Review of the Implementation of the Vienna Programme of Action for the Landlocked Developing Countries for the Decade 2014-2024 in the Africa Region

UN-OHRLLS and UNECA

Background report for the High-Level Africa Regional Review Meeting of the Vienna Programme of Action for Landlocked Developing Countries for the Decade 2014–2024 held on 29 and 30 May 2023 at the Phakalane Golf Estate Hotel and Convention Centre, Gaborone, Botswana.

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) in collaboration with UNECA. UN-OHRLLS and UNECA gratefully acknowledges Dr. Gift Mugano for preparing the report.

Table of Contents

Acronyms

ACGF	African Credit Guarantee Facility
AfCFTA	African Continental Free Trade Area
AfT	Aid for Trade
AICD	Africa Infrastructure Country Diagnostic Study
AIDA	Accelerated Industrial Development for Africa
AUDA	African Union Development Agency
BADEA	Arab Bank for Economic Development in Africa
BIAT	Boosting Intra – African Trade
BOOT	Build Own Operate Transfer
CBM	Coordinated Border Management
COMESA	Common Market for Eastern and Southern Africa
CTTTFP	Comprehensive Tripartite Transport and Trade Facilitation Programme
COO	Certificate of origin
CPIS	Coordinated Port Information System
CVTFS	COMESA Virtual Trade Facilitation System
DFIs	Development Financial Institutions
DRC	Democratic Republic of Congo
DRM	Domestic Resource Mobilization
EAC	East African Community
ECCAS	Economic Community of Central African States
EU	European Union
FDI	Foreign Direct Investment
FTA	Free Trade Area
GDP	Gross Domestic Product
GERD	Grand Ethiopian Renaissance Dam
GVCs	Global Value Chains
ICTs	Information, Communication Technologies
IDA	International Development Assistance
IDB	Islamic Development Bank
IPPF	Infrastructure Projects Preparation Facility
IRENA	International Renewable Energy Agency
KFAED	The Kuwait Fund for Arab Economic Development
IT	Information Technology
ITU	International Telecommunication Union
JICA	Japan International Cooperation Agency
LAPSSET	Lamu Port Southern Sudan-Ethiopia Transport
LLDCs	Landlocked Developing Countries
MOU	Memorandum of Understanding
NEPAD	New Partnership for Africa's Development
NSWs	National Single Windows
ODA	Official Development Assistance
OECD	Organization for Economic Cooperation and Development
OSBP	One Stop Border Post
PICI	Presidential Infrastructure Champion Initiatives
PIDA	Program for Infrastructure Development in Africa
PPP	Public Private Partnerships
RVCs	Regional Value Chains
SEZs	Special Economic Zones
SAATM	Single African Air Transport Market
SADC	Southern African Development Community
SAPP	Southern African Power Pool
SDGs	Sustainable Development Goals

SFD	Saudi Fund for Development
SMEs	Small and Medium Enterprises
STEM	Science, Technology, Engineering and Mathematics
SSA	Sub Sahara Africa
TFA	Trade Facilitation Agreement
TAH	Trans African Highways
TFI	Trade Facilitation Index
TMEA	Trade Mark East Africa
TMSA	Trade Mark Southern Africa
TTTFP	Tripartite Trade and Transport Facilitation Programme
UN	United Nations
UNCTAD	United Nations on Trade and Development
UNDP	United Nations Development Programme
UNECA	United Nations Economic Commission for Africa
UNIDO	United Nations Industrial Development Organization
UN-OHRLLS	United Nations Office of the High Representative for Least Developed Countries, Landlocked Developing Countries and Small Island Developing States
UNOSSC	United Nations Office for South-South Cooperation
VPoA	Vienna Programme of Action
WCO	World Customs Organization
WHO	World Health Organization
WTO	World Trade Organization

Executive Summary

African landlocked developing countries, face special trade and development challenges, arising from their lack of territorial access to the sea and geographical remoteness from international markets. Out of the 32 landlocked developing countries (LLDCs), Africa hosts 16 landlocked developing countries, and 13 of these are also least developing countries. The overall socioeconomic development of LLDCs is severely constrained by remoteness and isolation from world markets, lack of territorial access to the sea, cumbersome transit procedures, multiple border crossings, high transit costs and inadequate infrastructure.

The Vienna Programme of Action (VPoA), which is also an integral part of the Sustainable Development Goals in the context of the 2030 Agenda for Sustainable Development and 'Agenda 2063: The Africa We Want, of the African Union', was adopted at the Second United Nations (UN) Conference on LLDCs held in Vienna, Austria, in November 2014. The VPoA's overarching goal is to help LLDCs achieve sustainable and inclusive growth and eradicate poverty.

The UN General Assembly, in its resolutions 76/217 and 77/246, decided to hold the Third UN Conference on landlocked developing countries in 2024 to, inter alia, undertake a comprehensive review of the implementation of the VPoA and formulate and adopt a renewed framework for international support to address the special needs of LLDCs. It also requested to hold national- and regional-level reviews as part of preparations for the Conference. This report reviews the status of implementation of the VPoA by identifying the progress made, best practices and lessons learnt as well as obstacles and constraints encountered and actions needed to overcome them.

This report reviews the status of implementation of the Vienna Programme of Action in the Africa Region focusing on the priority areas of the Vienna Programme of Action including: socio-economic development of LLDCs; Priority 1: Fundamental transit policy issues; Priority 2: Infrastructure development and maintenance focused on transport infrastructure, and energy and information and communications technology infrastructure; Priority 3: International trade and trade facilitation; Priority 4: Regional integration and cooperation; Priority 5: Structural economic transformation; and Priority 6: Means of implementation.

Overview of the Socio-Economic Development of African LLDCs and their Assessment of SDGs Performance

For the period 2015 – 2019, economic performance of African LLDCs was robust as real economic growth rates averaged 3.6 per cent, that is, higher than the growth rate of African economies of 2.8%. However, in 2020, the gains which had been witnessed in the last five years were reversed by the COVID-19 pandemic as African LLDCs witnessed significant economic contraction of 2.2 per cent while the African continent as a whole contracted by 3%.

In 2021, African LLDCs' real GDP growth rebounded by average of 3.2%, that is, lower than a 6.4% and a 4.7% average growth for developing countries and Africa as a whole, respectively.

Using the Human Development Index (HDI), which depicts the quality of life of citizens in any country (by narrowing on life expectancy, expected years in schooling and per capita income), and is directly linked to SDGs implementation, this report shows that, between 2014 and 2021, the HDI increased for 12 African LLDCs with the exception of Botswana, Chad, South Sudan and Zambia. In 2021, 10 African LLDCs recorded an HDI of at least 0.5, that is

up from 7 countries in 2014 (UNDP, 2022). This signifies improvement in the quality of life of citizens in the African LLDCs since the launch of the VPoA although this is below the average of the LLDC group and the world average.

With respect to the health indicators, since the launch of the VPoA, African LLDCs witnessed notable decline in the HIV prevalence rate.

However, due to a combination of limited economic opportunities in the labour market and negative effects of the COVID-19 pandemic, the unemployment rate for the African LLDCs' increased to 9.1 per cent in 2021 from 8.6% in 2014.

During the period under review, the combined effects of COVID-19 pandemic, the war in Ukraine, and climate change has undermined decade long gains in several SDGs which inter alia include zero poverty (SDG 1), zero hunger (SDG 2), good health and well-being (SDG 3), quality education (SDG 4), gender equality (SDG 5), clean water and sanitation (SDG 6), decent work and economic growth (SDG 6), reduced inequality (SDG 10) and climate (SDG 13).

In this report, African LLDCs are called upon to build resilience in food security and resilience of the African LLDC agricultural systems, provide social safety nets to vulnerable population, build a strong health system by investing into production of medicines and undertaking climate smart investments. Development partners are called upon to support establishment or strengthening emergency funds at national and regional levels that can be used during major crises.

Priority Area 1: Fundamental Transit Policy Issues

African LLDCs are party to regional agreements such as the Tripartite Transport and Transit Facilitation Programme, an initiative of the South African Development Community (SADC), the Common Market for Eastern and Southern Africa (COMESA) and the East African Community (EAC) which was launched on October 2017 as the successor programme to the Comprehensive Tripartite Transport and Trade Facilitation Programme, implemented until 2017 (UN-OHRLLS and UNECA, 2019). Likewise, the launch of the COMESA- EAC-SADC Tripartite Free Trade Area in June 2015, in Sharm el Sheikh, Egypt, strengthened the resolve of the 26 Tripartite States to implement various trade facilitation measures from which landlocked developing countries are set to benefit.

During the review period, the ratification and implementation of relevant international conventions by African LLDCs such as the TIR Convention and the International Convention on the Harmonization of Frontier Controls of Goods, however, remains low. 12 African LLDCs had ratified the Revised Kyoto Convention (UN-OHRLLS, 2021).

During the implementation phase of the VPoA, in African LLDCs, transit times and the associated costs were reduced as a result of the development of various transnational highways and corridors. For example, evidence shows that, after its completion, passenger journey time between Mombasa and Nairobi has been reduced from 10 hours in 2010 to 4 hours in 2019 while freight traffic time was reduced from 15 hours to 4 hours in the same period. The reduction in transit times and time spend at the borders was caused by development of both rail and road infrastructure as well as establishment of One Stop Border Posts (OSBPs). In extreme cases, as in the case of the Djibouti – Addis Ababa corridor, for example, transit times declined

from 4 days in 2010 to 12 hours in 2019. Likewise, transit costs also declined significantly during the period under review.

However, during the peak of the COVID-19 pandemic, these gains were reversed as countries instituted measures to curb the spread of the disease. Because lockdowns were introduced at different times, major delays occurred at borders such as Malaba on the Beitbridge on the South African/Zimbabwe border; Kazungula on the Zimbabwe/Zambia border) and Kenya/Uganda border. In some cases as all trucks were required to be offloaded and sanitized before being handed over to truck drivers from their own countries).

Over and above challenges associated with the COVID-19 pandemic, prolonged stopping of cargoes which characterise the transport system in Africa resulted in increased costs. Likewise, unharmonized rules for quota transport and cargo distribution for transit traffic resulted in inefficiencies in transport corridor gateways.

In view of the foregoing observation, development partners such as ECA, UN – OHRLLS, African Development Bank, UNCTAD, WCO, WTO and RECs have a strategic role in helping African LLDCs to ratify and implement policies, laws and regulations which are aimed at enhancing freedom of transit and transpose the international standards based on international conventions/agreements in national legislation. In this regard, it is important for international organizations to scale up technical assistance and capacity building support to LLDCs towards the effective accession, ratification and implementation of relevant international conventions and regional agreements.

Likewise, as part of measures aimed at mitigating the impact of COVID-19 pandemic on trade facilitation, digital solutions which inter alia include electronic versions of proof of compliance, contactless border control, mobile money payment options and electronic cargo tracking, should be used by African LLDCs' as part of the border modernisation process.

Priority Area 2: Infrastructure Development and Maintenance (Transport)

The most dominant mode of transport in Africa is road transport which accounts for 80 to 90 per cent of the passenger and freight traffic, followed by railways, air and inland waterways. The quality of African roads, when compared with comparator transit neighbours and global average, as well as LLDCs averages, are relatively poor. The average paved road density in African LLDCs is 10.59km per 1000 km^2, is nearly 50% of landlocked countries' average, that is, 24.66 km.

Of concern is the fact that the general pace of provision of railway infrastructure in Africa is low. Although all African countries have roads and air transport, albeit of varying degrees, 16 African countries are without railways, four of which are the LLDCs. Although Eswatini has the highest rail density among African LLDCs, the total African railway network of 74,775 km, which is mostly situated in North Africa and Southern Africa, has very low density, and has over 26,362 km of missing links.

In order to address the deficit in road transport, the Trans-African Highway, that is, a network of transcontinental road projects in Africa was mooted. It comprises nine highways with a cumulative length of 56,683 km (35,221 miles). Although this project was going to be a game changer, its operationalisation is continuously hampered by missing links and poor maintenance in some key segments.

In order to address these challenges, most regional economic communities have given priority to transport corridor projects that are aimed at addressing border procedures and other non-tariff barriers to trade and infrastructure gaps, with border posts facilitation being accorded the highest priority in interventions involving corridor transport value chains.

Evidence shows that since the launch of the VPoA there hasn't been meaningful progress made on the development of the transport infrastructure. Although several interventions are being implemented with a view to upgrade the transport infrastructure, the transport infrastructure in the African LLDCs remains largely constrained due to the need to rehabilitate and replace old fleets and upgrade airports and terminals; the high scale of investment needed for infrastructure development and maintenance; lack of physical and human resources and new technologies; poor airport infrastructures; limited connectivity; and lack of transit facilities.

In view of the foregoing observation, the following recommendations are proposed:

- It is critical that the Africa region and LLDCs, assisted by AUDA-NEPAD, and the RECs prioritize projects to the few that have greater impact on connectivity, economic development of LLDCs and other African states.
- LLDCs should ensure that there is a pipeline of bankable priority infrastructure projects for investment through the various funding mechanisms that have been identified in this report and the states should identify the various funding mechanisms for both project preparation and capital investment.
- Given that Africa's infrastructure gap continues to widen, there is urgent need to liberalize infrastructure investment and financing, through promotion of private sector investment and operations, underpinned by the implementation of the "user pays principle".
- LLDCs should accelerate preparation of projects to bankability in order to scale up investment, with focus on smart projects that impact more on economic transformation.
- In view of the fact that air transport connectivity and traffic volumes will continue to increase on a year by year basis, it is critical for the African Union to keep pushing for further liberalization of the skies within the framework of the Single African Air Transport Market (SAATM), in order to allow LLDCs to grow their networks within Africa.

Priority Area 2: Infrastructure Development and Maintenance (Energy)

In 2020, African LLDCs, 37% of the population had access to electricity up by 13 percentage points from 2014, when the VPoA was adopted (UNECA, 2022). However, energy access for African countries remains stubbornly low with an average of only 44% have access to electricity. Although the percentage of African LLDCs with access to electricity picked up to 37%, it still lags that for all LLDCs in the world of 60 per cent.

This report shows that, although the development of energy infrastructure is largely constrained by lack of funding, African LLDCs can leverage on diaspora remittances as observed in Ethiopia. In addition, investments in renewable energy presents massive opportunities for African LLDCs.

In view of the foregoing observation, the following recommendations are proposed:

- LLDCs and transit states need to accelerate preparation of power projects (including renewables) to enhance access to electricity to reduce the cost of doing business and enhance quality of life for citizens;
- Given the power shortfalls in some states on the one hand and excess power in other states, LLDCs need to scale up projects on cross border inter- connectors to enable LLDCs

experiencing power shortfalls to purchase power from neighboring countries to ensure energy security.

- In view of structural rigidities in energy supply, there is need for African LLDCs to increase investments in improving energy efficiency.
- In order to address challenges to access to power and energy resources, African LLDCs need to intensify the implementation of Rural Electrification Programmes to promote Universal Access to electricity. These are funded through public private partnerships and state fiscal mechanisms.
- There is need to scale up initiatives such as the light-up Africa by the African Development Bank.
- It is critical to ensure that development partners, among them the UN family renders support for capacity building at national, regional and continental levels;
- LLDCs need to take full advantage of climate funding especially for energy, water and transport projects, as these have proved to be a formidable force in funding of project preparation and capital investment.

Priority Area 2: Infrastructure Development and Maintenance (ICT Development)

African LLDCs have witnessed a significant increase in mobile cellular subscriptions, from 64.3 per 100 people in 2014 to almost 80 per 100 people in 2020. The use of internet in Africa increased from 27% in 2019 to 33% in 2021, while in the LLDCs the number of internet users increased from 29% in 2019 to 35% in 2021. Although this is a significant improvement, this is still far below the world average of 63%.

Likewise, in 2020, African LLDCs recorded major increases in subscriptions for active mobile broadband (37 per 100 inhabitants) and mobile-cellular telephone (79 per 100 inhabitants), and a small increase in subscriptions for fixed-broadband (3 per 100 inhabitants). In 2020, 53% of the population in the African LLDCs had access to 4G mobile network coverage, while 31% had access to 3G coverage, and 10% to 2G coverage.

In the African LLDCs, the opportunity to harness the benefits of the digital economy and, in particular, the optimization of emerging technologies that facilitate trade and spur sustainable development, is hampered by the high cost of ICTs. The technologies which are essential for trade facilitation inter alia include automated single windows, e-commerce, e-government and digital finance.

In view of this observation, African LLDCs should make concerted efforts to lower the high costs of broadband. In addition, African LLDCs should develop new policies related to digital identity, data security and data privacy, among others with a view to benefit from the digital economies, especially through digital trade.

In view of the foregoing observations, the following recommendations are proposed:

- LLDCs and transit countries should be encouraged to collaborate to establish ICT infrastructure, applications and services with the support of governments, private sector, development partners, multilateral financial and development institutions and regional banks.
- LLDCs should be encouraged to create appropriate enabling environment including the necessary policies, legal and regulatory framework to support ICT development in particular the development of broadband including enhancement of digital skills, promotion of digital inclusion, increased adoption and utilization of ICT applications and services and to close the digital divide.

- LLDCs should be encouraged to provide for mechanisms to facilitate the deployment of networks and services in non-profitable areas for operators, whether public investment, public-private scheme, or other types of incentive.
- There is need for LLDCs to work with cellular service providers with the view to reduce the cost of broadband access, which remains a major challenge, and can also be addressed in the medium term through increased licensing of service providers.
- The international community should provide capacity-building support to LLDCs to improve the business environment in and the ability to attract and retain the private sector in the ICT.

Priority Area 3: International Trade and Trade Facilitation

a) International Trade

Since the launch of the VPoA, the performance of exports of African LLDCs, African economies and LLDCs was a lacklustre. African LLDCs' share of merchandise exports in global exports has remained stubbornly low and flat hovering around at 0.24% in 2021, that is, 0.01% drop from 2014. This trend is consistent with the share of African and LLDCs' share of merchandise exports in global exports (UNCTAD, 2022). Africa's share of merchandise in global exports stood at 3% in 2014 but maintained a sustained marginal decline to 2.5% by 2021. LLDCs also witnessed a decline of their share of merchandise exports in global exports from 1.20% in 2014 to 0.98% in 2021 (UNCTAD, 2022). Likewise, the share of intra-African trade for African LLDCs is the lowest in the world at 6%, compared with the continental average of 16% (UNECA, 2020 and UNCTAD, 2022). To make matters worse, exports from African LLDCs remained undiversified and are largely constituted by ores and metals, agricultural commodities and mineral fuels.

As noted in trade in merchandise, since the launch of the VPoA, African LLDCs share of export of services to the global share of exports in services remained at 0.2%, that is, three times lower than LLDCs' share of export of services to the global share of exports in services. Likewise, African share of export of services remained fixed at 2% for five straight years, that is, 2014 – 2019 and then dropped marginally to 1.6% and 1.7% in 2020 and 2021, respectively (UNCTAD, 2022).

African LLDCs share of export of merchandise has remained stubbornly low, the following recommendations are proposed:

- African LLDCs must intensify the industrialization agenda through linkages with other regional and global value chains to create a win-win situation.
- As part of the industrialisation strategy, African LLDCs should consider expediting the establishment of special economic zones with a view to foster value addition and beneficiation.
- There is need to strengthen trade facilitation in the African LLDCs and transit countries with a view to reduce trade costs and delays which is key in integrating African LLDCs into global trade.
- With the support of RECs, African LLDCs should address barriers to international trade in services so as to harness the development potential of their economies. Boosting trade in services is key in improving economic performance and can provide a range of traditional and new export opportunities and it is vital for structural transformation.
- It is important to address tariff peaks, high tariffs, and tariff escalation, as well as non-tariff barriers imposed on manufactured goods from the LLDCs.

- The SMMEs form a large part of the private sector in the LLDCs and it is therefore necessary to enhance the capacity of the SMMEs to participate in international trade.

b) Trade Facilitation

The World Trade Organization (WTO) Trade Facilitation Agreement (TFA), which aims to address costs of trade that are caused by delays at borders and customs-related processes and procedures, is the main framework being used by African LLDCs to foster trade facilitation. Specifically, the TFA has three main objectives:

- Expedite the movement, release and clearance of goods, including goods in transit
- Improve cooperation between customs and other authorities
- Enhance technical assistance and build capacity for the implementation of the TFA

Since the adoption of the VPoA in 2014, African LLDCs and transit countries have made progress in the ratification of the TFA. By December 2020, all 14 LLDCs that are WTO members had ratified the Trade Facilitation Agreement[1]. With respect to transit countries, 15 out of 19 African transit countries had also ratified it[2].

However, the rate of implementation of the different provisions of the TFA for all African countries, including the African LLDCs varies. The average implementation rate of 35.3% for African LLDCs and 42.1% for Africa, indicating presence of capacity constraints amongst African LLDCs.

Notwithstanding notable progress made on trade facilitation, most LLDCs are severely constrained by inefficient procedures inside as well as outside their territorial borders. The competitiveness of LLDCs' exports is eroded by multiple border crossings and long distances from major markets and cumbersome border and transit procedures and inadequate infrastructure, which when combined, increase the trade costs and other transaction costs substantially. The following recommendations are proffered:

- OSBP and automated customs operations presents massive opportunity for easing trade facilitation in African LLDCs. OSBP was undoubtedly identified as a practical way to reduce duplication of procedures and reduce the clearance processing times. By reducing time lost, OSBP/JBP can also reduce the cost of transport for shippers and goods to consumers, thus accruing benefits across the national economic spectrum. Developing OSBPs will also help address the special needs of African LLDCs. In view of this, there is scope for African LLDCs to rollout OSBPs with a view to improve trade facilitation.
- Increased use of Automated customs operations which is implemented through the Automated System for Customs Data (ASYCUDA) is an integrated customs management system for international trade and transport operations in a modern automated environment which used to handle import, export and transit related procedures.
- In order to maximize trade opportunities for the region, Africa LLDCs should place emphasis to the implementation of trade facilitation initiatives. In this regard, several

[1] [1] Ethiopia and South Sudan are working on their accession to WTO and, until this is complete, they cannot be party to the Trade Facilitation Agreement.

[2] Algeria, Eritrea and Somalia are not WTO members, so they cannot be party to the Trade Facilitation Agreement. The Democratic Republic of the Congo, a WTO member, has not yet ratified the Trade Facilitation Agreement.

initiatives being implemented to facilitate trade in the region are one stop border post, tripartite Vehicle regulations and standards, third-party vehicle insurance, market liberalization measures, COMESA-EAC-SADC tripartite trade facilitation, COMESA virtual trade facilitation system, tripartite trade and transport facilitation program, African Union SMART corridor concept, national single windows, coordinated border management, harmonized road user charges and overload control.

Priority Area 4: Regional Integration and Cooperation

During the VPoA implementation period, the African Continental Free Trade Area (AfCFTA) was established with a view to, among others, mitigate the problems associated with overlapping membership. In addition, given that amongst the regional blocs, the AfCFTA is the minimum level of market integration that has been achieved and in order to further deepen regional integration and address challenges associated with overlapping membership and contradictory RECs, African states resolved to establish the AfCFTA.

Resultantly, on 30 May 2019, the economic integration of African economies reached a new milestone when the agreement establishing the AfCFTA entered into force after 24 countries deposited their instruments of ratification. The operational phase of the AfCFTA process was subsequently launched in Niamey, the Niger on 7 July 2019. As of February 2022, the Agreement has been signed and ratified by 54 and 41 African countries, respectively, including all Africa's LLDCs. African countries who ratified the AfCFTA have consented to liberalize up to 97% of tariff lines on intra-African trade in fifteen years' time. The agreement on AfCFTA is envisioned to result in reduced tariffs and the elimination of non-tariff barriers and more importantly expected to ease trade facilitation hurdles among the African LLDCs since it contains provisions on trade facilitation, transit and customs cooperation (UNECA, 2022).

Using the Regional Integration Index, this report shows that African LLDCs have not deepened their regional integration. The major binding constraints which are weighing heavily of African LLDCs are production constraints, lack of complementarity of goods, multiple membership, macroeconomic instability and shortage of key infrastructures such as transport, water and energy.

African LLDCs' quest to deepen regional integration has been severely constrained by capacity constraints especially in implementing ratified trading protocols, supply side constraints, lack of complementarity of goods, multiple membership, macroeconomic instability and shortage of key infrastructures such as transport, water and energy. In view of this observation, the following recommendations are proposed:

- Since all the African LLDCs have ratified the AfCFTA, policy measures aimed at building productive capacity are need as this is key in fostering intra-Africa trade, stimulating the much-needed manufacturing and economic development.
- LLDCs should make efforts to accelerate and champion deeper market integration at the regional and continental levels, as this paves the way for greater facilitation of movement of goods across the regional blocs and ultimately the continent, given that the key tenets of the WTO TFA are embedded in market integration provisions, with African LLDCs the key beneficiaries.
- Given that the RECs are the AU pillars for regional integration, it is critical that both transit and LLDCs follow through their commitments towards the ongoing regional market integration process in order to realize the full benefits of the process of regionalism.

Priority Area 5: Structural Economic Transformation

The value added from agriculture is generally high for most LLDCs in Africa ranging from 30% to 54%. However, 6 LLDCs have low value added share of agriculture varying from 6 to 12%. For the period 2014 – 2021, the overall agricultural share and share of manufactured value added of all the African LLDCs was generally steady although there were noticeable marginal changes. The share of manufactured value added, in particular, remained low for most countries with the exception of Eswatini with 27%.

Over the period under review, progress on structural transformation by African LLDCs has been slow. The absence of supportive industrial policies coupled with low investment flows and subdued local investors have undermined efforts towards value addition, technology and innovation.

In view of this observation, the following recommendations are suggested:

- In view of the fact that 60% of labour employment in agriculture with between 20 -40% contribution to the economy, African LLDCs can improve economic performance in this sector through enhanced agro-processing that provides value added opportunities.
- Through the use of SEZs, African LLDCs can leverage on the opportunities coming with the AfCFTA. However, in view of the fact that most African LLDCs and African economies in general have failed to use SEZs as a vehicle for industrialisation, there is need for development partners such as RECs, ECA, UNDP, African Development Bank and bilateral donors such as China to collaborate with African LLDCs in the establishment of SEZs.
- Regional SEZs, as noted in the case of Zimbabwe and Zambia, which is being supported by COMESA and ECA can be a classical example which can be used to drive the establishment of SEZs in African LLDCs.
- There is need for African LLDCs to participate in RVCs and GVCs. However, because of the complexity of value chains, development partners such as the African Development Bank, ECA, UN – OHRLLS, bilateral donors should provide technical assistance to African LLDCs.

Priority Area 6: Means of Implementation

As one of the priority areas of the VPoA, African LLDCs and their transit neighbours are required to effectively mobilize adequate domestic and external resources for the effective implementation of the Vienna Programme of Action.

Overall, total financial resources received by African LLDCs from official development assistance, foreign direct investments and remittances, combined, shows an upward trajectory from the year 2014 when VPoA was launched. In 2021, a total of $7.3 billion in FDI was received, a real increase of 3% since the VPoA was launched in 2014. This amounted to 0.45% of total global FDI inflows.

It is important to note that since the launch of the VPoA, FDI into African LLDCs maintained an upward trend save for the year 2020 when FDI inflows dropped to $4.9 billion due to the COVID-19 pandemic.

With respect to official development assistance, in 2020, African LLDCs received $21.5 billion, that is, a real increase of 34.3% since the adoption of the VPoA. However, official development assistance was unevenly distributed among them, with the top four countries receiving 46% of the total amount.

In 2022, the African LLDCs received $8.7 billion in remittances, which was $1.7 billion more than was received by the group in 2014. Remittance inflows to the African group were unevenly distributed, with the top four recipients (i.e., Zimbabwe, Uganda, South Sudan and Mali)accounting for 62% of inflows in 2022.

Based on the foregoing observation, compared to FDI and diaspora remittances, ODA has demonstrated as a major source of capital to African LLDCs.

The following recommendations are suggested:

- There is a need for African LLDCs to come up with innovative instruments which can direct remittances into direct investments. The diaspora investment vehicles, inter alia include diaspora bond, deposits account, transnational loans and special economic zones.
- African LLDCs must make concerted efforts in luring foreign direct investment which is crucial for the structural transformation of African LLDCs. These efforts would increase the value of domestic economies and link African LLDCs more effectively to global value chains, thereby helping them to achieve some of the priorities set out in the VPoA.
- In order to help African LLDCs effectively address the impact of the pandemic and sustain their post-pandemic recovery initiatives, official development assistance which include aid-for-trade support should be provided. Such support is needed to build the capacity to formulate trade policy, participate in trade negotiations and implement trade facilitation measures, finance trade, develop trade infrastructure, diversify exports and strengthen productive capacity, with a view to increasing their global market competitiveness.
- In addition, a comprehensive economic rescue plan that goes beyond emergency credit to enable LLDCs to effectively implement the VPoA is needed.
- LLDCs should strengthen their efforts in mobilizing domestic resources, including through carrying out reforms in tax administration, broadening the tax base and strengthening domestic capital markets.

Conclusion

African LLDCs have made efforts and progress towards the implementation of the Vienna Programme of Action. However, this progress has been slow, and more work needs to be done to address the special needs of LLDCs and support their achievement of the Sustainable Development Goals by 2030. In particular, the following observations were noted:

- During the implementation phase of the VPoA, in African LLDCs, transit times and the associated costs were reduced as a result of the development of various transnational highways and corridors. Regional infrastructure development projects such as Djibouti – Addis Ababa corridor, the Standard Gauge Railway and one stop border post in East Africa have significantly contributed to the reduction in transit times and transit costs.
- With respect to infrastructure development, significant progress has been made in construction and revamping of key trade infrastructures which inter alia include transport, borders and ICTs. Trans highways have been constructed under the AU's Presidential Infrastructure Champions Initiatives. However, significant backlog of rail, roads, OSPBs, ICTs and air transport is still outstanding due to a number of binding constraints which inter alia include drought of funding, limited capacity required to develop bankable projects and macroeconomic instability.

- In addition, African LLDCs have remained at the bottom of the value chains and continue to depend on a handful of commodities. This evidence shows that, in direct contrast with the VPoA's goal of fostering African LLDCs' participation in global trade, value addition, diversification and reduction of dependency on commodities.
- With respect to trade facilitation, most African LLDCs ratified the WTO TFA but implementation is low due to lack of capacity.
- On regional integration and cooperation and economic structural transformation, although African LLDCs are part to several RECs, they have not deepened their regional integration and as such intra-regional trade and their global trade has remained stagnant. African LLDCs' exports have remained concentrated few primary commodities. The major binding constraints which are weighing heavily on African LLDCs are production constraints, lack of complementarity of goods, multiple membership, macroeconomic instability and shortage of key infrastructures such as transport, water and energy.

In view of the fact that all the six areas of priority under the VPoA are still outstanding, there is need for rolling over these focus areas in the forthcoming programme. In addition, the following areas of focus must be included as part of the expanded programme:

- The AfCFTA and peculiar needs of the African LLDCs;
- Building resilience of African LLDCs: Post COVID-19 recovery; climate change adaptation and mitigation; and addressing external shocks caused by the war in Ukraine;
- Capacity building programmes covering aspects such as development of bankable projects, implementation of trade agreement and border controls.

1. Introduction

African landlocked developing countries[3], like other landlocked developing countries (LLDCs) face special trade and development challenges, arising from geographical remoteness from international markets and their lack of territorial access to the sea. Out of the 32 LLDCs, Africa hosts 16, and 13 of these are also least developing countries. The overall socioeconomic development of LLDCs is severely constrained by lack of territorial access to the sea, remoteness and isolation from world markets, cumbersome transit procedures, high transit costs, multiple border crossings and inadequate infrastructure.

In addition, the majority of the LLDCs are highly dependent on commodities exports, while a handful rely on tourism or remittances as the main source of their foreign exchange earnings, making them highly vulnerable to swings in external flows.

While the economic and social consequences of the COVID-19 pandemic spare no country or country group, African LLDCs are particularly exposed, due to their dependence on commodity exports of agricultural, mining and energy products and dependence on transit through neighbouring countries. The closing of land borders further isolates African LLDCs from world markets, making crisis mitigation difficult.

The Vienna Programme of Action (VPoA), was adopted at the Second United Nations (UN) Conference on LLDCs held in Vienna, Austria, in November 2014. The VPoA is also an integral part of the 2030 Agenda for Sustainable Development and Agenda 2063: The Africa We Want, of the African Union. The VPoA aims to address constraints and structural rigidities faced by LLDCs through six mutually reinforcing priority areas: fundamental transit policies; infrastructure development and maintenance (transport, energy and ICT); international trade and trade facilitation; regional integration and cooperation; structural economic transformation; and means of implementation (UNCTAD, 2018, UN-OHRLLS and UNECA, 2019). Its overarching goal is to help LLDCs achieve sustainable and inclusive growth and eradicate poverty.

The High-level Midterm review on the implementation of the VPoA for the decade 2014-2024, which was held in December 2019 adopted a political declaration that has a call for action to accelerate the implementation of the Vienna Programme of Action. Since 2019, the VPoA has been implemented together with the political declaration of the High – level Midterm Review.

The UN General Assembly, in its resolutions 76/217 and 77/246, decided to hold the Third UN Conference on LLDCs in 2024 to, inter alia, undertake a comprehensive review of the implementation of the VPoA and formulate and adopt a renewed framework for international support to address the special needs of LLDCs. It also requested to hold national- and regional-level reviews as part of preparations for the Conference. In this context this report ws prepared to serve as an important background document which will be used to facilitate the review of the implementation of the VPoA in the region.

This report provides comprehensive information, analysis and statistical data on recent progress and challenges in the implementation of the VPoA and of the Political Declaration of the High-level Midterm Review. The report also reviews the performance of the LLDCs on the Sustainable Development Goals and recent socio-economic development, and the progress

[3] Botswana, Burkina Faso, Burundi, the Central African Republic, Chad, Eswatini, Ethiopia, Lesotho, Malawi, Mali, the Niger, Rwanda, South Sudan, Uganda, Zambia and Zimbabwe.

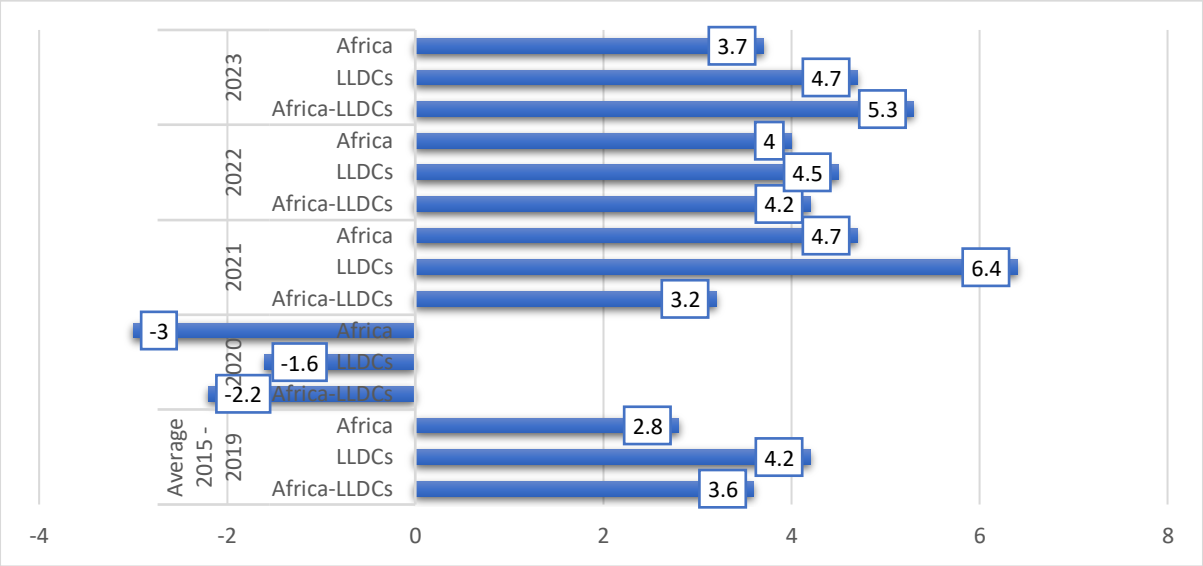
made in implementing the Roadmap for Accelerated Implementation of the VPoA, highlighting how the situation has evolved since the adoption of the VPoA, with a particular focus on how the challenges associated with landlockedness have continued to affect them. In addition, the report presents facts on what has worked well and what has not worked, and identifies any emerging challenges and opportunities facing the LLDCs. Furthermore, it highlights how the LLDCs have been affected by the overlapping crisis of COVID-19, the War in Ukraine and climate change. Finally, the report provides tailor made recommendations which are grounded on empirical underpinning.

2. Socio-Economic Development of LLDCs and their Assessment of SDGs Performance

2.1 Status and Progress on Social Economic Development of LLDCs and Assessment of SDGs Performance

For the period 2015 – 2019, economic performance of African LLDCs was somehow impressive as real economic growth rates averaged 3.6%, that is, higher than the growth rate of African economies of 2.8% (see figure 2.1). However, in 2020, African LLDCs witnessed significant economic contraction of 2.2% while the African continent as a whole contracted by 3% (see figure 2.1) (UN DESA, 2022). The negative growth rate which was observed in 2020 was mainly caused by lockdowns which were instituted to reduce the spread of the pandemic. These lockdowns resulted in massive disruptions in the local economies, global value chains and travel, which when combined, resulted in economic recessions across the globe (Mugano, 2020).

Figure 2.1: Economic growth of LLDCs in Africa, 2015–2023.



Source: United Nations Department of Economic and Social Affairs, *World Economic Situation and Prospects, 2021* (United Nations publication, Sales No. E.21.II.C.1).

At a country level, although all African LLDCs are vulnerable to exogenous shocks, the most vulnerable countries which were hard hit by the COVID-19 disruptions are Botswana (-7.8%), Lesotho (-9.5%), Zimbabwe (-8%), South Sudan (-7.2%), Rwanda (-3.4%) and Zambia (-3%). The vulnerability of these countries are mainly caused by the fact that their foreign exchange

is heavily centred on few commodities and tourism which suffered from lockdowns and the disruptions to supply chains. On the contrary, notwithstanding the negative impact of the COVID-19 pandemic, some African LLDCs that registered reasonable real growth rates in 2020 include Ethiopia (6.1%), Niger (3.6%) and Uganda (3%) (see table 2.1).

In 2021, African LLDCs' real GDP growth rebounded by average of 3.2%, that is, lower than a 6.4% and a 4.7% average growth for developing countries and Africa as a whole, respectively (Figure 2.1). The African LLDCs are projected to continue rebounding by an average of 4.2% in 2022 and 5.3% in 2023 (see figure 2.1). Of interest, a number of African LLDCs registered strong growth, that is, Botswana (5.7%), Niger (4.6%), Rwanda (4.5%), Zimbabwe (6.3%), Uganda (4.7%) and Burkina Faso (5%) (see table 2.1). In contrast, countries such as Chad, Central African Republic, Eswatini and Chad experienced the lowest growth rates of 0%, 0.9%, 1.4% and 1.5%, respectively (see table 2.1).

Table 2.1: African LLDCs Real Growth Rates (%)

Country	1999-2013a	2014	2015	2016	2017	2018	2019	2020	2021	2022b	2023f
Africa	4.6	3.3	2.8	1.7	3.3	3.4	2.8	-3	4.7	4	3.7
Burundi	2.9	4.2	-0.4	3.2	3.8	5.3	4.5	-0.3	2.9	3.5	3.2
Burkina Faso	5.7	4.3	3.9	6	6.2	6.7	5.7	1.9	5	5.5	5.3
Botswana	4.9	4.1	-1.7	4.3	2.9	4.5	3	-7.9	5.7	4.5	4.8
Central African Republic	-0.8	0.1	4.3	4.8	4.5	3.8	3	1	0	4.1	4.7
Ethiopia	8.8	10.3	9	8.5	8.2	7.6	8.9	3.5	3.5	4.9	7
Lesotho	4.1	1.7	3.1	3.6	-3.2	-1.2	-0.4	-9.5	3.6	4.6	6.8
Mali	9	7.8	7.5	8.9	6.7	6.8	6.6	-1.6	3	4.3	4.2
Malawi	4.1	6.2	3.3	2.7	5.2	3.9	5.2	0.8	2.5	4	4.3
Niger	4.4	7.5	4.3	5.7	5	7	5.8	3.6	4.6	7.1	7.9
Rwanda	8.8	6.2	8.9	6	4	8.6	9.4	-3.4	4.5	6.2	6.5
South Sudan	1.8	30.3	7.9	-7	-3.7	3.8	0.9	-7.2	2	2.2	8.9
Eswatini	3.2	0.9	2.3	1.3	2	2.4	2.2	-2.3	1.4	2.7	5
Chad	8.1	3.8	4.6	-2.7	-2.4	2.3	3	-0.9	1.5	3.6	3.8
Uganda	6.9	4.5	5.7	2.6	7.1	5.7	7.7	-0.8	3.9	4.7	4.6
Zambia	6.7	4.7	2.9	3.8	3.5	4	1.4	-3	1.5	0.9	4.5
Zimbabwe	3.3	2.4	1.8	0.8	4.7	4.8	-8.1	-8	6.3	4.1	4.2

Source: United Nations Department of Economic and Social Affairs, *World Economic Situation and Prospects, 2021* (United Nations publication, Sales No. E.21.II.C.1). *Notes*: [a] – average percentage change; [b] – partial estimates; [f] – forecasts.

Human Development Index (HDI), which depicts the quality of life of citizens in any country (by narrowing on life expectancy, expected years in schooling and per capita income), and is directly linked to SDGs implementation, is used in this report to showcase how African LLDCs performed with socioeconomic development since the launch of the VPoA. Between 2014 and 2021, the HDI increased for 12 African LLDCs with the exception of Botswana, Chad, South Sudan and Zambia. In 2021, 10 African LLDCs recorded an HDI of at least 0.5, that is up from 7 countries in 2014 (see table 2.3) (UNDP, 2022). This signifies improvement in the quality of life of citizens in the African LLDCs since the launch of the VPoA.

It is important to note that, although African LLDCs have made appreciable progress, the performance of all the African LLDCs is below the average of the LLDC group and the world average. In view of this observation, African LLDCs need to build on the current momentum to address the impediments which are constraining the quality of life for its citizens.

Table 2.3: Human Development Index for African LLDCs

Country	2014	2015	2016	2017	2018	2019	2020	2021	Change in HDI Rank (2015 – 2021)
Botswana	0.701	0.706	0.712	0.717	0.716	0.717	0.713	0.693	-6
Burkina Faso	0.405	0.412	0.420	0.423	0.449	0.425	0.499	0.500	2
Burundi	0.421	0.418	0.418	0.417	0.417	0.428	0.431	0.426	-2
Central African Republic	0.349	0.357	0.362	0.367	0.405	0.411	0.426	0.404	2
Chad	0.403	0.407	0.405	0.404	0.398	0.403	0.397	0.394	-1
Eswatini	0.580	0.584	0.586	0.588	0.607	0.615	0.610	0.597	4
Ethiopia	0.445	0.451	0.457	0.463	0.489	0.498	0.498	0.500	6
Lesotho	0.509	0.511	0.516	0.520	0.522	0.524	0.521	0.514	3
Malawi	0.468	0.470	0.474	0.477	0.510	0.519	0.516	0.512	4
Mali	0.414	0.418	0.421	0.427	0.430	0.433	0.427	0.428	1
Niger	0.345	0.347	0.351	0.354	0.399	0.406	0.401	0.400	2
Rwanda	0.509	0.510	0.520	0.524	0.528	0.534	0.532	0.534	0
South Sudan	0.397	0.399	0.394	0.388	0.395	0.393	0.386	0.385	-3
Uganda	0.500	0.505	0.508	0.516	0.522	0.525	0.524	0.525	-3
Zambia	0.580	0.583	0.586	0.588	0.572	0.575	0.570	0.565	-4
Zimbabwe	0.525	0.529	0.532	0.535	0.602	0.601	0.600	0.593	-1
World	**0.718**	**0.722**	**0.726**	**0.728**	**0.736**	**0.739**	**0.735**	**0.732**	

Source: UNDP Human Development Reports

At the launch of VPoA in 2014, only Botswana and Zambia were classified as medium human development (that is, 0.550 – 0.699) while 14 countries were classified as low human development (less than 0.550). However, in 2021, Eswatini and Zimbabwe entered the medium human development category, that is, adding the number of African LLDCs in the medium development category to four.

With respect to the international ranking, between 2015 and 2021, countries such as Botswana and Zambia dropped by 6 and 4 positions, respectively, notwithstanding the fact they remained in the medium category (see table 2.2). Likewise, countries such as Ethiopia, Lesotho and Malawi moved up the HDI global ranking by 6, 3 and 4 positions, respectively but remained in the low human development category (see table 2.2).

Overall, when juxtaposed with global average, evidence shows that all African LLDCs performed below the world average for the 2014 – 2021 period (UNDP, 2022). In order to improve the lives of the citizens, more work needs to be done especially in the areas of economic transformation, health and education.

With respect to the health indicators, since the launch of the VPoA, African LLDCs witnessed notable decline in the HIV prevalence rate. In 2014, the prevalence of HIV for Botswana, Lesotho, Eswatini, Zimbabwe and Zambia stood at 22%, 24.7%, 29.4%, 14.5% and 12.8%, respectively. In 2021, the prevalence of HIV for Botswana, Lesotho, Eswatini, Zimbabwe and Zambia dropped to 18.6%, 20.9%, 27.9%, 11.6% and 10.8%, respectively (see table 2.2).

Table 2.2 Prevalence of HIV, total (% of population ages 15-49)

Country Name	2014	2015	2016	2017	2018	2019	2020	2021
Burundi	1.3	1.3	1.2	1.2	1.1	1	1	0.9
Burkina Faso	0.9	0.9	0.8	0.8	0.7	0.7	0.7	0.6
Botswana	22	21.7	21.3	20.9	20.4	19.8	19.2	18.6
Central African Republic	4	3.8	3.6	3.4	3.2	3.1	2.9	2.7

Ethiopia	1.2	1.1	1.1	1	1	0.9	0.9	0.8
Lesotho	24.7	24.6	24.2	23.6	23	22.3	21.6	20.9
Mali	1.1	1	1	1	0.9	0.9	0.8	0.8
Malawi	10	9.7	9.5	9.2	8.8	8.4	8.1	7.7
Niger	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2
Rwanda	3.1	3	2.9	2.8	2.7	2.6	2.5	2.3
South Sudan	1.9	1.9	2	2	2	2	2.1	2.1
Eswatini	29.4	29.6	29.8	29.7	29.4	29.1	28.6	27.9
Chad	1.4	1.4	1.3	1.3	1.2	1.2	1.1	1.1
Uganda	6.1	6	5.9	5.8	5.7	5.5	5.4	5.2
Zambia	12.8	12.6	12.4	12.2	12	11.6	11.2	10.8
Zimbabwe	14.5	14.2	13.8	13.4	13	12.5	12.1	11.6
Sub-Saharan Africa	3.8	3.8	3.7	3.6	3.5	3.4	3.3	3.2

Source: World Bank World Development Indicators, 2022

Unemployment rate for the African LLDCs' stood at about 9.1% in 2021 up from 8.6% in 2014 (World Bank, 2022). The rise in the unemployment was due to a combination of limited economic opportunities in the labour market and negative effects of the COVID-19 pandemic.

Table 2.2: Unemployment (% of total labor force) (modelled ILO estimates)

Country Name	2014	2015	2016	2017	2018	2019	2020	2021
Burundi	1.6	1.6	1.6	1.6	1.6	1.6	1.7	1.8
Burkina Faso	4.2	4.3	4.4	4.6	4.7	4.7	4.9	4.8
Botswana	20.0	20.6	21.0	21.6	22.1	22.6	24.9	24.7
Central African Republic	5.5	5.6	5.7	5.6	5.6	5.6	6.4	6.6
Ethiopia	2.3	2.3	2.3	2.3	2.3	2.3	3.2	3.7
Lesotho	24.2	23.8	23.5	23.2	22.8	22.4	24.6	24.6
Mali	6.4	7.7	7.6	7.4	7.4	7.4	7.7	7.7
Malawi	5.9	5.9	5.8	5.8	5.8	5.8	6.7	7.0
Niger	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.8
Rwanda	1.2	1.1	1.1	1.1	1.1	1.1	1.5	1.6
South Sudan	12.2	12.3	12.3	12.3	12.2	12.2	14.0	13.9
Eswatini	24.0	23.3	22.7	22.8	22.8	22.8	25.5	25.8
Chad	1.0	1.1	1.1	1.1	1.1	1.1	1.7	1.9
Uganda	1.9	1.9	1.9	1.9	1.9	1.9	2.8	2.9
Zambia	9.4	10.1	10.9	11.6	12.0	12.5	12.8	13.0
Zimbabwe	4.8	4.8	4.8	4.8	4.8	4.8	5.4	5.2

Source: World Bank World Development Indicators

African LLDCs which recorded the highest unemployment rates in 2021 are Eswatini (25.8%), Botswana (24.7%) and Lesotho (24.6%) (see table 2.2). Countries such as Malawi and Zimbabwe recorded low unemployment rates of 7.7% and 5.2%, respectively, which favourably compares well with advanced economies yet they experience high levels of formal unemployment due to informality.

2.2 Challenges and Emerging Issues

Challenges and emerging issues which affected the African LLDCs during the period under review include the COVID-19 pandemic, war in Ukraine and climate change.

(a) COVID-19 Pandemic

During the period under review, that is, 2014 – 2022, the combined effects of the COVID-19 pandemic, war in Ukraine and climate change have also negatively affected the economies of African LLDCs thereby undermining their capacity to advance socio-economic development and the attainment of the SDGs. In the health sector, in particular, most African countries placed more focus on COVID-19 at the expense of other diseases thereby undermining progress achieved in the fight against Africa's most lethal diseases: malaria, TB and HIV/AIDS (IMF, 2021). Most African countries such as Burkina Faso and Niger shifted and refocused their thin resources on COVID–19 thereby posing risks of resurgence of malaria, TB and HIV/AIDS as the main causes of death in Africa which could lead to over a million excess deaths (IMF, 2021). As a result, between May and July in 2020, according to the World Health Organization (WHO), more than 50% decline in services ranging from provision of skilled birth attendants to the treatment of malaria cases were noticed in 14 African countries which include Burkina Faso, DR Congo, Mozambique, Niger, Nigeria and Tanzania. Ironically, these countries represent more than 50% of global deaths caused by Malaria in 2019 (WHO, 2021).

With respect to education, although there had been improvement on some indicators relating to quality education in LLDCs over the past 15 years, the COVID-19 pandemic caused major disruptions. Between March 2020 and November 2021, schools in 29 of the 32 countries were fully closed for an average of 20 weeks (United Nations, 2022). While schools have mostly reopened, costs in terms of learning losses persisted, especially in countries in which a lack of digital infrastructure limited e-learning options.

(b) Climate Change and Emerging Issues

In Africa, because of limited productive capacities and structural vulnerabilities, LLDCs are disproportionately exposed to the severe negative impacts of climate change. During the VPoA period, the impact of COVID-19 and war in Ukraine has exacerbated the existing vulnerabilities of LLDCs to climate change, especially drought, desertification, land degradation and melting of glaciers. Most LLDCs are located in dryland regions where the impacts of climate change, desertification and land degradation are more pronounced. 60% of the population in LLDCs is located in dryland areas and 54% of total land in LLDCs is classified as dryland. This increases the vulnerability of African LLDCs to global warming, desertification, and land degradation (UN-OHRLLS, UN DESA and IRENA, 2021). The situation is worsened by the fact that most LLDCs are dependent on a few mineral commodities and/or few primary agricultural and almost two thirds of the population is still dependent on agriculture (UN-OHRLLS, UN DESA and IRENA, 2021).

During the period under review, recurrent droughts in the Sahel region, Southern Africa and other regions with LLDCs have become more defined and resulted in food and water insecurity. In Southern Africa, the southern parts of Botswana have witnessed the drying of major dams resulting in acute shortage of supply safe of drinking water (UN-OHRLLS, UN DESA and IRENA, 2021). In Central Africa, in the last fifty years, as a result of high temperatures and droughts, the bulk of lake Chad has shrunk putting those dependent on the water source, at risk of losing their primary water supply.

During the implementation period of VPoA, African LLDCs were hit by several climate induced disasters ranging from heatwaves, cyclones, floods and droughts. During the period

under review, in African LLDCs, land covered by forests has declined steadily from 17.0 per cent in 2015 to 16.6 per cent in 2020 (UN-OHRLLS, UN DESA and IRENA, 2021). Extreme temperatures recorded in Southern Africa in 2019 shot up to 45°c in parts of Botswana, Zambia and Zimbabwe (UN-OHRLLS, UN DESA and IRENA, 2021). Likewise, on one hand while the frequency of droughts has been increasing, climate change resulted in more frequent extreme climate events which were characterised by storms, heavy rains and cyclones leading to destruction of infrastructure and loss of life. In 2019, for example, tropical cyclone Idai caused over 1,200 deaths in Malawi, Mozambique and Zimbabwe. Cyclone Idai caused irreversible damages to the agricultural sector and combined economic damages and infrastructure damages of $2.2 billion Idai across Mozambique, Madagascar, Malawi and Zimbabwe (UN-OHRLLS, UN DESA and IRENA, 2021). To make matters worse, in 2020, the number of African LLDCs reported loss of life or significant displacement of populations due to flooding, that is, Malawi, Mozambique, Ethiopia, Rwanda, Burundi, and Uganda. In 2020, in some Africa LLDCs such as Ethiopia, Rwanda, Burundi, and Uganda floods destroyed crops and swept away animals thereby causing food prices to go up. For example, in these countries, the price of maize increased from 14 to 41% in November 2020 while the price of soya bean increased from 9% to 25% (UN-OHRLLS, UN DESA and IRENA, 2021).

In 2021, climate change related natural disasters in African LLDCs weakened infrastructure (including rail, roads, hydropower plants, homes, schools and public buildings), imposing a direct cost on transit trade, which consequently puts constraints on the African LLDCs' capacity to compete on the global market. For example, at the beginning of 2021, some African LLDCs including Botswana, Malawi and Zimbabwe experienced devastating floods that destroyed bridges and road infrastructure (UN-OHRLLS, UN DESA and IRENA, 2021).

An empirical analysis of the impact of climate change on the economy by the African Development Bank (2019) revealed a lower GDP per capita growth ranging, on average, from 10 to 13 per cent (with a 50% confidence interval), with the poorest countries in Africa displaying the highest adaptation deficit.

The United Nations (2022) underscored that LLDCs are among the most vulnerable to climate change which limits their ability to invest in adaptation and mitigation. In most LLDCs, biodiversity loss, melting glaciers, recurrent droughts, desertification, land degradation and other disasters are imposing profound economic and social costs, especially as many landlocked developing countries are highly reliant on natural resources and agriculture.

(c) Conflict and Insecurity

In recent years, African countries in the Sahel region, in particular, witnessed a sudden rise in conflict and insecurity (Grun, Saidi and Bisca, 2020). For example, in September 2020, 1.5 million people were forcefully displaced and 5,300 people were killed at Tri-Border area between Burkina Faso, Mali, and Niger as a result of active combat between extremist armed groups, community militias, national security forces, and international military contingents (Grun, Saidi and Bisca, 2020).

Likewise, Mali has experienced a second coup d'état in less than a decade (United Nations High Commissioner for Refugees (UNHCR, 2020). According to the International Organisation for Migration (IOM, 2020) and Grun, Saidi and Bisca (2020), conflict in the Sahel is fuelled by a mix of climate risks, competition over dwindling resources, inter-communal tensions, low levels of service delivery, and few opportunities for sustainable livelihoods. For example, in the Sahel, since 75% of the region is too high to allow for sedentary herding, cross-border transhumance is the only solution for pastoralists yet rising insecurity makes cross-

border migration dangerous, while diminishing pastures has brought about a spike in farmer-herder conflict (World Bank, 2020).

These crises and the resulting political instability have exacerbated the economic challenges that those countries are facing due to the COVID-19 pandemic.

(c) War in Ukraine

War in Ukraine has further hindered Africa's capacity to recover from the COVID-19 pandemic. The war has negatively affected African economies through rising food and energy costs, disrupting trade, narrowing fiscal space and decreasing the flow of development funds throughout the region (United Nations, 2022). Likewise, as supply disruptions from the war rocked global markets, food grain prices continued to rise to even higher levels, exceeding 30% (United Nations, 2022). Human Rights Watch, 2022 observed that the war has worsened food security crisis in a number of African countries across the continent mainly because African countries largely depends on Russia and Ukraine on the supply of fertilisers, wheat and vegetable oils. African LLDCs which have significant share of imports of wheat from Russia and Ukraine, and are also likely to face direct impact of the war on food security are Uganda, South Sudan, Mali and Zimbabwe with 48%, 58%, 36% and 15%, respectively of their total wheat imports bill (Human Rights Watch, 2022).

Because of their landlockedness, African LLDCs were the most affected countries when lockdowns were instituted. Over and above the 55 million Africans which had been pushed into extreme poverty as a result of the COVID-19 pandemic, in 2022, 4.8 million Africans fell into poverty specifically due to the war in Ukraine; 2.3 million people in Africa became highly vulnerable to fall into poverty; 4.5 million people in Africa became moderately vulnerable and 6.7 million people in Africa became slightly vulnerable to fail in to poverty; and 1.9 million people were chronically poor in 2022 (United Nations, 2022). The most affected African LLDCs are Ethiopia, Botswana, Niger, Uganda and Zimbabwe.

African LLDCs should consider the following measures with a view to build resilience against current and future shocks:

- **Pharmaceutical sector:** with a population of 1.3 billion people and the expected demand of medicines to grow from $19 billion in 2016 to $62 billion by 2024, Africa offers a large market for pharmaceuticals (McKinsey and Company, 2021). But it imports 99% of the vaccines it uses, and African manufacturers meet less than 2% of the continent's demand for medicines (Mckinsey and Company, 2021). Manufacturing of local medicines presents African economies and the African LLDCs, in particular, is further reinforced by the fact that African economies manufacture less than 2% of the continent's demand for medicines and import 99% of total vaccines required (Mckinsey and Company, 2021). Manufacturing of local medicines, if taken up, is expected to significantly contribute to import substitution, creation of fiscal space for African Governments in the backdrop of rising government debt, job creation and health systems' resilience.

  However, this requires African countries to make concerted efforts to investments into the pharmaceutical industry with a view to scale up manufacturers from the 375 drug makers to match with China and India, which have similar population, but have 5,000 and 10,500 drug manufacturers, respectively (Mckinsey and Company, 2021).

- **Agricultural Sector:** in view of Africa's heavy reliance on food imports amounting to $35 billion annually and anticipated growth in population to 9 billion by 2050, agricultural transformation provides massive opportunities for African economies including the African

LLDCs (African Development Bank, 2016). This is particularly so because the continent has 65% of its uncultivated arable land which can be used to build the continent's food security and feed the world. In this regard, in the continent's agricultural transformation, African governments must create a business environment to move Africa to the top of the agricultural value chains. This will require significant development of rural infrastructure, provision of affordable finance, investments in raising agricultural productivity, as well as incentives for the private sector to establish food processing and agro-allied industries in rural areas.

In this regard, African economies and African LLDCs can leverage on the African Development Bank's Feed Africa Strategy which aims to invest $24 billion over the next ten years in support of African agricultural transformation (African Development Bank, 2016). This provides scope for the UN-OHRLLS, ECA, FAO and other developing partners to collaborate with the African Development Bank in providing technical assistance to African governments in developing the roadmap and strategies for agricultural transformation.

- **Establishment or strengthening of emergency funds initiatives at community, national and regional levels:** Establishment or strengthening of emergency funds that could be used during crises is critical. For example strengthening of assistance grants that were established in response to COVID-19 such as African Development Bank's emergency assistance grant, the IMF's Natural Disaster Response and Assistance Trust Fund etc.

2.3 Conclusion and Recommendation

During the period under review, the combined effects of COVID-19 pandemic, war in Ukraine, climate change and political instability has undermined decade long gains in several SDGs which inter alia include zero poverty (SDG 1), zero hunger (SDG 2), good health and well-being (SDG 3), quality education (SDG 4), gender equality (SDG 5), clean water and sanitation (SDG 6), decent work and economic growth (SDG 6), reduced inequality (SDG 10) and climate (SDG 13).

In order to meet the 3% Sustainable Development Goal target by 2030, Africa's per capita consumption would need to grow by 10.25% per annum (African Development Bank, 2020). Between 2020 and 2030, as argued by African Development Bank (2020), if historical trends persist, an average African country would have to more than double its average annual consumption.

In view of the foregoing observations, the following recommendations are suggested:

- **Fiscal support**: building on already existing social safety nets, as noted in Uganda, Rwanda, Mali, Burkina Faso and Niger, there is need for African LLDCs to provide substantial fiscal support to maintain consumption, prevent job losses and cushion the socioeconomic impacts of the COVID-19 pandemic. Measures included direct cash transfers (Rwanda and Uganda), food distribution (Burkina Faso and Niger) and fee waivers for basic services to households and businesses (Mali) (UNECA, 2022). Rwanda, for example, doubled fiscal spending on social protection to 3.3% of GDP, an increase of $2.2 billion. This has helped Rwanda to extend the health insurance to the entire population in Rwanda and reduced out of pocket spending to 14% which is well below Africa and globally set targets (UNECA, 2022).

- **Building food security and resilience of the African LLDC agricultural systems:** in order to mitigate against soaring food prices caused by external shocks such as climate change, disruptions caused by the COVID-19 and war in Ukraine, African LLDCs need to build a strong agribusiness system and agricultural transformation, which combined, can help African LLDCs to increase agricultural production.

  In this regard, African economies and African LLDCs can leverage on the African Development Bank's Feed Africa Strategy which aims to invest $24 billion over the next ten years in support of African agricultural transformation (African Development Bank, 2016). This provides scope for the UN-OHRLLS, ECA, FAO and other developing partners to collaborate with the African Development Bank in providing technical assistance to African governments in developing the roadmap and strategies for agricultural transformation.

  Similarly, African countries and African LLDCs, in particular, can leverage on the African Development Bank's recently launched Emergency Food Production Facility which aims to raise food production in Africa to 38 million tonnes by the end of 2022 by providing smallholder farmers with certified seeds and fertilizers. The initiative aims to address the food shortages caused by the disruption of food supplies from Ukraine and Russia, estimated at about 30 million metric tonnes of wheat, maize and soybeans that the continent imports from the two countries.

- **Climate smart investment opportunities:** African LLDCs can leverage on the Liquidity and Sustainability Facility (LSF) amounting to $100 million which was concluded by ECA and African Export - Import Bank (Afreximbank) on 14 November 2022 with a view to lower the costs of borrowing for African sovereigns by turning African sovereign bonds into liquid assets. The LSF is an initiative to build a repurchasing or 'repo' market for Africa in the same way that such markets have been instrumental in the Americas and Europe and also in emerging markets in Asia to reduce the risk of bond issuances and stimulate demand. Providing African sovereigns and private investors with a liquidity structure on par with international standards is needed as a transition instrument to invest more in sectors such as energy. Indeed, when the bonds are ready to be repurchased', they go into a less risky basket, which opens new opportunities. This first transaction marks the full operationalization of the LSF's business model, enabling it to start fulfilling in earnest its two objectives of supporting the liquidity of African Sovereigns Eurobonds, and incentivizing SDG-related investments such as SDG and green bonds on the African continent. Africa can save up to an estimated US$11 billion over the next five years on its costs of borrowing.

- **Establishment or strengthening of emergency funds initiatives at community, national and regional levels:** It is important to establish or strengthen emergency funds that could be used during crises.

3. Review of the Implementation of the Vienna Programme of Action in the Africa Region

This section reviews the status of implementation of the Vienna Programme of Action in the Africa Region, identifies the challenges and opportunities, focusing on the priority areas of the Vienna Programme of Action including: Priority 1: Fundamental transit policy issues; Priority 2: Infrastructure development and maintenance focused on transport infrastructure and energy and information and communications technology infrastructure; Priority 3: International trade and trade facilitation; Priority 4: Regional integration and cooperation; Priority 5: Structural economic transformation; and Priority 6: Means of implementation. The section also makes recommendations under each priority area for consideration for the next programme for LLDCs.

3.1 Fundamental transit policy issues

Adequate transit facilities and freedom of transit are vital for the overall development of LLDCs. It is against this background that the Vienna Programme of Action emphasises the importance of a strong supportive legal framework that promotes the harmonization, simplification and standardization of rules and documentation, including the full and effective implementation of relevant international conventions on transport and transit (UNECA, 2021).

The priority on fundamental transit policy issues inter alia seeks to: (a) reduce travel time along corridors, with the aim of allowing transit cargo to move a distance of 300 to 400 kilometres every 24 hours; (b) significantly reduce the time spent at land borders; and (c) significantly improve intermodal connectivity, with the aim of ensuring efficient transfers from rail to road and vice versa and from port to rail and/or road and vice versa.

(a) Progress and Current Status of Ratification and Implementation of International Conventions on Trade and Transport Facilitation

Since the adoption of the Vienna Programme of Action, the ratification and implementation of relevant international conventions by African LLDCs such as the TIR Convention and the International Convention on the Harmonization of Frontier Controls of Goods, however, remains low (see table 3.1).

Table 3.1: Status of ratification of key international conventions to promote trade and transport facilitation, as of 2021

Convention or agreement	African LLDCs	African transit countries	World total
Revised Kyoto Convention (2006)	12 (75%)	9 (47%)	123
TIR Convention (1975)	0	0	73
International Convention on the Harmonization of Frontier Controls of Goods (1982)	1 (6%)	1(5%)	58

Source: World Trade Organization, World Customs Organization and Office of Legal Affairs of the Secretariat.
Note: *- refers to percentage of the total landlocked developing countries or transit countries.

A limited number of LLDCs and transit countries in Africa which inter alia include Botswana, Burundi, Ethiopia, Lesotho, Malawi, Rwanda, Uganda, Zambia and Zimbabwe are party to international conventions on transport and transit (UN-OHRLLS and UNECA, 2019). Likewise, with respect to the implementation of the Revised Kyoto Convention, which aims to harmonise and simplify customs procedures, only 12 African LLDCs had ratified (see table 3.2) (UN-OHRLLS, 2021).

In the same vein, the status of the implementation of Transport Agreements and Conventions shows that the majority of the African LLDCs have not yet ratified them notwithstanding their importance (see table 3.2) (UN-OHRLLS, 2021).

Table 3.2: Status of ratification of conventions related to border crossing facilitation

Convention	LLDCs				Total
	Africa	Asia	Europe	Latin America	
1975 Customs Convention on the International Transport of Goods under Cover of TIR Carnets (TIR Convention), entered into force on 20 March 1978	0	7	4	0	11
1982 International Convention on the Harmonization of Frontier Controls of Goods (Geneva Convention), entered into force on 15 October 1985	1	7	0	0	8
1972 Customs Convention on Containers	1	3	3	0	7
1968 Convention on Road Signs and Signals	1	6	4	0	11
1956 Convention on the Contract for the International Carriage of Goods by Road (CMR)	0	6	4	0	10
1956 Customs Convention on the Temporary Importation of Commercial Road Vehicles	0	3	3	0	6
Total	**3**	**32**	**18**	**0**	**53**

Source: United Nations (https://treaties.un.org). Accessed on 21 January 2023.

However, all African LLDCs are party to regional and sub-regional agreements aimed at facilitating ease of movement of goods and people in the region. A good example of such agreement is the Tripartite Transport and Transit Facilitation Programme, an initiative of the Southern African Development Community (SADC), the Common Market for Eastern and Southern Africa (COMESA) and the East African Community (EAC) which was launched on October 2017 as the successor programme to the Comprehensive Tripartite Transport and Trade Facilitation Programme, implemented until 2017 (UN-OHRLLS and UNECA, 2019). Likewise, the launch of the COMESA- EAC-SADC Tripartite Free Trade Area in June 2015, in Sharm el Sheikh, Egypt, strengthened the resolve of the 26 Tripartite States to implement various trade facilitation measures from which LLDCs are set to benefit.

(b) Reviewing the Impact of Ratification and Implementation of International Conventions on Trade and Transport Facilitation and Regional Trading Protocols

In the last decade African LLDCs witnessed rapid construction and rehabilitation of key infrastructures which inter alia include road, rail and ports (see section 3.2.1). This was accompanied with harmonisation and simplification of trading rules such as establishment of one stop border post. These interventions resulted in: (a) reduction in travel time along corridors; (b) significant reduction of the time spent at land borders; and (c) improvement of intermodal connectivity, through efficient transfers from rail to road and vice versa and from port to rail and/or road.

During the implementation phase of the VPoA, in African LLDCs, transit times and the associated costs were reduced as a result of the development of various transnational highways and corridors.

Regional infrastructure development projects such as Djibouti – Addis Ababa corridor and the Standard Gauge Railway and one stop border post in East Africa have significantly contributed to the reduction in transit times and transit costs.

For example, the development of the Djibouti – Addis Ababa railway line has seen reduction of transit time from three to 4 days in 2010 to a mere 12 hours in 2019.

Likewise, the Nairobi – Mombasa Standard Gauge Railway which was opened in 2017, connects Mombasa with Kenya's hinterland, Uganda, Rwanda, South Sudan and Eastern DRC is expected to have significant regional impact. Travel time between Mombasa and Nairobi is projected to decline from 12 hours to 4 hours and freight trains will carry 25 million tonnes a year (NEPAD, 2020). Transport costs per ton per kilometre are expected to be reduced from $0.20 in 2010 to $0.08 in 2019 (NEPAD, 2020). As a result of this project, in 2025, rail transport for Kenyan cargo from the ports into the hinterland is expected to reach 40% of the cargo traffic from a mere 5% of total before the project was established (NEPAD, 2020).

In addition, evidence shows that, after its completion, passenger journey time between Mombasa and Nairobi has been reduced from 10 hours in 2010 to 4 hours in 2019 while freight traffic time was reduced from 15 hours to 4 hours in the same period (NEPAD, 2020). In addition, transit time for through traffic to other destinations is projected at 1 day which was impossible with road transport (NEPAD, 2020).

Going forward, further plans are aimed at linking the Nairobi – Mombasa Standard Gauge Railway branch to link Juba and Mombasa. This is expected to replicate the existing benefits when traffic switches from road to rail. Other savings are expected from reduction in road transport, damage to roads, reduced congestion and reduction in transit costs.

In addition, in East Africa, developments which were undertaken by national governments have resulted in reduction in transit times. These developments included, inter alia: weighbridges improvements and rationalization; port capacity expansion in Mombasa, Lamu in Kenya, Dar es Salaam, Mwambani and Bagamoyo in Tanzania; the establishment of one stop inspection stations (OSIS) along the Central Corridor; and the establishment and operationalization of One-Stop Border Posts (OSBPs) at border interfaces within EAC and with other adjoining RECs. These projects, combined, have reduced the transit traffic travel times between the ports of Mombasa and Dar es Salaam to the LLDCs by up to 60% on average (NEPAD, 2020).

OSBPs were noted as effective vehicles which can be used by African LLDCs to reduce time spend at the border. For example, the recently opened OSBP at the Kazungula Bridge between Zambia and Botswana has already resulted in a significant reduction in the time it takes hauliers to cross the border from 40 hours in April 2021 to 22 hours since the multi – modal linkage was opened on 10 May 2021 (Southern African Freight News, 2021). Although this is a remarkable progress, the time spent at Kazungula Bridge is 3 hours higher than spent in at the border in East Africa (NEPAD, 2020).

Likewise, on 7 December 2022, Malawi and Zambia commissioned OSBP, that is, Mchinji/Mwami OSBP.

As part of the strategies by SADC Member States to reduce time spent at the border and in transit, five SADC countries namely Botswana, Malawi, Namibia, Zambia and Zimbabwe are voluntarily participating in the Corridor Trip Monitoring System (CTMS) pilot (United Nations Office for the Coordination of Humanitarian Affairs (OCHA), 2023). This project is being implemented on sections of the Trans Kalahari, Walvis Bay-Ndola-Lubumbashi, Beira, Nacala and North-South Corridors (OCHA, 2023).

Although SADC is providing leadership in the implementation of the CTMS, the initiative is a brainchild of the three Regional Economic Communities - COMESA, EAC and the SADC - under the Tripartite Arrangement. When this initiative was mooted, it aimed at facilitating safe regional trade and transport facilitation, tourism and the reopening of economies following disruptions caused by the COVID-19 pandemic (OCHA, 2023). In this regard, in the short term, the CTMS supports the implementation of Tripartite and SADC guidelines on the movement of goods, persons, and services during COVID-19 pandemic (OCHA, 2023). In the

long term, CTMS has been developed as a primary Corridor Performance Management tool in support of the implementation of "Smart Corridors" (OCHA, 2023).

From a financing perspective, the CTMS is one of the many outputs of the €21 million EU-funded TTTFP which is aimed at facilitating the development of a more competitive, integrated and liberalised regional road transport market in the COMESA-EAC-SADC Region (OCHA, 2023). Complementary funding has been received from the Germany Government, especially for supply of CTMS equipment, its deployment at selected borders, and training of staff.

Likewise, in February 2017, Uganda, Kenya and Rwanda, launched a regional electronic cargo tracking system (RECTS) with a view to reduce time spend at the border and in transit (Elisa, 2023). Implementation of RECTS has seen 20% of cargo subjected to e-monitoring resulting in reduced transit time from 6 to 3 days for regional, and 3 to 1.5 days for national transactions improved truck turnaround time from 4 to 8 trips a month and suppressed transit diversion and improved trade facilitation (Elisa, 2023). In addition, Uganda commenced roll out of the EAC e-Passport in January, 2019 to visa-free access to countries outside the region, thus enhancing both trade and travel (Elisa, 2023).

Likewise, in September 2022, Zimbabwe launched a brand new border post at the Beit Bridge border post which was reconstructed by the private sector at a cost of US$300 million through a 17.5 years build, operate and transfer arrangement (Chitopo, 2023). This is expected to provide expanded gateways into Zimbabwe which is expected to provide a seamless movement of both traffic and people. This is anticipated to reduce long queues which would stretch to 300km and 36 hours waiting time to 3 hours (Emerging Africa Infrastructure Financing, 2023).

(c) The Impact of COVID-19 on Cross – Border and Transit Freight Transportation

For LLDCs in general, pandemic-related restrictions which were instituted on cross-border and transit freight transportation with a view to curb the spread of the COVID-19 pandemic resulted in major trade bottlenecks, engendering high costs, supply chain disruptions and increased transportation times (United Nations, 2022).

In Africa, between January and May 2020, the situation was worsened by the fact that 90% of all freight is carried by road transport and the presence of low levels of digitalization and automation in border crossings between LLDCs and transit neighbours (UN-OHRLLS, 2021).

Because lockdowns were introduced at different times, major delays occurred at borders such as on the Beitbridge on the South African/Zimbabwe border; Kazungula on the Zimbabwe/Zambia border) and Malaba on Kenya/Uganda border. In some cases as in Rwanda all trucks were required to be offloaded and sanitized before being handed over to truck drivers from their own countries (UN-OHRLLS, 2021).

For example, on all routes along the Northern Corridor and along the Mombasa-Malaba route, cargo transit times worsened from 7 days in the first quarter of 2020 to 11 days by the second quarter and remaining relatively high in the third quarter (UNECA, TradeMark East Africa and African Economic Research Consortium, 2021). Likewise, between February and April 2020, delays at the Malaba border increased from 2 hours in February to 8 hours in April (UN-OHRLLS, 2021).

(d) Challenges and Opportunities

Pandemic-related restrictions which were instituted on cross-border and transit freight transportation with a view to curb the spread of the COVID-19 pandemic resulted in major trade bottlenecks, engendering high costs, supply chain disruptions and increased transportation times. Some of the key challenges affecting African LLDCs and opportunities are as follows:

- **Port Congestion – (**Frederic, Huang and Mao, 2021) noted that prolonged stopping of cargoes which characterise the transport system in Africa resulted in increased costs, increased stacking of cargoes in the port and increase in congestion in the port, reduced storage capacity of the port and increasing the logistics costs of the system. In addition, as a result of insufficient parking in areas inside and outside, African ports are characterised with truck blockages.
- **Inland Transport Cargo Allocation** – inadequate rules for quota transport and cargo distribution for transit traffic resulted in inefficiencies in transport corridor gateways (Frederic, Huang and Mao, 2021). Although African LLDCs are allocated shares of inland transport cargo, these allocations are rarely enforced because measures for the distribution of freight are not yet perfect. For example, in the Douala-N'Djamena transport corridor, the Central African Republic and Cameroonian operators are respectively allocated 65% and 35% of freight. However, evidence shows that Cameroonian transport companies receive a 71% of the Douala-N'Djamena transport corridor instead of 35%.
- Use of digital solutions at the border – although the COVID-19 pandemic has softened, the use of digital solutions at the border presents opportunities for African LLDCs to modernise their processes. Building on existing experience witnessed in EAC, in particular, digital solutions which can be considered inter alia include electronic versions of proof of compliance, contactless border control, mobile money payment options and electronic cargo tracking (UNECA, 2020d).

(e) Recommendations

In view of the foregoing observations, the following recommendations are proposed:

- Development partners such as ECA, UN-OHRLLS, African Development Bank and RECs have a strategic role in helping African LLDCs to ratify and implement policies, laws and regulations which are aimed at enhancing freedom of transit and transpose the international standards based on international conventions/agreements in national legislation. In this regard, the specific roles of international organizations are to scale up technical assistance and capacity building support towards the effective accession, ratification and implementation of relevant international conventions and regional agreements.
- Digital solutions which inter alia include electronic versions of proof of compliance, contactless border control, mobile money payment options and electronic cargo tracking, should be used by African LLDCs' as part of the border modernisation process.
- LLDCs and transit countries should be encouraged to use available tools to promote transit such as the WCO Transit Guidelines with a view of supporting economic development of LLDCs.
- LLDCs and transit countries should be encouraged to strengthen or adopt a corridor approach to improve transit. UN-OHRLLS, UNECA, UNCTAD, and other relevant partners are invited to provide technical support.
- The use of other mechanisms to monitor travel time along transit transport corridors like the WCO Time Release Studies should be encouraged. Countries and relevant regional organizations should be encouraged to publish the main findings detailing challenges leading to major delays and make recommendations on solutions to these challenges.
- The continent should move with speed to implement the SMART Corridor concept, which embraces all aspects of elimination of non-tariff barriers to trade, underpinned by the WTO Trade Facilitation Agreement.

- In view of the fact that failure to ratify conventions on trade facilitation can be considered as a commercial risk by investors, African LLDCs that are yet to ratify conventions and agreements facilitating border crossing must be encouraged to do so.
- African LLDCs should be encouraged to reach out to the international entity that manages a particular agreement/convention, for technical assistance to interpret the agreement/convention, understand its benefits, reflect it in the national laws and legislations as well as assistance to facilitate implementation.
- Policy measures that are developed to facilitate border crossing trade should ensure sustained political support by the government, incorporate the interest of the private sector and the interest of donors.
- UN-OHRLLS and other relevant international organizations should facilitate sharing of information on international best practices.

3.2 Infrastructure Development and Maintenance

The combined effects of the infrastructure deficit in Africa and the resulting high costs of logistics remains a primary constraint to growth. UNECA, 2022 observed that the development of accessible and predictable solutions in the transport, energy and information communications technology (ICT) sectors is hindered by insufficient quantity of physical infrastructure, and high prices.

3.2.1 Transport Infrastructure

In Africa, the most dominant mode of transport is road transport, followed by railways, air and inland waterways (UNECA, 2022). Eighty % to 90% of the passenger and freight traffic is covered by road transport, but the average road access rate in Africa or the percentage of people with access to road, is 34% as compared to 50% in other developing countries (UNECA, 2022). Similarly, the following 5 African LLDCs do not have navigable waterways, that is, Botswana, Burkina Faso, Eswatini, Ethiopia and Lesotho (UNECA, 2022).

The quality of African roads, when compared with comparator transit neighbours and global average, as well as LLDCs averages, are relatively poor. The average paved road density in African LLDCs is 10.59km per 1000 km^2, which is nearly 50% of global LLDCs' average, that is, 24.66 km (UNECA, 2022). The disparity of the quality of roads are even wider when compared with transit developing countries (191.4 km per 1000 km^2) and global average (151 km per 1000 km^2) (see table 3.3).

Table 3.3: Paved road and railway density of LLDCs

Region	Paved road density (km per 1 000 km^2)	Rail density (km per 1 000 km^2)
East and Southern Africa	34.7	5.7
West and Central Africa	3.5	2.3
All LLDCs	19.1	3.6
Transit developing countries	191.4	8.6
Global	151.0	9.5

Source: UN-OHRLLS, "Financing Infrastructure in the Transport Sector in Landlocked Developing Countries: Trends, Challenges and Opportunities", 2018. Available at http://unohrlls.org/custom- content/uploads/2018/09/landlocked developing countries_Report_18_digital_Final.pdf (accessed on 15 January 2023).

Rail is the second most dominant mode of transport in Africa (UNECA, 2022). Many African LLDCs are linked to the sea by rail. By nature, rail transport offers economies of scale arising from bulk carriage which is ideal for landlocked developing countries to transport their low-value bulk goods. In addition rail transport offers shorter and more reliable transit times due to fewer stops in transit and shorter border-crossing waiting times and fewer enroute delays which result in cost savings.

Of concern is the fact that the general pace of provision of railway infrastructure in Africa is low. Although all African countries have roads and air transport, albeit of varying degrees, 16 African countries are without railways, four of which are the LLDCs, that is, Burundi, the Central African Republic, Chad and the Niger (UNECA, 2022). Although Eswatini has the highest rail density among African LLDCs, the total African railway network of 74,775 km, which is mostly situated in North Africa and Southern Africa, has very low density, and has over 26,362 km of missing links (UNECA, 2022).

In order to address the deficit in road transport, the Trans-African Highway, that is, a network of transcontinental road projects in Africa was mooted. It comprises nine highways with a cumulative length of 56,683 km (35,221 miles) (UNECA, 2022). Although this project was going to be a game changer, its operationalisation is continuously hampered by missing links and poor maintenance in some key segments.

Estimates by UN-OHRLLS shows road and rail densities are much lower in African LLDCs, as compared with transit developing countries and the global average (see table 3.3). UN-OHRLLS has also estimated that, to reach the global country average for paved road and rail densities, African LLDCs need to construct an additional 107,000 km of roads and 20,700 km of railway, at a cost of about $23 billion, which is beyond the capacity of many of them.

The urgent need for the African LLDCs to close the infrastructure gap is grounded on the fact that the current infrastructure deficit and the associated high cost of logistics constitute major constraints to the growth of LLDCs and to the full realization of the African Continental Free Trade Area (AfCTA). A comprehensive study conducted by ECA on the effects of the AfCTA on trade flows in Africa, showed that inadequate transport infrastructure and services could hamper the full realization of the benefits of the AfCFTA in the LLDCs. The ECA study revealed that the implementation of the AfCTA will result in a 28% increase in intra-African freight demand by 2030: the demand for road, rail, maritime and air freight will rise by 22%, 8%, 62% and 28%, respectively, while the modal share on rail will increase from 0.3% to 7%.

However, if the AfCTA is to be fully implemented, by 2030, Africa will require close to 2 million additional trucks, 250 aircrafts, more than 100,000 rail wagons and more than 100 vessels (UNECA, 2022). This calls for the need for huge investments in roads, seaports, railways and airports as well as in rail wagons, trucks, aircrafts and vessels.

The Programme for Infrastructure Development in Africa (PIDA) has estimated that corridor inefficiencies in the African Regional Transport Infrastructure Network cost more than $75 billion per annum, that is, more than the total annual foreign investments attracted by the continent which reduces African countries' intra-regional and international competitiveness.

In order to address these challenges, most regional economic communities have given priority to transport corridor projects that are aimed at addressing border procedures and other non-tariff barriers to trade and infrastructure gaps, with border posts facilitation being accorded the highest priority in interventions involving corridor transport value chains. In this regard, in order to improve the efficiency and reduce the costs of the corridors, there is need for African transport corridors to be converted into SMART (Safety, Mobility, Automated, Real-time Traffic Management) corridors. The key components of SMART corridors are strong corridor

management institutions and implementation of WTO Trade Facilitation Agreement and World Customs Organization trade facilitation tools, such as coordinated border management, a national single window, one-stop border posts, ICT-based processes and electronic certificates for rules of origin.

In view of this, in July 2010, at its 15th Ordinary Session of the African Union Assembly, Heads of States and Governments endorsed the establishment of High-Level Ad-hoc Subcommittee of the Presidential Infrastructure Championship Initiative (PICI) which was chaired by the South African President at its inception. The PICI sought to locate the ownership and Championship of Africa's Infrastructure Development to the level of Heads of states and other eminent persons across the continent. In the same vein, in order to create much greater awareness on the key projects, increase traction on pace of implementation as well as leverage the much-needed funding for infrastructure, the African Union Development Agency (AUDA), which is expected to be the implementing agency of the African Union was established. In this regard, within the framework of the Presidential Infrastructure Championship Initiative (PICI), the AU appointed a number of African leaders as Champions for various infrastructure projects (see table 3.4).

Table 3.4: Presidential Infrastructure Champions Initiative Projects

Champion	Country	RECs	Project	Estimated cost
President Abdelaziz Bouteflika	Algeria	ECOWAS and AMU - Algeria, Niger, Nigeria, Tunisia, Mali and Chad	Missing Links on the Trans-Sahara Highway - Construction of 225 km of road between Assamakka and Arlit, Niger	USD102 million
President Abdelaziz Bouteflika	Algeria	ECOWAS and AMU Algeria, Niger, Nigeria and Chad	Installation of 4 500 km of terrestrial optic fibre cable	USD80 million
President Muhammadu Buhari	Nigeria	ECOWAS and AMU Nigeria, Niger and Algeria	Nigeria-Algeria Gas Pipeline Project (Trans-Sahara Gas Pipeline) - a 4 401 km natural gas pipeline from Nigeria to Algeria via Niger, and from Algeria to Spain	USD10 billion (48" line) and USD13.7 billion (56" line) (2006)
President Macky Sall	Senegal	ECOWAS, ECCAS, COMESA and IGAD - Senegal, Mali, Burkina Faso, Niger, Nigeria, Cameroon, Chad, Sudan, Ethiopia and Djibouti	Dakar-Ndjamena-Djibouti Road/Rail Project - An 8 715 km road/rail project which entails combining TAH 5 (Dakar to N'djamena) and TAH 6 (N'djamena to Djibouti)	USD2.21 billion for the road link and USD5.95 for the rail section
President Jacob Zuma	Republic of South Africa	SADC, COMESA and EAC - South Africa, Botswana, Mozambique, Zambia, Zimbabwe, Tanzania and Malawi	Construction of a multi-modal trans-continental interconnector – North-South Corridor Road/Rail Project	N/A. Cost is based on the specific project within the corridor
President Denis Sassou Nguesso	The Republic of Congo	ECCAS, CEMAC, SADC and COMESA - Republic of Congo and the DRC	Kinshasa-Brazzaville Bridge Road/Rail Project linking Kinshasa in Democratic Republic of Congo (DRC) with Brazzaville in Republic of Congo	N/A, funded by AfDB
President Paul Kagame	Rwanda	All RECs - All African countries	Unblocking Political Bottlenecks for ICT Broadband and Optic Fibre Projects Linking Neighbouring States	N/A
President Abdel Fattah el-Sisi	Egypt	COMESA, IGAD, EAC and SADC - Egypt, Kenya, Uganda, Sudan, South Sudan, DRC Burundi, Ethiopia, and Tanzania	This project has various components focusing on water management and intermodal transport	To be determined
President Uhuru Kenyatta	Kenya	COMESA, CEN-SAD, EAC, IGAD - South Sudan, Ethiopia, Uganda and Kenya	The project will entail various transport node developments - Lamu Port Southern Sudan-Ethiopia Transport Corridor Project (LAPSSET)	Sh2.7 trillion

Source: NEPAD (2020)

The PICI projects presented in table 3.4 cover the Southern African Development Community (SADC) corridors, East Africa, Central and West Africa and the Northern corridors.

With respect to the SADC corridors, that is, corridors in Southern Africa which serve six SADC LLDCs which are Botswana, Lesotho, Eswatini, Malawi, Zambia and Zimbabwe. The performance of these corridors has direct impact on the cost of goods and services, the cost of doing business and competitiveness, which when combined, has a direct bearing on the socio-economic well-being of these countries. Likewise, corridors in East Africa equally serve Burundi, Ethiopia, Malawi, Rwanda and Zambia. On the other hand, corridors in Central and West Africa serve the LLDCs of Burkina Faso, Central African Republic, Chad, Mali and Niger.

3.2.1.1 Progress Made in the Implementation of Transport Infrastructure Projects

This report presents progress made in some of the flagship projects which has a bearing on the outcomes of VPoA in Africa.

Multinational – Trans – Sahara Highway Project (Niger)

The Trans-Sahara Highway is a 9,022 km – long infrastructure project which links six countries belonging to three RECs, that is, Algeria and Tunisia (AMU), Mali, Niger and Nigeria (ECOWAS) and Chad (ECCAS). It is located on the Algiers/Lagos and Dakar/Djibouti trans – African corridors, is part of the priority PIDA and one of the priority projects for achieving the NEPAD objectives by 2020. The Trans – Sahara Highway (TSH) project was signed off by 8th of March 2014 and is anticipated to be completed by June 2023 (African Development Bank, 2023). The total cost is estimated at $585.53 million. Of this cost, the African Development Bank is contributing 31.56 per cent, that is, $187.79 million (African Development Bank, 2023). The balance is met by three Governments of Algeria, Niger and Chad and donors which include Islamic Development Bank (IDB), Arab Bank for Economic Development in Africa (BADEA), Development Bank of Central African States (BDEAC), The Kuwait Fund for Arab Economic Development (KFAED), Saudi Fund for Development (SFD), OPEC Fund for International Development (OFID) (African Development Bank, 2013).

The project is expected to contribute to the regional integration between AMU, ECOWAS and ECCAS and to the development of trade by road (African Development Bank, 2023). Specific objectives are to: (i) improve TSH's overall level of service and increase traffic and trade between North Africa, West Africa and Central Africa; (ii) reduce transport and logistics costs; (iii) improve the living conditions of the inhabitants of the Project Impact Area and their access to basic social services (drinking water, schools, health units, etc); and (iv) contribute to the overall improvement of security in the Sahara region. The TSH corridor runs through a part of the continent endowed with abundant wealth which inter alia include fisheries, uranium, natural gas and oil deposits. Once completed, the TSH is expected to provide the necessary impetus for the exploitation, development of these resources and the socio-economic development of the countries involved.

The TSH is one of the priority projects of the infrastructure development programme in Africa (PAP – PIDA). As noted by African Development Bank (2023), the project targets: (i) development and asphalting of the missing segments of the 565 km long main road in Chad; (ii) construction of a 543 – metre long bridge over the Niger River at Farié with 3 km of access roads; and construction of infrastructure to facilitate transport and transit at the Algerian/Niger and Niger/Chad borders. For Niger and Chad, the TSH is strategic because it aims to improve external and internal accessibility of both countries. In Niger, works on the bridge at Farie is over 80% complete while on the two lots of the Arlit-Assamaka section (225 km) are 72% and

78% complete, respectively (African Development Bank, 2023). Progress on the other road sections is encouraging, with rates of 100% for the Massakory-Ngouri section (85 km), 37.88% for the Ngouri-Bol section (100 km) and nearly 38% for the RigRig-Daboua-Niger border section (African Development Bank, 2023). Overall, the consolidated rate of completion is around 48% (African Development Bank, 2023). This project is estimated to cost $102 million and is funded by OPEC Fund, African Development Bank, the Arab Bank for Economic Development in Africa, the Islamic Development Bank, the Kuwait Fund for Arab Economic Development, the Saudi Fund for Development and the government of Niger (OPEC Fund, 2021).

However, no progress has been made on the 53 km Liwa-RigRig stretch due to lack of funding (African Development Bank, 2023). In view of this, on 22 October 2021, the African Development Bank approved a supplementary budget of UA12.22 million which will be used to supplementary financing to contribute to the completion of works on the RigRig-Daboua-Niger border section and the development of the so-far-unfinanced Liwa-RigRig section, thus completing the funding required for the work on this important corridor in Chad. The implementation of the entire programme will span an estimated period of thirty (30) months, that is, from January 2022 to June 2024. The African LLDCs which will benefit from this project are Niger, Mali and Chad. Other African countries which will benefit from this project are Nigeria, Algeria and Tunisia.

Likewise, under the leadership of the President of Algeria, within the ECOWAS and UMA RECs, a 4,500 km fibre optic link between Algeria, Chad and Nigeria via Niger which is estimated to cost $80 million is being developed. To date, the Algerian section measuring 2,700 km, which is part of the national fibre optic backbone, was completed and is fully operational although it needs to be strengthened and secured to allow for permanent connectivity (NEPAD, 2020).

(a) The Trans African Highway

In order to enhance inter-state continental wide connectivity through the setting-up of a network of all-weather good quality roads, within the framework of PIDA and PICI, in 2010, the African Union launched a programme aimed at expediting the revamping of the Trans African Highway Programme.

In this regard, the President of Mali, working in collaboration with RECs such as ECOWAS, ECCAS, COMESA and IGAD, is providing leadership in the development of the Trans African Highway (TAH). The TAH will benefit six African LLDCs such as Burkina Faso, Mali, Niger, Ethiopia and Chad and other five African countries such as Senegal, Nigeria, Cameroon, Sudan and Djibouti. By combining the TAH initiatives, that is, TAH 5 (Dakar to N'djamena) and TAH 6 (N'djamena to Djibouti), the project involves the renovation and construction of the road between Dakar and Djibouti. The estimated cost of the road link project is $2.21 billion (NEPAD, 2020). In this project, Senegal will focus on the Dakar – Bamako rail as the first part of the project. The railway component, which is expected to cost $5.95 billion, entails construction of a new railway network with standard gauge (NEPAD, 2020). In terms of progress on this project, negotiations with Chinese companies and other funders are underway. Already, a round table meeting with donors was held.

In the horn of Africa, in order to enhance connectivity in East Africa, road development is in progress on the Djibouti – Addis Ababa – Juba Corridor, the Lamu Corridor, the Central Corridor and Northern Corridor. As part of the Trans African Highways, work is ongoing along the Dakar, N'Djamena and Djibouti sections to enhance east west connectivity through landlocked countries Mali, Niger, Chad, Central African Republic and South Sudan.

In West Africa, with respect to road infrastructure development, the 1080 km long Praia-Dakar-Abidjan-Lagos Corridor, which is part of the Trans African Highways No. 7, seeks to connect to Mombasa through Yaounde, Bangui, Kisangani, Kampala and Nairobi in East Africa through Central Africa. Part of this corridor is also referred to as the Trans-Sahelan Highway stretching over 4 400 kilometers, of which 50% of the network has been paved (UN – OHRLLS and UNECA, 2019). Paving of the missing link between Salo, in the Central African Republic, and Quesso, in the DRC, would benefit LLDCs like Chad in terms of access to the coast and other transit countries.

(b) North-South Corridor

The North – South Corridor which links the port of Durban with landlocked states of Botswana, Malawi, Zambia and Zimbabwe, and through to the DRC, has been significantly developed as a pilot project in Southern Africa as a cross- border transit and transport value chain to address transport constraints in a sequenced and multimodal way. This corridor comprises inter-related projects that address management of railway systems and rail infrastructure; physical and procedural improvements at border crossings; road infrastructure; road transport facilitation; port infrastructure; management of air transport and energy interconnectors. In order to improve access to landlocked states. Through the support of the COMESA- EAC-SADC Tripartite framework, a number of projects have been fully prepared and implemented which include Bulawayo – Beitbridge (in Zimbabwe), Kazungula bridge (between Zambia, and Botswana), Beitbridge – Harare – Chirundu Highway and Mutare – Harare – Bulawayo – Plumtree road (in Zimbabwe).

The Kazungula Bridge Project , with an estimated cost of $259.3 million, was approved on December 2011 (African Development Bank, 2021). With financial support from the African Development Bank Group, through a loan of $76.5 million to the Government of Zambia and additional funding from the two governments as well as co-financing from the EU-Africa Infrastructure Trust Fund and the Japanese International Cooperation Agency, the project was completed in December 2020 (African Development Bank, 2021). Resultantly, it was officially commissioned on 10 May 2021 by the Presidents of Botswana and Zambia (African Development Bank, 2021).

With two border facilities on either side, the 923-meter bridge is not only a win for Botswana and Zambia but also contributes to integration in the southern Africa region, and illustrates development cooperation. The project included the construction of two One-Stop Border Posts, one on each side of the Zambia/Botswana border. In order to cover trade facilitation and the framework for One-Stop Border Post operations – critical for efficient operation and the realization of project benefits, the construction activities were further complemented by soft activities such as technical assistance and capacity building. The bridge and One-Stop Border Posts is expected to support trade and transport along the North-South Corridor, and indeed the Trans-African Highway on the Cape to Cairo route. The bridge also provides impetus to the recently launched African Continental Free Trade Area.

In addition to trade facilitation, because the new Kazungula Bridge comes with a combined transport configuration, including two car lanes in each direction, a single rail track, and pedestrian walkways on both sides, it provides means to travellers with more convenience as they no longer need to rely on pontoon boats to cross at this location (African Development Bank, 2021).

Mutare – Harare – Bulawayo – Plumtree, in Zimbabwe, the dualization of the Mutare – Harare – Bulawayo – Plumtree road section was completed. In the road transport infrastructure, the Government of Zimbabwe entered into a PPP with Group Five International, a South

African Johannesburg Stock Exchange-listed entity. The PPP was a joint venture between the Zimbabwe National Road Administration (ZINARA) and Group Five International meant to rehabilitate more than 800 kilometres of road network, at a cost of US$206 million. Financing was through a loan obtained from the Development Bank of Southern Africa (DBSA, 2012).

Beitbridge – Harare – Chirundu Highway, the 971 km long road, which forms part of the Trans African Highway, involves upgrading, dualization and tolling of the highway (Infrastructure Development Bank of Zimbabwe, 2023). The road will be divided into three sections namely: (i) Beitbridge – Harare measuring 570 km with 8 toll plazas; Harare – Chirundu measuring 342 km with 6 toll plazas; and (iii) Harare Ring Road measuring 59 km with 3 toll plazas (Infrastructure Development Bank of Zimbabwe, 2023). The estimated cost of this project is US$2.7 billion. The project is being funded from domestic resource mobilisation which is largely skewed towards budget support as well as use of Special Drawing Rights[4]. The project will create employment opportunities across the country as well as improve transport and trade in the region. In terms of progress to date, 354.47 km of the Beitbridge – Harare highway is completed and has been opened to traffic

Walvis Bay – Ndola – Lubumbashi Corridor, which is anchored on the port of Walvis Bay, and is linked with Zambia, has been developed to fairly seamless levels. The Trans Kalahari Corridor, which is also anchored on the port of Walvis Bay and is linked with Botswana, has attained commendable levels of performance.

(d) Lamu Corridor - the Lamu Port Southern Sudan-Ethiopia Transport

In April 2013, the Government of Kenya announced the setting up of a government agency, Lamu Port Southern Sudan Transport Development Authority to manage the Lamu Corridor - the Lamu Port Southern Sudan-Ethiopia Transport (LAPSSET) project on behalf of the Kenyan government. The cost of the project is $29.24 billion. Through creation of a second transport corridor, the aim of the project is to cut over-dependence on Kenya's main port of Mombasa as well as open up Kenya's largely under- developed northern frontier. This project is expected to serve African LLDCs such as Uganda, Burundi, Ethiopia, Rwanda and South Sudan.

Under the LAPSSET Project, with the support of China Exim Bank, Kenya completed the first phase of a single-track standard gauge railway (SGR) between Mombasa and Nairobi with a route length of 472 km and a total length of 609 km at an estimated cost of $3.8 billion. The 25-tonne axle load railway line has capacity to move 22 million tonnes of cargo annually at speeds ranging from 80-100km/hr to 120km/hr for freight and passengers, respectively. By the 1st of June 2017, the railway line was fully operational (NEPAD, 2020). The Ageremariam - Hawassa road which is 198 km long road inside Ethiopia was completed in 2020 (NEPAD, 2020).

The next phase of the project is expected to extend the standard gauge railway to Ethiopia, Uganda and South Sudan, thus providing vital regional links for the LLDCs like Burundi, Rwanda and Uganda, and ultimately promoting industrial growth and socio-economic development (UN-OHRLLS and UNECA, 2019)

(e) Addis Ababa - Djibouti Standard Gauge Railway Line

Likewise, with financial support from China, Ethiopia completed construction of a 750km Addis Ababa - Djibouti standard gauge railway line which was opened in 2018. The railway line which also includes a 100 km double line between Addis Ababa and Adama in Ethiopia was constructed at a cost of $3.77 billion (UN – OHRLLS and UNECA, 2019). The line will eventually connect to Kenya, South Sudan and Sudan. On the software side, Ethiopia and

[4] The Government of Zimbabwe allocated US$144 million of the SDR towards road rehabilitation.

Djibouti have carried out staff training with a view to upgrade skills in line with the new demands of the modified transport system. In addition, a railway institute will be established in Ethiopia which will be used to provide technical support to other African countries. Meanwhile, Ethiopia and Sudan signed a bilateral agreement on the construction of a Standard Gauge Railway between the two countries whose feasibility study will be funded by the African Development Bank (AfDB).

(f) Progress on Railways Network and Connectivity Development and Maintenance

Railway transport has desirable modal advantages of being a low-cost bulk carrier, relatively efficient in fuel consumption, less gas emission, low external costs and better safety record compared to other surface transport modes.

In the last decade, in Southern Africa rehabilitation of the railways were carried out in Angola anchored on the ports of Namibe, Lobito and Luanda, as well as railways in Mozambique, anchored on the ports of Beira (Sena Line) and Nacala linking them directly with landlocked states of Zimbabwe and Malawi.

In addition, a number of railway rehabilitation programmes have been undertaken, and these include the Mozatize – Nkhaya – Nayuchi linking the Nacala corridor to the Beira corridor, and the Cuamba – Lichinga section being upgraded, and these initiatives will provide relief to landlocked Malawi. Under the North – South Corridor Railway Revitalization Programme, Zimbabwe is undertaking rehabilitation of its railway infrastructure. The rehabilitation of the Goba railway line linking Maputo and landlocked Eswatini has also been completed (UN – OHRLLS and UNECA, 2019) .

Similarly, governments in West Africa countries and mining houses collaborated in the development of extensive rail project which is designed to boost trade in the region. The initiative is focused on the development of 3,000 km long railway line which, when completed, will connect Benin, Burkina Faso, Côte d'Ivoire, Ghana, Niger, Nigeria and Togo. In this project, new tracks are added to existing ones which are being upgraded. It will benefit landlocked countries such as Niger and Burkina Faso, which face constant transport problems and largely rely on seaports in neighbouring countries and road infrastructure to carry its imports and exports. The project responds to and addresses the need for better infrastructure and reliable transport to transport minerals between West African countries as well as from the mines to major ports (UN – OHRLLS and UNECA, 2019).

(g) Progress on Port and Maritime Development and Maintenance

In order to provide necessary capacity to cater for both coastal and landlocked countries, there is need for a sustained development and maintenance programme of physical port infrastructure. In view of this, in Africa, since the launch of VPoA, port authorities have embarked on port expansion initiatives to ensure that this objective is met; and ports infrastructure continues to be rehabilitated across the continent and some of the initiatives include, among others, the following:

In Djibouti ports infrastructure development included four new specialized ports at Doraleh, Tadjourah, Damejog and Ghoubetat at an estimated cost of over $800 million (UN-OHRLLS and UNECA, 2019). Doraleh will have facilities to handle containers, general cargo, bulk cargo and cars with an annual capacity of 9 million tonnes (UN-OHRLLS and UNECA, 2019). Tadjourah will handle potash exports with an annual capacity of 4 million tonnes; and Damejog is a dedicated livestock export facility with an annual capacity of 10 million head (UN-OHRLLS and UNECA, 2019). Ghoubet is a dedicated salt export facility with an annual capacity of 5 million tonnes (UN-OHRLLS and UNECA, 2019).

As part of the Lamu Port and phased LAPSSET project, Kenya is constructing a 32 berths deep sea at the Lamu. The short term plan for 3 berths was completed by 2020 at an estimated cost of $689 million. The medium term plan which entails 4 – 10 berths was launched in 2017 and is expected to be completed by 2025 (African Development Bank, 2020). The long term plan is envisaged to construct 11-20 berths which are expected to be completed by 2040 and 21-32 berths are expected to be constructed after 2040 (African Development Bank, 2020).

The developments both at Djibouti and Lamu ports are expected to increase port capacity and support smooth flow of trade through the Djibouti, Moyale and Juba Corridors. In addition, appropriate trade and transit facilitation measures will be mainstreamed to ensure smooth flow of trade by reducing delays and cost of doing business.

Progress has been made by a number of African LLDCs in development of inland depots (UN – OHRLLS and UNECA, 2019). The inland ports will be used to move goods upcountry in bond for customs clearance close to the customers and shippers. Inland dry ports and container depots are geared to provide facilities such as trans-shipment, distribution, consolidation, storage, customs services, and equipment maintenance. This comes with the advantage of providing easy access to inland logistics stakeholders and reducing port congestion.

In addition, inland dry ports were established in Matsapha Dry Port in Eswatini, Tororo Inland Port in Uganda, Chipata in Zambia, Mutare Dry Port in Zimbabwe. In some African LLDCs such as Burundi and Rwanda customs clearance is not performed at the border but inland, which has seen reduction in congestion at the borders (UN-OHRLLS and UNECA, 2019) Rwanda, for example, established a dry port near the border that operates 24/7 and extended all customs services to facilitate faster clearance of essential and relief goods at the first point of entry (UN-OHRLLS, 2021).

A number of LLDCs are in the process of constructing inland dry ports, and these include Mekelle, Woreta, Kambolcha and Hawassa in Ethiopia, and these ports will be linked to the Nairobi – Mombasa Standard Gauge Railway network.

(h) Progress on Air Transport Network Development

From 2014 to 2019, African LLDCs registered a 30 per cent increase in air carrier departures, that is, from 30.1 million to 39.1 million (see table 3.5) (World Bank, 2022). However, in 2020, because of the lockdowns which were instituted worldwide to curb the spread of the COVID-19, the number of air traffic passengers declined to 13.4 million (see table 3.5).

Over the period under review, in the African LLDCs, Ethiopian Airlines dominated the airspace and account for 95 per cent of the total airfreight of African LLDCs.

Table 3.5: Selected African LLDCs Air Traffic Passengers[5]

Country Name	2014	2015	2016	2017	2018	2019	2020
Burkina Faso	117,420	122,590	144,950	145,049	189,545	185,841	70,228
Botswana	205,992	226,549	254,396	223,673	253,417	254,439	
Malawi	5,856	6,011	6,744	10,545	10,545	7,117	1,792
Rwanda	626,928	544,541	644,559	1,031,957	1,502,478	1,561,562	661,288
Eswatini					51,633	52,744	10,647
Uganda	163,824	41,812	52,187	14,958	21,212	19,823	6,159
Zambia	8,592	203,617	144,060	154,573	16,633	17,506	8,718
Zimbabwe	301,260	370,165	378,803	282,539	282,539		324,227

[5] Missing African LLDCs had missing data

Ethiopia	28,675,159	30,909,723	32,262,658	32,504,898	33,704,037	37,031,843	12,273,940
Total	**30,105,031**	**32,425,008**	**33,888,357**	**34,368,192**	**36,032,039**	**39,130,874**	**13,356,998**
Share of Ethiopia %	**95**	**95**	**95**	**95**	**94**	**95**	**92**

Source: World Bank Development Indicators

Binding constraints which are faced by LLDCs' air transport industry inter alia include: the need to rehabilitate and replace old fleets and upgrade airports and terminals; the high scale of investment needed for infrastructure development and maintenance; lack of physical and human resources and new technologies; poor airport infrastructures; limited connectivity; and lack of transit facilities (UN-OHRLLS and UNECA, 2019).

To increase the role of Africa in the global aviation industry, the African Union launched the Single African Air Transport Market in January 2018. That initiative involves full liberalization of market access to intra-African air transport services, as well as of tariffs, flight frequencies and capacity; removal of restrictions on ownership; and free exercise of the five freedoms traffic rights for scheduled and freight air services.

In addition, in January 2015, at its 24th Ordinary Session, the AU Assembly adopted the Declaration on implementation of the Yamoussoukro Decision towards establishment of a Single African Air Transport Market with a view to advance concrete and unconditional implementation of the Yamoussoukro Decision and the Single African Air Transport Market. The Single African Air Transport Market (SAATM) was launched in 2018. Twenty-three Member States are currently implementing the Yamoussoukro Decision, and includes six African LLDCs, namely, Botswana, Eswatini, Ethiopia, Mali, Rwanda and Zimbabwe.

Given that it is not subjected to borders and other impediments as is in the case of surface transport modes, Air transport offers enhanced access to LLDCs and brings relief to the LLDCs. However, air transport is expensive and is suited for persons with higher disposable incomes and high value goods. Notwithstanding the high costs, air transport offers LLDCs an opportunity to unlock their landlockedness. African LLDCs such as Ethiopia, with the largest network in Africa, and Rwanda, an up and coming airline, dubbed "the Airline of the Future" are reaping the benefits of air transport. The air transport market liberalisation adopted by the African Union will culminate in removal of market restrictions, with greater freedoms that will see increased air traffic, fare reduction, increased frequencies and greater connectivity across Africa and into the LLDCs. Already, Ethiopian, Kenya Airways and Rwandair have been granted fifth freedom rights in East and Southern Africa.

3.2.1.2 Challenges and Opportunities

LLDCs have a huge transport infrastructure gap and in order to close this gap, LLDCs in general are required to use a combination of resources from the public sector, private sector and international development partners, as well as exploring new sources of financing (see section 3.3).

In addition, existing opportunities which can be tapped by African countries and in African LLDCs, in particular, are centred around the $88.6 billion which is lost by the African continent annually to illicit financial flows mainly through corruption, tax avoidance and illegal market activities such as terrorism financing and drug trafficking (UNCTAD, 2020). In view of the fact that the African continent requires about $35 – 47 billion annually to finance the required transport infrastructure, the $88.6 billion, if recovered, is 2.5 – 1.89 times of the annual transport budget requirement for the African continent (African Development Bank, 2018). Of concern is the fact that, since 1980, only $1.53 billion has been recovered and returned to

countries in Africa which is insignificant considering the fact that Africa loses $88.6 billion annually (World Bank, 2020).

In this regard, strengthen asset recovery policies, standards and actions, it is necessary to undertake multilateral efforts using existing StAR global network of initiatives such as the Asset Recovery Inter-Agency Network for Southern Africa, the Asset Recovery Inter-Agency Network for East Africa, the Asset Recovery Inter-Agency Network for West Africa, the Camden Asset Recovery Inter-Agency Network and the European Union Agency for Law Enforcement Cooperation.

3.2.1.3 Conclusions and Recommendations

In view of the foregoing observation, the following recommendations are proposed:

- It is critical that the Africa region and LLDCs, assisted by AUDA-NEPAD, and the RECs prioritize projects to the few that have greater impact on connectivity, economic development of LLDCs and other African states.
- LLDCs should ensure that there is a pipeline of bankable priority infrastructure projects for investment through different funding mechanisms and the states should identify the various funding mechanisms for both project preparation and capital investment (CAPEX).
- Given that Africa's infrastructure gap continues to widen, there is urgent need to liberalize infrastructure investment and financing, through promotion of private sector investment and operations, underpinned by the implementation of the "user pays principle".
- LLDCs should accelerate preparation of projects to bankability in order to scale up investment, with focus on smart projects that impact more on economic transformation. The LLDCs and transit states need to accelerate domestication and implementation of sound regionally adopted policy, regulatory and legislative frameworks to create an enabling environment for investment and infrastructure operations as well as enhance global competitiveness.
- LLDCs should enhance their capacities to manage the project implementation value chain and transaction management, with the assistance of participating DFIs and other supporting partners.
- In view of the fact that air transport connectivity and traffic volumes will continue to increase on a year by year basis, it is critical for the African Union to keep pushing for further liberalization of the skies within the framework of the Single African Air Transport Market (SAATM), in order to allow LLDCs to grow their networks within Africa.

3.2.2 Energy

In order to enhance productivity and trade competitiveness of LLDCs, the VPoA places emphasis on the importance of having access to affordable, reliable and renewable energy in enabling the modernization of information and communications technology and transit systems. However, energy access for African countries remains stubbornly low with an average of only 44% of the population having access to electricity in 2022 which is far below the average of 81% for developing countries (World Bank, 2022).

3.2.2.1 Progress of Implementation of Energy Projects

In 2020, African LLDCs, 37 per cent of the population had access to electricity up by 13 percentage points from 2014, when the VPoA was adopted (UNECA, 2022).

Table 3.6: Electricity Access (% of Population)

Country Name	2014	2015	2016	2017	2018	2019	2020
Burundi	7.0	8.4	9.3	9.3	10.9	11.4	11.7
Burkina Faso	19.2	16.1	16.6	17.2	14.4	18.4	19.0
Botswana	60.0	62.1	64.2	67.4	68.2	70.0	72.0
Central African Republic	12.1	12.7	13.5	14.3	14.8	14.3	15.5
Ethiopia	27.2	29.0	42.9	44.3	44.9	48.1	51.1
Lesotho	27.8	31.7	35.1	33.7	47.0	44.5	47.4
Mali	34.1	37.6	38.8	34.8	50.9	47.8	50.6
Malawi	11.9	10.8	11.0	12.7	18.0	11.2	14.9
Niger	15.8	16.6	17.3	18.0	17.6	19.0	19.3
Rwanda	19.8	22.8	29.4	34.1	37.0	40.4	46.6
South Sudan	4.1	4.6	5.1	4.2	6.2	6.7	7.2
Eswatini	65.0	64.0	63.4	73.5	73.9	76.9	79.7
Chad	8.4	7.7	9.3	10.9	10.1	8.4	11.1
Uganda	20.4	18.5	26.7	32.5	41.9	41.3	42.1
Zambia	27.9	31.1	35.4	40.3	40.3	43.0	44.5
Zimbabwe	32.3	33.7	42.6	44.2	45.6	46.8	52.7

Source: World Bank (2022)

Although the percentage of African lLLDCs with access to electricity picked up to 37%, it still lags that for all LLDCs in the world of 60% (UNECA, 2022; International Renewable Energy Agency, 2019 and World Bank, 2021). To make matters worse, there is a significant rural–urban electricity divide among the African LLDCs. As noted by UNECA (2022), on average, 69.1% of the urban dwellers had access to electricity, compared with only 23.6% of the population residing in rural areas.

However, on a country level, countries which had made significant progress since the launch of the VPoA with respect to access to electricity are Eswatini (79.7%), Botswana (72%), Zimbabwe (52.7%) and Ethiopia (51.1%) (see table 3.4). In Zimbabwe, in particular, 32.3 % of the population had access to electricity in 2014 but increased to 52.7% in 2020.

(a) Challenges and Opportunities

A number of African LLDCs which include Zimbabwe, Zambia and Malawi are characterised by power shortfalls while other states have excess power but the absence of cross border inter-connectors prevents LLDCs experiencing power shortfalls to purchase power from neighboring countries to ensure energy security. In addition, cross-border energy trade and transit through is weak as a result of absence of transmission lines which connects.

Notable hindrance in power generation, as noted by African Development Bank (2018) is funding. This worsened by the fact that investments into power generation requires long pay back periods and thus stable macroeconomic environment is a priori requirement for such kinds of projects which is missing in most African LLDCs.

Renewable energy, which inter alia include solar, hydropower, wind and bioenergy has been identified as one of the low hanging fruits in filling in the gap in energy supply in African LLDCs (see box 3.1).

Box 3.1: The Rationale for Renewable Energy

The majority of LLDCs are rich in renewable resources. It therefore makes economic sense for the African LLDCs in particular to invest in renewable energy. This will not only improve access to energy but also help African LLDCs to actively participate in reducing global warming whilst at the same time creating new jobs and advancing socio-economic and industrialisation objectives.

Fostering cross-border electricity trade in renewable energy, can be an important tool for promoting trade facilitation and making supply chains more efficient. Reliable renewable energy can reduce delays caused by power outages at border crossings and customs clearance, as well as other transit processes. Greater efficiency in their operation would reduce the cost of transactions and expand opportunities for African LLDCs to participate in international markets. One of the opportunities for landlocked countries is that they can benefit from cross-border trade in electricity with neighbouring countries, where electricity interconnections are in place. Trading electricity across borders increases system flexibility and resilience and allows more rapid and widespread renewable capacity expansion.

Renewable energy can be used to promote universal access of energy. Universal access to energy can be achieved if centralised connections are deployed together with standalone systems. It is also important to ensure access to levels of electricity that are higher than those generally required by households in accordance with the multi-tier framework, which measures access based on attributes such as affordability, safety and reliability. Electricity supply of Tier 3 and above is necessary to support productive uses that are vital for socio-economic development and job creation.

Source: IRENA (2022)

Collaborative opportunities for renewable energy have already been established in various RECs. For example, several national power generation and cross-border interconnector plans have been adopted with a view to enhance generation capacity in Africa. Most of the key projects are part of the master plans of the regional economic communities which inter alia include the Common Market for East and Southern Africa, the East African Community, the Economic Community of Central African States, the Economic Community of West African States and the Southern African Development Community. These RECs include regional projects which are supported by pan-African institutions such as the African Union Commission and the New Partnership for Africa's Development, under the auspices of PIDA, the ECA and African Development Bank (see section 3.3).

A good example is the North – South Power Transmission Enhancement Project, which extends from Egypt through the Sudan, South Sudan, Ethiopia, Kenya, Malawi, Mozambique, Zambia and Zimbabwe to South Africa. The Ethiopia – Kenya line is the most advanced because they have secured funding.

High potential in renewable energy is in hydro-power in African LLDCs such as Zambia and Ethiopia where significant investments were made in the last 10 years. For example, the Ethiopian experience of the Grand Renaissance Dam in Ethiopia which was completed in 2020 marked a major achievement for power generation in East Africa which can be used as a model by African LLDCs. As noted in box 3.3, the Grand Renaissance Dam in Ethiopia shows that innovative finance models such as diaspora bonds presents massive opportunities for African LLDCs which can be used as an effective vehicle to fund key infrastructures such as energy. Based on total diaspora remittances[6] African LLDCs received in 2021, countries which leverage on diaspora and turn social remittances into diaspora direct investments to fund key infrastructures in the energy sector are Zimbabwe ($2 billion), South Sudan ($1.2 billion), Mali ($1.2 billion), Uganda ($1billion), Burkina Faso (561 million) and Niger ($542 million) (see table 3.19) (World Bank, 2022).

[6] As noted by Mugano (2018), unlike diaspora investments which characterize Chinese and Indian diaspora remittances, African diaspora remittances are driven social needs such as health, funeral, education and food.

Although several renewable energy projects have been developed in most LLDCs in Africa with a view to augment power generation, the pace of completion of those projects has been frustratingly slow due to long gestation periods (UNECA, 2022). In 2019, African LLDCs which have made significant investments in renewable energy mainly focusing on hydro energy and solar are Niger ($110 million), Malawi ($100 million), Burundi ($90 million), Zambia ($80 million), Uganda ($70 million), Ethiopia ($55 million), Central African Republic ($50 million), Burkina Faso ($48 million), Mali ($47 million), Chad ($20 million), Lesotho ($18 million), Eswatini ($16 million) (IRENA, 2020a). However, countries such as Botswana, South Sudan, Zimbabwe and Rwanda have received insignificant investments in renewable energy with Botswana receiving barely nothing notwithstanding the fact that these countries are in dire need of energy supply (IRENA, 2020a).

In order to bring relief to LLDCs, as well as to other countries, different regions have adopted the least cost options from the regional power plants, paving the way for power trading across countries through power wheeling agreements. Nevertheless, in the long term, most States are seeking self-sufficiency in energy supply.

3.2.2.2 Conclusions and Recommendations

In view of the foregoing observation, the following recommendations are proposed:

- LLDCs and transit states need to accelerate preparation of power projects (including renewables) to enhance access to electricity to reduce the cost of doing business and enhance quality of life for citizens;
- Given the power shortfalls in some states on the one hand and excess power in other states, LLDCs need to scale up projects on cross border inter- connectors to enable LLDCs experiencing power shortfalls to purchase power from neighboring countries to ensure energy security.
- Support expansion and upgrading of supply, transmission and distribution infrastructure.
- Strengthen cross-border energy trade and transit through installation of new transmission lines.
- In view of structural rigidities in energy supply, there is need for African LLDCs to increase investments in improving energy efficiency.
- In order to address challenges to access to power and energy resources, African LLDCs need to intensify the implementation of Rural Electrification Programmes to promote Universal Access to electricity. These are funded through public private partnerships and state fiscal mechanisms.
- There is need to scale up initiatives such as the Light Africa.
- It is critical to ensure that development partners, among them the UN family renders support for capacity building at national, regional and continental levels;
- LLDCs need to take full advantage of climate funding especially for energy, water and transport projects, as these have proved to be a formidable force in funding of project preparation and capital investment.
- LLDCs are encouraged to utilise existing facilities such as the Climate Investment Platform, which assists in creating a pipeline of projects and supports matchmaking with potential investors; and the Energy Transition Accelerator Financing (ETAF) Platform, which is expected to provide capital to fast-track the pace and scope of renewable energy deployment in tandem with climate and development objectives. LLDCs are also encouraged to request technical assistance to utilise the Renewables Readiness Assessment tool provided by IRENA to identify recommendations to scale up renewable energy.

3.2.3 ICT Connectivity

Information and communication technologies (ICTs) are essential for trade facilitation and for driving structural economic transformation in LLDCs. Information and communications technology can contribute to sustainable and inclusive growth by: increasing productivity across all sectors; facilitating market expansion beyond borders to take advantage of economies of scale; and lowering costs and facilitating access to services, including access to broadband infrastructure and information via global media such as the Internet, thus contributing to increased participation in governance, accountability and transparency. Specific objectives are: (a) To expand and upgrade, as appropriate, infrastructure for supply, transmission and distribution of modern and renewable energy services in rural and urban areas; (b) All LLDCs should make broadband policy universal; (c) To promote open and affordable access to the Internet for all; (d) LLDCs should actively engage to address the digital divide.

3.2.3.1 Progress in the Implementation in ICT Projects in African LLDCs

African LLDCs have witnessed a significant increase in mobile cellular subscriptions, from 64.3 per 100 people in 2014 to almost 80 per 100 people in 2020. The use of internet in Africa increased from 27% in 2019 to 33% in 2021, while in the LLDCs the number of internet users increased from 29% in 2019 to 35% in 2021 (International Telecommunication Union, 2021). Although this is a significant improvement, this is still far below the world average of 63%.

At a country level, since the launch of the VPoA, countries which have made significant progress in mobile cellular subscriptions inter alia include Burkina Faso, Botswana, Rwanda and Zambia (see table 3.7) (World Bank, 2022).

Table 3.7: Mobile Cellular Subscriptions per 100 People as of 2021

Country Name	2014	2015	2016	2017	2018	2019	2020	2021
Burundi	30	47	49	53	55	55	54	62
Burkina Faso	69	77	80	90	95	97	103	112
Botswana	151	151	140	135	138	150	150	161
Central African Republic	24	26	25	24	25	31	34	-
Ethiopia	31	41	49	37	-	37	38	-
Lesotho	102	101	106	110	72	76	69	80
Mali	134	125	108	114	110	111	119	100
Malawi	34	39	41	43	39	47	52	60
Niger	43	45	36	40	-	52	59	-
Rwanda	68	75	75	72	77	75	81	81
South Sudan	26	26	24	26	18	21	13	-
Eswatini	81	83	87	91	-	101	105	-
Chad	38	39	38	42	45	48	52	-
Uganda	56	54	59	62	59	59	62	66
Zambia	64	71	72	78	87	94	101	104
Zimbabwe	85	90	89	96	86	86	84	89

Source: World Bank World Development Indicators

However, during the period under review, countries such as Lesotho and Mali have respectively witnessed decline in mobile cellular subscriptions from 102% in 2014 to 80% in 2021 and 134% in 2014 to 100% in 2021 (see table 3.7) (World Bank, 2022).

Likewise, in 2020, African LLDCs recorded major increases in subscriptions for active mobile broadband (37 per 100 inhabitants) and mobile-cellular telephone (79 per 100 inhabitants), and a small increase in subscriptions for fixed-broadband (3 per 100 inhabitants). In 2020, 53% of the population in the African LLDCs had access to 4G mobile network coverage, while 31% had access to 3G coverage, and 10% to 2G coverage.

Those averages, however, are very low compared with the global average and the average for all LLDCs. High cost of ICT access was singled out as one of the main reasons for low usage of the internet in the LLDCs in Africa. As noted by the International Telecommunication Union, existing data shows that African LLDCs have succeeded in reducing prices over time, with the mobile cellular basket falling from 21.5% in 2014 to 16.7% of gross national income per capita in 2019, and the fixed broadband basket declining from 323% to 130% of gross national income per capita over the same period. Amongst the LLDCs, Rwanda is leading the way in the harnessing of digital trade through e-commerce (UNECA, 2022).

3.2.3.2 Challenges and Opportunities

Most African LLDCs witnessed low usage of the internet in the African LLDCs due to high cost of ICT access (International Telecommunication Union, 2021). In addition, other constraints which prevent African LLDCs from fully harnessing the developmental potential of ICT and digitalization include low digital literacy rates, infrastructural gaps, poor quality regulation and the high cost of accessing submarine cables (International Telecommunication Union, 2021).

As a result, technologies which include e-commerce, automated single windows, e-government and digital finance are rarely used in most LLDCs. Yet the use of ICTs especially through digital trade is more important than ever as it is an effective mitigation measure to disasters such as the COVID-19 pandemic.

In the African LLDCs, the opportunity to harness the benefits of the digital economy and, in particular, the optimization of emerging technologies that facilitate trade and spur sustainable development, is hampered by the high cost of ICTs. The technologies which are essential for trade facilitation inter alia include automated single windows, e-commerce, e-government and digital finance.

In view of this observation, African LLDCs should make concerted efforts to lower the high costs of broadband. In addition, African LLDCs should develop new policies related to digital identity, data security and data privacy, among others with a view to benefit from the digital economies, especially through digital trade.

Even outside exogenous shocks such as the COVID-19 pandemic, the advantages which comes with the use of application of e-commerce, automated single windows, e-government and digital finance inter alia include reduction in ease of doing business, improvement in trade facilitation and increase in fiscal revenue.

3.2.3.3 Conclusion and Recommendations

In view of the foregoing observations, the following recommendations are proposed:

- LLDCs and transit countries should be encouraged to collaborate to establish ICT infrastructure, applications and services with the support of governments, private sector, development partners, multilateral financial and development institutions and regional banks.
- LLDCs should be encouraged to create appropriate enabling environment including the necessary policies, legal and regulatory framework to support ICT development in particular the development of broadband including enhancement of digital skills,

promotion of digital inclusion, increased adoption and utilization of ICT applications and services and to close the digital divide.

- LLDCs should be encouraged to provide for mechanisms to facilitate the deployment of networks and services in non-profitable areas for operators, whether public investment, public-private scheme, or other types of incentive.
- There is need for LLDCs to work with cellular service providers with the view to reduce the cost of broadband access, which remains a major challenge, and can also be addressed in the medium term through increased licensing of service providers. The quantum of digital spectrum dividend that is available can still be exploited in Africa and should be offered to players through the enhancement of the multiplicity concept in the sector.
- The international community should provide capacity-building support to LLDCs to improve the business environment in and the ability to attract and retain the private sector in the ICT.

3.3 Financing of Infrastructure

This section discusses infrastructure gaps in Africa, various sources of finance, trends and progress of infrastructure financing, challenges and recommendations.

3.3.1 Progress on Implementation of Infrastructure Financing in African LLDCs

At a continental level, after extensive consultations with AUDA/NEPAD, AfDB, UNECA, RECs and other partners, the Programme for Infrastructure Development in Africa (PIDA) was approved by the AU Assembly in 2012 and culminated in the development and adoption of the PIDA Priority Action Plan (PIDA-PAP) for the continent. The PIDA-PAP comprises 51 programmes with an estimated value of $75 billion, eight (8) of which are considered priority projects, following their selection at the 2014 Dakar Financing Summit (UNECA and UN-OHRLLS, 2019).

After its launch, significant progress has been made in the implementation of several cross-border infrastructure projects around the African continent. Of the 51 PIDA projects being implemented in Africa, 7 are notable projects being implemented in African LLDCs (Table 3.8)

Table 3.8. PIDA Projects

1	2	3	4
RUZIZI III HYDROPOWER PROJECT	**DAR ES SALAAM PORT EXPANSION**	**SERENGE-NAKONDE ROAD (T2)**	**NIGERIA-ALGERIA GAS PIPELINE**
Ruzizi III is a 147-megawatt run-of the-river hydro-electric plant with three power units.	Handle larger vessels in the container, liquid and dry bulk trades; improve interfaces across transport modes; improve linkage services with rail services.	The project road runs in a northeastern direction from Serenje in Zambia's Central Province to Nakonde in the Muchinga Province covering a total distance of 614.71 km.	Natural gas pipeline for export to Europe. The Nigeria-Niger-Algeria Pipeline is also referred to as the Trans-Sahara gas pipeline (TSGP).
In 2014, the feasibility study was completed, political support is strong, project structure is fairly clear, and financing is being secured	In 2014, the feasibility study was complete (or nearly complete), project had good support from key stakeholders, likely to go ahead but there are some problems that need to be resolved.	In 2014, the feasibility study was complete (or nearly complete), project had good support from key stakeholders, likely to go ahead but there are some problems that need to be resolved.	In 2014, the feasibility study wascomplete (or nearly complete), project had good support from key stakeholders, likely to go ahead but there are some problems that need to be resolved.
Rwanda, DRC, Burundi	Tanzania	Uganda, Zambia	Nigeria, Niger, Algeria
Project moved to financial Close	Project moved to Construction	Project moved to Construction (Partly)	Tendering (Partly)

5	6	7	8
MODERNIZATION OF DAKAR-BAMAKO RAIL LINE	**SAMBANGALOU HYDROPOWER PROJECT**	**ABIDJAN-LAGOS COASTAL CORRIDOR**	**LUSAKA-LILONGWE ICT TERRESTRIAL FIBRE OPTIC**
Investment in new rail infrastructure (track and rolling stock), and signaling system for the rail line between Dakar port and Bamako	Located 930 km upstream from the mouth of the Gambia River. The dam will be located in Senegal, and 80% of the 181 km2 reservoir will be in Guinea.	Modernisation and upgrading of the West African Corridor comprising the construction of 4 one-stop border posts (OSBPs).	Installing an upgradable 10Gbit/s single channel fibre line from MTL's Technical centre in Lilongwe to the Chipata border with Zambia
In 2014, the Project had strong political support but feasibility study had not yet been done, so still at concept or pre-feasibility. Therefore, still needed a lot more work before it is ready for financing.	Feasibility study completed by 2014, political support is strong, project structure is fairly clear, and financing is being secured	Project has strong political support but feasibility study not yet done by 2014, so still at concept or pre-feasibility. Therefore, needs a lot more work before it is ready for financing.	Feasibility study is complete by 2014, project has good support from key stakeholders, likely to go ahead but there are some problems that need to be resolved.
Senegal, Mali	Senegal	Togo, Ghana	Malawi, Zambia
Moved to feasibility	Project moved to Construction (Partly)	Project moved to feasibility	Project moved to Construction (Partly)

Source: African Union Development Agency (2023)

These projects are supported by five funding instruments, that is: the PIDA Service Delivery Mechanism; the Continental Business Network; the Policy & Regulatory Support; M&E and Information Management and the Presidential Infrastructure Champion Initiative (PICI). These are further supported by a cross cutting instrument, the PIDA Capacity Building (PIDA CAP).

Specific projects being implemented under the PIDA programme are 51 transport-related, 4 energy and 27 ICT projects (UNECA and UN-OHRLLS, 2019). Among the trade related, prominent cross-border projects are roads (28), OSBPs (8) which are mainly in the ECOWAS and EAC, 3 airports (ECOWAS), 4 ports (SADC) and 5 rail projects (see table 3.9).

Table 3.9: PIDA Projects under Implementation as of 2021

No	Airports	OSBPs	Sea Ports	Rail	Roads	Total
COMESA					1	1
CEN-SAD					1	1
EAC		3		2	12	17
ECCAS		1	2		10	13
ECOWAS	3	3	1		3	10
IGAD		1				1
SADC			4	3		7
UMA					1	1
TOTAL	**3**	**8**	**7**	**5**	**28**	**51**

Source: PIDA database, 2021

In terms of implementing these projects, progress has been achieved since a number of projects are advancing along progressive phases in the project cycle, that is, from conception and preparation, through to detailed designs and securing investment funding. In this regard, a total of eight projects, which Southern Africa has interest in, have completed preparatory stage are: North South and Beira Corridor Acceleration Programme (including Serenje Nakonde Road Project), the Central Corridor as a PIDA Acceleration Project/Corridor Acceleration Programme, and portions of the Zambia-Tanzania- Kenya Transmission line are still at stage 2, undergoing feasibility studies, the Inga III under early project preparation (UN-OHRLLS and UNECA, 2019).

In February 2021, under the Second Phase of Priority Action Plan of the PIDA and its Partnership Strategy, the African Union adopted 69 infrastructure projects with an estimated implementation cost of $160.8 billion (UNECA, 2022 and African Union Development Agency (AUDA), 2023). This new Partnership Strategy aims to fast-track the implementation of continental, regional and national infrastructure projects with regional impacts by leveraging partnerships between African countries and their development partners.

In addition, existing evidence shows that innovative finance models which inter alia include sovereign loans grants, (mostly at middle-income countries' interest rates), public private partnerships, development finance institutions, foreign direct investment (FDI), diaspora bonds and other domestic mobilization options have been used to close infrastructure gaps in Africa (UNECA, 2022).

3.3.2 Public Private Partnerships

Although global experience shows that public private partnerships (PPPs) have been used as an effective vehicle to finance the development of key infrastructures (as noted by Gurara et al (2017) and World Bank (2016)), since 2000, low income developing countries (LIDCs) accounted for 6.5% of the value and 10.5% of the number of PPP projects in all emerging market and developing economies.

Evidence shows that of the US$43 billion in LIDC PPP projects since 2010, 33% has been invested in Sub-Saharan Africa and more than 50% has been invested in Asia (Gurara *et al*, 2017). This demonstrates that even though Africa lags behind in PPPs, there is scope for the continent to use PPPs as a vehicle to finance regional projects. True to that, UNCTAD (2018) and Mugano (2022), observed that across Africa, there are several examples of regional infrastructure projects, especially in the energy and transport sectors. For instance, the Central Corridor is an integrated transport program across five countries (Burundi, DR Congo, Rwanda, Tanzania, and Uganda) with an investment of about US$18 billion involving local and international actors from the public and private sectors (WEF, 2015).

The Ruzizi III Hydropower Plant project, which involves, Burundi, Democratic Republic of the Congo and Rwanda, is the first regional public private partnership power project in Africa. This project - which is expected to have significant private ownership since it leverages more than 50% of commercial financing, that is, debt and equity -offers valuable lessons on how to structure and attract commercial funding, which leads to timely implementation (see box 3.2)

Box 3.2: The Ruzizi III Hydropower Plant Project

The Ruzizi III Hydropower Plant Project is part of the Programme for the Development of Infrastructure in Africa (PIDA) which involves Burundi, Democratic Republic of Congo (DRC) and Rwanda. This project, which was approved on 16 December 2015 and is expected to be completed by 2026, entails the construction of a 147 MW power plant and a distribution station on the Ruzizi River which is between DRC and Rwanda. Specific objectives of this project are: (i) contribute to the development of Ruzizi III on hydropower generation; and (ii) strengthen regional economic integration through the creation of an electricity market. From a financing perspective, the total cost of the project is estimated at UA443.40 million. Of this amount, UA98.5 million is being financed by African Development Bank's public sector window while UA35.62 million is expected from the private sector window and the balance was mobilised from commercial funding. This project, once completed, will double the current total electricity generation capacity of Burundi while Rwanda's capacity will increase by 50% (African Development Bank, 2022). From a job creation perspective, as of 2021, 1000 temporary jobs and 450 permanent jobs were created (African Development Bank, 2022).

Source: African Development Bank (2022)

3.3.3 Domestic Resource Mobilisation

Most regional economic communities have developed resource mobilization strategies aimed at enhancing the capacity of States to finance infrastructure and other developmental projects. To enhance the sustainability of infrastructure, LLDCs and transit countries have had to scale up their capacities for maintenance of infrastructure, supported by full cost recovery measures under the "user pays" principle as in the South African, Ethiopian and Vietnam cases (see boxes 3.1, 3.3 and 3.4).

The Grand Ethiopian Renaissance Dam (6,000 MW), which is almost 70% completed, and the Gibe III (1,870 MW) projects in Ethiopia have been successfully funded using a combination of diaspora bond and domestic resources (see box 3.3).

Box 3.3: Grand Ethiopian Renaissance Dam

According to Africa Development Bank (2011), Ethiopia is one of few countries in Africa which issued diaspora bond as a tool of fostering diaspora investment. The Millennium Corporate Bond was issued in 2008 by the state-owned utility Ethiopian Electric Power Corporation (EEPCO) for the construction of the Grand Ethiopian Renaissance Dam (GERD). In order to raise confidence of the subscribers, the bond was underwritten by National Bank of Ethiopia (NBE).

In order to raise the impetus of the bond and to reach as many as Ethiopians in the diaspora, the bond was marketed through networks in countries of the OECD and the Middle East by the Commercial Bank of Ethiopia

(CBE) to non-resident Ethiopians and foreign nationals of Ethiopian origin only (Government of Ethiopia, 2009). The interest rates on the bonds are 4%, 4.5% and 5% respectively for 5, 7 and 10 years bonds (Africa Development Bank, 2011). The face value of the bond as noted by Africa Development Bank (2011) is $100 and the Government required a minimum investment of $500 dollars or its equivalent in selected convertible currencies. To make the bond attractive, investments in the diaspora bond can be used as collateral for borrowings from local banks in local currency and the interest is tax exempt at the source.

GERD will be the largest hydroelectric power plant in Africa (10th in the World) with over 6000MW capacity when completed (Tesfaye, 2016). The Dam will increase Ethiopian's installed power generation capacity by 200% (that is excluding Gibe III, which has begun generating power) (Tesfaye, 2016). With a potential capacity of 45,000 MW hydropower potential, Ethiopia will become a major power exporter (Africa Development Bank, 2011). In the medium term, Ethiopia could generate US$1 billion foreign currency from power export, and reduce Ethiopia's dependence on imported petroleum (GERD, 2011).

In addition to potential export earnings, reliable and affordable electricity will help Ethiopia to achieve its ambitious strategy of industrialisation which it recently embarked. Moreover, the dam construction process builds local capacity through learning by doing, knowledge spill-over and the transfer of technology. A case in point is the role of the Metal and Engineering Corporation (MEtEC), which is the main contractor on divisions of the electromechanical and hydraulic steel structure.

The construction of the Dam has created employment opportunities for over 10,000 people, and at its peak will employ 15,000 (Tesfaye, 2016). The resource mobilisation process has encouraged the culture of saving, where the national saving rate has increased from 9.5% to 22% during the last five years as noted by Tesfaye (2016). Beyond the benefits of industrialisation, job creation and foreign exchange generation, 74 million metric cube of water, the project will create a man-made lake double the size of Lake Tana, unlocking huge potential for agro-fishery development and tourism (Tesfaye, 2016).

Although the primary target of funding was expected to be derived from the diaspora, at least 75% of resources were mobilised domestically from businesses, farmers and employees (Mugano, 2018).

Source: Mugano (2022)

Lessons which can be derived by African LLDCs from the Ethiopian case study are that innovative finance instruments such as diaspora bonds can be used to finance long term infrastructure. However, it is important to note that the use of diaspora bonds is not a straightforward matter. Rather, as noted in the Ethiopian case study, there is need to address "confidence-gap" and "trust-deficit" issues within sections of the diaspora community through community dialogue and partnership working. As noted by Mugano (2018), the Ethiopian Government removed potential barriers and obstacles by creating opportunities for the diaspora to participate in economic development, mapping out and profiling the diaspora population, building sustainable partnerships, facilitating their involvement in the country, consolidating the diaspora's sense of attachment to their home country and further developing actionable strategies and enabling institutions. Evidence and literature on diaspora have shown that diaspora policies work best when the diaspora are engaged with as full partners, that is, when diaspora engagement is a two-way process, meaningful and sustained.

African countries can draw lessons from Vietnam's experience in rural electrification. The Government of Vietnam took leadership in setting goals, planning and coordinating the implementation of the strategy. Vietnam undertook serious planning and coordination, ensured funds were available for financing capital costs and prioritised productive uses of electricity. Thereafter, the framework which had been established by government was used to catalyse the efforts of all stakeholders (World Bank, 2019). What was striking in the guide was the allocation of responsibilities for rural electrification which was formalised for the first time in 1999 , enabling the rural electrification programme to be branded as "State and People, Central and Local, Working Together." As part of government commitment, all levels in government, that is, local, provincial and central were mainstreamed into the Vietnam's rural electrification programme (World Bank, 2019).

The expansion of rural electric systems in Vietnam relied on multiple sources of financing which inter alia include: special surcharges on urban customers; customer contributions; commune, district, province, and central government budgets; private investors; borrowing; and retained depreciation from the state utility (Vietnam Electricity, EVN) (World Bank, 2019). One of the major key factors underlying the rapid expansion of access to electricity to a large proportion of the population was the cost-sharing approach to financing rural electrification investment (World Bank, 2019). Cost sharing by local communities, in particular, ensured a sense of community ownership and sustained local commitment to the proper operation and maintenance of rural electricity systems.

3.3.3.1 Challenges and Opportunities

A study by ICA (2014) shows that infrastructure spending in Africa is about 3.8 % of GDP, whilst China and India spend 8.5% and 4.7 % of GDP, respectively. The average for developing countries is 5.6% (ICA, 2014). This explains why Africa continues to lag behind other developing countries.

In order to close the gap, a background paper which was commissioned by the Japan International Co-operation Agency (JICA) and presented at the Africa Emerging Markets Forum in Abidjan in March 2017 showed that 5-6% of GDP should be spent on infrastructure, suggesting spending of $120 billion is required against actual expenditure of $84 billion (UN-OHRLLS and UNECA, 2019).

Latest statistics from the African Development Bank (2018) reveal that Africa's annual infrastructure requirements amount to $130 – $170 billion with a financing gap in the range of $68 – $108 billion (see table 3.7.)

Table 3.7: Preliminary Figures on Africa's Investment Needs ($ billions)

Infrastructure Subsector	Target by 2025	Annual Costs	Notes
Power	100% access to power in urban with 95% access in rural areas	35-50	New Deal on Energy target by 2025
Water supply and sanitation	100% access in urban area 100% access in rural area	56-66	Access to piped water and improved latrines
Information and communication technology	50% mobile universal and 10% internet penetration rate	4-7	
Road and other transport sectors (air, rail, and port)	80% preservation; 20% development	35-47	Construction, Upgrading, rehabilitation and maintenance
Total		**130-170**	**Current spending is $62 billion**

Source: Africa Economic Outlook (AfDB, 2018:80)

Investment cost of transport infrastructure: Although the available estimates of transport infrastructure needs in LLDCs vary greatly, evidence shows that, for the LLDCs to reach the global average road and rail network densities, 200,000km of paved roads and 46,000km of railway at a cost of about US$ 0.51 trillion, that is, about 2% of their GDP, is required (UN-OHRLLS, 2018). Additional analysis shows that the gap between the current investment in transport infrastructure in LLDCs against the required financial resources is about 2.3% of their GDP (UN-OHRLLS, 2018).

In order to close this gap, LLDCs in general are required use a combination of resources from the public sector, private sector and international development partners, as well as exploring new sources of financing (see section 3.6).

3.3.3.2 Conclusions and Recommendations

In view of the fact that most African LLDCs face drought of funding, the following are policy measures which can be taken into account with a view to close the funding gap:

- Use of domestic resources and innovative finance, use of diaspora bonds as noted in the Ethiopian Grand Ethiopian Renaissance Dam, diaspora bonds is an effective vehicle which can be used by African LLDCs to close the infrastructure gap. However, the success of diaspora bonds depends of the credibility of the Central Banks of participating countries which is a real challenge with most African LLDCs. The participation of regional banks such as the African Development Bank and Afrexim Bank in providing guarantees as well as technical assistance to African LLDCs in crafting the diaspora bond is critical.
- Recovering and curbing illicit financial flows, there is need for development partners such as the IMF, World Bank, African Development Bank and the UN family in helping African LLDCs in curbing illicit financial flows and recovering the externalised funds. In this regard, support can be given towards strengthening asset recovery policies, standards and actions, it is necessary to undertake multilateral efforts using existing StAR global network of initiatives such as the Asset Recovery Inter-Agency Network for Southern Africa, the Asset Recovery Inter-Agency Network for East Africa, the Asset Recovery Inter-Agency Network for West Africa, the Camden Asset Recovery Inter-Agency Network and the European Union Agency for Law Enforcement Cooperation.
- There is need for development partners such as African Development Bank, ECA, UN-OHRLLS and other UN families to provide technical assistance to African LLDCs in the development of pipeline of bankable priority infrastructure projects for investment through the various funding mechanisms that have been identified in this report.
- Establish dedicated project preparation facility for LLDCs for preparation of bankable infrastructure projects that can handle big projects. Currently in Africa there are more than 30 project preparation facilities which are very small with capital of 10 million or 20 million. These will not help, as most of the resources will be used to pay the salaries of those who manage these facilities. Instead project preparation facilities that handle big projects are required.
- Establish transport infrastructure funding facility for LLDCs. Closing the infrastructure gap in LLDCs and transit countries is critical for the successful implementation of the VPoA. It is important for multilateral development partners to consider funding window that will provide preferential funding to LLDCs
- Given that Africa's infrastructure gap continues to widen, there is urgent need to liberalize infrastructure investment and financing, through promotion of private sector investment and operations, underpinned by the implementation of the "user pays principle".
- The African LLDCs and transit states need to accelerate domestication and implementation of sound regionally adopted policy, regulatory and legislative frameworks to create an enabling environment for investment and infrastructure operations as well as enhance global competitiveness.
- This report noted that air transport connectivity and traffic volumes continue to increase on an annual basis. In view if this, it is critical for the African Union to keep pushing for further liberalization of the skies within the framework of the Single African Air Transport Market (SAATM), in order to allow African LLDCs to grow their networks within Africa.

3.3 International Trade and Trade Facilitation

3.3.1 International Trade

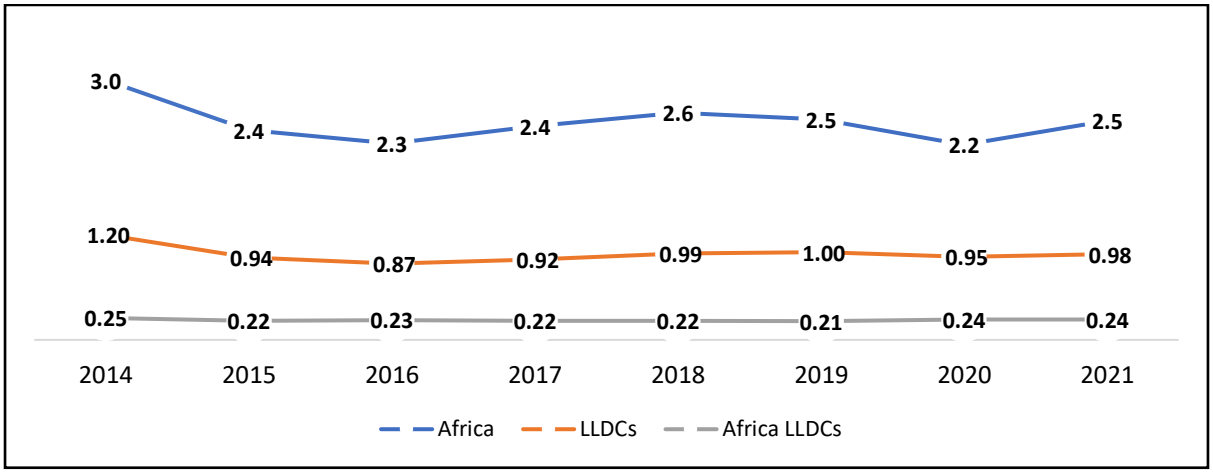
International trade is an important vehicle of economic development since it provides a critical channel for the flow of technology, services and finance required to improve productive capacity in industry, agriculture and services which are a priori requirement for structural economic transformation. In view of this observation, the 2030 Agenda for Sustainable Development recognizes international trade as an engine for inclusive economic growth and poverty reduction, and an important means to achieve the Sustainable Development Goals (SDGs). The desire to foster partnerships that can support LLDCs to harness benefits from international trade is one of the primary goals of the VPoA. Amongst other objectives, the VPoA aims to promote increased participation of LLDCs in global trade, value addition, diversification and reduction of dependency on commodities.

3.3.2.1 Status and Progress on International Trade

(a) Trade in Merchandise

Since the launch of the VPoA, the performance of exports of African LLDCs, African economies and LLDCs was a lacklustre. African LLDCs' share of merchandise exports in global exports has remained stubbornly low and flat hovering around at 0.24% in 2021, that is, 0.01% drop from 2014 (see figure 3.1) (UNCTAD, 2022). This trend is consistent with the share of African and LLDCs' share of merchandise exports in global exports (UNCTAD, 2022). Africa's share of merchandise in global exports stood at 3% in 2014 but maintained a sustained marginal decline to 2.5% by 2021. The 32 LLDCs also witnessed a decline of their share of merchandise exports in global exports from 1.20% in 2014 to 0.98% in 2021 (UNCTAD, 2022). Likewise, the share of intra-African trade for African LLDCs is the lowest in the world at 6%, compared with the continental average of 16% (UNECA, 2020 and UNCTAD, 2022). To make matters worse, exports from African LLDCs remained undiversified and are largely constituted by ores and metals, agricultural commodities and mineral fuels.

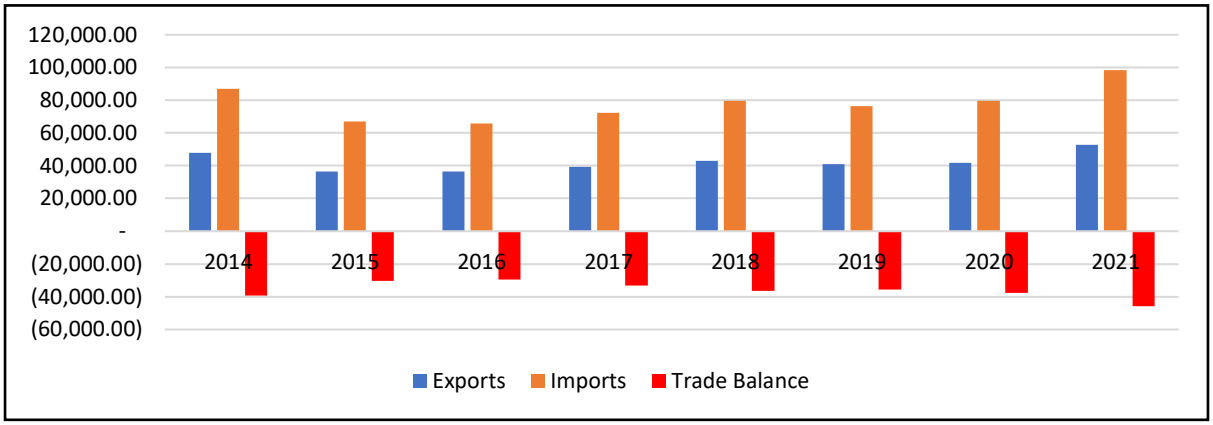
Figure 3.1: African landlocked developing countries merchandise exports (percentage of world merchandise exports)



Source: United Nations Conference on Trade and Development UNCTADStat data. Available at http://unctadstat.unctad.org/EN/ (accessed on 10 January 2023)

With respect to trade performance, during the period under review, African LLDCs maintained a trade deficits (see figure 3.2). For example, in 2014, total African LLDCs' exports and imports stood at $47.7 billion and $86.9 billion, respectively. In the same year, the combined trade deficit for the African LLDCs was $39.2 billion (see figure 3.2).

Figure 3.2: African LLDCs Trade Performance ($million)



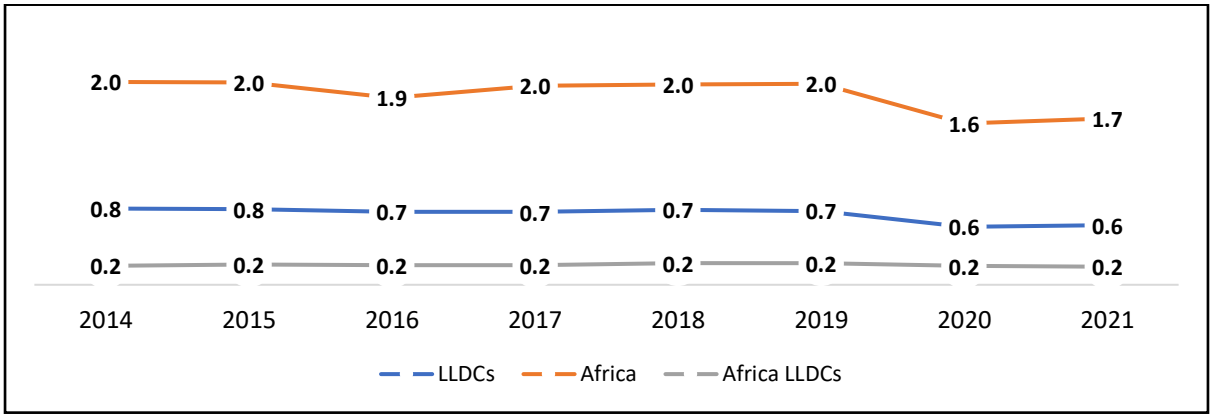
Source: United Nations Conference on Trade and Development UNCTADStat data. Available at http://unctadstat.unctad.org/EN/ (accessed on 10 January 2023)

In 2021, although African LLDCs exports rose by $5.1 billion to $52.8 billion, import bill also surged to $98.4 billion giving a trade deficit of $45.6 billion (see figure 3.2).

(b) Trade in Services

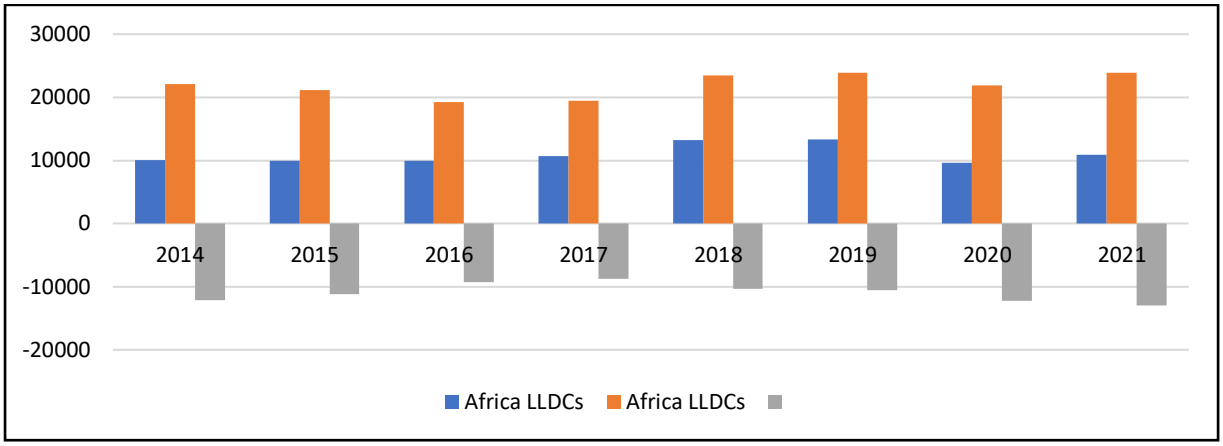
As noted in trade in merchandise, since the launch of the VPoA, no meaningful progress was observed in terms of trade in services. African LLDCs share of export of services to the global share of exports in services remained flat at 0.2%, that is, three times lower than LLDCs' share of export of services to the global share of exports in services. Likewise, African share of export of services remained fixed at 2% for five straight years, that is, 2014 – 2019 and then dropped marginally to 1.6% and 1.7% in 2020 and 2021, respectively (see figure 3.3) (UNCTAD, 2022).

Figure 3.3: African LLDCs services exports (percentage of world services exports)



Source: United Nations Conference on Trade and Development UNCTADStat data. Available at http://unctadstat.unctad.org/EN/ (accessed on 10 January 2023)

Figure 3.4: African LLDCs Trade Performance ($million)



Source: United Nations Conference on Trade and Development UNCTADStat data. Available at http://unctadstat.unctad.org/EN/ (accessed on 10 January 2023)

In terms of trade performance, the total exports of services, on an annual basis, was almost 50% of total imports, thereby resulting in large trade deficit. For example, in 2014, African LLDCs, combined, exports and imports stood at $10 billion and $22.1 billion with a negative trade balance of $12.1 billion. In 2021, total export and import of services by African LLDCs marginally increased to $10.9 billion and $23.9 billion giving a negative trade balance of $13 billion (UNCTAD, 2022).

Based on the foregoing observation and evidence presented in table 3.8, it is clear that African LLDCs have remained at the bottom of the value chains and continue to depend on a handful of commodities. This evidence shows that, in direct contrast with the VPoA's goal of fostering African LLDCs' participation in global trade, value addition, diversification and reduction of dependency on commodities (see table 3.8).

Table 3.8. Top Performing Exports for African LLDCs

Country	Main Exports	Share of top 5 Exports in Total exports (%) in 2014	Share of top 5 Exports in Total exports (%) in 2021
Botswana	• Diamonds, whether or not worked, but not mounted or set (excluding unmounted stones for pick-up • Dust and powder of natural or synthetic precious or semi-precious stones • Insulated "incl. enamelled or anodized" wire, cable "incl. coaxial cable" and other insulated • Meat of bovine animals, frozen • Carbonates; peroxocarbonates "percarbonates"; commercial ammonium carbonate containing ammonium	95.0	94.8
Burkina Faso	• Gold, incl. gold plated with platinum, unwrought or not further worked than semi-manufactured • Cotton, neither carded nor combed • Coconuts, Brazil nuts and cashew nuts, fresh or dried, whether or not shelled or peeled • Unwrought zinc • Other oil seeds and oleaginous fruits, whether or not broken (excluding edible nuts, olives	93.6	94
Burundi	• Gold, incl. gold plated with platinum, unwrought or not further worked than semi-manufactured • Coffee, whether or not roasted or decaffeinated; coffee husks and skins; coffee substitutes • Tea, whether or not favoured • Wheat • Niobium, tantalum, vanadium or zirconium ores and concentrates	79.0	80.0

Central African Republic	• Tanks and other armoured fighting vehicles, motorized • Motor vehicles for the transport of goods, incl. chassis with engine and cab • Parts and accessories for tractors, motor vehicles for the transport of ten or more persons • Containers, incl. containers for the transport of fluids, specially designed and equipped for • Wood in the rough, whether or not stripped of bark or sapwood, or roughly squared (excluding	65.4	64.7
Chad	• Petroleum oils and oils obtained from bituminous minerals, crude • Gold, incl. gold plated with platinum, unwrought or not further worked than semi-manufactured • Lac; natural gums, resins, gum-resins, balsams and other natural oleoresins • Other oil seeds and oleaginous fruits, whether or not broken (excluding edible nuts, olives, • Cotton, neither carded nor combed	98.0	97.3
Eswatini	• Mixtures of odoriferous substances and mixtures, incl. alcoholic solutions, based on one or • Cane or beet sugar and chemically pure sucrose, in solid form • Prepared binders for foundry moulds or cores; chemical products and preparations for the chemical • Women's or girls' suits, ensembles, jackets, blazers, dresses, skirts, divided skirts, trousers • Wood sawn or chipped lengthwise, sliced or peeled, whether or not planed, sanded or end-jointed	71.7	70.2
Ethiopia	• Coffee, whether or not roasted or decaffeinated; coffee husks and skins; coffee substitutes • Other oil seeds and oleaginous fruits, whether or not broken (excluding edible nuts, olives • Other vegetables, fresh or chilled (excluding potatoes, tomatoes, alliaceous vegetables, edible • Dried leguminous vegetables, shelled, whether or not skinned or split • Cut flowers and flower buds of a kind suitable for bouquets or for ornamental purposes, fresh	71.0	70.2
Lesotho	• Men's or boys' suits, ensembles, jackets, blazers, trousers, bib and brace overalls, breeches • Women's or girls' suits, ensembles, jackets, blazers, dresses, skirts, divided skirts, trousers • T-shirts, singlets and other vests, knitted or crocheted • Men's or boys' shirts, knitted or crocheted (excluding nightshirts, T-shirts, singlets and • Women's or girls' suits, ensembles, jackets, blazers, dresses, skirts, divided skirts, trousers	51.7	52.3
Malawi	• Unmanufactured tobacco; tobacco refuse • Tea, whether or not flavoured • Oilcake and other solid residues, whether or not ground or in the form of pellets, resulting ... • Cane or beet sugar and chemically pure sucrose, in solid form • Groundnuts, whether or not shelled or broken (excluding roasted or otherwise cooked)	80.8	80.3
Mali	• Gold, incl. gold plated with platinum, unwrought or not further worked than semi-manufactured • Cotton, carded or combed • Live bovine animals • Live sheep and goats • Mineral or chemical fertilisers containing two or three of the fertilising elements nitrogen	86.0	85.8

Niger	• Palm oil and its fractions, whether or not re ned (excluding chemically modified) • Rice • Petroleum oils and oils obtained from bituminous minerals (excluding crude); preparations containing • Uranium or thorium ores and concentrates • Pasta	78.6	79.1
Rwanda	• Gold, incl. gold plated with platinum, unwrought or not further worked than semi-manufactured • Coffee, whether or not roasted or decaffeinated; coffee husks and skins; coffee substitutes • Tin ores and concentrates • Tea, whether or not flavoured • Niobium, tantalum, vanadium or zirconium ores and concentrates	87.8	87.5
South Sudan	• Petroleum oils and oils obtained from bituminous minerals, crude • Ferrous waste and scrap; re-melting scrap ingots of iron or steel (excluding slag, scale and • Parts of aircraft and spacecraft of heading 8801 or 8802, n.e.s. • Turbojets, turbopropellers and other gas turbines • Wood charcoal, incl. shell or nut charcoal, whether or not agglomerated (excluding wood charcoal	99.80	99.7
Uganda	• Coffee, whether or not roasted or decaffeinated; coffee husks and skins; coffee substitutes • Gold, incl. gold plated with platinum, unwrought or not further worked than semi-manufactured • Petroleum oils and oils obtained from bituminous minerals (excluding crude); preparations containing • Fish fillets and other fish meat, whether or not minced, fresh, chilled or frozen • Cane or beet sugar and chemically pure sucrose, in solid form	44.4	45.2
Zambia	• Copper, unrefined; copper anodes for electrolytic refining • Copper, refined, and copper alloys, unwrought (excluding copper alloys of heading 7405) • Unused postage, revenue or similar stamps of current or new issue in the country in which they • Sulphuric acid; petroleum • Cobalt mattes and other intermediate products of cobalt metallurgy; cobalt and articles thereof	77.7	77.6
Zimbabwe	• Unmanufactured tobacco; tobacco refuse • Gold, incl. gold plated with platinum, unwrought or not further worked than semi-manufactured • Ferro-alloys • Diamonds, whether or not worked, but not mounted or set (excluding unmounted stones for pick-up • Chromium ores and concentrates	72.8	92

Source: UNCTAD Database

The structure of the main exports does not show that much progress has been made with value addition.

3.3.2.2 Challenges and Opportunities

African LLDCs have serious deficits in infrastructures, institutional, legal and regulatory frameworks which are necessary and sufficient requirement to guarantee timely delivery of

goods or ensure reliability or flexibility in the supply of goods (Mugano, 2022). As noted in section 3.2, specific areas with gaps in infrastructure in African LLDCs inter alia include transport, ports, power, and ICTs.

Because of gaps in these key infrastructures they have become serious impediments to Africa's quest to achieve its trade goals (World Bank, 2019). For example, as a result of shortages of ports, contrary to global best practice where ports handle in excess of 30 tonnes/hour, rates for western, southern and eastern Africa are 7-15 tonnes/hour, 10- 25 tonnes/hour and 8-25 tonnes/hour, respectively (World Bank, 2019). This situation, as noted by Mugano (2022), has remained the same.

With respect to the cost of electricity, as noted by the World Bank (2019), the cost of electricity per unit to consumers in most African LLDCs and African countries is more than double the cost in high-income nations such as the United States (US$0.12/kWh) and far higher than in many emerging markets such as India (US$0.08/kWh) (World Bank, 2019). This situation undermine African LLDCs capacity to attract investments required to foster production while at the same time erode the competitiveness of firms in African LLDCs.

With respect to opportunities, Igue, Alinsato and Agadjihouédé (2020) observed that African countries and African LLDCs, in particular, have several technological advantages that can facilitate e-commerce. In fact, the Global System for Mobile Communications Association (GSMA) identifies 314 technology clusters in 93 cities in 42 African countries (Mochiko, 2016). Igue, Alinsato and Agadjihouédé (2020) and World Bank (2019) argued that the recent increase in internet usage, mobile penetration and intense use of social media by African LLDCs provides the building blocks required for the use of e-commerce in international trade.

The opportunity for use of e-commerce in African LLDCs is premised on the fact that Africa continues to account for a small share of global e-commerce. The use of ICT provides many strategic and operational benefits to SMEs which inter alia include the development of closer relationships with customers and business partners, intense integration of internal and external processes, better access to external resources, and improved access to information. These benefits are likely to improve decision-making, strengthen trade relations and, in turn, improve e-commerce development and the international visibility of SMEs (Brynjolfsson and Smith, 1999; St-Pierre, Monnoyer and Boutary, 2017; UNCTAD, 2018; UNCTAD, 2019).

For example, Wamboye, Adekola and Sergi (2016) carried out a study using a sample of 43 Sub-Saharan African countries assessing the impact of e-commerce on firm performance and concluded that the adoption of ICT by companies is associated with productivity growth through an increase in output, confirming the existence of a network effect.

3.3.2.3 Conclusions and Recommendations

African LLDCs share of export of merchandise has remained stubbornly low, the following recommendations are proffered:

- African LLDCs must intensify the industrialization agenda through linkages with other regional and global value chains to create a win-win situation.
- It is important to address tariff peaks, high tariffs, and tariff escalation, as well as non-tariff barriers imposed on manufactured goods from the LLDCs. The multilateral trading system, in particular the WTO play a key role in addressing these challenges.
- As part of the industrialisation strategy, African LLDCs should consider expediting the establishment of special economic zones with a view to foster value addition and beneficiation.

- There is need to strengthen trade facilitation in the African LLDCs and transit countries with a view to reduce trade costs and delays which is key in integrating African LLDCs into global trade.
- With the support of RECs, African LLDCs should address barriers to international trade in services so as to harness the development potential of their economies. Boosting trade in services is key in improving economic performance and can provide a range of traditional and new export opportunities and it is vital for structural transformation.
- The quality of policies, regulations and institutional frameworks are key determinant of services performance (UNCTAD, 2016). It is therefore important for LLDCs to establish and/or strengthen their regulatory and institutional frameworks. .
- The SMMEs form a large part of the private sector in the LLDCs and it is therefore necessary to enhance the capacity of the SMMEs to participate in international trade and to maintain conducive environment for private sector development.

3.3.3 Trade Facilitation

African LLDCs, because they lack direct access to the sea, they rely on transit neighbours to reach the international markets. Because LLDCs are severely constrained by inefficient procedures inside as well as outside their territorial borders, more emphasis is placed on the importance of trade facilitation. The competitiveness of LLDCs' exports is eroded by multiple border crossings and long distances from major markets and cumbersome border and transit procedures and inadequate infrastructure, which when combined, increase the trade costs and other transaction costs substantially.

High trade transaction costs, inefficiencies and lack of competitiveness impedes African LLDCs from effectively participating in regional integration and participating in regional and global value chains. Empirical evidence shows that, in LLDCs, the trade costs may be as high as 50% of the value of traded goods in some LLDCs (UNECA, 2022). Inefficiencies in transit transport and high trade costs also have negative implications to the performance of the small and medium size enterprises (SMEs), which are important drivers of economic activity in the LLDCs and indeed within the continent. In view of this, trade facilitation reforms will help in reducing transaction costs, increasing trade and customs revenue, facilitating export competitiveness and attracting foreign investment.

The World Trade Organization (WTO) Trade Facilitation Agreement (TFA) aims to address costs of trade that are caused by delays at borders and customs-related processes and procedures. Specifically, the TFA has three main objectives:

- Expedite the movement, release and clearance of goods, including goods in transit
- Improve cooperation between customs and other authorities
- Enhance technical assistance and build capacity for the implementation of the TFA

The TFA contains provisions for expedited movement, release and clearance of goods, including those on transit. The WTO estimated that if implemented, the TFA could increase GDP growth by up to 0.5% annual, boost global trade by up to $1 trillion per year and reduce trade costs by an average of 14.3 per cent (World Trade Organisation, 2022). UNECA also estimated that if TFA is fully implemented, there are high chances that potential costs may be reduced by 12.5% and 17.5% (UNECA, 2021).

While great progress has been achieved with the ratification of the TFA by the LLDCs as alluded to earlier on, the level of implementation is still very low as demonstrated by the share of measures notified under category A, which is about 34% compared to 58.2% for developing

countries (WTO, 2022). For African LLDCs, only 28% of the trade facilitation measures have been notified as being fully implemented (category A (WTO, 2022).

On 22 February 2017, the Trade Facilitation Agreement entered into force upon ratification by two thirds of WTO membership (UNECA, 2021).

3.3.3.1 Status and Progress on the Implementation of Trade Facilitation Agreements

Since the adoption of the VPoA in 2014, African LLDCs and transit countries have made progress in the ratification of the TFA. By December 2020, all 14 African LLDCs that are WTO members had ratified the Trade Facilitation Agreement[7]. With respect to transit countries, 15 out of 19 African transit countries had also ratified it[8].

However, the rate of implementation of the different provisions of the TFA for all African countries, including the African LLDCs varies (see table 3.9). There is an average implementation rate of 35.3% for African LLDCs and 42.1% for Africa, indicating implementation capacity constraints among African LLDCs (UNECA, 2021). Specific areas where LLDCs particularly outperform the continental average include: (a) the implementation rate by African LLDC on the movement of goods intended for import under customs controls is nearly 93%, that is, higher than the African average of 84.1% (see table 3.9); (b) the implementation rate on use of customs brokers is 78.6%, against an average of 65.9%; and (c) LLDCs in Africa's implementation rate on common border procedures is 78.6%, compared with the continental average of 68.2% (UNECA, 2021).

Table 3.9: Implementation rate of the Trade Facilitation Agreement provisions, by article (percentage) in 2022

Article	Africa	African LLDCs
1. Publication and availability of information	30.7	23.2
2. Opportunity to comment, information before entry into force and consultations	37.5	35.7
3. Advance rulings	22.7	14.3
4. Procedures for appeal or review	52.0	28.6
5. Other measures to enhance impartiality, non-discrimination and transparency	47.3	40.5
6. Disciplines on fees and charges imposed on or in connection with importation and exportation and penalties	41.7	38.1
7. Release and clearance of goods	35.6	23.6
8. Border agency cooperation	16.3	1.2
9. Movement of goods intended for import under customs controls	84.1	92.9
10. Formalities connected with importation, exportation and transit	52.6	50.0
11. Freedom of transit	40.4	34.7
12. Customs cooperation	41.0	35.7

Source: Economic Commission for Africa (ECA) (2021)

As noted in table 3.9, areas where African LLDCs are most lagging include:

(a) procedures for appeal or review (28.6% as compared with 52%);

[7] Ethiopia and South Sudan are working on their accession to WTO and, until this is complete, they cannot be party to the Trade Facilitation Agreement.

[8] Algeria, Eritrea and Somalia are not WTO members, so they cannot be party to the Trade Facilitation Agreement. The Democratic Republic of the Congo, a WTO member, has not yet ratified the Trade Facilitation Agreement.

(b) pre-arrival processing for the African LLDCs (21.4% against a continental average of 45.5%);

(c) penalty disciplines, where the average implementation rate for LLDCs is 21.4%, compared with a continental average of 45.5%; and

Also, African LLDCs recorded an average implementation rate of 7.1% on test procedures against a continental average of 27.3% (UNECA, 2021).

Likewise, there are large variations observed in the implementation rates of the TFA between countries. The large range of implementation rates vary from the highest implementation rate of the LLDCs on 79% from Rwanda and the lowest implementation rate on 22% from South Sudan (see table 3.10). Of specific interest is the fact that Botswana, Malawi, Zambia, Rwanda, and Sudan emerged as leading African LLDCs with implementation rates above the continental average of 50.6% (UNECA, 2022).

Table 3.10: Implementation of trade facilitation measures in LLDCs by category, 2021

Category	Botswana	Burundi	Ethiopia	Malawi	Niger	Rwanda	South Sudan	Sudan	Zambia	Zimbabwe	Africa
Transparency	80%	47%	73%	73%	40%	87%	33%	60%	73%	40%	**55%**
Formalities	83%	79%	75%	79%	25%	88%	42%	67%	63%	42%	**63%**
Institutional arrangement and cooperation	89%	22%	56%	89%	100%	100%	56%	78%	89%	78%	**60%**
Paperless trade	41%	63%	19%	59%	19%	85%	0%	67%	56%	41%	**51%**
Cross-border paperless trade	11%	11%	0%	11%	44%	39%	0%	67%	39%	17%	**25%**
Total	**57%**	**50.5%**	**42%**	**60%**	**37%**	**79%**	**22%**	**67%**	**60%**	**45%**	**51%**

Source: Global Survey on Digital and Sustainable Trade Facilitation 2021 - https://www.untfsurvey.org/

At a continental level, countries exhibited high implementation rate on trade facilitation measures relating to formalities, that is, 63% (see table 3.10). Interestingly, most African LLDCs report a relatively high implementation rate for formalities and transparency measures, with more than 50% having an implementation rate above the regional average (see table 3.10). UNECA (2022) argued that most African LLDCs could have been motivated by additional challenges they face in terms of trade and access to markets. Likewise, the high score attained by LLDCs on institutional arrangement and cooperation is motivated by the fact that LLDCs rely heavily on neighbouring countries (UNECA, 2022).

On the contrary, costly cross-border paperless trade measures are less implemented, at 25% – a pattern largely reflected in the results for LLDCs (see table 3.10). Of concern is the fact a survey carried by ECA in 2021 shows that the implementation rate is 50.6% of African LLDCs lags behind the global average of 64.7% and 51.3% for all LLDCs (UNECA, 2022).

Empirical evidence shows that improved trade facilitation and reduced non-tariff barriers are essential for the full benefits from the African Continental Free Trade Area to be realised. For example, a scenario analysis by ECA on the impact of removal of non-tariff measures will result in increase of intra-African trade by 63% (UNECA, 2022 & ATPC, 2021). Likewise, trade facilitation measures could help address the challenges faced by women which inter alia include harassment at the border, cost of information, time poverty and others.

In order to maximize trade opportunities for the region, Africa as a region has accorded priority to implementation of trade facilitation initiatives. In this regard, several initiatives being implemented to facilitate trade in the region are one stop border posts, tripartite Vehicle regulations and standards, third-party vehicle insurance, market liberalization measures,

COMESA-EAC-SADC tripartite trade facilitation, COMESA virtual trade facilitation system (CVTFS), tripartite trade and transport facilitation program (TTTFP), African Union SMART corridor concept, national single windows, coordinated border management (CBM), harmonized road user charges and overload control.

(i) One-Stop Border Posts

A One-Stop Border Post (OSBP) means that goods and passenger vehicles only stop once at the border and exit one country and enter another at the same time. This results in a reduction in the time spent at, and costs involved in, border crossings. Several countries in Africa have fully embraced the OSBP concept with a view to convert most, if not all, of their border posts to OSBPs. Converting a border post to an OSBP requires that appropriate legislation, border procedures and infrastructure for information and communication technology (ICT) is in place. Examples of OSBPs are Chirundu border post between Zambia and Zimbabwe and the Nakonde - Tunduma border post between Tanzania and Zambia. Both OSBPs resulted in reduced delays at the border from several days to hours for pre-cleared cargo (see box 3.4).

Box 3.4: Chirundu One Stop Border Post

The Chirundu One Stop Border Post (OSBP) is a pilot trade facilitation project under the North South Corridor Pilot Aid for Trade Programme initiated by the COMESA-EAC-SADC Tripartite. Through a Bilateral Agreement between Zambia and Zimbabwe, it was launched in December 2009. In Africa, it is the first functioning OSBP. The main objective of the OSBP is to facilitate trade by reducing the processing at the border with a view to reduce cross-border transactions thereby enhancing the competitiveness of the region. For example, between 2009 and 2012, average crossing time declined from 120 hours before December 2009 to about 25 hours by June 2012. During the same period, the border post became much busier, with the number of vehicles increasing by 65%. Savings arising from the reduction in processing times at the border at Chirundu were estimated at $600,000 per day. These savings trickles down the entire business value chain which involves brokers, transporters, importers and consumers.

Source: Trademark Southern Africa

In East Africa, in order to strengthen the implementation of OSBPs, the EAC adopted the One Stop Border Posts Bill, and the East African Community Vehicle Load Control Bills, and regulations to support the implementation of the two laws were also developed.

With the support of the World Bank partnering with Trade Mark East Africa (TMEA), the EAC embarked on OSBPs development programme and put in place a pilot programme to transform selected two border posts into OSBP. This led to the development of several OSBPs which inter alia Holili/Taveta; Lungalunga/Horohoro, Malaba/Malaba, Busia (Kenya –Uganda), Milama Hills/Kagitumba, Nemba/Gasenyi (Burundi); Ruhwa (Rwanda – Burundi); and Elegu (Uganda) – Nimule (South Sudan) border posts. The OSBP at Malaba was completed around mid-2017, with immense impact expected once OSBPs are fully operational and ICT upgrades undertaken.

Similarly, the EAC OSBP model has reduced transit time from Mombasa to Kampala from 18 days to four days, and from 21 days to 3 days for the Eldoret – Kampala section. The Kazungula OSBP between Botswana and Zambia was completed in 2019 and has helped in reducing the dwell time for north and south bound traffic.

Likewise, ECOWAS member states signalled their commitment to create joint border posts through signature of the Supplementary Protocol Act/SA.1/13. The commitment further entailed the need to reduce the number of check points along their corridor routes. The first ECOWAS OSBP was provided at CINKANSE (Burkina Faso/Togo border), thanks to the ECOWAS and UEMOA Joint Border Posts Program which has since seen 11 border posts completed since 2003. With support from the World Bank, four other border posts have been

completed, namely, Noe-Elubo (Ghana/Ivory Coast border), Kodjoviakope (Togo/ Ghana border), Hillaconddji – Sanveekondji (Benin/ Togo border) and Seme-Krake (Benin/Nigeria border).

The following table summarises the One-Stop-Border-Posts being executed under the auspices of AUDA/NEPAD. Box 3.5 shows the OSBPs being implemented within the PIDA Programme.

Box 3.5: One - Stop Border Posts Progress in Africa

Before 2009, there was no OSBP in the African Continent. In 2009, Chirundu Border Post, between Zambia and Zimbabwe opened as a pilot OSBP within the COMESA region. It has brought the impact on the ground, reducing travel time across the border from 4-5 days to a few hours. Thereafter, a number of OSBPs have been built including Namanga between Kenya and Tanzania, Rusumo between Rwanda and Tanzania in East and Sinkanse in West Africa. However, there remain a various kinds of challenges faced in their operationalisation phase after the facilities are built, and as a matter of fact, there are many more OSBPs on the waiting list to be implemented on the continent.

In May 2010, the EAC adopted the OSBPs Bill, which sets the legal framework and shows political commitment to establish up to 15 one stop border crossings in the five partner states. SADC, which comprises 14 member states, has included the creation and implementation of Joint Customs Controls in its core mandate. In the Western sub region, the West African Economic and Monetary Union and ECOWAS, with the assistance of the European Union's 9th European Development Fund, have taken the lead to develop joint border posts at several sites. While the Malanville (Benin-Niger) and the Cinkansé (Togo-Burkina Faso) OSBPs are already functional, other OSBPs are still under design or construction, including the Sémé Kraké (Nigeria-Benin) and the Akuna-Noepe (Togo-Ghana) OSBPs.

Between 2014-2015, about 27 OSBP's were constructed. To date, 76 OSBP sites have been identified by country's REC's and the Programme for Infrastructure Development in Africa:

- 10 OSBP's have been completed in East, South and West Africa
- 12 OSBP's are still under construction
- 5 are under planning
- 49 are pending design and construction

Source: Mugano (2022)

A study commissioned by the EAC on cost and delays along the corridor value chain showed that, among others, approximately 40% of the cost (financial and temporal) was attributable to the operations of two stop border posts in the region (UN-OHRLLS and UNECA, 2019). When the first OSBPs was opened and operationalised in 2017 at Malaba and Busia between Kenya and Uganda, immense savings on transit times were realised. Likewise, evidence from the Northern Corridor Transit and Transportation Coordination Authority (NCTTCA), shows that at Port of Mombasa at least 50% of the arrivals at the Port Exit Gate within 13.5 hours of being offloaded from the vessels as compared to over 72 hours (3 days) and 144 hours (6 days), respectively for Home Use and Transit cargo. The NCTTCA reported a total average Port Dwell Time for all cargo of 60.63 hours (2.5 days).

(ii) Overload Control

In order to reduce damage to the road infrastructure and hence avoid steep expenditure in the maintenance or rehabilitation as roads fail and reduce the cost of doing business through reduced transit times and utilization of equipment, member States agreed to the harmonization of Axle Loads Limits and Vehicle Overload Control across countries. The harmonisation of Axle Loads Limits and Vehicle Overload Control was intended to ensure that vehicles operating on the road networks comply with the pavement design standards. In this regard, in order to preserve the roads, weighbridges are strategically placed along the corridors with a view to avoid truck overloads.

Unfortunately, most of the weighbridges are static and there is no communication between different weighbridges. In East and Southern Africa, although some member States would want zero tolerances on weigh bridges, the majority subscribe to 2-5% weight variance (UNECA and UN-OHRLLS, 2019).

(iii) Harmonized Road User Charges

In the Eastern and Southern African region, in particular, a programme is ongoing to harmonize cross-border road user charges although the objective is to harmonize the same across Africa. Harmonisation of user charges is expected to reduce procedures across countries and reduce transit times since payments for access to road networks are expected to be predictable. In this regard, although they differ from country to country, all the LLDCs have introduced road user charges which, inter alia, include fuel levy, toll charges and access charges which are predictable to truckers to plan accordingly (UN-OHRLLS and UNECA, 2019).

(iv) Coordinated Border Management (CBM)

As a pre-cursor to the operationalisation to OSBP, coordinated border management (CBM) has been introduced in Mozambique (Mutare/ Forbes Border Post), Resanno Garcia (RSA/ Mozambique), Mwanza/Zobwe (Malawi/Tanzania), DRC/Zambia (at Kasumbalesa) and Botswana/Namibia on the Trans Kalahari Corridor.

(v) National Single Windows

National Single Window (NSW) is a process that allows traders to submit electronically only once., Standardized information and documents to fulfil all imports, exports and transit regulatory requirements and all clearances and payments are done through the NSW process. Several African countries which inter alia include Ghana, Senegal, Madagascar, Mozambique and Kenya have implemented NSWs (UN-OHRLLS and UNECA, 2019). Although adoption by the LLDCs would further reduce customs clearance and border dwell times, NSW has benefitted LLDCs linked to these countries.

NSW is widely used in advance economies because of the multiple benefits it comes with to both the government and private sector. The benefits which will accrue to government after establishing a NSW include foundations towards an efficient e-Government system, real-time accurate trade data and statistics, substantial increase in Government revenues, better use of Government resources and increased transparency and accountability encouraging trade compliance. The benefits of NSW to the private sector include reduced duplication and errors, accelerated cargo clearance, reduced cost of document handling, one-stop 24-hour window for information exchange with Government Agencies and access to accurate statistics. Ghana, for example, after introducing the NSW, realized an immediate decrease in clearance time by a factor of 5, and immediate increase in government revenue by 35% and an increase in the accuracy and consistence of real-time trade data. Most of the NSWs in Africa have been established through PPP on a build-operate- transfer basis such as in Mozambique, Madagascar, Ghana, DRC, Ghana, but others are built through donor support, for example in Rwanda.

(vi) Implementation of the African Union SMART Corridor Concept

A study commissioned by the Program for Infrastructure Development in Africa (PIDA) revealed that corridor inefficiencies in the African Regional Transport Infrastructure Network cost over $75 billion per annum which reduces African countries' intra-regional and international competitiveness. In this view, the African Union carried out a scoping study on the development and roll out of a SMART Corridor and recommended that all Africa's transport corridors should be converted into SMART corridors with a view to improve the

corridor efficiency and reduce this cost. The SMART Corridor key attributes entail, among others the following:

a) Monitoring of traffic movements along the corridor and providing real-time information to stakeholders to enable them to manage trade and transport facilitation processes.
b) Paperless trade and transport administrative clearing procedures and logistics processes.
c) Corridor Performance Monitoring System which is reliable and facilitates evidence-based interventions to improve corridor efficiency;
d) Reduction of corruption in the transportation and clearance of cargo as well as reduction in transport costs and transit times. Of the four key defining characteristics of a SMART Corridor, ITS/ICT is the most critical and the newest.

The SMART Corridor concept initiatives embraces traditional trade facilitation measures but seeks to refine and reinforce the ongoing measures.

(vii) The COMESA-EAC-SADC Tripartite Mechanism for Reporting, Monitoring and Eliminating Non - Tariff Barriers (NTB)

One of the key mechanisms which have been put in place to strengthen trade facilitation efforts, which has been deemed in a number of cases as more important than further improvements in enabling physical infrastructure, for example, is the Tripartite Mechanism for Reporting, Monitoring and Elimination of Non-Tariff Barriers. This Mechanism is grounded in the view that the gains in increased volumes of trade and costs reduction will be significant should member states effectively eliminate NTBs. In view of this, at the Tripartite Forum, states are obliged to highlight their efforts and related progress in eliminating NTBs. In terms of implementation, regular reports on occurrences are captured for attention by the relevant authorities and stakeholders and designated authorities receive regular alerts on incidents. In East and Southern Africa this process is coordinated by TradeMark East Africa (TMEA).

(viii) Tripartite Trade and Transport Facilitation Program (TTTFP)

In order to facilitate the development of more competitive, integrated and liberalized regional road transport market in East and Southern Africa, a 5-year Tripartite Trade and Transport Facilitation Program (TTTFP) was launched in 2017. This project will ensure implementation of the Tripartite-agreed measures, among others, by providing technical capacity at national level necessary to ensure the domestication of these measures.

(ix) The COMESA Virtual Trade Facilitation System (CVTFS)

The COMESA Virtual Trade Facilitation System (VTFS) is a regional project which aims to provide an online system of tracking cargo and transport equipment along the designated corridors in the region. The CVTFS is a comprehensive system incorporating and integrating the features of other trade facilitation systems such as those for transit data transfer, regional customs bond guarantee, and electronic marketing systems. With the VTFS, signal transmitting gadgets are fitted on vehicles or containers thereby enabling them to be tracked as they transit across the region. The CVTFS has been implemented in the following corridors/countries; Northern Corridor (Burundi and Rwanda); Horn-Corridor (Djibouti and Ethiopia); North-South Corridor (DRC, Malawi; and Zambia).

(x) Market Liberalization Measures

Market liberalization is considered to be a key trade facilitation measure. The process draws on work being done in other areas of the Comprehensive Tripartite Transport and Trade Facilitation Programme (CTTTFP) and entails assessment, development and harmonization of national and regional legal and institutional arrangements, framework for granting a permit or license in the territory of one state for the territory of the other state, and in transit across the

territory enroute to another country and market access. The process eliminates the permit system for foreign carriers and drivers as it allows cabotage and third country rule to come into effect. Implementation in the last few years has been mostly by SACU countries and the East African Community. LLDCs have benefitted from market liberalization as it introduces competition as well as prevents trans-shipment of goods from one carrier to another.

(xi)Third-Party Vehicle Insurance

The Tripartite region has three third-party vehicle liability insurance schemes which provide cross border insurance to carriers. Three modes of payments are available in the Tripartite, namely, cash payments at the border, Fuel Levy System and the COMESA Yellow Card System. Following consultations between COMESA, EAC and the SADC, it was resolved that the Yellow Card System would offer a sound basis for an effective instrument to facilitate cross border movement of vehicles, goods and persons, and that it would enhance the development of trade and transport in the region. In terms of implementation, to date 13 countries have implemented, and another six countries are in the process of operationalization, bringing them to nineteen and the rest may join by default.

(xii) Tripartite Vehicle Regulations and Standards

The Tripartite member states are in the process of developing harmonized standards for vehicle fitness. A number of small studies are under way, addressing issues such as smoke emissions, vehicle registration standards, training of examiners, and bus overloading. To date, some vehicle standards have been harmonized for a number of countries such as Uganda, Malawi and Ethiopia. Given the harmonization's achieved with dimensions and weights, there is greater scope to rationalize and accord unification of critical dimensions across the Tripartite. Regarding implementation, the standards are going through adoption for implementation. However, seven countries that include Uganda, Malawi and Ethiopia have opted to implement the regulations and standards before adoption.

3.3.3.2 Challenges and Opportunities

Notwithstanding notable progress made on trade facilitation, most LLDCs are severely constrained by inefficient procedures inside as well as outside their territorial borders. The competitiveness of LLDCs' exports is eroded by multiple border crossings and long distances from major markets and cumbersome border and transit procedures and inadequate infrastructure, which when combined, increase the trade costs and other transaction costs substantially.

High trade transaction costs, inefficiencies and lack of competitiveness impedes African LLDCs from effectively participating in regional integration and participating in regional and global value chains. Empirical evidence shows that, in LLDCs, the trade facilitation costs may be as high as 50% of the value of traded goods in some LLDCs (UNECA, 2022). Inefficiencies and high costs in transit transport also have negative implications to the performance of the small and medium size enterprises (SMEs), which are important drivers of economic activity in the LLDCs and indeed within the continent.

OSBP and automated customs operations presents massive opportunity for easing trade facilitation in African LLDCs. OSBP was undoubtedly identified as a practical way to reduce duplication of procedures and reduce the clearance processing times. By reducing time lost, OSBP/JBP can also reduce the cost of transport for shippers and goods to consumers, thus accruing benefits across the national economic spectrum. Developing OSBPs will also help address the special needs of African LLDCs. In view of this, there is scope for African LLDCs to rollout OSBPs with a view to improve trade facilitation.

Automated System for Customs Data (ASYCUDA) is an integrated customs management system for international trade and transport operations in a modern automated environment which used to handle import, export and transit related procedures (UN-OHRLLS and UNECA, 2019).

In Africa, ASYCUDA was first implemented in Mali but is now used by several countries in Africa which include African LLDCs. One of the benefits of the ASYCUDA system is that it improves efficiency at the border thereby reducing delays and improving transit times (UN-OHRLLS and UNECA, 2019).

3.3.3.3 Conclusions and Recommendations

Transit times from coastal states into African LLDCs is largely impeded by complex border procedures. In view of this observation, the following observations are presented:

- African LLDCs and transit states need to demonstrate commitment to scale up the implementation of transport and trade facilitation measures. There is need to enhance cooperation between the African LLDCs and transit countries to implement joint trade facilitation reforms including standardisation of documents and harmonize custom procedures.
- Although progress has been achieved in putting in place Trade and Transport Facilitation Programs at both regional and sub-regional levels, adequate resources must be provided to support their implementation including through Aid for Trade with a view to accelerate the implementation of the programs.
- African LLDCs and Transit countries should mainstream trade facilitation into their national development strategies and plans.
- In order to increase efficiencies in border operations, ease congestion at the border and reduce transit times, with the assistance of RECs and development partners such as African Development Bank, Afrexim Bank, ECA, UN-OHRLLS and other UN families.
- African LLDCs should be encouraged and supported to make greater use of ICT systems in border management (ASYCUDA, Single Windows, biometric ID cards etc.) and OSBPs.
- With respect to the WTO TFA, partners such as the WTO, UNCTAD, ECA, RECs and the UN family as well as development partners should provide African LLDCs with technical assistance to help them move from ratification to implementation of the TFA.

3.4 Regional Integration and Cooperation

Regional integration involves trade liberalization within a defined regional economic community (REC) and provision of tariff and non-tariff barriers to member States outside the REC. Evidence shows that African LLDCs belong to three/four major Regional Economic Communities (RECs), that is, Economic Community of Central African States (ECCAS), COMESA, ECOWAS and SADC (UNECA and UN-OHRLLS, 2019). Of concern, evidence shows that, because of the overlapping membership, the existence of overlapping and often contradictory regional economic communities give rise to an ineffective "Spaghetti bowl" of institutions with limited authority and analytical capacity underlined by huge political promises (Mugano, 2022).

3.4.1 Status and Progress of Regional Integration and Cooperation

During the VPoA implementation period, the African Continental Free Trade Area was established with a view to, among others, mitigate the problems associated with overlapping membership. In addition, given that amongst the regional blocs, the Free Trade Area is the minimum level of market integration that has been achieved and in order to further deepen regional integration and address challenges associated with overlapping membership and contradictory RECs, African states resolved to establish the AfCFTA.

Resultantly, on 30 May 2019, the economic integration of African economies reached a new milestone when the agreement establishing the AfCFTA entered into force after 24 countries deposited their instruments of ratification (UNECA, 2022). The operational phase of the AfCFTA process was subsequently launched in Niamey, the Niger on 7 July 2019. As of February 2022, the Agreement had been signed and ratified by 54 and 41 African countries, respectively, including all Africa's LLDCs. African countries who ratified the AfCFTA have consented to liberalize up to 97% of tariff lines on intra-African trade in fifteen years' time. The agreement on AfCFTA is envisioned to result in reduced tariffs and the elimination of non-tariff barriers and more importantly expected to ease trade facilitation hurdles among the African LLDCs since it contains provisions on trade facilitation, transit and customs cooperation (UNECA, 2022).

In addition, the agreement can facilitate African LLDCs' integration into regional value chains, and expand their trade capabilities. Within the AfCFTA context, African LLDCs with manufacturing bases can position themselves on specific segments of regional value chains (RVCs) for goods and services. The African LLDCs are set to benefit immensely from the liberalization envisioned in the AfCFTA, including the elimination of tariffs. African LLDCs will benefit from the provision for the exclusion of 3% tariff lines from liberalization if the value of the goods does not exceed 10% of total intra-African imports.

This should pave way for African LLDCs to have market access to 1.3 billion single Africa market across 55 countries with a combined GDP of $3.4 trillion. The AfCFTA, if implemented, has a potential of lifting 30 million people out of extreme poverty by 2035. The African LLDCs' share of intra- African imports ranges (with exception of one LLDC) between 13% and 58%. In addition, on average, 56% of intra-African imports come from within the same REC, whereas this share is over 70% for 11 of the 16 African LLDCs (UNECA and UN-OHRLLS, 2019).

ECA supported ratification advocacy efforts and has continued to support African countries, including African LLDCs and RECs in the development and deployment of national and regional AfCFTA implementation strategies. It is also working in partnership with other

stakeholders to encourage and help member states ratify the AU Free Movement Protocol and its subsequent implementation.

In this regard, ECA support to LLDCs centred upon sensitization and consultations around issues relating to the African Continental Free Trade Area, including the development of strategies in Chad, Malawi, the Niger, Zambia and Zimbabwe. African Continental Free Trade Area strategies serve to identify particular countries' key trade opportunities, constraints and steps required for it to take full advantage of national, regional and global markets. In order to demonstrate how to operationalize the African Continental Free Trade Area, ECA and partners launched the African Continental Free Trade Area-anchored Pharmaceutical Project in pilot countries, with Ethiopia and Rwanda as beneficiaries. The Project has a three-strand approach: pooled procurement of medicines and products, facilitation of local pharmaceutical production and ensuring quality standards of medicines and products to achieve the Sustainable Development Goals and aspirations of Agenda 2063.

Undoubtedly, the establishment of the AfCFTA is expected to deepen regional integration.

The Regional Integration Index which shows the extent of integration by member countries to the different RECs around the continent will be used to rate and rank the integration of countries in various regions and to assess progress made by countries since the launch of the VPoA. In this regard, five key integration areas are trade through liberalization, regional infrastructure, production, free movement of people and financial and macroeconomic integration will be analysed (see table 3.11).

Table 3.11: Country Level Integration Performance of LLDCs, 2019s

Countries	Country Level Integration Performance					
	Trade Integration Index	Regional Infrastructure Index	Productive Integration Index	Free Movement of People	Financial & Macroeconomic Integration	Regional Integration
Botswana	0.496	0.242	0.245	0.105	0.342	0.302
Burkina Faso	0.434	0.147	0.181	0.580	0.525	0.370
Burundi	0.301	0.091	0.123	0.037	0.379	0.203
Central African Republic	0.282	0.079	0.173	0.432	0.417	0.273
Chad	0.400	0.09	0.183	0.438	0.447	0.303
Eswatini	0.730	0.124	0.097	0.105	0.280	0.280
Ethiopia	0.407	0.316	0.069	0.025	0.482	0.287
Lesotho	0.655	0.080	0.052	0.444	0.297	0.308
Malawi	0.389	0.148	0.174	0.580	0.219	0.282
Mali	0.431	0.154	0.139	0.481	0.542	0.352
Niger	0.425	0.069	0.073	0.456	0.462	0.299
Rwanda	0.435	0.184	0.164	0.907	0.570	0.434
South Sudan	0.290	0.009	0.081	0.407	0.023	0.147
Uganda	0.434	0.162	0.217	0.876	0.322	0.376
Zambia	0.431	0.258	0.324	0.229	0.185	0.287
Zimbabwe	0.550	0.261	0.221	0.574	0.357	0.387
African Average	**0.383**	**0.220**	**0.201**	**0.441**	**0.399**	**0.327**

Source: AU, AfDB and UNECA (2019)

With respect to regional integration, amongst the African LLDCs, Rwanda, with an average score of 0.434 is the most integrated country. It is also important to note that, in terms of performance, Rwanda is above the continental average score of 0.327 on regional integration. Out of 16 African LLDCs, in addition to Rwanda, other countries which scored above the Africa's average are Zimbabwe (0.387), Uganda (0.376) and Botswana (0.370) (see table 3.11).

With a score of 0.147, South Sudan is the least integrated both in Africa and amongst African LLDCs. Likewise, Burundi, with a score of 0.203, is second least integrated country within the African LLDCs (see table 3.11). AU, AfDB and UNECA (2019) noted that low

performance in Burundi is principally driven by lack of commitment to liberalise the movement of people.

With respect to financial and macroeconomic integration, the highest performer amongst the African LLDCs is Rwanda with a score of 0.570 which is way above the African average of 0.399. Of interest to note is the fact that Rwanda is ranked 4th position on the African continent. Within the African LLDCs, countries which performed exceptionally well on macroeconomic and financial integration are Mali (0.542), Botswana (0.525), Ethiopia (0.482), Niger (0.462), Chad (0.447) and Central African Republic (0.417). The top performers are largely characterised by macroeconomic stability and how easily currencies are convertible to other currencies. This is the case for the Rwandan franc and Botswana Pula. Botswana, in particular, is highly ranked in terms of good governance which is a prior requirement for the enforcement of existing bilateral investment treaties. This is an important factor that boosts their position on this dimension.

On the contrast, countries such as South Sudan, Zambia and Zimbabwe with stubborn inflation and currency crisis ranked poorly on this dimension. South Sudan and Zambia are the least performers on macroeconomic and financial integration with an average scores of 0.023 and 0.185, respectively.

With respect to free movement of people, in the African LLDCs, Rwanda is the top performer with an average score of 0.907 and is ranked 6th position on the African continent. The second best performer is Uganda with an average score of 0.876 followed by Malawi (0.580), Burkina Faso (0.580) and Zimbabwe (0.574). The least performer was Burundi (0.037) followed by Botswana (0.105) and Lesotho (0.105) (see table 3.11).

With regard to productive integration index, only four African LLDCs performed well above the African average, that is, Zambia (0.324), Botswana (0.245), Zimbabwe (0.221) and Uganda (0.217). The remaining 12 countries were bottom performers, that is, they revealed low exports of intermediate goods and also performed poorly on exports.

Amongst the African LLDCs, Ethiopia is the best performer in terms of regional infrastructure. Other countries with exceptional performance are Zimbabwe (0.261), Zambia (0.258) and Botswana (0.242). The remaining 12 African LLDCs performed well below the African average of 0.220 which means that concerted effort is required to improve infrastructure in the African LLDCs.

On trade integration, Eswatini tops the African LLDCs group with an average score of 0.730 which is close to the maximum score of 1. This is mainly because Eswatini is part of the Southern Africa Customs Union (SACU) and a member of the Common Monetary Area which also include Lesotho, South Africa, and Namibia. Other 12 countries which include Lesotho (0.655) and Zimbabwe (0.550) have performed well above the African average. Only three countries, that is, South Sudan (0.290), Central African Republic (0.282) and Burundi (0.301) performed below African average score on trade integration.

The RECs where each LLDC is being compared are shown on the right of the table, and their score cards demonstrate mixed fortunes. Countries like Botswana, Rwanda, Zambia, Niger and Mali fare fairly well compared with the rest.

Table 3.12: Rankings of LLDCs in the REC Integration

Country	Main REC for Regional Integration Performance	Ranking in the Main REC	Other REC Membership	Ranking
Botswana	SADC	2		
Burkina Faso	CEN-SAD	7	ECOWAS	
Burundi	COMESA	12	EAC	
Central African Republic	CEN-SAD	22	ECCAS	4

Chad	CEN-SAD	4	ECCAS	9
Eswatini	COMESA	13	SADC	5
Ethiopia	COMESA	19		
Lesotho	SADC	10		
Malawi	COMESA	11	SADC	11
Mali	CEN-SAD	6	ECOWAS	
Niger	CEN-SAD	5	ECOWAS	4
Rwanda	COMESA	8	EAC	3
South Sudan	IGAD	7	COMESA	
Uganda	COMESA	3	EAC	2
Zambia	COMESA	2	SADC	4
Zimbabwe	COMESA	7	SADC	6

Source: UN-OHRLLS and UNECA (2019)

Overall, the foregoing observation shows that African LLDCs have not deepened their regional integration. The major binding constraints which are weighing heavily on African LLDCs are production constraints, lack of complementarity of goods, multiple membership, macroeconomic instability and shortage of key infrastructures such as transport, water and energy (Mugano, 2022; UNCTAD, 2022).

With respect to regional cooperation, RECs create an enabling environment for investment, business performance and policy predictability. The COMESA-EAC-SADC Tripartite is a practical example whose programmes cover cooperation and harmonisation in infrastructure, industrialisation, trade and customs and free movement of persons (UN-OHRLLS and UNECA, 2019).

In order to assist states with development, adoption and domestication of harmonised regulatory frameworks, within the RECs, ICT and Energy regulatory associations have been established (UN-OHRLLS and UNECA, 2019). In turn, states are required to establish national energy and ICT regulators to serve the enforcement and domestication of agreed harmonised regulatory frameworks and guidelines. The agreed provisions on facilitating access to energy, corridors and ICT connectivity for LLDCs are discussed at length elsewhere in the report. Examples of cooperation in energy and transport which were extensively discussed in this report inter alia include OSBP, Southern Africa Power Pool and cross border interconnectivity plans. Most of the key projects have been adopted as part of the master plans for the Regional Economic Communities (namely COMESA, EAC, ECCAS, ECOWAS and SADC) as regional projects, supported by the Power Pools, Pan African Institutions, under the auspices of the Programme for Infrastructure Development in Africa – PIDA. This has enhanced the connectivity of LLDCs to both transit countries and the rest of the world.

As a way forward, a number of issues being pursued within the framework of the AfCFTA include:

- Conclusion of outstanding issues on modalities for tariff liberalization;
- Development of Appendix IV on Rules of Origin;
- Conclusion of outstanding issues in the Annex on Rules of Origin;
- Work related to negotiations on Trade in Services
- Finalization of Guidelines for implementation of Trade Remedies;
- Necessary work to ensure preparedness in the implementation of the Annexes;

3.4.2 Challenges and Opportunities

The major binding constraints which are weighing heavily on the deepening of regional integration in African LLDCs inter alia include supply side constraints, lack of complementarity of goods, multiple membership, macroeconomic instability and shortage of key infrastructures such as transport, water and energy (Mugano, 2022; UNCTAD, 2022).

Existing RECs in Africa and the already established relationship with South – South cooperation may affect the effective implementation of the trading protocols signed under the AfCFTA (Mugano, 2022). In RECs, in particular, there is potential risk that Heads of States of Government may not render political will to deepen regional integration within the AfCFTA at the expense of their REC(s) which they have been attached to for several years.

However, notwithstanding this challenge, the AfCFTA presents large market access to African LLDCs.

3.4.3 Conclusions and Recommendations

This report shows that African LLDCs' quest to deepen regional integration has been severely constrained by capacity constraints especially in implementing ratified trading protocols, supply side constraints, lack of complementarity of goods, multiple membership, macroeconomic instability and shortage of key infrastructures such as transport, water and energy. In view of this observation, the following recommendations are proposed:

- Since all the African LLDCs have ratified the AfCFTA, policy measures aimed at building productive capacity are needed as this is key in fostering intra-Africa trade, stimulating the much-needed manufacturing and economic development. LLDCs are encouraged to implement the provisions of the AfCFTA.
- LLDCs should make efforts to accelerate and champion deeper market integration at the regional and continental levels, as this paves the way for greater facilitation of movement of goods across the regional blocs and ultimately the continent, given that the key tenets of the WTO TFA are embedded in market integration provisions, with African LLDCs the key beneficiaries.
- Given that the RECs are the AU pillars for regional integration, it is critical that both transit and LLDCs follow through their commitments towards the ongoing regional market integration process in order to realize the full benefits of the process of regionalism.
- Cross border infrastructure development and maintenance (Transport, ICT and energy infrastructure) is fundamental to facilitate integration and needs to be enhanced.

3.5 Structural Economic Transformation

The majority of African economies continue to rely heavily on export of commodities while increasing services – sector employment in most economies is neither technologically dynamic nor tradeable notwithstanding the fact that Africa's structural transformation and the need for its economies to shift resources from low to high value-added manufacturing and services sectors had been top priorities on the development agenda for a long time.

3.5.1 Status and Progress on Structural Economic Transformation

During the implementation phase of the VPoA, COMESA and SADC developed their respective industrial policies whose focus is to intensify industrialisation (see table 3.13).

Table 3.13: RECs Industrial Policies/Strategies

REC	Industrial Policy focus	Industrialization Strategy	Period Covered
COMESA	COMESA Industrial Policy (2015)	COMESA Industrialization Strategy	2015-2025
EAC	EAC Industrialization Policy 2012 - 2032	East African Industrialization Strategy (2012-2032)	2012 -2032
ECOWAS	West Africa Common Industrial Policy		2012-2020
SADC	SADC Industrialization Policy	SADC Industrialization Strategy Roadmap 2015 – 2063	2015 - 2063

Source: Various REC websites

These industrial policies placed emphasis on global value chains (GVCs) and regional value chains (RVCs) which is key in providing opportunities for firms to absorb new technology, and rapidly expand their economies of scale, access international markets and therefore facilitate structural economic transformation. The succeeding section reviews progress made to increase value addition in manufacturing and agricultural sectors. Notwithstanding a number of strategies undertaken by African countries such as development of regional industrial strategies, positioning African countries to participate in regional and global value chains, as has been the case with many African economies, many LLDCs in Africa have seen a decline in the share of manufacturing in GDP and in employment.

The contribution of industrial activities to economic output in Africa remains limited, ranging between 11 to 12% from 2000 to 2020 (UNECA, 2022). However, for the African LLDCs the contribution of industrial activities to economic output in Africa is even lower, ranging from nearly 10% in 2000 to 8% in 2020 (UNECA, 2022). This observation does not disqualify the fact that in absolute terms, manufacturing value added (MVA) has increased steadily across the continent over the same period. From 2000 to 2020, MVA (constant 2015 prices) for the group of African LLDCs increased by 2.75-fold from $ 8 Billion to 22 billion (UNECA, 2022). Such trend has been underpinned by relatively dynamic manufacturing activities taking place in Eswatini, Ethiopia, Uganda and Zimbabwe under strong political will.

The value added from agriculture is generally high for most LLDCs in Africa such as Chad (54%), Mali (36%), Central African Republic (30%) and Niger (36%) (see table 15). However, countries with low value added share of agriculture inter alia include Botswana (6%), Rwanda (9%), Eswatini (9%), Burkina Faso (10%), Zambia (9%) and Zimbabwe (12%). Evidence presented from table 3.14 shows that, for the period 2014 – 2021, the overall agricultural share and share of manufactured value added of all the African LLDCs was generally steady although there were noticeable marginal changes. The share of manufactured value added, in particular, remained low for most countries with the exception of Eswatini with 27%.

Based on the foregoing observation, it can be argued that since the launch of the VPoA, there is no noticeable decline or changes in value added from agriculture.

Table 3.14: Trends for share of manufacturing value added in GDP (%) for African LLDCs

Country Name	2014	2015	2016	2017	2018	2019	2020	2021
Burundi	10	9	9					
Burkina Faso	11	12	11	10	11	10	9	10
Botswana	8	7	7	6	6	6	6	6
Central African Republic	17	20	19	18	18	18	18	17
Ethiopia	4	4	6	6	6	6	5	5
Lesotho	12	15	17	15	17	17	14	15
Mali	7	6	6	6	6	7	7	7
Malawi	10	10	10	11	11	12		
Niger	8	8	7	8	7	7	7	8
Rwanda	7	7	7	8	8	8	9	9
South Sudan	3	4						
Eswatini	31	32	31	30	29	30	27	27
Chad	3	3	3	3	3	3	3	
Uganda	15	17	16	16	16	15	16	16
Zambia	7	8	8	8	7	7	8	9
Zimbabwe	13	12	12	11	14	14	16	12

Source: World Development Indicators

Table 3.15: Trends for agriculture value added share in GDP % for African LLDCs

Country Name	2014	2015	2016	2017	2018	2019	2020	2021
Burkina Faso	24	23	22	21	21	18	18	17
Botswana	2	2	2	2	2	2	2	2
Central African Republic	34	32	32	33	31	28	29	30
Lesotho	4	4	5	5	4	4	5	5
Mali	37	38	37	37	38	37	36	36
Malawi	29	27	26	23	22	23	23	23
Niger	33	32	35	36	38	37	38	36
Rwanda	25	24	25	26	25	24	27	24
South Sudan	8	10						
Eswatini	9	9	9	8	9	9	8	8
Chad	51	50	46	49	45	43	47	54
Uganda	25	24	23	23	23	23	24	24
Zambia	7	5	6	4	3	3	3	3
Zimbabwe	9	8	8	8	7	10	9	9

Source: World Development Indicators

The share of employment of agriculture and in industry is an effective technical indicator for structural transformation. Current statistics shows that the employment shares of agriculture and industry in total employment for African LLDCs between 2014 and 2018 have not changed over the five-year period, confirming that in the absence of industrial policies and strategies to catalyse structural transformation, this cannot be achieved (see table 3.16).

Over the period under review, progress on structural transformation by African LLDCs has been slow. The absence of supportive industrial policies coupled with low investment flows and subdued local investors have undermined efforts towards value addition, technology and innovation.

Table 3.16: Agriculture and Industry employment shares (% of total employment)

Countries	2014		2015		2016		2017		2018	
	Agric. Share %	Industry Share %	Agric. Share %	Industry Share %	Agric. Share %	Industry Share %	Agric. Share %	Industry Share %	Agric. Share %	Industry Share %
Botswana	23.9	18.1	23.6	18.1	23.4	18.1	23.2	18.1	23.0	18.1
Burkina Faso	30.4	31.6	30.0	31.5	29.7	32.3	29.2	32.6	28.7	33.0
Burundi	91.4	2.4	91.6	2.2	91.8	2.2	91.9	2.1	92.0	2.1
Central African Republic	73.8	8.7	73.6	8.7	73.3	8.9	73.1	9.0	72.8	9.2
Chad	80.8	3.3	80.9	3.2	81.3	3.1	81.7	3.0	81.6	3.1
Eswatini	13.3	24.6	13.3	24.5	13.2	24.5	13.1	24.5	13.0	24.4
Ethiopia	70.0	9.1	68.9	9.9	68.0	10.9	67.1	11.4	66.2	12.0
Lesotho	68.1	9.6	67.8	9.7	67.6	9.8	67.1	9.9	66.9	10.0
Malawi	72.4	8.2	72.3	8.2	72.2	8.2	72.1	8.2	71.9	8.3
Mali	66.7	8.0	62.3	8.3	66.0	6.3	65.7	6.4	65.3	6.5
Niger	68.5	7.9	67.6	8.3	67.5	8.3	67.1	8.6	66.6	8.8
Rwanda	47.3	18.9	46.0	18.9	48.1	16.5	48.9	15.9	49.6	15.4
South Sudan	76.3	8.0	76.2	7.9	76.2	8.0	76.1	8.0	75.9	8.1
Uganda	71.7	7.0	71.3	7.2	71.4	7.2	71.1	7.3	70.8	7.4
Zambia	55.2	10.3	54.7	10.4	54.4	10.6	54.2	10.6	53.9	10.7
Zimbabwe	67.3	7.4	67.1	7.3	67.2	7.2	67.1	7.3	67.2	7.2

Source: World Development Indicators

This evidence further reveals the continuation of historical form of the participation of LLDCs in regional and global value chains where they have been suppliers of unprocessed raw materials which also undermines intra-regional and hence regional integration.

Failure by most African LLDCs to develop or domesticate regional industrial strategies has been singled out by UN-OHRLLS and UNECA (2019) as one of the impediments on economic structural transformation. Eswatini is the only country which developed its industrial policy within the same time frame with VPoA (see table 3.17). The majority of African LLDCs have not designed industrial policies that emphasize structural transformation since they operate with policies formulated more than 20 years ago as shown in table 3.17. This partly explains why most LLDCs have not made progress on economic structural transformation.

Table 3.17: Status of policies, Plans and Strategies for Structural Transformation

Country	Policy, Plan or strategy	Date or Period
Botswana	Industrial Development Policy for Botswana	1998
Burkina Faso	National Plan for Economic and Social Development (PNDES)	2016 - 2020
Burundi	Burundi Vision 2025	2011
Central African Republic	Industrial restructuring and upgrading programme	
Chad	Action Plan for the Elaboration of the Economic Diversification Strategy	2018
Eswatini	Industrial Development Policy	2015 - 2022
Ethiopia	Ethiopian Industrial Development Strategic Plan	2013-2025
Lesotho	Industrialization Master Plan	2007-2010
Malawi	Integrated Trade and Industry Policy	1998
Mali		
Niger		
Rwanda	National Industrial Policy	2011
South Sudan		
Uganda	Draft Industrial Policy Validated	October 2018
Zambia	Commercial, Trade and Industrial Policy	2009
Zimbabwe	Industrial Development Policy, National Trade Policy, National Export Strategy and National Development Strategy 1	2018 - 2019

Source: Compiled from internet sources

However, a limited number of LLDCs such as Botswana, Zimbabwe, Zambia and Eswatini have formulated and are implementing industrial policies. Interestingly, some LLDCs such as Chad and Central African Republic have moved to target strategies for specific aspects of industrial policy.

3.5.2 Challenges and Opportunities

The implementation of RVCs and GVCs is moving at a snail pace due to a number of binding constraints which inter alia include low mechanization for land preparation, limited access to irrigation; limited access to quality inputs; weak supporting organizations; absence of combine harvesters; and limited access to processing facilities. In the absence of processing facilities, a number of countries are forced to sell their produce as raw materials.

For example African LLDCs such as Malawi, Zambia and Zimbabwe face numerous challenges ranging from shortage of processing facilities, structural rigidities in the supply of raw materials and high input costs. Malawi, is largely constrained by shortage of rice processing facilities which has made it difficult to competitively participate in both RVCs and GVCs while Zambia's soybean and poultry value chains is largely constrained by limited soya production which has resulted in low capacity utilisation. Likewise, the Zambia Poultry Value Chain also faces a number of challenges such as high cost of stock feed and high feed input. From a pricing perspective, these impediments eroded the competitiveness of the country and has made it difficult for Zambia to participate in regional value chains. Zimbabwe has also established value chains in the agro-processing industry with specific focus on soybean but faces increased prices of inputs like fertilizers, foreign currency and drought of production (UN-OHRLLS and UNECA, 2019).

The large market access which is brought about by the AfCFTA presents massive opportunities for African LLDCs to lure investors to tape into the 1.3 billion people and $3.4 trillion economy.

3.5.3 Conclusions and Recommendations

During the period under review, African LLDCs did not make any substantial progress on economic structural transformation. Over 90% exports from African LLDCs have remained largely concentrated in raw materials and the contribution of African LLDCs to global trade remained flat at around 0.2%. In view of this observation, the following recommendations are suggested:

- African LLDCs can improve economic performance in the agricultural sector through enhanced agro-processing that provides value added opportunities.
- Through the use of SEZs, African LLDCs can leverage on the opportunities coming with the AfCFTA. However, in view of the fact that most African LLDCs and African economies in general have failed to use SEZs as a vehicle for industrialisation, there is need for development partners such as RECs, ECA, UNDP, African Development Bank and bilateral donors such as China to collaborate with African LLDCs in the establishment of SEZs.
- Regional SEZs, as noted in the case of Ethiopia, Zimbabwe and Zambia, which is being supported by COMESA and ECA can be a classical example which can be used to drive the establishment of SEZs in African LLDCs.
- There is need for African LLDCs to participate in RVCs and GVCs. However, because of the complexity of value chains, development partners such as the African Development Bank, ECA, UN-OHRLLS, bilateral donors should provide technical assistance. A number

of critical success factors for the development of RVCs and GVCs have been identified, and the key aspects include: Technological upgrading; Creation of appropriate enabling environment by the states; Stable macroeconomic environment, robust financial markets and banking systems; Provision of ICT and energy as key enablers of industrialization; and removal of key binding constraints (mainly provision of skills, finance and infrastructure).

3.6 Means of implementation

African LLDCs are expected to mobilize domestic resources for the development of infrastructure and transit facilities, as well as for overall socioeconomic development. However, in their efforts to achieve sustained growth and sustainable development, African LLDCs face acute shortage of financial resources and capacity constraints (UN-OHRLLS, 2014). As one of the priority areas of the VPoA, African LLDCs and their transit neighbours are required to effectively mobilize adequate domestic and external resources for the effective implementation of the Vienna Programme of Action. This section presents progress made in mobilising resources, challenges, gaps and opportunities.

3.6.1 Status and Progress on Means of Implementation

Overall, total financial resources received by African LLDCs from official development assistance, foreign direct investment and remittances, combined, shows an upward trajectory from the year 2014 when VPoA was launched.

(a) Status and Progress on Foreign Direct Investment

In 2021, a total of $7.3 billion in FDI was received, a real increase of 3% since the Vienna Programme for Action was launched in 2014 (see table 3.18). This amounted to 0.45% of total global FDI inflows. This is notable progress considering that Zambia witnessed investment outflows amounting to $823 million (see table 3.18). FDI inflows to the African LLDCs have however focused on two countries (i.e., Ethiopia and Uganda) accounting for 74% of these flows in 2021.

It is important to note that since the launch of the VPoA, FDI into African LLDCs maintained an upward trend save for the year 2020 when FDI inflows dropped to $4.9 billion due to the COVID-19 pandemic (see table 3.18).

Table 3:18: Inflows of Foreign Direct Investment into the African LLDCs ($ million)

Country Name	2014	2015	2016	2017	2018	2019	2020	2021
Burundi	81.75	49.62	0.06	0.32	0.98	1.04	8.47	7.90
Burkina Faso	357.30	231.90	390.62	2.57	268.41	162.97	(98.78)	137.37
Botswana	515.18	378.55	142.52	260.58	285.96	93.61	31.81	55.16
Central African Republic	3.48	3.00	7.26	6.89	18.00	25.60	34.75	30.17
Ethiopia	1,855.05	2,626.52	4,142.94	4,017.16	3,360.42	2,548.74	2,395.80	4,259.45
Lesotho	94.46	206.51	79.23	42.17	40.87	35.73	28.00	(12.37)
Mali	144.21	275.53	356.48	560.75	467.30	859.09	536.85	659.67
Malawi	598.09	287.75	115.70	90.20	77.01	55.23	45.24	46.41

Niger	822.97	529.48	301.33	338.71	466.04	717.15	360.65	754.55
Rwanda	314.00	162.08	279.75	274.03	366.19	263.17	99.92	211.90
South Sudan	1.04	0.15	(7.85)	1.42	60.14	(2.21)	17.50	67.50
Eswatini	25.78	31.50	26.85	(57.65)	31.13	127.97	44.07	121.48
Chad	(675.55)	559.64	244.68	363.38	460.89	566.64	557.69	562.17
Uganda	1,058.56	737.65	625.70	802.70	1,055.35	1,273.89	873.79	1,142.21
Zambia	1,507.80	1,582.67	662.81	1,107.52	408.44	547.97	(172.75)	(823.08)
Zimbabwe	472.80	399.20	343.01	307.19	717.87	249.50	150.36	166.00
TOTAL	**7,176.92**	**8,061.75**	**7,711.10**	**8,117.93**	**8,085.01**	**7,526.09**	**4,913.37**	**7,386.48**

Source: World Bank World Development Indicators, UNCTAD

(b) Status and Progress on Official Development Assistance

In 2021, a total of $21.5 billion was received in ODA by the African LLDCs, a real increase of 31.3% since the Vienna Programme of Action was adopted in 2014. However, ODA was unevenly distributed between the African LLDCs, with three countries, that is, Ethiopia, Zambia and South Sudan, accounting for 47.5% of the group's total that year (see table 3.18).

Table 3.18: Official Development Assistance ($ million)

Country Name	2014	2015	2016	2017	2018	2019	2020
Burundi	515	367	743	436	451	554	479
Burkina Faso	1,123	998	1,029	892	1,186	1,108	1,731
Botswana	99	65	91	102	86	68	79
Central African Republic	611	487	507	512	656	689	830
Ethiopia	3,584	3,239	4,083	4,125	4,941	4,677	5,302
Lesotho	107	86	112	146	154	140	170
Mali	1,234	1,202	1,205	1,360	1,557	1,814	1,566
Malawi	931	1,049	1,242	1,520	1,279	1,167	1,453
Niger	918	869	952	1,225	1,308	1,439	1,930
Rwanda	1,035	1,088	1,150	1,231	1,120	1,168	1,624
South Sudan	1,959	1,675	1,587	2,183	1,578	1,677	1,820
Eswatini	86	93	148	148	121	71	105
Chad	392	606	624	649	874	642	1,037
Uganda	1,632	1,637	1,763	2,012	1,945	2,028	3,083
Zambia	998	797	966	1,040	1,000	948	1,016
Zimbabwe	761	788	653	726	795	843	984
TOTAL	**15,986**	**15,047**	**16,855**	**18,307**	**19,052**	**19,032**	**21,471**

Source: World Bank World Development Indicators, UNCTAD

In 2020, top recipient of ODA are Ethiopia (US$5.3 billion), Uganda (US$3.1 billion), Niger (US$1.9 billion), South Sudan (US$1.8 billion), Burkina Faso (US$1.7 billion) and Rwanda (US$1.6 billion).

(c) Migrant Remittances

In 2022, the African LLDCs received $8.7 billion in remittances, which was $1.7 billion more than was received by the group in 2014. Remittance inflows to the African group were unevenly distributed, with the top four recipients (i.e. Zimbabwe, Uganda, South Sudan and Mali), that is accounting for 62% of inflows in 2022.

Table 3.19: Migrant remittance inflows $ million)

Country Name	2014	2015	2016	2017	2018	2019	2020	2021	2022e	% of GDP in 2022
Botswana	46	30	25	39	44	59	36	58	56	0.3
Burkina Faso	396	385	397	417	456	467	525	561	589	3.2
Burundi	56	51	31	34	48	0	0	48	50	1.4
Central African Republic	0	0	0	0	0	0	0			
Chad	0	0	0	0	0	0	0			
Eswatini	96	96	98	144	126	119	112	132	148	3.2
Ethiopia	1,796	1,087	772	393	436	480	404	436	327	0.3
Lesotho	393	371	454	550	582	544	468	499	527	21.0
Malawi	38	41	39	79	181	281	232	259	267	2.3
Mali	921	817	827	885	1,023	972	997	1,053	1,094	5.9
Niger	219	172	176	264	297	309	521	542	534	3.6
Rwanda	184	159	173	215	261	261	280	391	469	3.9
South Sudan	2	1,139	1,083	634	1,267	80	87	1,236	1,187	24.8
Uganda	888	902	1,146	1,166	1,338	1,425	1,062	1,083	1,131	2.3
Zambia	58	47	38	94	107	98	135	242	260	1.0
Zimbabwe	1,904	2,047	1,856	1,730	1,428	1,417	1,832	1,982	2,047	5.3
TOTAL	**6,998**	**7,343**	**7,116**	**6,644**	**7,593**	**6,511**	**6,690**	**8,521**	**8,686**	

Source: World Bank World Development Indicators, UNCTAD

In terms of the importance of remittances to the national economies of African LLDCs, in Lesotho, South Sudan, Mali and Zimbabwe, remittances represent 21%, 24.8%, 5.9% and 5.3% share of respective countries' GDP.

3.6.2 Challenges and Opportunities

During the period under review, the high levels of debt have made it difficult for most African LLDCs to mobilise large sums of domestic resources which inter alia include fiscal revenue and levies which are required to achieve the Vienna Programme of Action objectives for achievement of the Sustainable Development Goals. Current statistics show that the total average of government debt among African LLDCs is 54% of GDP.

To illustrate the severity of external debt on African LLDCs, evidence shows that, in 2019, external debt stock rose to 51.6% of GDP from 41.3% in 2015 – an increase of more than 10 percentage points in 5 years. In six African LLDCs, that is, Burkina Faso, Burundi, Eswatini,

Rwanda, Zambia and Zimbabwe, the government's gross debt as a share of GDP rose by 10 percentage points in the same period. Resultantly, eleven African LLDCs are now classified as being highly indebted. To make matters worse, for most countries, the external debt is predominantly private non-guaranteed debt and is highly volatile. As a result of high external debt, it has been extremely difficult for most African LLDCs to mobilize the resources required to implement the Vienna Programme of Action and achieve the Sustainable Development Goals.

This debt, coupled with overlapping crisis of the COVID-19 pandemic and war in Ukraine, reduces the available options for African countries, that is, both non-landlocked developing countries and LLDCs, to finance their development agendas. Anecdotal evidence shows that significant share of funds which traditionally comes to African LLDCs are being channelled to help Ukraine. This is expected to drive down the ODA coming to African LLDCs.

3.6.3 Conclusions and Recommendations

Based on the foregoing observation, compared to FDI and diaspora remittances, ODA is a major source of capital to African LLDCs. The following recommendations are suggested:

- There is a need for African LLDCs to come up with innovative instruments which can direct remittances into direct investments. The diaspora investment vehicles inter alia include diaspora bond, deposits account, transnational loans and special economic zones.
- African LLDCs must make concerted efforts in luring foreign direct investment which is crucial for the structural transformation of African LLDCs. These efforts would increase the value of domestic economies and link LLDCs more effectively to global value chains, thereby helping them to achieve some of the priorities set out in the Vienna Programme of Action.
- In addition, if they are to effectively address the impact of the pandemic and sustain their post-pandemic recovery initiatives, LLDCs and transit countries also require official development assistance, including aid-for-trade support. Such support is needed to build the capacity to formulate trade policy, participate in trade negotiations and implement trade facilitation measures, finance trade, develop trade infrastructure, diversify exports and strengthen productive capacity, with a view to increasing their global market competitiveness.
- A comprehensive economic rescue plan that goes beyond emergency credit to enable LLDCs to effectively implement the Vienna Programme of Action is needed.
- LLDCs should strengthen their efforts in mobilizing domestic resources, including through carrying out reforms in tax administration, broadening the tax base and strengthening domestic capital markets.
- LLDCs should prioritise domestic resource mobilization given the limited financing from external sources, although this requires implementation of cost reflective tariffs to attract private investors. There is a need to prioritize private sector funding for the provision of infrastructure as well as create an appropriate enabling environment for investment, by putting in place proper legislative and regulatory measures in order to enhance the appetite for private sector participation, as well as bring about a business culture in mandated institutions;
- LLDCs need to enhance the level of good governance in key institutions that facilitate economic development and provide services, especially within the public sector and parastatal organizations, in order to bring about the much- needed operational efficiency and sustainability in these enterprises;

- LLDCs can attract more FDI by improving their regulatory environment and by engaging in regional integration initiatives and deepening their cooperation with neighbouring countries, especially transit countries.
- LLDCs should put in place sound industrial policies and strategies to catalyse structural economic transformation through enhanced investment, entrepreneurship and technological transformation.
- LLDCs will also need to better leverage ODA for attracting further finance from other sources such as foreign direct investment, public-private sector partnerships, and blended finance. Furthermore, FDI, public-private partnerships, blended finance and remittances need to be utilized more effectively in promoting growth and structural change in the LLDCs.
- LLDCs need to identify and prepare bankable projects to secure financial and technical resources from multilateral initiatives such as the Africa Development Bank.
- LLDCs should push for mainstreaming of the VPoA programme into the regional and continental agenda, as well as greater collaboration between the UN family, the RECs and the African Union, to fully mainstream the programme into the latter's strategies and action plans. Such programmes should focus on addressing key challenges with clear targets and benchmarks to ensure proper monitoring and evaluation and robust action on the ground, underpinned by emphasis on a quantitative approach and less qualitative approaches.

4. Conclusions and way forward

African landlocked developing countries are making efforts and progress towards the implementation of the Vienna Programme of Action. However, this progress has been slow, and work needs to be accelerated to achieve the objectives of the Vienna Programme of Action by 2024, and the Sustainable Development Goals by 2030. In particular, the following observations were noted:

- During the implementation phase of the VPoA, in African LLDCs, transit times and the associated costs were reduced as a result of the development of various transnational highways and corridors. Regional infrastructure development projects such as Djibouti – Addis Ababa corridor, the Standard Gauge Railway and one stop border post in East Africa have significantly contributed to the reduction in transit times and transit costs.
- With respect to infrastructure development, significant progress has been made in construction and revamping of key trade infrastructures which inter alia include transport, borders and ICTs. Trans highways have been constructed under the AU's Presidential Infrastructure Champions Initiatives. However, significant backlog of rail, roads, OSPBs, ICTs and air transport is still outstanding due to a number of binding constraints which inter alia include drought of funding, limited capacity required to develop bankable projects and macroeconomic instability.
- In addition, the report shows that African LLDCs have remained at the bottom of the value chains and continue to depend on a handful of commodities. This evidence shows that, in direct contrast with the VPoA's goal of fostering African LLDCs' participation in global trade, value addition, diversification and reduction of dependency on commodities.
- With respect to trade facilitation, the report revealed that most African LLDCs ratified the WTO TFA but lag behind in its implementation due to lack of capacity.
- On regional integration and cooperation and economic structural transformation, although African LLDCs are part to several RECs, they have not deepened their regional integration

and as such intra reginal trade and their global trade has remained stagnant. African LLDCs' exports have remained concentrated on a few primary commodities. The major binding constraints which are weighing heavily on African LLDCs are production constraints, lack of complementarity of goods, multiple membership, macroeconomic instability and shortage of key infrastructures such as transport, water and energy.

In view of the fact that all the six areas of priority under the VPoA are still outstanding, there is need for rolling over these focus areas in the forthcoming programme. In addition, the following areas of focus must be included as part of the expanded programme:

- The AfCFTA and peculiar needs of the African LLDCs;
- Building resilience of African LLDCs: Post COVID-19 recovery; climate change adaptation and mitigation; and addressing external shocks caused by the war in Ukraine;
- Capacity building programmes covering aspects such as development of bankable projects, implementation of trade agreement and border controls.

5. References

African Development Bank (2016), Feed Africa: Strategy for Agricultural Transformation in Africa (2016 – 2025), African Development Bank, Abidjan 01, Côte d'Ivoire

African Development Bank (2023), Chad – Trans – Saharan Highway Project (TSH) – Supplementary Grant, https://projectsportal.afdb.org/dataportal/VProject/show/P-Z1-DB0-238 (accessed on 18 January 2023).

African Development Bank (2021), Kazungula Bridge Project to expand regional integration and trade across southern Africa, https://www.afdb.org/en/news-and-events/kazungula-bridge-project-expand-regional-integration-and-trade-across-southern-africa-43688 (accessed on 9 January 2023), Abidjan 01. Côte d'Ivoire.

African Development Bank (2020), African Economic Outlook: Developing African Workforce for the Future, Abidjan 01. Côte d'Ivoire.

African Development Bank (2013), Multinational – Trans-Sahara Highway Project (Niger), https://projectsportal.afdb.org/dataportal/VProject/show/P-Z1-DB0-102 (accessed on 8 January 2023), Abidjan 01. Côte d'Ivoire.

African Development Bank (2022), Multinational Ruzizi III Regional Power Hydropower Plant Project (Rwanda), Abidjan 01. Côte d'Ivoire.

Africa Development Bank (2011), The Role of the Diaspora in Nation Building: Lessons for Fragile and Post-Conflict Countries in Africa, Addis Ababa, Ethiopia.

Asian Development Bank (2021), CAREC Corridor Performance Measurement and Monitoring Annual Report 2020: The Coronavirus Disease and Its Impact, Asian Development Bank, Mandaluyong

African Union Development Agency (2023), About the Second Dakar Financing Summit, https://www.dakarfinancingsummit.org/about (accessed on 7 March 2023)

ATPC (2021) New Assessment of the economic impacts of the Agreements Establishing the African Continental Free Trade Area on Africa, Policy Brief, Addis Ababa.

AU, AfDB and UNECA (2019), Africa Regional Integration Index Report 2019, Addis Ababa

Brynjolfsson, E. and Smith, M. (1999), "Frictionless Commerce: A Comparison of Internet and Conventional Retailers", MIT Sloan School of Management Working Paper.

Chitopo, T (2023), Zimbabwe's Progress Under VPOA, A Paper Presented at the UN-OHRLLS Conference on LLDCs and SIDS, 27 – 28 February 2023, Harare.

Elisa, DB (2023), Uganda's Progress Under VPOA and Key Challenges Encountered, A Paper Presented at the UN-OHRLLS Conference on LLDCs and SIDS, 27 – 28 February 2023, Harare.

Emerging Africa Infrastructure Finance (2023), US$286 Border Post Infrastructure Regeneration to Minimise Delays, Stimulate Trade and Bring Many Community Benefits, https://www.eaif.com/project/us286-border-post-infrastructure-regeneration-to-minimise-delays-stimulate-trade-and-bring-many-community-benefits/(accessed **on 5 March 2023).**

FAO (2022), Impact of the Ukraine-Russia conflict on global food security and related matters under the mandate of the Food and Agriculture Organization of the United Nations (FAO), FAO, Rome.

Frederic, D., Huang, H.L. and Mao, C.H. (2021) The Challenges Faced on Transit Transport Corridors by Landlocked Countries in Central Africa: Literature Review. Open Journal of Applied Sciences, 11, 1200-1211. https://doi.org/10.4236/ojapps.2021.1111090

GERD (2016), Council Reports, Addis Ababa, Ethiopia.

Grun, R., Saidi, M and Bisca, P.M (2020), Adapting Social Safety Net Operations to Insecurity in the Sahel, Sahel Adaptive Social Protection Programme Operational & Policy Note Series, World Bank, Washington DC.

Gurara, D., Klyuev, V., Mwase, N., Presbitero, A., Xu, X.C and Bannister, G (2017), rends and Challenges in Infrastructure Investment in Low-Income Developing Countries, IMF, IMF Working Paper, Washington DC.

Human Rights Watch (2022), Ukraine/Russia: As the War Continues, Africa Food Crisis Looms, https://www.hrw.org/news/2022/04/28/ukraine/russia-war-continues-africa-food-crisis-looms (accessed on 20 December 2022).

Igue, C., Alinsato, A and Agadjihouédé, T (2020), E-Commerce in Africa: Issues and Challenges, World Trade Organisation, Geneva

Infrastructure Development Bank of Zimbabwe (2023), Beitbridge – Harare – Chirundu Highway, https://www.idbz.co.zw/project-operations/idbz-projects/beitbridge-harare-chirundu-highway (accessed on 9 January 2023)

International Air Transport Association (2021), "Economic performance of the airline industry" (2021). Available at https://www.iata.org/en/iata-repository/publications/economic-reports/airline-industry-economic-performance- --october-2021---report/. (accessed on 21 December 2022)

International Monetary Fund (IMF) (2021). World Economic Outlook. Variable used: GDP – current prices, GDP per capita - current prices (U.S. dollars per capita), Real GDP growth. https://www.imf.org/external/ datamapper/datasets/WEO. Accessed 11 April 2021.

International Organization for Migration (IOM). Central Sahel & Liptako Gourma Crisis — Monthly Dashboard #8. August 20, 2020, https://reliefweb.int/report/burkina-faso/ central-sahel-liptako-gourma-crisis-monthly-dashboard-8-20-august-2020 (accessed on 5 March 2023)

IRENA (2022a), *IRENA Data & Statistics*, https://www.irena.org/statistics.

IRENA (2022), Scaling up renewables in Landlocked developing countries, Abu Dhabi: International Renewable Energy Agency.

International Renewable Energy Agency (2019), Landlocked developing Countries Turn to Renewables for Socio-economic Development, Energies https://www.irena.org/news/articles/2019/Dec/Countries-Turn-to-Renewables-for-Socioeconomic-Development

International Telecommunication Union (2021). Statistics: Individuals Using the Internet – 2021. Available at https://www.itu.int/en/ITU-D/Statistics/Pages/stat/default.aspx (Accessed on 23 December 2022)

Mckinsey and Company (2021), Africa Needs Vaccines: What Would it take to Make them here? https://www.mckinsey.com/industries/life-sciences/our-insights/africa-needs-vaccines-what-would-it-take-to-make-them-here (accessed on 20 January 2023).

Mochiko, T. (2016), "Online shopping edging up but Sub-Saharan Africans still don't trust e-commerce", Business Day, 20 December 2016.

Mugano, G (2022), Trade Liberalisation and Economic Development in Africa, Routledge Studies in Development Economics, ISBN 9780367749088, https://www.routledge.com/Trade-Liberalisation-and-Economic-Development-in-Africa/Mugano-Brookes/p/book/9780367749088 (Edited by Michael Brookes);

Mugano, G (2020), The Economy Nexus of COVID-19 Pandemic, Sociological Review, vol. LIV, No. 3, 737–760.

Mugano, G (2018), Diaspora Direct Investment and African National Economies: Case Studies, in D. Hack-Polay & J. Siwale (eds.), African Diaspora Direct Investment: Establishing the Economic and Socio-cultural Rationale, Palgrave Studies of Entrepreneurship in Africa, Palgrave Macmillan, ISBN 978-3-319-72046-3, pp 43-61 (https://link.springer.com/chapter/10.1007/978-3-319-72047-0_3)

OPEC FUND (2021), Trans Saharan Highway, https://opecfund.org/news/trans-sahara-highway (accessed on 18 January 2023)

SADC, SARDC. 2019. SADC Regional Infrastructure Development – Short Term Action Assessment 2019. SADC, SARDC. Gaborone, Harare

Southern African Freight News (2021), BORDER BEAT: New bridge at Kazungula reduces border crossing time, https://www.freightnews.co.za/article/border-beat-new-bridge-kazungula-reduces-border-crossing-time (accessed on 22 January 2023).

St-Pierre, J., Monnoyer, M. C., and Boutary, M. (2017), "Le rôle des TIC sur le degré d'exportation des PME : une étude exploratoire", 8ème Congrès International Francophone en Entrepreneuriat et PME.

Tesfaye, M (2016), The Imperative of Stepping-up Ethiopian Diaspora's Contribution to Hedasė Dam (GERD), A Paper Presented at Diaspora Forum, London.

United Nations (2022), Implementation of the Vienna Programme of Action for Landlocked Developing Countries for the Decade 2014–2024: Report of the Secretary General, New York

United Nations (2022), World Economic Situation and Prospects 2022, New York

UNCTAD (2022), Handbook of Statistics 2022, UNCTAD, Geneva

United Nations Conference on Trade and Development (UNCTAD) (2019), "Création et Captation de Valeur : Incidences sur les pays en Développement", Rapport sur l'Economie Numérique 2019, UNCTAD Publications.

United Nations Conference on Trade and Development (UNCTAD) (2018), "Pouvoir, Plateformes et l'illusion du libre-échange", Rapport sur le commerce et le Développement 2018, UNCTAD Publications.

UNECA (2022), The Liquidity and Sustainability Facility (LSF) closes inaugural $100 million repo transaction at COP27, https://www.uneca.org/stories/the-liquidity-and-sustainability-facility-%28lsf%29-closes-inaugural-%24100-million-repo (accessed on 19 January 2023).

UNECA (2022), 2022 African Report of the Secretary General Implementation of the Vienna Programme of Action for Landlocked Developing Countries for the Decade 2014-2024, https://www.un.org/ohrlls/sites/www.un.org.ohrlls/files/eca-2022.pdf (accessed on 18 December 2022).

UNECA (2021), Report on the Vienna Programme of Action for Landlocked Developing Countries for the Decade 2014–2024, UNECA, Addis Ababa

UNECA, TradeMark East Africa and African Economic Research Consortium (2021), *Waving or Drowning? The Impact of COVID-19 Pandemic on East African Trade, Addis Ababa*

UNECA. (2020d). Facilitating cross-border trade through a coordinated African response to COVID-19. Addis Ababa: UNECA.

UNCTAD (2018), Key Statistics and Trends in Trade Policy, Geneva, Switzerland.

UNDP (2022), Human Development Index 2021/2022 Report, New York

United Nations Office for the Coordination of Humanitarian Affairs (OCHA) (2023), Five SADC Member States pilot the Corridor Trip Monitoring System, https://reliefweb.int/report/world/five-sadc-member-states-pilot-corridor-trip-monitoring-system (accessed on 6 March 2023)

United Nations High Commissioner for Refugees (UNHCR). "Sahel Crisis 2020: Responding to the urgent needs of refugees, internally displaced, returnees and others of concern." June 12, 2020, https://reliefweb.int/report/burkina-faso/sahel-crisis-2020-responding-urgent-needs-refugees-internally-displaced (accessed on 5 March 2023)

UN-OHRLLS, UN DESA, IRENA (2021), Enhancing Capacity of Landlocked Developing Countries to Address Climate Change, energy and water-related challenges during COVID-19 era: Experiences and Solutions, NY

UN-OHRLLS and UNECA (2019), Improving Transport Connectivity for LLDCs and the Status of Implementation of the Vienna Programme of Action in the African Region, UNECA, Addis Ababa

UN-OHRLLS (2018), Financing Infrastructure In The Transport Sector In Landlocked Developing Countries: Trends, Challenges & Opportunities, UN-OHRLLS, New York

Yescombe, E.R. (2017), Public-Private Partnerships in Sub-Saharan Africa: Case Studies for Policymakers, Dares Salaam: UONGOZI Institute, Mkuki na Nyota Publishers.

Wamboye, E. F., Adekola, A. and Sergi, B. (2016), "Labor Productivity Growth and Technology Adoption in Sub-Saharan Africa", International Labor Review 155(2): 231-252.

World Bank (2019), "Une Analyse des Enjeux façonnant l'Avenir Economique de l'Afrique", Africa's Pulse, Publication de la Banque Mondiale, April 2019, volume 19.

World Bank. "Where Climate Change Meets Reality: Supporting Africa's Sahel Pastoralists to Secure a Resilient Future." September 21, 2020, https://www.worldbank.org/en/news/immersive-story/2020/09/21/where-climate-change-is-reality-supporting-africas-sahel-pastoralists-secure-a-resilient-future (accessed on 5 March 2023).

World Bank (2020), What are Public Private Partnerships? Washington, DC: World Bank.

World Bank (2019). Electricity Access in Sub-Saharan Africa: Uptake, Reliability, and Complementary Factors for Economic Impact. Africa Development Forum series. Washington, DC: World Bank. doi:10.1596/978-1-4648-1361-0. License: Creative Commons Attribution CC BY 3.0 IGO

World Bank. 2017. *Regulatory Indicators for Sustainable Energy.* Washington, DC: World Bank.

World Health Organization (WHO) (2021). Director-General's opening remarks for panel "Is Africa ready to finance its own vaccine?" https:// www.who.int/director-general/speeches/detail/director-general-s- opening-remarks-for-panel-is-africa-ready-to-finance-its-own-vaccine. Accessed 28 May 2021.

World Trade Organisation (2022), The Benefits of Trade Facilitation, https://www.wto.org/english/tratop_e/tradfa_e/tradfa_e.htm#III (accessed on 20 December 2022)