBPs) and roadside stations;
(v) Establishment of smart corridors through provision of adequate energy and modern ICT networks; and
(vi) Funding the construction/rehabilitation of existing gaps in infrastructure.

3.4 Transport Logistics Monitoring

The monitoring of corridor performance is critical for an efficient and successful transit corridor system. The following are some of the main areas where logistics monitoring is desirable and could be considered in the context of a corridor management:

(i) Standards of quality of service (Performance in port, inland terminals and border posts);
(ii) Corridor performance monitoring, such as transit and border crossing times and delays at borders and ports;
(iii) Development of a real-time monitoring systems on performance of logistics service providers;
(iv) Monitoring of quality of logistics service;
(v) Publication of Annual Logistics Performance Surveys;
(vi) Developing a Corridor Observatory with Performance Dashboard;
(vii) Preparation of periodic corridor performance reports; and
(viii) Performance benchmarking.

3.5 Stakeholder Coordination

The coordination of all stakeholders involved in corridor operations is desirable in order for there to be a buy-in by the various parties in the trade and transport chain. This requires the full participation of the corridor stakeholders to provide their inputs in key policies being made on the corridor operations and get feedback on what has been adopted. Stakeholders may be in clusters depending on the activities they are involved in, including policy makers, regulators, infrastructure providers, service providers, shippers or their agents. Some of the clusters with large membership such as shippers, freight forwarders, trucking companies, warehousemen, shipping lines and various specialized private contractors may have association that may represent them at stakeholders’ fora.

Stakeholders could be brought in to participate more effectively in increasing efficiency in corridor operations through the establishment of stakeholder Community Charters such as has been done in the Northern and Central Corridors in East Africa. The Community charters provide for consultative mechanisms where participating stakeholders set and adopt corridor targets, make individual commitments to maintain the targets within a peer review environment. The stakeholders also make commitments to provide the necessary data and other information to be used in computing the agreed performance indicators.

3.6 Corridor Budgetary Resources

The Corridor agreement or any enabling instrument should stipulate how the corridor management institution will be funded, clearly highlighting the responsibilities of the different stakeholders. Even with clear funding stipulations, budgetary challenges may still arise in future especially where some stakeholders may fail to honour their contributions on a regular basis. It is therefore important to remain innovative in terms of developing the best options of raising the budget for
the CMIs in order to maintain a regular flow of funding to meet their financial obligations and hence sustain their operations.

The CMIs also need to be innovative in generating additional financial resources so that they can fund projects that may not be covered by the regular budgets. This can be achieved through undertaking revenue generating activities, research in relevant areas and online ICT value added products. The CMIs may also network with development agencies and cooperating partners who readily provide grants for funding projects that they have interest in promoting.

3.7 Consultation and Resolution of Bottlenecks

As there are many parties in the Corridor transport network involved in policy, service provision and oversight, conflicts may emerge when some parties do not meet their obligations or attempt to pass blame on others. In such circumstances, there is need for fast resolution disputes or stalemates so as to avert the onset of bottlenecks which may choke the flow of transport along the corridor. It is therefore important to develop a system of reporting on noncompliance with stakeholder obligations by parties and a rapid resolution of logistics bottlenecks.

3.8 Capacity Building of Stakeholders

Capacity building is an important issue for CMIs, covering both their own staff and generally working to promote skills in other stakeholders using and operating along the corridor. The CMI will therefore need to interface with other agencies such as governments, ports, railways, road authorities, shipping lines etc. in order to enhance standardisation of training for agencies taking part in transport operations and other logistics. Further, the CMI needs to maintain high quality information dissemination, ideally through transport observatories, where they are responsible for them. In addition, the CMI should undertake capacity building and awareness/sensitization workshops in partnership with other stakeholders in their hinterlands.
CHAPTER 4: LEGAL, REGULATORY AND INSTITUTIONAL FRAMEWORKS FOR COORDINATION AND MANAGEMENT OF CORRIDORS: SELECTED EXPERIENCES

4.1 Corridor Legal and Regulatory Frameworks

There are various agreements and other instruments which have been employed to establish corridors, each dependent on the contracting parties and the scope of the areas of cooperation that such parties intend enter into. Table 3 shows the major corridors established through formal agreements in various regions of the world.

Table 3: Sample of major operational corridors established under formal agreements

<table>
<thead>
<tr>
<th>Corridor Name</th>
<th>Enabling Instrument</th>
<th>Parties to Agreement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Northern Corridor</td>
<td>Multilateral Agreement</td>
<td>Burundi, DRC, Kenya, Rwanda, South Sudan, Uganda</td>
</tr>
<tr>
<td>Central Corridor</td>
<td>Multilateral Agreement</td>
<td>Burundi, DRC, Rwanda, Tanzania, Uganda</td>
</tr>
<tr>
<td>Dar es Salaam Corridor</td>
<td>Constitution</td>
<td>DRC, Malawi, Zambia</td>
</tr>
<tr>
<td>Beira Corridor</td>
<td>Agreement</td>
<td>Mozambique, Zimbabwe</td>
</tr>
<tr>
<td>Maputo Corridor</td>
<td>Company Registration</td>
<td>Mozambique, Swaziland, South Africa</td>
</tr>
<tr>
<td>Walvis Bay Corridor</td>
<td>MOU</td>
<td>Namibia, Botswana, South Africa (Trans-Kalahari)</td>
</tr>
<tr>
<td>Lagos - Abidjan Corridor</td>
<td>Joint 5 States Declaration</td>
<td>Nigeria, Benin, Togo, Ghana, Cote d’Ivoire</td>
</tr>
<tr>
<td>Abidjan/Ouagadougou/ Niamey Corridor</td>
<td>Bilateral Agreements</td>
<td>Cote d’Ivoire, Burkina Faso, Niger</td>
</tr>
<tr>
<td>Dakar Corridor</td>
<td>Bilateral Agreements</td>
<td>Senegal, Mali, Niger</td>
</tr>
<tr>
<td>Transport Corridor Europe-Caucasus-Asia (TRACECA)</td>
<td>Multilateral Agreement</td>
<td>Armenia, Azerbaijan, Bulgaria, Georgia, Iran, Kazakhstan, Kyrgyzstan, Moldovia, Romania, Tajikistan, Turkey, Ukraine and Uzbekistan</td>
</tr>
<tr>
<td>International North-South Transport Corridor (INSTC)</td>
<td>Multilateral Agreement</td>
<td>Iran, Russian Federation, Azerbaijan, Armenia, Belarus, Bulgaria, Kyrgyzstan, Oman, Tajikistan, Turkey, Syria and Ukraine.</td>
</tr>
<tr>
<td>Trans-Caspian East-West Middle Corridor (Trans-Caspian Corridor)</td>
<td>Multilateral Agreement</td>
<td>Afghanistan, Azerbaijan, China, Georgia, Kazakhstan, Kyrgyzstan, Turkey and Turkmenistan</td>
</tr>
<tr>
<td>Central Asia/Persian Gulf Transit Transport Corridor</td>
<td>Ashgabat Multilateral Agreement</td>
<td>Kazakhstan, Iran, Uzbekistan, Turkmenistan, Pakistan, India and Oman</td>
</tr>
<tr>
<td>The Greater Mekong Subregion Corridors</td>
<td>Multilateral Agreement</td>
<td>Cambodia, China, Lao PDR, Myanmar, Thailand and Vietnam</td>
</tr>
</tbody>
</table>

Source: Author’s compilation

The African continent has the largest number of LLDCs. Perhaps due to this fact, a good number of corridors have been established, through the conclusion of comprehensive multilateral
agreements and MOUs. There are already three corridors in Eastern Africa, three in Southern Africa and about five in West Africa that have been operationalized using the above-mentioned instruments. Corridors established under treaties/agreements include for example the Northern and Central corridors in the Eastern Africa region. The Northern Corridor was established through the Northern Corridor Agreement concluded by Burundi, Congo DR, Kenya, Rwanda, South Sudan while the Central Corridor was set up through a multilateral agreement signed by Burundi, Congo DR, Rwanda, Tanzania and Uganda.

The process of establishing other corridors is also ongoing. In the case of Djibouti Corridor, the Draft Agreement is going through its discussion process and is expected to be completed and launched by mid-2020. MOU is the instrument being developed for the establishment of the North South Corridor. Table 4 below shows the corridors where preparatory work is being undertaken for their formal establishment and the proposed enabling instruments.

**Table 4: Some African Corridors Under Formal Establishment**

<table>
<thead>
<tr>
<th>Corridor Name</th>
<th>Proposed Enabling Instrument</th>
<th>Parties to Agreement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Djibouti Corridor</td>
<td>Multilateral Agreement</td>
<td>Djibouti, Ethiopia, South Sudan, Uganda</td>
</tr>
<tr>
<td>LAPSSET Corridor</td>
<td>Multilateral Agreement</td>
<td>Kenya, Ethiopia, South Sudan</td>
</tr>
<tr>
<td>Nacala Corridor</td>
<td>MOU</td>
<td>Mozambique, Malawi, Zambia</td>
</tr>
<tr>
<td>Durban (North-South) Corridor</td>
<td>MOU</td>
<td>South Africa, Botswana, Zimbabwe, Zambia, Malawi and DRC</td>
</tr>
<tr>
<td>Benguela Corridor</td>
<td>MOU</td>
<td>Angola, DRC and Zambia</td>
</tr>
<tr>
<td>Tema-Ouagadougou Corridor</td>
<td>MOU</td>
<td>Ghana, Burkina Faso</td>
</tr>
</tbody>
</table>

*Source: Author’s compilation*

In the Middle East and Central and South Asia, a number of corridors have been established to serve the regions which have several LLDCs. One of the notable corridors is the one established under the Ashgabat Agreement. The Ashgabat Agreement is a multimodal transport agreement signed by Kazakhstan, Uzbekistan, Turkmenistan, Iran, Pakistan, India and Oman for creating an international transport and transit corridor facilitating transportation of goods between Central Asia and the Persian Gulf. The agreement came into force in April 2016. Turkmenistan is the depository state for the agreement.

The Multilateral Agreement on International Transport for Development of the Europe-the Caucasus-Asia Corridor has Armenia, Azerbaijan, Bulgaria, Georgia, Iran, Kazakhstan, Kyrgyzstan, Moldova, Romania, Tajikistan, Turkey, Ukraine and Uzbekistan as the contracting parties. This agreement entered into force in 1999.

The Trans-Siberian railway network contains the Trans-Siberian Corridor, which provides trade links serving Europe and Asia and is hence a major component of the system of international transport corridors. The Coordination of the Trans-Siberian Corridor is undertaken by the

---

8 The Horn of Africa and Eastern Africa subregions regions share three countries (Kenya, South Sudan and Uganda).
Coordinating Council on Trans-Siberian Transportation (CCTT). The CCTT was founded by the Ministry of Railway Communication of the Russian Federation, the German Railways (Deutsche Bahn); the Group of European Trans-Eurasian Forwarders and Operators; and the Korean International Freight Forwarders Association. Currently, it has more than 96 member societies from 23 countries, including European, Asian and the CIS states railway companies, shipping and port companies, freight forwarders, municipalities, telecom companies and other stakeholders. During the last more than 20 years, the CCTT has achieved a reputable regional and global standing and has become an important international forum for networking and real cooperation among all parties involved in Trans-Siberian freight transportation.

India has transit agreements with Nepal and Bhutan which provide for passage of both exports and imports through Indian ports on the eastern side of the country. The major ports in Bangladesh are equally accessible to both Bhutan and Nepal in terms of distances. However, they are separated by the narrow corridor which is Indian territory and hence would need to arrange for transit through India in order to pass into or out of the landlocked developing countries. Lao PDR is an active member of the Greater Mekong Subregion which has elaborate systems of cooperation arrangements including the development of regional economic corridors.

In Europe, the development of transit corridors to serve landlocked countries or to provide transit overland for countries has a remarkable history covering several centuries. The number of landlocked countries in Europe has changed over centuries as borders kept on being redrawn until the end of the Second World War. Europe which has fifteen landlocked states though only four (Armenia, Azerbaijan, North Macedonia, Moldova) are classified as LLDCs provides some useful lessons on the legal and regulatory frameworks for corridor development and management.

In order to grant access to the sea for landlocked countries and also for large coastal countries that could be accessed better through foreign ports, European countries negotiated and concluded many bilateral and multilateral treaties. Some of the landmark treaties include the Mainz Convention on Free Navigation of the Rhine River signed in 1831, covering France, Germany, Netherlands and Switzerland and the Convention and Statute on Freedom of Transit (Barcelona Convention) of 1921, to name a few. The establishment of the EU Customs Union and the liberalisation of movement of persons in the last three decades has resulted in the disappearance of international frontiers hence removing most of the classical NTBs experienced in Africa and Asia where borders have been strictly retained.

Through the facilitation of the UNECE, various regional and global agreements together with accompanying standards and procedures catering for the provision of seamless cross border and transit road and rail transport services have been developed. These agreements have enhanced mobility, inter-modality and interoperability on the major transport axes across Europe and have been replicated or extended into other continents.

### 4.2 Corridor Management Institutional Frameworks

The global system of existing and potential transport corridors for serving the needs of the LLDCs has largely been mapped over the years. These corridors are at different stages in terms of their organisation to provide effective coordination in order to facilitate the smooth flow of trade and movement of people across the countries that they serve. Table 5 summarizes the institutional arrangements of selected corridors.
Table 5: Institutional arrangements of selected corridors

<table>
<thead>
<tr>
<th>Corridor</th>
<th>CMI name</th>
<th>Status</th>
<th>Secretariat</th>
<th>Supreme Organs</th>
<th>Policy Organs</th>
<th>Management/Oversight Organ</th>
<th>Technical and other Committees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Northern Corridor</td>
<td>Northern Corridor Transit and Transport Coordination Authority (CTTCA)</td>
<td>Operational</td>
<td>Permanent Secretariat</td>
<td>Council of Ministers</td>
<td></td>
<td>Executive Committee</td>
<td>Four specialized committees (Transport, Customs, Infrastructure and Private Sector) and Public Private Stakeholders Committee</td>
</tr>
<tr>
<td>Central Corridor</td>
<td>Central Corridor Transit Transport Coordination Agency (CCTFCA)</td>
<td>Operational</td>
<td>Executive Secretariat</td>
<td>Interstate Council of Ministers</td>
<td></td>
<td>Executive Board</td>
<td>Stakeholders consultative committee</td>
</tr>
<tr>
<td>Dar es Salaam Corridor</td>
<td>Dar es Salaam Corridor Committee (DCC)</td>
<td>Operational</td>
<td>DCC Secretariat</td>
<td>Annual General Meeting</td>
<td></td>
<td>Executive Committee</td>
<td>Sectoral Subcommittees</td>
</tr>
<tr>
<td>Maputo Corridor</td>
<td>Maputo Corridor Logistics Initiative (MCLI)</td>
<td>Operations suspended due to lack of funding</td>
<td>MCLI Secretariat</td>
<td>n.a.</td>
<td></td>
<td>Board of Directors</td>
<td>Ad hoc Committees</td>
</tr>
<tr>
<td>Trans-Kalahari Corridor</td>
<td>Trans Kalahari Corridor Management Committee</td>
<td>Operational</td>
<td>Trans Kalahari Corridor Secretariat (TKCS)</td>
<td>n.a.</td>
<td></td>
<td>Trans Kalahari Corridor Management Committee</td>
<td>Technical Working Groups</td>
</tr>
<tr>
<td>TRACECA</td>
<td>Intergovernmental Commission (IGC) TRACECA</td>
<td>Operational</td>
<td>Permanent Secretariat (PS) of the IGC TRACECA</td>
<td>Intergovernmental Commission</td>
<td>n.a.</td>
<td></td>
<td>Working Groups and Expert Groups</td>
</tr>
<tr>
<td>CAREC</td>
<td>CAREC</td>
<td>Operational</td>
<td>CAREC Secretariat (Asian Development Bank CAREC Unit)</td>
<td>Ministerial Conference</td>
<td>Senior Official’s Meetings</td>
<td>Technical Committees (Transport, Customs, Trade Policy, Energy)</td>
<td></td>
</tr>
</tbody>
</table>

The levels of coordination required may not be the same in all the corridors since the countries they serve may have other alternatives or due to historical links there may be no serious bottlenecks to require the establishment of dedicated corridor institutions to manage the transit regimes.

A case in point where dedicated corridor institutions have not been necessary is for the SACU region where South Africa acts as a coastal state and provides access to the sea for Botswana, Lesotho and Eswatini. Because of historical links and the existence of SACU, the transport networks of the three LLDCs are well interfaced with those of South Africa and the region operates as a single distribution system with no hard borders.

Where the advantages such as in the SACU region do not exist, then there may be need for the establishment of formal corridor institutions to coordinate the functions of all the stakeholders so that transit operations can be facilitated through elaborate consultative and consensus making mechanisms. This mechanism also provides for the rights and obligations for the individual countries and also for the economic operators using the corridor.

In West Africa, there was also substantial uniformity in the French speaking countries and the three landlocked developing countries (Burkina Faso, Mali and Niger) were relatively well served through the coastal countries Cote d’Ivoire, Senegal, Togo and Benin. However, transit through Ghana required signing of requisite agreements to provide for trade and transport facilitation.

The Northern Corridor that is served by Mombasa port in Kenya is a case where its hinterland consists of six countries, four of them (Burundi, Rwanda, South Sudan and Uganda) being landlocked and one (Congo DR) having a large part of its territory a long distance away from its seaports. The countries developed as three clusters during the colonial era and after independence continued preserving the traditional visa requirements for movement of persons. They also retained their own customs, immigration and the various regulatory regimes that provide oversight for movement of goods and means of transport.

4.3 Corridor Infrastructure Development

Corridor infrastructure is one of the most critical components in any cooperation agreement among countries entering into corridor management. This is because the movement of traffic along corridors depends on the availability and quality of roads and railway networks, ports, inland terminals and facilities at border posts and other support infrastructure. Corridor agreements therefore typically make very clear provisions on the standards of road and rail infrastructure, port facilities and facilities at border post along the designated corridor routes.

There are good examples of the provisions covering the coordination in the development of transport infrastructure in various multilateral or bilateral agreements and other instruments of establishing corridors. Both the Northern and Central corridors agreements in East Africa make clear provisions on coordination of the development of roads, railways, pipelines and border posts. In this respect, the six countries that are members of the Northern Corridor coordinate and synchronize their interventions across the road segments that are parts of the designated corridor routes. The NCTTCA Secretariat together with the national road agencies, railway companies and the port authority carry out annual audits on the status of the corridor infrastructure and prioritize and schedule interventions where necessary.
The corridor roads and interconnected railways need to be regularly monitored and countries should endeavor to ensure coordination and synchronization when it comes to construction of missing links, rehabilitation upgrades and installation of smart systems including rail electrification, signalling in railways and in weighbridges and roadside stations for the roads. Table 6 below provides a summary of provisions in two corridor agreements which underscore the need for coordination and synchronization among participating states in the development, rehabilitation and maintenance of corridor infrastructure.

Table 6: Provisions on Coordination on Development of Corridor Infrastructure

<table>
<thead>
<tr>
<th>Corridor</th>
<th>Article</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Northern Corridor (NCTTCA)</td>
<td>Article 4: Obligations of Contracting Parties</td>
<td>(c) To cooperate in investment planning, development of transport and transit facilities and to jointly seek financing for project execution.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(d) To harmonise their standards and procedures for design, construction, operation and maintenance of transport and transit facilities and equipment.</td>
</tr>
<tr>
<td>Djibouti Corridor</td>
<td>Article 15: Functions of the Governing Organs</td>
<td>(vi) Facilitate mobilization of resources for the implementation of key infrastructure projects and programme;</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(ix) Seek ways of reaching agreement among the Contracting Parties on matters related to the allocation of funds on a regional basis for projects under the Djibouti Corridor transport system aimed at improving conditions of transit within the territories of the Contracting Parties.</td>
</tr>
</tbody>
</table>

Source: Revised Northern Corridor Agreement (2007) and Draft Djibouti Corridor Agreement

On the larger scope of coordination of transport infrastructure along transport corridors, the EU TEN-T programme of infrastructure development is well resourced to ensure that priority transport links across all its members are kept to the agreed Community standards. The EU transport infrastructure is largely funded through the European Regional Development Fund (ERDF).

The CAREC corridors that interface with Eurasian corridors are being developed to enhance integration among the CAREC countries and also with its neighbouring regions. The CAREC economic integration programme provides for comprehensive development of infrastructure in roads, railways, inland cargo depots and border posts. The infrastructure projects are developed at state levels with substantial funding from the Asian Development Bank and the People’s Republic of China.

Where external funding is required to undertake major works, the corridor countries may jointly approach potential creditors such as development banks and other cooperating partners to mobilize funding to undertake projects implementation. This has been the case with the Northern Corridor countries with respect to major road rehabilitation projects where they undertake joint mobilization of funding from the AfDB, World Bank and other development partners. For example, upgrading of road segments of the LAPSSSET Corridor in Kenya and Ethiopia was financed by the AfDB and
the EU as interconnected projects that were filling in critical missing link on the corridor and the larger Cape/Cairo Trans-African Highway.

The experience in most corridors is that while project preparation covering primarily feasibility studies and detailed designs may be funded through grants from development partners, and cover segments in different countries, where financing is undertaken through borrowing, each country borrows individually and makes its own repayments separately. However, there may be options such as under PPPs where one PPP off-taker can develop infrastructure across borders and operate it as one connected facility. However, up to now, the off-taker will need to sign separate agreements with each state. There is great potential to develop connected cross-border transport infrastructure facilities such as railways and roads on the CAREC and other Eurasian corridors where China leads the various initiatives in routes development.

**4.4 Corridor Performance Indicators**

In order to determine whether advancements in corridor institutional frameworks and the state of physical infrastructure provide any clear advantages in terms of efficiency and transit costs, various corridors can be compared through standard performance indicators.

In the EU, the adoption of the TEN-T programme provides a good lesson to improvement in corridor performance through coordinated funding and construction, rehabilitation and maintenance. A study undertaken to analyse the impact of successive investments in the EU roads belonging to the Core Network since 1960 showed significant increase in travel speeds (Condeço-Melhorado, Christidis and Dijkstra 2015). Comparing travel speeds on the Core Network between 1960 and 2010, it was established that in many network links, speeds had more than doubled between 1960 and 2010, especially those links that started from a worse situation, like the ones in the Mediterranean and Central-Eastern countries. These improvements were deemed to have arisen largely out of the improved road infrastructure. It was however noted that in Western Europe and particularly in Germany travel speed improvements were smaller due to a better infrastructure endowment from the outset. The study expects further improvements out of the investments proposed by the European Commission up to 2030 to benefit the more recent entrants into the Community.

Some of the Key Performance Indicators (KPIs) related to the actions included in the Vienna Programme of Action include the following:

- Transit time and speed along corridors (port dwell-time, transit enroute and time at border posts);
- Cost for shipment of goods along the corridor;
- Reliability of the services in terms of transit time;
- Assessment of importance of implementation of specific provisions of the WTO TFA or other trade and transport regional facilitation instruments that relate to corridor performance;
- Assessment of importance and implementation of specific provisions under the Corridor Agreements which may grant additional preferences above those under TFA; and
• Key challenges and the mechanisms/measures for improving the performance of a corridor which will include Corridor Management Institution Governance, Policy and Regulatory Coordination and State of infrastructure connectivity

Table 7 below provides a summary of most used Key Performance Indicators that are available.

**Table 7: KPIs Impacting Corridor Hinterlands**

<table>
<thead>
<tr>
<th>Type of Facility</th>
<th>Target Element</th>
<th>Indicator</th>
<th>Unit of Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ports</td>
<td>Vessel</td>
<td>Vessel Delays</td>
<td>Hours</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ship Output</td>
<td>TEUs/Crane Hour</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Turnaround Time</td>
<td>Hours</td>
</tr>
<tr>
<td>Cargo</td>
<td></td>
<td>Cargo dwell time in port</td>
<td>Days</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Document Processing time</td>
<td>Days</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Delays after Customs Release</td>
<td>Hours</td>
</tr>
<tr>
<td>Surface Transport</td>
<td>Truck</td>
<td>Waiting time in port</td>
<td>Hours</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Time at weighbridge</td>
<td>Hours</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Time through Border Post</td>
<td>Hours</td>
</tr>
<tr>
<td>Rail Wagon</td>
<td>Waiting time in port</td>
<td>Days</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Transit Time</td>
<td>Hours</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Delivery Time</td>
<td>Days</td>
<td></td>
</tr>
<tr>
<td>Customs</td>
<td>Cargo and transport equipment</td>
<td>Average Goods Clearance Time (Exit)</td>
<td>Hours</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Average Goods Clearance time (Entry)</td>
<td>Hours</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Average Truck Dwell-time Time (Border)</td>
<td>Hours</td>
</tr>
<tr>
<td>Border Administration</td>
<td>Average clearance time (Persons)</td>
<td>Hours</td>
<td></td>
</tr>
<tr>
<td>Corridor</td>
<td>Transiting</td>
<td>Average transit time for trucks</td>
<td>Days</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Transit Delays</td>
<td>Days</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Average transit time (Rail Wagons)</td>
<td>Days</td>
</tr>
<tr>
<td>Costs</td>
<td>Vehicle Operating Costs</td>
<td>US Dollars or as appropriate</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Demurrage Charges</td>
<td>US Dollars or as appropriate</td>
<td></td>
</tr>
</tbody>
</table>

Various other performance indicators with regard to the entire corridor and for specific agencies involved in cargo handling, ports and Customs clearance transport, health, Sanitary and Phytosanitary Measures and other oversight agencies may be applied to determine the efficiency and the costs of provision of the various services.

The development of transport observatories in recent years housed by CMIs has led to monitoring and compilation of such and even more detailed reports and KPIs which can be availed online through subscription from the CMIs. The corridor observatories have integrated database that contains information collected through electronic data exchange from service providers and oversight agencies. These include ports authorities, railways, selected road transport authorities, customs authorities and weighbridge operators among others. Other data is collected through sample surveys and reports from road surveys, border posts and freight forwarders. Based on this data, corridor observatories have developed various reports that provide past and current...
information on the corridor performance through various Key Performance Indicators (KPIs) based on operations of key stakeholders along the transport chain. The KPIs are usually provided through a Dashboard that shows the current scores in the KPIs against baselines, targets and benchmarks.

Corridor Observatories are currently operational in the Northern Corridor and Central Corridor. The Dar es Salaam Corridor is currently developing its Observatory. The CAREC programme is undertaking regular monitoring of their corridor performance. Through the observatories and other tools, corridor performance monitoring can be undertaken including comparisons of performance among different corridors. Table 8 below summarises some selected performance indicators along major transport corridors.

Table 8: Speed Performance Indicators for selected corridors

<table>
<thead>
<tr>
<th>Corridor</th>
<th>Sector</th>
<th>Mode</th>
<th>Approx. Distance (Km)</th>
<th>Mean Transit Time (Hrs)</th>
<th>Net Speed (Km/Hour)</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Northern Corridor</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mombasa-Kampala</td>
<td>Road</td>
<td>Mombasa-Kampala</td>
<td>1,169</td>
<td>131.8</td>
<td>8.9</td>
<td>March 2018-March 2019</td>
</tr>
<tr>
<td>Mombasa-Kigali</td>
<td>Road</td>
<td>Mombasa-Kigali</td>
<td>1,682</td>
<td>175.2</td>
<td>9.6</td>
<td>April-September 2017</td>
</tr>
<tr>
<td>Mombasa-Juba</td>
<td>Road</td>
<td>Mombasa-Juba</td>
<td>1,662</td>
<td>249.6</td>
<td>6.7</td>
<td>April-September 2017</td>
</tr>
<tr>
<td>Mombasa-Goma</td>
<td>Road</td>
<td>Mombasa-Goma</td>
<td>1,838</td>
<td>149.8</td>
<td>12.3</td>
<td>April-September 2017</td>
</tr>
<tr>
<td>Mombasa-Busia</td>
<td>Road</td>
<td>Mombasa-Busia</td>
<td>947</td>
<td>73</td>
<td>13</td>
<td>March 2018-February 2019</td>
</tr>
<tr>
<td>Mombasa-Malaba</td>
<td>Road</td>
<td>Mombasa-Malaba</td>
<td>933</td>
<td>72</td>
<td>13</td>
<td>March 2018-March 2019</td>
</tr>
<tr>
<td>Central Corridor</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dar-Kigali</td>
<td>Road</td>
<td>Dar-Kigali</td>
<td>1,495</td>
<td>90</td>
<td>16.6</td>
<td>2018</td>
</tr>
<tr>
<td>Dar-Bujumbura</td>
<td>Road</td>
<td>Dar-Bujumbura</td>
<td>1,640</td>
<td>100</td>
<td>16.4</td>
<td></td>
</tr>
<tr>
<td>Dar-Kampala</td>
<td>Road</td>
<td>Dar-Kampala</td>
<td>1,780</td>
<td>107</td>
<td>16.6</td>
<td></td>
</tr>
<tr>
<td>Dar-Goma</td>
<td>Road</td>
<td>Dar-Goma</td>
<td>1,635</td>
<td>109</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>CAREC Corridors overall</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CAREC Corridors overall</td>
<td>Rail</td>
<td>n.a.</td>
<td>n.a.</td>
<td>35.4 (SWOD)</td>
<td>15.9 (SWD)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Road</td>
<td>n.a.</td>
<td>n.a.</td>
<td>46.3 (SWOD)</td>
<td>23.4 (SWD)</td>
<td></td>
</tr>
<tr>
<td>Corridor 1</td>
<td>Road</td>
<td>n.a.</td>
<td>n.a.</td>
<td>53.9 (SWOD)</td>
<td>30.1 (SWD)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Rail</td>
<td>n.a.</td>
<td>n.a.</td>
<td>44.8 (SWOD)</td>
<td>17.3 (SWD)</td>
<td>2018</td>
</tr>
<tr>
<td>Corridor 2</td>
<td>Road</td>
<td>n.a.</td>
<td>n.a.</td>
<td>53.2 (SWOD)</td>
<td>25.2 (SWD)</td>
<td></td>
</tr>
<tr>
<td>Corridor 3</td>
<td>Road</td>
<td>n.a.</td>
<td>n.a.</td>
<td>44.1 (SWOD)</td>
<td>26.1 (SWD)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Rail</td>
<td>n.a.</td>
<td>n.a.</td>
<td>47.8 (SWOD)</td>
<td>41.2 (SWD)</td>
<td></td>
</tr>
<tr>
<td>Corridor 4</td>
<td>Road</td>
<td>n.a.</td>
<td>n.a.</td>
<td>50.1 (SWOD)</td>
<td>30.3 (SWD)</td>
<td></td>
</tr>
<tr>
<td>South American Corridors</td>
<td>Corridor 5</td>
<td>Corridor 6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>--------------------------</td>
<td>-----------</td>
<td>-----------</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ciudad del Este – Ponta Grossa</td>
<td>Road 560</td>
<td>24</td>
<td>23.3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asunción - Rosario</td>
<td>River 1,210</td>
<td>240</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asunción - Montevideo</td>
<td>River 1,475</td>
<td>288</td>
<td>5.1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Santa Cruz - Puerto Quijarro-Rosario</td>
<td>Rail 650</td>
<td>24</td>
<td>27</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Santa Cruz - Tambo Quemado-Arica</td>
<td>Road 1,325</td>
<td>72</td>
<td>18.5</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Sources: ADB (2019); Northern Corridor Transit and Transport Coordination Authority (2018); Central Corridor Transit Transport Facilitation Agency (2018); UN-OHRLLS and UN-ECLAC (2019).

Notes: SWOD = speed without delays. SWOD is the ratio of the distance travelled to the time spent by a vehicle in motion between origin and destination (actual traveling time). SWD = speed with delays. SWD is the ratio of distance travelled to the total time spent on the journey, including the time the vehicle was in motion and the time it was stationary.

It should be noted that once new railways have been constructed, dramatic improvements in performance can occur especially with respect to transit times. For example, the new Djibouti/Addis Ababa Standard Gauge Railway (SGR) line has lowered dramatically transit times from more than 3 days by road to only 12 hours. The SGR between Mombasa and Nairobi has reduced freight traffic journey time from 15 to 4 hours (UN-OHRLLS and UNECA 2019).

Similar trend occurs with the establishment of One Stop Border Posts (OSBPs) which reduce significantly the waiting times at border posts. It is generally noted that from the East African region, times at border crossings have been reduced substantially after the provision of OSBP in many of the border posts. For example, the Chirundu One Stop Border Post between Zimbabwe and Zambia launched in December 2009 was the first functioning OSBP in Africa. After nearly three years in operation, border crossing times have reduced from average between 72 and 120 hours to average of 25 hours by June 2012 (UN-OHRLLS 2016). At the Malaba border post between Kenya and Uganda, crossing times that were routinely over 48 hours in 2006 dropped to less than six hours in 2011/2012 (Fitzmaurice and Hartmann 2013). Along the Central Corridor, since operationalization of OSBPs at border between Tanzania and Rwanda (Rusumo), Burundi (Kobero) and Uganda (Mutukula), times spent at borders have reduced significantly (Central Corridor Transit and Transport Facilitation Agency 2018). At Rusumo border, the border post crossing time (comprising customs and immigration clearance) has reduced from 1.7 hours before
the introduction of the OSBP in 2015 to 0.72 hours in 2017. At Kobero OSBP, border crossing time have fallen from 5.64 hours in 2015 to 1.79 hours in 2017.

For comparison, in the CAREC region overall, the average border crossing time by road was 12 hours in 2018 and gradually increasing from around 6 hours since 2010 (ADB 2019). However, large discrepancies are observed based on the different corridors. Corridors 5 and 6 demonstrated the longest border-crossing times with 28.2 hours and 15.0 hours respectively in 2018 while border crossing points on corridors 4 and 1 performed best with 2.8 hours and 3.5 hours respectively.

While the above mentioned corridor performance indicators on transit times, speeds and delays at borders provide some insights into the current status of corridors, more work needs to be undertaken to collect data over several time periods and create a series of observations over time tied with the state of infrastructure and the interventions undertaken in trade and transport facilitation. This data is also critical for tracking progress on the VPoA priority on fundamental transit policy issues.
CHAPTER 5: CHALLENGES IN ESTABLISHMENT, OPERATIONALISATION AND MANAGEMENT OF CORRIDORS

The establishment, operationalization and management of transport corridors is done through consensus by participating states as it provides them with rights and imposes obligations on them. There are challenges which need to be addressed at each of the three stages. The ensuing narrative examines the challenges that can be encountered.

5.1 Challenges in Establishment of Corridors

The establishment of a transport corridor involves a number of steps that must be undertaken. These include making key decisions, undertaking negotiations with relevant stakeholders and concluding them successfully. It may also involve spending money on the construction of additional infrastructure or making an undertaking to do so in the future.

The following are some of the issues which may take time and resources before a corridor is established and could pose challenges if not approached methodically and with clear understanding and preparation:

(i) Identification and designation of corridor routes;
(ii) Preparation, negotiations, adoption and ratification of Corridor Agreements;
(iii) Funding the construction/rehabilitation of existing gaps in infrastructure; and
(iv) Establishment of the Corridor Management Institutions (CMIs).

The establishment of corridors in Eastern and Southern Africa took time as states held lengthy negotiations to grant transit rights to means of transport and liberalize the granting of entry visas to truck drivers and crews. In the case of the Northern Corridor, the participating states had to agree on dual driving codes as three of them (Kenya, Tanzania and Uganda) drive on the left side while the other four drive on the right side. The states adopted mutual recognition of drivers’ licenses.

Getting consensus on the funding modalities for the Corridor Management Institutions (CMIs) has posed challenges in the conclusion of corridor agreements in various regions. The Northern Corridor initially adopted an annual contribution paid by each member state. This method of payment resulted in many states accumulating arrears making it difficult for the CMI to carry out its work programmes. Challenges in the establishment of corridor institutions have also been faced in Southern Africa particularly with the Durban Corridor (North/South Corridor) where member countries do not seem to reach consensus on the methods of funding the CMI.

Lack of funding for the rehabilitation of transport infrastructure and construction of missing links along the designated corridor routes can also pose a challenge. Such funding has been provided in Africa for example through the African Development Bank, the World Bank and development partners as in the cases of the Central, Northern and LAPSSET corridors in Eastern Africa and for the Lagos/Abidjan and the Abidjan/Ouagadougou/Niamey Corridors in West Africa. The Asian Development Bank and the World Bank have provided funding for corridor road projects in Lao PDR and Bhutan for example.
5.2 Challenges in Corridor Operationalization

The operationalization of Corridors is usually encumbered by challenges during their formative stages. These challenges may be internal or external and include, amongst others, the following:

(i) Initial financial resources to launch the CMIs by procuring staff equipment and office facilities;
(ii) Enhancing infrastructure interoperability in areas such as discordant railway gauges;
(iii) Lack of harmonized customs procedures; and
(iv) Lack of harmonized documentation.

While countries may agree on the establishment of corridors including corridor management institutions, the actual operationalization may be delayed due to failure to make financial contributions for the procurement of staff and equipment for the corridor secretariats and its other operational expenses. Both the Central Corridor and Dar es Salaam corridor took time to become operational and the former had to receive grant funding from the AfDB to cater for its operational costs for its initial years.

The issue of discordant railway gauges affects the Eurasian corridors originating from Asian countries and passing through the Russian rail gauge into Standard Gauge (SGR) networks in the rest of Europe. This has been handled through provision of transhipment facilities and border terminals.

In Eastern and Southern Africa, there was lack of harmonization of customs procedures and documentation, but over the years this has been addressed substantially through support from UNCTAD, WCO and RECs and some of the instruments developed have become benchmarks in trade and transport facilitation regionally and globally.

5.3 Challenges in Corridor Management

In order for the entity managing the corridor to perform its functions, it requires financial and human capital resources and access to data on timely basis from the corridor stakeholders. If some of the resources or cooperation from stakeholders is lacking, the management of the corridor may be faced with challenges. The possible challenges may include, amongst others, the following:

(i) Lack of human capital in terms of staff for the CMI to undertake the mandates of the Corridor;
(ii) Lack of funds for approved annual budgets for the CMIs;
(iii) Delays in receiving and processing operational and planning data from service providers (ports, railways, roads, pipelines and transporters), infrastructure providers, regulatory/oversight agencies;
(iv) Balancing the interests of all Corridor stakeholders, including the business interests, governments and their regulatory agencies; and
(v) Institutional constraints leading to lack of capacity to effectively fulfil mandates.

The examples of corridors faced with management challenges after their operationalization include the Northern Corridor, where during its initial years, many countries fell into arrears in the remittances of their annual contributions. Arising from delays and defaults in making
contributions, the CMI went through a number of years of serious financial constraints until the method of contributions was changed to a user levy for traffic passing through the port (cargo levy is considered the most reliable sustainable funding mechanism) adopted by most of the member states. NCTTCA now applies a mixture of user levy and government subscription. The funding challenge also affected the Secretariat of the Maputo Corridor Initiative. The formative instruments for the Maputo Corridor Initiative provided for a strong Stakeholders’ commitments to providing budgetary resources to support the operations of the corridor. However, the Secretariat of the Maputo Corridor Initiative was forced to close its operations when their core supporters failed to provide regular budgetary contributions to keep the institution operational.

The problem of providing data and/or information by stakeholders to a central processing entity such as the CMI to facilitate the preparation of material for data sharing among interested stakeholders becomes all the more relevant in the coordination of service providers and governmental organs. In order to develop and adopt targets for various services along the Northern Corridor, the Mombasa Port Community Charter was established in 2014 after extensive stakeholder consultations were undertaken (See Box 3 for more details). The participating stakeholders, who include policy makers, service providers and regulatory agencies, made commitments to fulfil their responsibilities and to be answerable for any of their omissions through a peer review mechanism. One of the Charter objectives was to “Develop and implement a self-monitoring mechanism to ensure implementation of collective community obligations. The senior managers of the participating Port Community entities shall voluntarily submit themselves to sanctions for breach of any of the collective obligations”.

---

9 Direct state contributions have often resulted in delays in remittances resulting in arrears while private sector subscriptions have not proved sustainable in cases where they have been employed.


11 The Mombasa Port Community Charter, 2014
CHAPTER 6: REVIEW OF BEST PRACTICES IN CORRIDOR DEVELOPMENT AND MANAGEMENT

The concept of “Best Practices” can be applied when developing the options for adoption in the establishment, operationalization and management of Corridors. These best practices are determined and selected taking into account the practical experiences gained from existing corridors; the successes and challenges faced with the enabling legal, regulatory and institutional frameworks and during the establishment, development and management of transit existing transport corridors. Good practices developed in successful corridors can be replicated in new corridors that may operate under similar circumstances or in existing ones that may be facing similar challenges.

6.1 Best Practices in Corridor Establishment

The establishment of a corridor precedes all the other issues and as such, it needs to be undertaken after due consideration of important parameters such as port facilities, existing and proposed transport routes, traffic levels and future growth patterns taking into account competition from other corridors. It is necessary that there are strong institutional structures in all the corridor states to ensure cooperation, coordination and accountability. The following are important areas in policy, legal and regulatory domains that need to be considered before making a decision on the establishment of a transport corridor.

(i) Mapping of the potential corridor routes taking advantage of existing infrastructure and missing links. The purpose of such mapping is to ultimately designate the routes that will form the corridor. This is a common practice amongst the existing corridors, such as the Northern and Central Corridors, Maputo Corridor, TEN-T networks in Europe, CAREC Programme, and the Belt and Road Initiative.

(ii) Building consensus and obtaining buy-ins from countries and various other key stakeholders along the Corridors. It is important to address stakeholder’s objections and suggestions on the institutional structure of the corridor and its funding mechanisms.

(iii) Preparations, negotiating and conclusion of appropriate legal instruments including Agreements, MOUs and Protocols. Legal instruments are necessary to establish a legal basis for cooperation among corridor parties, providing for rights, obligations and sanctions on each party. As discussed above, the existing corridors have concluded various Agreements, MOUs and related protocols, such as the Northern Corridor Transit and Transport Agreement, Central Corridor Transit Transport Facilitation Agency Agreement, Multilateral Agreement on International Transport for Development of TRACECA corridor, a Constitution to establish the Dar es Salaam Corridor Coordinating Committee; EU Council decisions for the TEN-T network. The sharing of best practices in this area can help determine the most appropriate enabling instrument depending on the circumstances of each corridor.

(iv) Dissemination of public information on the corridors to the various stakeholders involved, indicating the benefits and stakeholders’ roles and obligations. Information dissemination will lead to enhanced stakeholder understanding and preparedness in
corridor programmes implementation. This should include reporting to stakeholders on the progress made towards the achievement of key milestones in corridor establishment. For example, the NCTTCA, Walvis Bay Corridor and CAREC have dynamic communication facilities through their websites.

(v) **Presence of a corridor champion.** Furthermore, there should be Corridor champions in form of high-profile entities and State officials or people in the corporate world who can provide advocacy for the establishment of corridors. Key champions may include State Departments, parastatals, sector players, transporters, port authorities, infrastructure development agencies and RECs. The RECs (such as COMESA, EAC, SADC, ASEAN, SAARC), together with development banks and agencies such as the AfDB, ADB and the World Bank and other cooperating partners could also provide financial support and advocacy for establishment of corridors. The corridor champions also play an important role not only during the establishment of the corridors, but also in the corridor development stage (see below).

6.2 **Best Practices in Corridor Development**

The best practices in corridor development should take into account the need for adequate and well-maintained infrastructure across the corridor in order to serve increasing traffic flows and for their evolution into higher levels towards transformation into economic corridors. Specifically, the following is a checklist of policy and financing needs to be considered.

(i) **Well defined transport infrastructure networks.** Designation of corridor ports, surface transport (roads, railways), inland terminals and border posts is needed to facilitate coordination in the construction, rehabilitation and/or maintenance of transport infrastructure facilities along the corridor. This will help with scheduling of project implementation to meet the corridor development and reporting on the status of outstanding projects to operationalize corridor transport infrastructure and other facilities. Corridors in the Eastern and Southern Africa region have coordinated the development of interconnected projects. For example, the Northern and Central corridors, and the Nacala and Maputo corridors have endeavoured to coordinate project implementation.

(ii) **Coordination in the construction, expansion, rehabilitation and maintenance of priority infrastructure facilities along the corridor.** Coordination amongst the members of the corridor is needed, on a priority basis, to ensure adequate and efficient transport infrastructure along all corridor segments. Transport infrastructure development through prioritisation and coordinated resource mobilisation has been evident for example in the case of the Northern Corridor, Central Corridor, CAREC and in the case of EU for the TEN-T network.

(iii) **Trade and transport facilitation instruments and harmonization of corridor operating procedures.** Harmonization of infrastructure configurations and procedures along the corridor, including for weighbridges, roadside stations, One Stop Border Posts (OSBP\(\text{\textsuperscript{a}}\)) and adoption of common facilitation instruments across the corridor will facilitate better stakeholder cooperation, performance and management of transit and border-
crossing facilities and support the removal of transit and cross-border bottlenecks. The Northern and Nacala corridor have attempted to harmonise their operating procedures for example. In Southern Africa, the adoption of the Single Administrative Document for customs was first tested on the Trans-Kalahari Corridor before it was rolled out at the national level in several countries (Kunaka and Carruthres 2014). The implementation of the WTO TFA’s provisions is one of the ways to incorporate best practice trade facilitation instruments in the corridor operations.

(iv) **Provision of adequate energy and modern ICT networks.** In addition to transport infrastructure, power and ICT infrastructure should be made available along corridors to ensure availability of energy distribution infrastructure and access to desired capacity ICT networks to support transport operations.

(v) **Allocation of budgetary resources for corridor programmes and projects.** Corridor countries need to advocate for provision of adequate resources at the national level towards implementation of corridor programmes and projects. For example, interventions need to be made during national budget making processes for the benefit of the corridor.

(vi) **Coordinated resource mobilization for corridor programmes and projects implementation.** Corridor countries also need to mobilize additional resources from other sources to meet the requirements for corridor programmes and projects implementation. There are opportunities for mobilizing funding from external partners. For example, the operations of TRACECA were initially funded by the European Union. Loan from the European Investment Bank was used to finance the rehabilitation of the Beira corridor. In recent years, China has become major investor in transport infrastructure projects in Africa, such as for example the Addis Ababa-Djibouti railway or the Nairobi-Mombasa railway.

(vii) **Establishment of Corridor champions.** As discussed above, it is advisable to develop a network of corridor supporters, i.e. champions, who will undertake advocacy work for the corridor and can mobilize financial resources, including from governments and corporate world. For Example, in the framework of the Presidential Infrastructure Championship Initiative (PICI), the African Union Development Agency (previously known as NEPAD) has appointed a number of African Presidents as Champions for various regional infrastructure, including corridor, projects (see Box 2).


Within the framework of the Presidential Infrastructure Championship Initiative (PICI), a number of African Heads of State were appointed as Champions for various infrastructure projects on the continent. Originated from a proposal by President of South Africa, NEPAD, now known as African Union Development Agency, has developed the PICI. The role of the Champions is to create awareness and visibility of the key infrastructure projects, unblock bottlenecks and leverage funding for their implementation.

Initially eight projects were identified in 2011 to be championed, while others were added at a later stage. The projects were originally to be implemented between 2010 and 2015 and significant progress has been made in terms of their implementation.

As of 2019, the Champions of the PICI projects include 9 Presidents for various transport, energy and ICT infrastructure projects, including transport corridors:

- H.E President Abdelaziz Bouteflika of Algeria for the Missing Link of the Trans-Sahara Highway, as well as the Optic Fibre from Algeria via Niger to Nigeria;
- H.E President Macky Sall of Senegal for the Dakar-Ndjamen- Djibouti Road/Rail;
- H.E Muhammadu Buhari, President of Nigeria for the Nigeria– Algeria Gas Pipeline: Trans-Saharan Gas Pipeline;
- H.E President Denis Sassou Ngueso of the Republic of Congo champions for the Kinshasa-Brazzaville Bridge Road/Rail;
- H.E President Paul Kagame of Rwanda champions the Unblocking of Political Bottlenecks for ICT Broadband and Fibre optic projects;
- H.E President Abdel Fattah El Sisi of Egypt champions the Establishment of a Navigational Line from Lake Victoria to the Mediterranean Sea via the River Nile Project (VICMED);
- H.E President Cyril Ramaphosa of South Africa for the North-South Corridor Road/Rail Project;
- H.E President Uhuru Kenyatta, of Kenya for the Lamu Port South Sudan Ethiopia Transport Corridor Project (LAPSSET)
- H.E President Hage Geingob, of Namibia champions the International Logistics Infrastructure Hub Projects

It has been argued that while the presence of Champions has increased the prospects of successful implementation of the PICI projects, the economic and integrative potential of the projects and the high-profile Champions which bring the necessary political will are not necessarily sufficient to ensure accelerated implementation of the projects. Champions need to pay attention to a range of technical, geopolitical, institutional, political and social factors to ensure success (Ikome and Lisinge 2016).

6.3 Best Practices in Corridor Management

In the management of transport corridors, the best practices would be those that ensure that the policy making and oversight organs responsible for governance and the executing agencies (Corridor Secretariats) carry out their functions as contained in policy decisions, strategic plans and annual work programmes. This would be achieved optimally where all stakeholders (policy makers, regulatory authorities, transport infrastructure providers, transporters, shippers and various other service providers) discharge their functions effectively.

In order to enable the corridor to achieve optimal operational efficiency and reduce the cost of doing business, it is necessary that the corridor provides adequate and efficient physical infrastructure in terms of port facilities, roads, railways, inland cargo depots and border posts. In addition to the challenges due to physical infrastructure, the common barriers to trade and transport need to be addressed through corridor-wide harmonization of legislative and regulatory instruments. The appropriate institutional framework needs to be in place together with human capacity building.

The following is a summary of important issues that need to be considered in order to develop the appropriate environment for successful transport corridor systems.

(i) **Preparation of regular Strategic Plans for implementing priority programmes and projects by Corridor management institutions.** The provision of adequate transport infrastructure, policy and regulatory harmonization and institutional capacities require systematic planning through the development and execution of priority programmes and projects. This requires the preparation of regular strategic plans to guide the implementation of the priority programmes and projects. The CMI will be responsible for coordination of implementation across the corridor states. The Northern Corridor and Central Corridors have developed five-year Strategic Plans.\(^\text{14}\)

(ii) **Establishment and/or adoption of information sharing systems.** Platforms for data sharing amongst customs authorities and other agencies across the corridor countries, such as seamless data transmission, should be established or adopted. This would include the use of the ASYCUDA system, Single Window systems and various Corridor Observatories. Data sharing platforms have already been established in the cases of Northern, Central and Dar es Salaam Corridors and CAREC.

(iii) **Establishment of Corridor Databases (Observatories).** Corridor observatories are typically online databases or tools for measuring and monitoring the performance of the corridor, involving data collection, processing and reporting systems which may include Corridor Performance Dashboards. They aim to provide accurate and reliable statistics for decision making in corridor development and management. Corridor Observatories have been successfully established in the case of the Northern Corridor and Central Corridor, while the CAREC programme has a corridor performance and monitoring programme.

\(^{14}\) Northern Corridor Strategic Plan 2017-2021; CCTTFA 2014-2019 Strategic Plan.
(iv) **Establishment of Corridor Community Charters.** These community charters would encourage a self-regulation mechanism to ensure implementation of collective community obligations subject to peer review. The Mombasa Port Community Charter is a good example of how port and corridor community collectively work together and hold each other accountable in their aim to enhance efficiency, effectiveness and competitiveness of the port and corridor (See Box 3).

(v) **Active participation of all stakeholders.** All stakeholders, including public and private should be encouraged to participate in dialogues that informs decision making on corridor operations. Sector associations for stakeholders involved in Corridor operations can be created. For example, the NCTTCA has a Public-Private Stakeholders Forum, in which the public and private sectors raise issues and exchange views. The Maputo Corridor Logistics Initiative had one of the more effective arrangements for public and private sector, largely as a result of its working modalities and its creation as a private sector-led management arrangement.

(vi) **Coordination of programmes/projects implementation.** Optimization of planning and use of resources can be achieved through coordination with other corridors and their CMIs and regional economic communities/organizations. Synergies in programme implementation of the various entities can be identified and exploited.

(vii) **Resource mobilization for programmes/projects implementation.** In most cases, additional outside resources would need to be mobilized for the implementation of corridor programmes and projects. A good practice would be to engage development partners jointly for funding of corridor projects. This has been done in the case of the Northern and Central corridors for example.

(viii) **Building institutional and human capacity to manage the corridor infrastructure and operations.** Due to the fact that managing corridors requires both institutional and human capacity, there is necessity to identify and where necessary fortify training institutions and provide resources to undertake sustainable capacity building for stakeholders in all agencies involved in the transport logistics service provision. In order to prepare for capacity building for corridor personnel, the Northern Corridor identified the Bandari College in Mombasa as a resource center for training and skills development for both maritime and overland logistics covering freight forwarding, warehousing and transport. Another example is the CAREC Institute which is an intergovernmental organization with a mandate to contribute to CAREC programmes through knowledge generation and capacity building.

(ix) **Undertaking peer reviews, benchmarking and experience sharing.** Peer reviews and benchmarking with other corridors is a way to compare development and performance of a corridor, with a view to realize enhanced institutional and human capacities through experience sharing amongst other things. In the Eastern and Southern Africa region, there is a move by the individual corridor institutions to establish an association of corridor authorities. The African Corridor Management Alliance (ACMA), an intercontinental body that is expected to promote corridor management across the African continent was
established, with support or UNECA and the African Union, to build capacity, identify and respond to financial needs of the CMIs and boost intra-African trade. The ACMA would help foster collaboration among CMIs by sharing best practices on corridor development from various sub-regions on the continent and combining resources to find a common purpose on how to stimulate economic growth of the region. It is important that the ACMA is further strengthened.

The Mombasa Port and Northern Corridor Community Charter was originally commissioned by H.E. Mr. Uhuru Kenyatta, the President of Kenya and established in 2014. It emanated from the desire of the port of Mombasa stakeholders to realize the full potential of the port and by extension of the Northern Corridor. The Charter was signed by 25 public and private institutions and partners, following extensive consultations.

The Charter represented a collective framework to achieve a seamless transport along the Northern Corridor by transforming the Port of Mombasa into a high performing port, which was to be realized through implementation of key targets relating to cargo throughput, holding capacity, cargo take off, etc.

The Mission of the Charter is to “streamline and accelerate port stakeholders’ efforts aimed at realising the port community’s vision through the promotion of inclusive dialogue”. The Charter has four main objectives:

- Establish a permanent framework of collaboration that binds the port community together to specific actions, collective obligations, targets and timelines.
- Complement the individual institutional service charters in addressing the challenges that act as barriers to trade facilitation along the port and corridor.
- Introduce, educate and publicise to all stakeholders the industry customs and practices embraced by the port community so as to rightfully influence all persons in the region participating in international trade.
- Develop and implement a self-monitoring and evaluation mechanism for collective community obligations.

Since its inception in 2014, some of its targets have been achieved. For example, a steady growth in throughput was observed, indicative of the combined efforts of the community stakeholders to upgrade the port and corridor services. Improvements were also observed in ship turnaround time and cargo dwell time. At the same time, other targets were too ambitious while some were rendered irrelevant.

This led to a review of the Charter in 2017 from the perspective of the key targets and implementing stakeholders and subsequently it was revised for the term 2018-2024. The revised Charter strengthened the original in the following areas:

- As a framework for benchmarking the corridor performance
- As a monitoring and evaluation framework
- Includes new key stakeholders and criteria for new signatories
- Revised performance indicators, targets and benchmarks
- More stakeholder coordination, engagement and management
- Includes new sustainability processes
- Enhanced management arrangements, systems, processes and human resources
- Timelines for review and lifespan of the Charter
- New communication strategy
- Use of new information technology tools.

7.1 Conclusions

It is clear that transport corridors are being adopted increasingly across the world, in large part to cater for LLDCs so that they may have faster access to the sea through other transit countries. Based on the study findings, it has also been established that the development of CMIs has taken a center stage with the African continent actively adopting the corridor approach. This may have arisen largely due to the fact the continent has the largest number of LLDCs that are comparatively young and have not had sufficient time to negotiate both bilateral and multilateral arrangements to provide for efficient and sustainable transit and cross-border trade and transport facilitation instruments.

It is also noticeable that there is emphasis on transforming corridors from just providing their transport functions to becoming broader economic corridors where their routes are densified with economic activities. The transformation into economic corridor obviously brings increased en-route traffic which may impede the rapid movement of transit traffic. However, this can be managed with good corridor planning which needs to ensure that corridor capacity is increased before congestion sets in.

It is further observed that in order to increase efficiency and reduce costs in transiting along corridors, the establishment of CMIs through elaborate enabling instruments is of utmost importance. These enabling instruments must provide for an ideal environment for corridor institutional framework, development of physical infrastructure, transport facilitation, capacity building and the necessary stakeholder cooperation.

The challenges encountered in establishment of transport corridors have been found to apply to the corridor establishment, operationalization as well as management. Setbacks can be experiences in the negotiation and adoption of corridor agreements. Shortage of funding can negatively impact corridor infrastructure programmes as well as establishment and functioning of corridor management institutions.Balancing the interests of all stakeholders and institutional and human constraints can limit the capacity to effectively fulfil corridor mandates.

The report identifies and proposes key “Best Practices” for possible replication in establishment of new corridors and for the development and management of new and existing ones. In the area of enabling instruments, it is found that corridor agreements should typically incorporate corridors functions; rights and obligations of corridor states; governance structures; provisions on transport infrastructure development, trade and transport facilitation; and funding of the CMIs. Some practices can also be adopted to increase the efficiency of corridors and enhance their sustainability, such as for example coordinated capacity building; development of sustainable funding mechanisms for the implementation of the CMI programmes and projects; harmonization of corridor operating procedures; establishment of corridor champions, corridor observatories and corridor community charters; stakeholder consultations; peer learning and sharing of institutions for capacity building.
7.2 Recommendations

The recommendations below cover three corridor areas (establishment, development and management) that are deemed important in order to enable Corridors to perform their functions efficiently and on a sustainable basis. These recommendations are grouped into four thematic areas covering Corridor Agreements; Corridor Management for LLDCs and Transit Countries; Stakeholder Participation; and Corridor Sustainability as provided below.

(i) **Recommendations on Key Elements for Inclusion in Corridor Agreements**

The following are key elements recommended to potential corridor countries and other corridor stakeholders for inclusion in the corridor agreements that serve as the enabling instruments for the establishment of Corridors.

<table>
<thead>
<tr>
<th>Key Elements in Corridor Agreements</th>
<th>Examples of Agreements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comprehensive governance structure providing for policy, oversight and executive organs</td>
<td>NTCCA and CTTCA Agreements, Draft Djibouti Corridor Agreement</td>
</tr>
<tr>
<td>Provisions on modalities for funding of the Corridor institutions including the method of the remittance of funds to the corridor executive agencies</td>
<td>Revised NTCCA Agreement</td>
</tr>
<tr>
<td>Provisions on coordination in planning, development and maintenance of corridor transport infrastructure (ports, road, rail, border posts)</td>
<td>NTCCA and CTTCA Policy organs decisions</td>
</tr>
<tr>
<td>Provisions on implementation of trade and transport facilitation instruments to ensure smooth flow of trade with minimum bottlenecks to transit and cross-border trade and transport</td>
<td>NTCCA and CTTCA Policy organs decisions, RECs protocols and policy decision</td>
</tr>
<tr>
<td>Provisions on Rights of access to bilateral and third-party cargoes</td>
<td>COMESA, SADC and other RECs policy organs decisions</td>
</tr>
<tr>
<td>Provisions on the methods of consultation and resolution of disputes between/among various parties/stakeholders</td>
<td>NTCCA and CTTFA Agreements, Draft Djibouti Corridor Agreement</td>
</tr>
<tr>
<td>Securing the interests of all states (LLDCs and transit states)</td>
<td>Various regional and international transit agreements</td>
</tr>
<tr>
<td>Responsibilities of different corridor stakeholders and within the CMI$s$</td>
<td>NTCCA and CCCFA Agreements and policy organs decisions</td>
</tr>
</tbody>
</table>
(ii) **Recommendations on Corridor Management for LLDCs and Transit Countries**

The following are key elements recommended to be addressed to ensure effective Corridor Management in the participating countries, including an indication of agencies and parties that should take the lead.

<table>
<thead>
<tr>
<th>Issues for Corridor Management</th>
<th>Lead Agencies/ Parties</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corridor Management Institution (CMIs) providing effective governance system (policy making, oversight and implementation structures)</td>
<td>State parties</td>
</tr>
<tr>
<td>Development of regular corridor Strategic Plans for the implementation of priority programmes/projects and implementation through annual work programmes</td>
<td>CMIs in consultation with State parties</td>
</tr>
<tr>
<td>Development of corridor efficiency monitoring instruments covering ports, CFSs, surface transport, weighbridges, ICDs and border posts</td>
<td>CMIs and corridor stakeholders, including private actors</td>
</tr>
<tr>
<td>Use of integrated information portals including national and corridor-wide Single Window Systems</td>
<td>Customs Authorities</td>
</tr>
<tr>
<td>Establishment of Corridor Community Charters to encourage a self-monitoring mechanism to ensure implementation of collective community obligations subject to peer review</td>
<td>CMIs and all corridor stakeholders</td>
</tr>
<tr>
<td>Regular reviews of procedures, documentation, training and certification of various agency personnel in order to harmonize corridor processes</td>
<td>CMIs</td>
</tr>
<tr>
<td>Cargo and transport equipment tracking</td>
<td>Ports, Transporters Associations and CMIs</td>
</tr>
<tr>
<td>Coordination of programmes and projects implementation with other corridors and regional economic organizations</td>
<td>CMIs, regional organizations</td>
</tr>
<tr>
<td>Development of Corridor Observatories (Databases) that generate regular reports on corridor performance through the measurement of agreed performance indicators (KPIs)</td>
<td>CMIs</td>
</tr>
</tbody>
</table>
(iii) **Recommendations on Stakeholder Participation**

The following are recommended key issues to be addressed in order to enhance stakeholder participation in the corridor management.

<table>
<thead>
<tr>
<th>Issues for Stakeholder Participation</th>
<th>Lead Agencies/ Parties</th>
</tr>
</thead>
<tbody>
<tr>
<td>Development of Corridor Communities to bind stakeholders to specific actions, collective obligations, targets and timelines in fulfilling them</td>
<td>CMIs</td>
</tr>
<tr>
<td>Active participation of all stakeholders including the private sector in dialogue that informs decision making on corridor operations</td>
<td>CMIs, State parties, private sector actors</td>
</tr>
<tr>
<td>Peer review systems to enhance service quality through self-regulation and compliance regulatory requirements</td>
<td>Sector associations and CMIs</td>
</tr>
<tr>
<td>Provision of a platform for stakeholders to exchange information, especially through online media such as blogs, discussion groups or corridor news magazines</td>
<td>CMIs</td>
</tr>
</tbody>
</table>

(iv) **Recommendations on Sustainability of Corridors**

The following are key issues recommended to be addressed in order to enhance the sustainability of corridors in providing efficient transit services, including the lead actors responsible, the support required and potential supporters.

<table>
<thead>
<tr>
<th>Recommendation</th>
<th>Lead Actor(s)</th>
<th>Support Required</th>
<th>Potential Supporters</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project identification and preparation for priority corridor transport infrastructure projects</td>
<td>CMIs, infrastructure development agencies</td>
<td>Grants, loans and technical assistance for project preparation and implementation</td>
<td>Members states, development banks and cooperating partners</td>
</tr>
<tr>
<td>Development of innovative funding mechanisms to ensure that CMIs have steady budgetary resources to meet operational expenses and capital projects</td>
<td>CMIs</td>
<td>Augmentation of resources through grants</td>
<td>Development partners</td>
</tr>
<tr>
<td>Investment in human capital through recruitment and training to ensure that staff have requisite skills to perform functions in a dynamic environment</td>
<td>CMIs and sector associations</td>
<td>Opportunities through training, field attachments, scholarships</td>
<td>UN, RECs, development banks, development partners</td>
</tr>
<tr>
<td>Continuous research and development of innovative instruments to enhance trade and transport facilitation</td>
<td>CMIs and sectoral capacity</td>
<td>Research grants</td>
<td>Industry, development</td>
</tr>
<tr>
<td>Building capacities and institutes</td>
<td>Technical assistance</td>
<td>Industry and cooperating partners</td>
<td></td>
</tr>
<tr>
<td>-----------------------------------</td>
<td>----------------------</td>
<td>-----------------------------------</td>
<td></td>
</tr>
<tr>
<td>Standardization and integration of capacity building for all corridor stakeholders</td>
<td>CMIs and sectoral capacity building institutes</td>
<td>Technical assistance</td>
<td></td>
</tr>
<tr>
<td>Undertaking advocacy programmes for decision makers and other stakeholders to appreciate the importance of the roles played by corridors</td>
<td>CMIs and focal points in States</td>
<td>Access to media and targeted publicity fora</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>International organizations, media and conference/event organizers</td>
<td></td>
</tr>
</tbody>
</table>
REFERENCES


Central Corridor Transit Transport Facilitation Agency. CCTTFA 2014-2019 Strategic Plan


Condeço-Melhorado, A; Christidis, P; and Lewis Dijkstra (2015). Travel speed changes along the European Core Road Network for the Period 1960–2030: An Application of Octilinear Cartograms; Journal of Maps

Fitzmaurice, Mike; Hartmann, Olivier (2013). Border crossing monitoring along the northern corridor. Sub-Saharan Africa Transport Policy Program (SSATP) working paper series; no. 96. Washington DC; World Bank


Northern Corridor Transit and Transport Coordination Authority. Strategic Plan (2017-2021)

Northern Corridor Transit and Transport Coordination Authority (2018). Northern Corridor Transport Observatory Report Issue no. 12, May 2018

Northern Corridor Transit and Transport Coordination Authority (2019). Northern Corridor Transport Observatory Report Issue no. 14, June 2019


SADC (2012). The SADC Regional Infrastructure Development Master Plan (Transport Sector Plan)


UN-OHRLLS, UN ESCAP and UN ECE (2019b). Review of Progress made in Structural Economic Transformation in Euro-Asian Landlocked Developing Countries (LLDCs) (Background report for the UN-OHRLLS, UN ESCAP and UN ECE Euro-Asia regional review meeting on the implementation of the Vienna Programme of Action for the Landlocked Developing Countries for the Decade 2014-2024)

UN-OHRLLS and UN-ECLAC (2019). Background Report for the Latin America regional review meeting on the implementation of the Vienna Programme of Action for the Landlocked Developing Countries for the Decade 2014-2024. (Mid-term Review of the implementation of the VPoA for the LLDCs for the Decade 2014-2024)


The Central Corridor Transit Transport Facilitation Agency Agreement (September 2016). Dar es Salaam, Tanzania

The Louis Berger Group, Inc (2009). Strategies for the Transformation of the Northern Corridor into an Economic Development Corridor

The Central Corridor Transit Transport Facilitation Agency Agreement

The Mombasa Port and Northern Corridor Community Charter 2018-2024

The MOU on the establishment of the Dar es Salaam Corridor (2003)


The Northern Corridor Transit and Transport Agreement (2007). Nairobi
ANNEX: Outcome document of the meeting on Best Practices in Corridor Development and Management for the Benefit of LLDCs and Transit Countries held on 29-30 October 2019 in Ulaanbaatar, Mongolia

Ulaanbaatar Call for Enhanced Transit Transport Corridor Development

30 October 2019, Ulaanbaatar, Mongolia

Senior representatives and participants from LLDCs, transit developing countries, development partners, United Nations, international, regional and sub-regional organizations, regional development banks, think tanks, private sector and other stakeholders met at Ulaanbaatar, Mongolia, on 29 and 30 October 2019, and held deliberations in the Meeting on Best Practices in Corridor Development and Management organized by the Government of Mongolia in collaboration with the United Nations Office of the High Representative for Least Developing Countries, Landlocked Developing Countries and Small Island Developing States (UN-OHRLLS).

In view of the discussions held, we propose the following recommendations to enhance corridor development and accelerate the implementation of the Vienna Programme of Action for landlocked developing countries:

1. Welcome the efforts of LLDCs and transit countries to develop and operationalize international transit transport corridors in order to improve their connectivity, boost trade potential and to achieve the sustainable development goals;

2. Stress that LLDCs and transit countries should consider promoting the corridor approach to facilitate faster, smoother and more efficient transit, improve cross-border transport infrastructure and enhance regional connectivity;

3. Underscore the need to transform transit transport corridors into economic corridors that spur economic and industrial activity of the region and have the potential to create investment opportunities, enhance regional connectivity and facilitate regional trade and investment;

4. Emphasize the need for LLDCs and transit countries to harmonize and improve transport (road, rail, waterways, pipelines), sea-ports, inland ports, logistics centres and border-crossing infrastructure and facilities and services along the international transit transport corridors in order to improve efficiency, and in this regard LLDCs and transit countries should endeavor to harmonize domestic policies, standards and procedures and regulations for transit such as visa requirements for truck drivers, vehicle insurance, transit charges and axle load limits or non-tariff barriers;

5. Underscore the importance of establishing compatible ICT systems to support movement of goods and people such as Single Windows, OSBPs, electronic data exchange, digitalization of processes, informational portals and others;

6. Stress the need for transit transport corridors to encompass safety and security, technical standards and interoperability and ease of movement across borders;

7. Encourage LLDCs and transit developing countries to consider establishing or strengthening corridor coordination platforms, management mechanisms and frameworks, such as corridor management organizations and committees;
8. Encourage LLDCs and transit countries to enter into transit transport and corridor agreements at bilateral and regional level, in addition to global conventions on transit and transport, including the WTO Trade Facilitation Agreement; and in this regards invite all States that have not yet done so to consider signing, ratifying or acceding to the United Nations conventions and agreements on transport and transit facilitation;

9. Note that transit and corridor agreements should include provisions for coordinated planning and development of infrastructure, trade and transport facilitation issues, transport logistics monitoring, stakeholder coordination, capacity building and where appropriate establishment of corridor institutional framework and governance structure;

10. Emphasize that corridor partner states should sustain their cooperation and agreements governing corridors;

11. Emphasize the importance of institutions to facilitate the process of corridor development such as the Mongolia Investment Research Center that is supporting development of Mongolia-China-Russia economic corridor;

12. Underscores the need to mobilize, as appropriate, additional financial resources for rehabilitation or development of resilient corridor transport infrastructure and services, including through the promotion of public-private-partnerships, leveraging of private investments, co-financing and increased private sector participation so as to achieve inclusive and sustainable development;

13. Call on the UN system and other relevant international and regional organizations to provide policy, analytical and technical support towards the development, functioning and management of corridors and to facilitate greater sharing of experiences within and between regions;

14. Note the dearth in readily available reliable and regular data to inform policy and monitor corridor performance and call on development partners to provide corridor member states and corridor management institutions with capacity building support to enhance regular collection and publication of key corridor performance data to support the effective monitoring and evaluation of the corridors and further encourage strengthening or establishment of observatories;

15. Request UN system organizations, international, and regional and sub-regional organizations attending the meeting in particular UN-OHRLLS, UNCTAD, UNECA, ESCAP, UNECE, European Union, African Development Bank, Asian Development Bank, EBRD, IRU, International Think Tank for LLDCs and others to continue providing financial and technical assistance to landlocked developing countries and transit countries on corridor development and management and to undertake comprehensive research evaluating the benefits of corridors for LLDCs, or evaluation of efficiency of corridor governance structures to fill the knowledge gap;

16. Further request all regional and sub-regional corridor organizations to actively participate in corridor development and management;

17. Call on international financing institutions, regional development banks, multilateral and bilateral donors, the private sector and international organizations to prioritize access and increase their funding to LLDCs and transit developing countries towards transit transport corridor development and management including by providing timely, predictable and sustained financial resources and technical support at the national, regional, inter-regional and international levels;
18. Request international financial institutions, UN system and international and regional organizations to provide technical support to LLDCs to enable them to formulate and implement bankable corridor infrastructure development projects more effectively and efficiently including for feasibility studies, the negotiation of complex contracts and project management;

19. Call for establishment of dedicated corridor development and management funds that countries can access and can be regional or and global;

20. Strengthen corridor management institutions to enhance cooperation and coordination along corridor routes, and promote information sharing;

21. Request international and regional organizations to provide technical support to LLDCs and transit countries to ensure that corridors are sustainable;

22. Stress that it is important for LLDCs and transit developing countries to be incorporated in the advancement of regional initiatives and receive the necessary support.

Acknowledgment
The Meeting expressed profound appreciation to the Government of Mongolia for generously hosting the meeting. The Meeting expressed gratitude to the substantive support of UN-OHRLLS and financial contribution by the Russian Federation. The Meeting also appreciated the active participation and substantive contributions by LLDCs, transit developing countries, development partners, UN system organizations, multi-lateral and regional development banks, other international and regional organizations, development partners, the private sector, think tanks and other stakeholders.