POSITION PAPER

Africa's Land-Linked Economies: Pathways to Prosperity and Development

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Acronyms

AfCFTA	African Continental Free Trade Area	**ICT**	Information and Communication Technology
AGOA	African Growth and Opportunity Act	**IEA**	International Energy Agency
AI	Artificial Intelligence	**IGAD**	Intergovernmental Authority on Development
APoA	Awaza Programme of Action	**IoT**	Internet of Things
ASYCUDA	Automated System for Customs Data	**ITU**	International Telecommunication Union
AU	African Union	**LDC**	Least Developed Country
CAR	Central African Republic	**LLDC**	Landlocked Developing Country
DRC	Democratic Republic of the Congo	**LLDE**	Land-Linked Developing Economy
EBA	Everything But Arms	**MSME**	Micro, Small and Medium-sized Enterprise
EIF	Enhanced Integrated Framework	**MW**	Megawatt
FDI	Foreign Direct Investment	**OSBP**	One-Stop Border Post
FTA	Free Trade Arrangement	**REC**	Regional Economic Communities
GDP	Gross Domestic Product	**SDG**	Sustainable Development Goals
GVC	Global Value Chain	**UNCTAD**	United Nations Conference on Trade and Development
UNDP	United Nations Development Programme	**WTO**	World Trade Organization

1. Introduction

1.1. From land-locked and limited to land-linked and brimming with promise

Landlocked Developing Countries (LLDCs) were traditionally perceived as experiencing significant logistical and economic challenges due to their geographies. This narrative is shifting in a profound way across Africa, rewriting the story from one of geographic limitation to strategic advantage. African LLDCs are increasingly defined by what they uniquely offer: strategic centrality and vibrant connections that drive regional and global economic dynamism. Malawi's recent National Export Strategy (2021–2026) boldly proclaims its identity as a "land-linked" nation, explicitly signalling a new era of connectivity-driven growth.[1] This evolution from "landlocked" to "land-linked developing economies (LLDEs)" is reshaping development trajectories, unlocking transformative opportunities and repositioning these nations at the heart of Africa's socio-economic resurgence. This shift aligns with the transformative aspirations of the Awaza Programme of Action (APoA) for LLDCs (2024–2034),[2] emphasizing regional economic dynamism and trade facilitation, diversification and inclusive prosperity.

Several concrete examples vividly illustrate the LLDEs narrative. Rwanda's 130,000-hectare Kigali Logistics Platform is becoming a bustling regional hub, connecting Uganda, the Democratic Republic of Congo and Burundi with coastal economies of Kenya and Tanzania.[3] Uganda, with its rapidly expanding road and rail upgrades under the Standard Gauge Railway initiative and the revitalized Malaba–Kampala logistics corridor, is positioning itself as the heart of East Africa's inland trade. Ethiopia facilitates crucial trade routes from South Sudan to Djibouti and leverages its national airline, emerging as a vital global air transport connector that bridges Africa with international markets. Meanwhile, Botswana, Malawi, Zambia and Zimbabwe anchor the pivotal North-South corridor, linking South Africa to the broader Southern, Central and East African markets.

1.2. Why this matters now

Today's global landscape is being reshaped by unprecedented digital transformation and rapid regional integration. In Africa, these trends are magnified by ambitious integration frameworks, notably the African Continental Free Trade Area (AfCFTA). Digitalization is revolutionizing traditional logistical and economic barriers, enabling LLDCs to engage dynamically in continental and global markets through digital trade platforms, fintech innovations and sophisticated logistics systems.

Concurrently, the AfCFTA is already reducing trade barriers, unlocking vast opportunities for LLDCs to actively participate in and benefit from intra-African and global trade. Bolstered by substantial infrastructure investments and reinforced regional cooperation, this transformative moment urgently calls for the African LLDC narrative to be redefined. The alignment with the Sustainable Development Goals (SDGs) of Agenda 2030 and

[1] Government of Malawi. Malawi's National Export Strategy 2021 – 2026. https://mitc.mw/trade/images/NES_II.pdf
[2] See UN resolution A/RES/79/233. Online at https://www.un.org/en/landlocked/awaza-programme-action-lldcs
[3] World Bank. Rwanda_Kigali.Logistics.Platform.Connectivity.Development.Project.(English)¡ Washington, D.C.: World Bank Group. http://documents.worldbank.org/curated/en/099031224100051032

those of the African Union's Agenda 2063 further underscores the importance of this shift, positioning African LLDCs as central actors in Africa's sustainable and inclusive economic future.

1.3. Objective of the paper

This position paper explores transformative pathways for African LLDCs, emphasizing opportunities presented by enhanced connectivity, deeper regional integration, innovation and resilience. It identifies strategic policy reforms crucial for transitioning these nations from economic isolation to global economic integration. Through concrete examples and practical insights, the paper sets forth a clear and actionable policy framework for the emergence of "African Land-Linked Developing Economies (LLDEs)", positioning these nations as vibrant and central contributors to Africa's sustainable and inclusive growth.

The following section provides an overview of the recent economic performance of African LLDCs and examines their integration into regional and global markets. Section 3 provides brief analysis of key features of connectivity that foster LLDCs' resilience and integration. Section 4 examines the role of transformative trade agreements in shaping African LLDCs' integration. Section 5 discusses resilience in LLDCs in the face of climate threat. Section 6 provides a set of strategic policy reforms to unlock the transformative potential of African LLDEs, while the final section offers concluding insights.

2. African LLDCs: Economic performance and integration into regional and global markets

2.1. Resilient, with a need to accelerate diversification

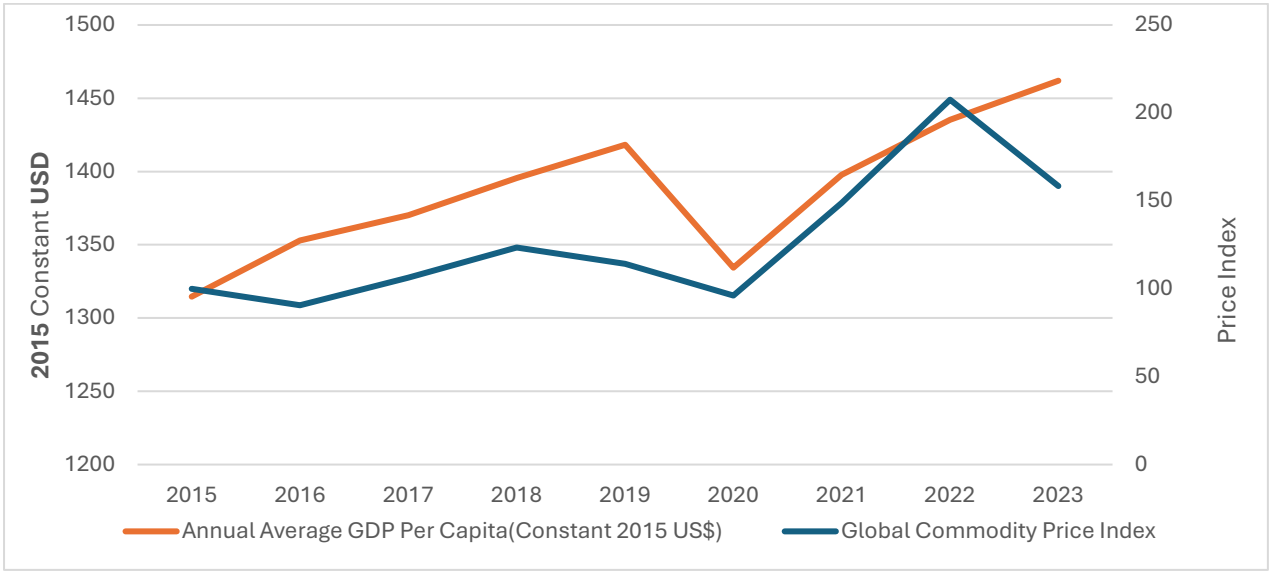
Despite inherent geographic challenges, African LLDCs have shown remarkable resilience, especially in the aftermath of COVID-19. Average GDP per capita (in 2015 constant USD) for the 15 African LLDCs[4] rebounded from US$1,334 in 2020 to $1,462 in 2023. This level was higher than pre-pandemic values (see Figure 1). Strong recovery following COVID-19 was observed among most African economies, underpinned by global economic recovery, a rebound in investments and relatively high commodities prices. This was despite challenging global dynamics shaped by tight financial conditions, the adverse impact of the Russia-Ukraine conflict and persistent climatic threats.[5] African LLDCs were particularly isolated during the COVID-19 epidemic due to their inherent geographical positioning, and their recovery is a signal of resilience.

The dependency of several African LLDCs on commodities exports, with minimal transformation, continues to make them vulnerable to the vagaries of global markets. This dependency is evident in the parallel trends observed between these countries' GDP per capita and the Global Commodity Price Index (Figure 1). Nevertheless, a resource-dependent LLDC like Botswana has been able to leverage its wealth to become one of the continent's most stable and prosperous economies. Over the period 2014–2023,

[4] Excluding South Sudan due to data gaps.
[5] AfDB African Economic Outlook 2023. Online at https://www.afdb.org/sites/default/files/documents/publications/afdb23-01_aeo_main_english_0602.pdf

Botswana was the top performing LLDC in Africa in terms of human development, with a Human Development Index value of 0.73 in 2023.[6] This score was higher than non-LLDCs countries such as Kenya, Ghana and Pakistan. The country demonstrated how good governance and investment in economic and social sectors can lead to stronger human development outcomes – a key lesson for resource-rich LLDCs.[7]

Figure 1: Trends in GDP per capita in African LLDCs, 2014–2023 (in 2015 constant USD) and Global Commodity Price



Source: UNDP calculations, based on World Bank, World Development Indicators (GDP per capita) and UNCTADStat (Global Commodity price Index).

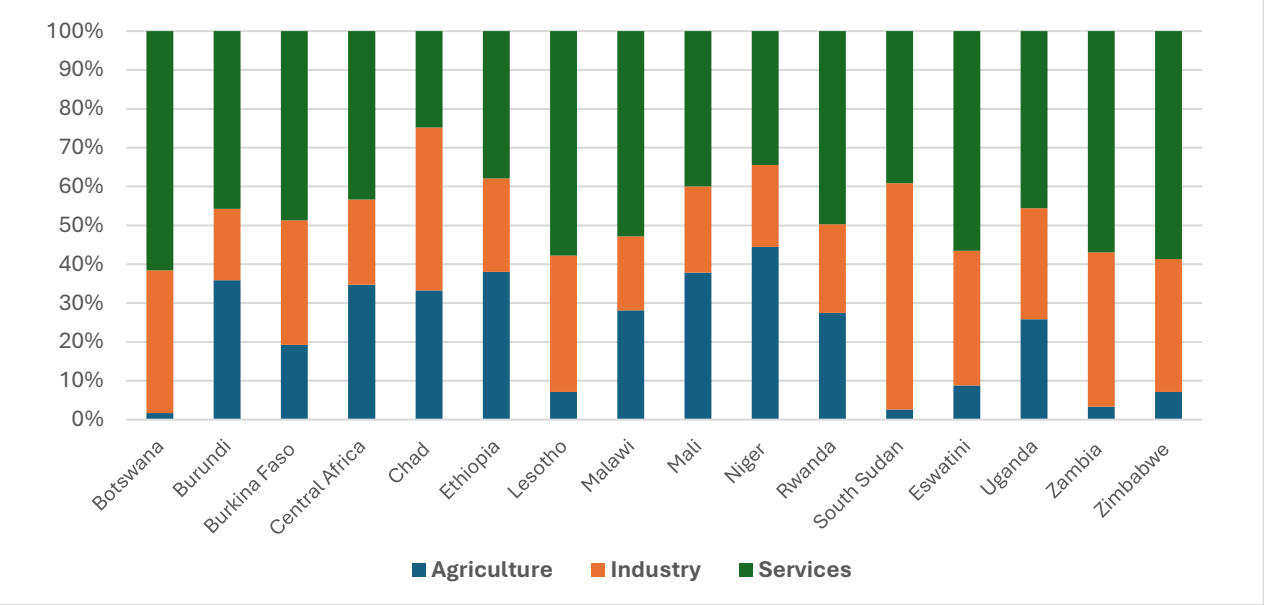
2.2. Diverging trajectories towards structural transformation

Structural transformation remains a pathway to inclusive growth and prosperity in LLDCs. This was reaffirmed in the APoA for LLDCs. This kind of transformation requires for instance that resources (e.g. capital and labour) shift away from low-value sectors (e.g. agricultural and mining) to higher productivity and value-added industrial and services sectors.[8] Ethiopia, for instance, has come to be positioned as a regional and global hub for textile and leather processing, while its transport services through the Ethiopian Airlines connects more than 100 international destinations. The airline alone contributed 1.2 percent of Ethiopia's Gross Domestic product (GDP) in 2023, creating nearly half a million direct and indirect jobs.[9] Rwanda continues to attract investments in the industry and services sector, notably information and communication technology (ICT) and tourism. Yet, most African LLDCs rely heavily on agricultural sector (e.g. Burundi, Central Africa Republic, Chad, Ethiopia, Malawi, Mali, Niger, Rwanda and Uganda — see Figure 2). For

[6] See Human Development Index | Human Development Reports
[7] Human Development Index | Human Development Reports
[8] UNECA.2015. Industrializing through trade. era2015_eng_fin.pdf
[9] iata.org/en/iata-repository/publications/economic-reports/the-value-of-air-transport-to-ethiopia/

countries such as Botswana, Zambia and South Sudan, excessive reliance on a single mineral commodity with limited diversification increases vulnerability to shocks. In Zambia, the mining sector (mainly copper) alone contributed to nearly 12 percent of the country's GDP and 40 percent of government revenues in 2023.[10]

Figure 2: Sectoral value added to GDP in African LLDCs, based on average values over 2021–2023



Source: UNDP calculations, based on data from UNCTADStat

Diversification efforts in African LLDCs rely partly on Micro, Small and Medium-sized Enterprises (MSMEs), who remain backbone of production and trade. In Rwanda, MSMEs account for 70 percent employment and over 50 percent GDP.[11] In Burkina Faso, they contribute 35 percent – 40 percent of the country's GDP and provide substantial employment.[12] Investments that help facilitate an enabling ecosystem for the MSMEs will be critical to fostering prosperity in the African LLDCs.

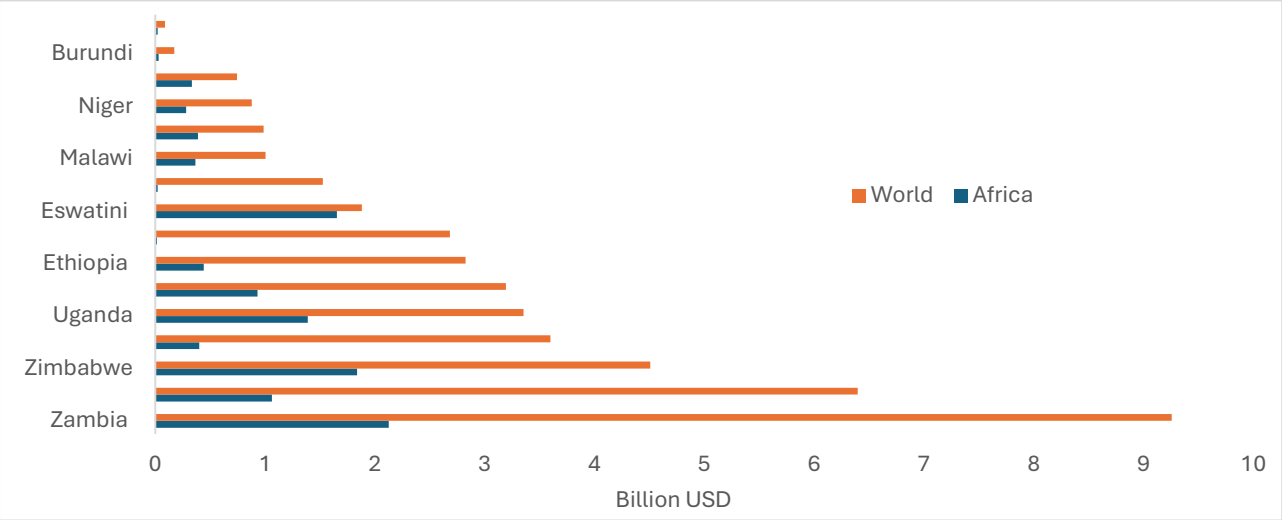
2.3. Trade and global market integration

Globally, LLDCs account for seven percent of the world's population, but contribute to only about 1.1 percent of world trade.[13] Although African LLDCs' contribution to global trade may be minimal, they supply regional and continental markets with strategic goods and services. These include diamonds (Botswana, Lesotho and Zimbabwe), copper (Zambia and Zimbabwe), gold (Burkina Faso, Mali, Zimbabwe and Central African Republic), coffee (Uganda and Ethiopia), sugar (ESwatini), as well as textiles and apparel (Ethiopia and Lesotho). The export profiles of most LLDCs are dominated by trade towards world markets. On average between 2013–2024, Zambia exported annually about $9.3 billion to world markets, followed by Botswana, ($6.4 billion) and Zimbabwe ($4.5 billion)

[10] World Bank (2024), Zambia Public Finance Review: Strengthening Fiscal Governance for Transformative Public Sector Investments, September
[11] ITC.2024. MSME Financing Gateway launched in Rwanda | ITC
[12] 12501
[13] UN.2025. BN-2025HLPF-Africa-LDCs-LLDCs

(see Figure 2). A few LLDCs seem to be relatively well integrated into regional markets across Africa. For instance, over the same period, nearly 88 percent of goods exported by Eswatini were destined to regional markets (intra-Africa). Similar values for Rwanda, Lesotho, Malawi, Niger, Uganda and Zimbabwe were above 30 percent, indicating a high level of integration into regional markets.

Figure 3: Exports from African LLDCs to Africa and world markets, annual average 2013–2024

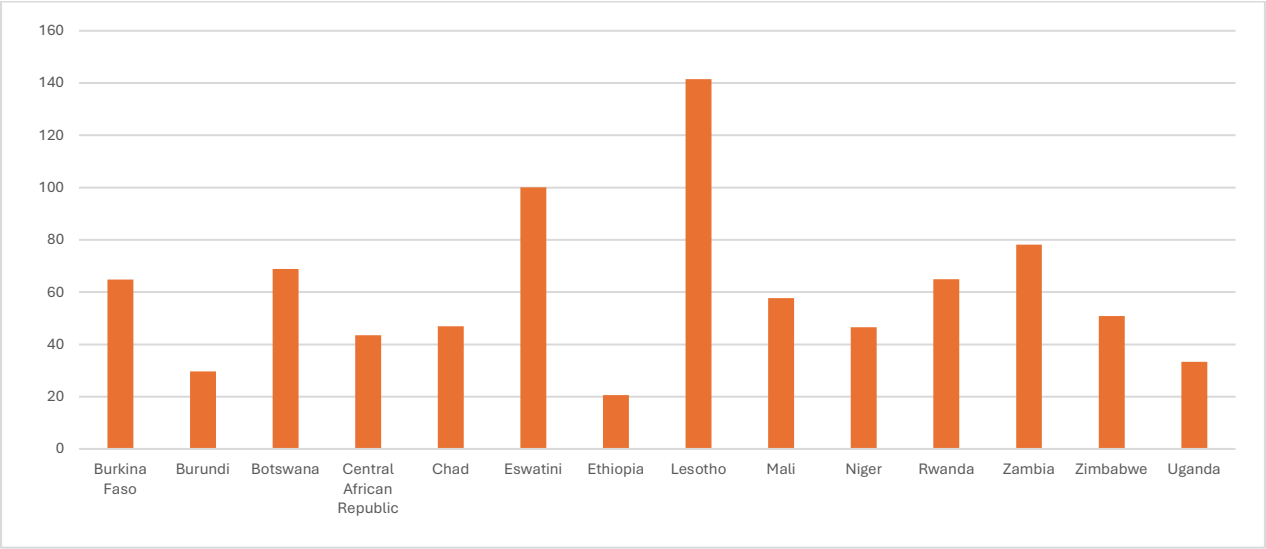


Source: UNDP based on data from ITC

The integration of African LLDCs into continental and global markets is underpinned by preferential trade agreements. Several African LLDCs are members of regional economic communities (RECs) and the African Continental Free Trade Area (AfCFTA), a few benefit from the United States' African Growth and Opportunity Act (AGOA), while those with Least Developed Countries (LDCs) status benefit from the European Union's Everything But Arms (EBA) initiative, among others. Looking at the Trade Openness Index (Figure 4), Lesotho (thanks to the textile and garment sector) had the highest ratio in 2023 considering the country's extensive exports to the United States under AGOA. Botswana, Eswatini, Zambia, Burkina Faso and Rwanda also had a trade openness ratio above 50 percent. With appropriate connectivity infrastructure, LLDCs can connect effectively to regional and global markets. For instance, Botswana ranked high in terms of logistic performance, and its 2023 logistic performance index rating of 3.1 showed it faring better than coastal countries such as Chile, Pakistan and Namibia.[14]

[14] See https://lpi.worldbank.org/international/global

Figure 4: Trade openness in African LLDCs: trade (exports and imports) to GDP ratio, 2023



Source: UNDP based on data from World Bank Development Indicators

2.4. Innovation and technology as enablers of value chain participation

Innovation and technology, particularly digital and frontier technologies, are emerging as powerful enablers for deeper participation in regional and global value chains (GVCs). Technological changes in transport and communication have driven the fragmentation of production, allowing countries to specialize in tasks within value chains rather than entire products.[15]

Blockchain technology holds significant potential to modernize trade facilitation in Africa, particularly for LLDCs where complex border processes often cause costly delays. Its decentralized nature makes it ideal for digitalizing customs records, cargo tracking and certificates of origin. For example**,** Rwanda**,** has introduced blockchain in cross-border trade documentation to reduce clearance times and eliminate fraud.[16] Similarly, Uganda and Zambia have shown interest in regional blockchain pilots for customs modernization. In corridors such as the Northern Corridor (linking Kenya with Rwanda, Uganda and the DRC)**,** blockchain combined with smart technologies has facilitated real-time cargo tracking and reduced border wait times by up to 80 percent. Platforms, such as Tradelines, ASYCUDA and CargoX, offer greater visibility and coordination among customs, ports and logistics providers.[17] For landlocked nations, the shift to smart corridors and blockchain-enabled logistics is critical to reducing trade costs and becoming competitive players in regional and global value chains.

Digital services, particularly e-commerce and fintech, are transforming how African LLDCs engage in trade. In Burkina Faso, digital payment systems are increasingly being used in

[15] The Governance of Global Value Chains
[16] Research-paper-on-Blockchain-technology-regulation-and-financial-inclusion-in-Rwanda.pdf
[17] Blockchain critical value in Africa's free trade area implementation

rural areas to allow farmers to transact with urban buyers.[18] Meanwhile, Ethiopia's Ethio Telecom is expanding digital service coverage, aiming to bring underserved areas into the e-commerce ecosystem. In Rwanda**,** the government has invested heavily in e-government and e-logistics systems that allow small producers and entrepreneurs to access services and markets beyond borders.[19]

Scientific research and frontier technologies like AI and blockchain are boosting agriculture-based trade in landlocked African countries. In Uganda, AI helps farmers with crop planning and pest control.[20] Ethiopia uses blockchain to track exports for compliance with EU standards.[21] These innovations show how LLDCs can overcome geographic barriers through tech-driven, knowledge-based trade. Further innovations are being sparked through the UNDP Timbuktoo programme, which is supporting thousands of startups to scale their businesses and generate transformative, society-changing prosperity through technology-driven innovation across Africa — and more particularly LLDCs.[22]

3. Strengthening connectivity for LLDC resilience and integration

3.1. Digital connectivity

Digital connectivity serves as a transformative pathway for African LLDCs to transcend geographic constraints and establish direct linkages with regional and global markets. While connectivity gaps persist, emerging data reveals the potential for digital solutions to redefine traditional isolation. According to the 2024 International Telecommunication Union (ITU) Facts and Figures, 39 percent of the population in LLDCs is online, with internet access in African LLDCs reaching up to 20 percent.[23] This represents a foundation upon which land-linked development can be built. The current digital landscape, though challenging, demonstrates that African LLDCs are positioned to leverage innovative connectivity solutions that bypass traditional dependencies on coastal neighbouring countries. These notwithstanding, LLDCs continue to rely on neighbouring coastal countries for undersea cable access. This presents an opportunity to develop diversified digital pathways that strengthen regional integration and reduce single-point dependencies.

3.2. Transit and physical infrastructure

Physical infrastructure serves as the pivotal foundation for transforming African LLDCs into integral nodes of economic corridors and land-linked production and trading hubs. While transportation costs[24] for LLDCs average two to three times higher than that of coastal

[18] Nuru Burkina Faso Supports Financial Inclusion with Mobile Money - Nuru
[19] https://www.undp.org/sites/g/files/zskgke326/files/2024-03/undp_digitalisation_full_final.pdf
[20] How can we... use AI to help smallholder farmers in Uganda? | Accelerate Programme
[21] https://eudl.eu/doi/10.1007/978-3-030-80621-7_22?utm
[22] Online via timbuktoo | United Nations Development Programme
[23] https://www.un.org/ohrlls/sites/www.un.org.ohrlls
[24] https://www.un.org/ohrlls/sites/www.un.org.ohrlls

countries, this gap represents an opportunity where strategic infrastructure investments can create competitive advantages.

Current trade bottlenecks, identified as key constraints by the World Trade Organization (WTO),[25] highlight specific areas where infrastructure improvements can unlock LLDC integration into global supply chains. The varying quality of road infrastructure across African LLDCs, coupled with limited railway connectivity, creates opportunities for targeted investments that can establish efficient multi-modal transport networks. The 756-kilometre Ethio-Djibouti Railway, which has been operational since 2018 and connects Ethiopia to Red Sea ports, has significantly reduced delays and freight costs — in some instances from three to four days to just 10/12 hours.[26] It has contributed significantly to improving the competitiveness of the Ethiopian economy. The establishment of efficient dry ports with modern cargo handling facilities is also positioning Africa LLDCs as regional logistics hubs rather than endpoints, while the implementation of one-stop border posts (OSBPs) streamline customs procedures and reduce transit times. The 130,000-hectare Kigali Logistics Platform, for instance, connects not only Rwanda but also Uganda, the Democratic Republic of Congo and Burundi to seaports of Mombasa (Kenya) and Dar es Salaam (Tanzania).

3.3. Energy connectivity

Energy connectivity catalyses transforming Africa's LLDCs into dynamic land-linked production hubs, where reliable electricity access directly enables industrial growth and cross-border trade facilitation. While the International Energy Agency (IEA, 2024)[27] indicates that electricity access in sub-Saharan Africa remains below global averages — with Chad and the Central African Republic (CAR) having rates of 11 and 16 percent, respectively[28] — these gaps represent opportunities for strategic energy investments that can unlock land-linked development potential.

The current limitations in grid connections,[29] particularly in rural and border regions essential for trade logistics, highlight areas where energy infrastructure can create competitive advantages for cross-border commerce. World Bank data[30] indicates that the average electricity generation capacity in African LLDCs is approximately 100–150 MW per million people. This is significantly lower than coastal counterparts, and points to the substantial opportunity for energy development that can support value-added exports, and the trade-processing industries needed for land-linked economic transformation. Ongoing game-changing energy projects such as the Southern African Power Pool, the Grand Ethiopian Renaissance Dam, the Mauritania-Mali transmission line and the North Core Interconnection project are significantly redefining energy access across the continent, including several LLDCs. Africa's abundant renewable energy resources, particularly solar potential exceeding 2,000 kWh/m^2 annually in most Sahel countries —

[25] https://www.wto.org/english/res_e/publications_e/landlocked2021_e.htm
[26] The Ethio-Djibouti Railway: Connecting Nations and Transforming Regional Trade - Possession Planning
[27] https://www.iea.org/commentaries/electricity-access-continues-to-improve-in-2024-after-first-global-setback-in-decades
[28] https://africa-energy-portal.org/blogs/electrification
[29] https://www.iea.org/reports/sdg7-data-and-projections/access-to-electricity
[30] https://trackingsdg7.esmap.org/data/files/download-documents/sdg7_-_report_2024_-_chapter1-accesstoelectricity.pdf

including Mali, Burkina Faso, Niger and Chad —position these LLDCs to become energy exporters rather than importers, fundamentally shifting their economic profiles from land-locked to land-linked economies. The Africa Minigrid Program[31] implemented by UNDP and its partners exemplifies this transformation, working with several African LLDCs to drive investment in solar minigrids that will provide affordable and reliable electricity to millions of people by 2030.

4. Transformative potential of trade agreements for African LLDCs

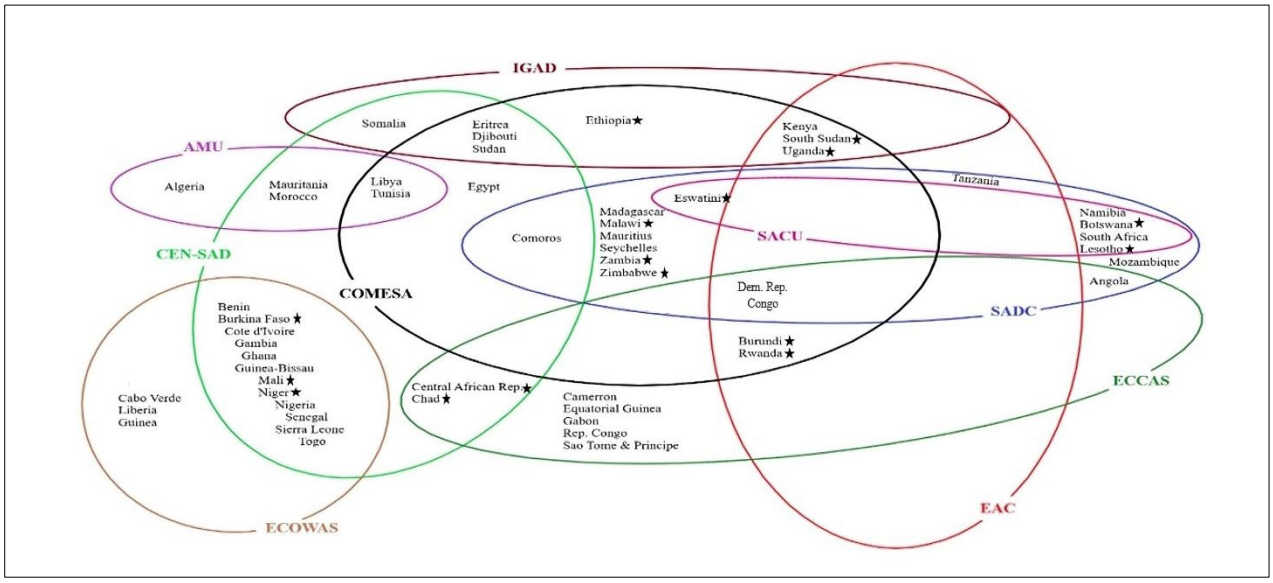
4.1. African LLDCs and regional/global trade agreements

African LLDCs benefit from various free trade arrangements (FTAs). Most of them are members of at least one or two RECs (see Figure 5) with existing preferential trade arrangements and thus benefit from regional trade preferences. In addition, most African LLDCs are members of the AfCFTA (exceptions include South Sudan, which has signed but not yet ratified the AfCFTA Agreement) and the WTO (Ethiopian and South Sudan are not yet members, but their gradual accession process is underway) - Box 1 provides an overview of the implementation of WTO trade facilitation reforms in African LLDCs. These various FTAs acknowledge the unique geographic features of the LLDCs, [32] providing them with pathways for becoming land-linked economies and strong nodes of economic corridors through partnerships and financing, leveraging South-South and triangular cooperation including Aid for Trade initiative.

[31] https://www.undp.org/energy/africa-minigrids-program. This initiative, supported by the Global Environment Facility (GEF) and implemented through the United Nations Development Programme (UNDP) in partnership with the Rocky Mountain Institute (RMI) and the African Development Bank (AfDB),

[32] https://www.wto.org/english/news_e/news24_e/devel_14nov24_e.htm

Figure 5: Regional Economic Communities membership in Africa



Source: Authors based on various RECs documents

*Note: (i) * for LLDCs (ii) Over the 16 African LLDCs, South Sudan only has not yet ratified the AfCFTA Agreement and two (Ethiopia and South Sudan) are not yet member of WTO. They have however initiated WTO accession process*

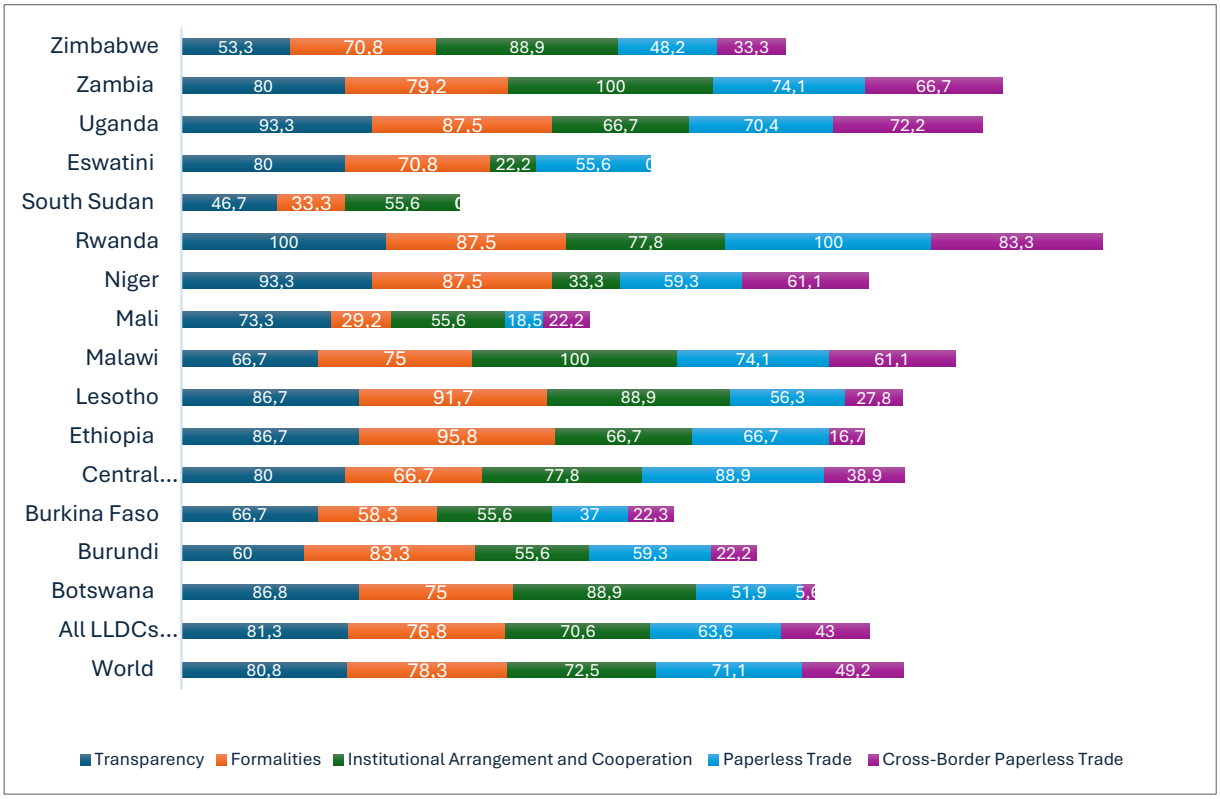
Box 1: WTO trade facilitation reforms in LLDCs

The implementation of trade reforms in African LLDCs varies widely, as seen in Figure 6. The implementation rates draw on several indicators that capture commitments under the WTO Trade Facilitation Agreement (TFA) — which entered into force in 2017 — and a number of other measures, including those related to cross-border paperless trade.[33] A few African LLDCs, including Rwanda, Zambia and Uganda, are performing quite well compared with the overall group or world averages.

Digitalization of cross-border trading procedures has significant potential to foster inclusiveness. Nearly two thirds of the African LLDCs have implemented over half of the cross-border paperless trading commitments under the WTO TFA. Rwanda has fully implemented these commitments, while Zambia, Uganda, Malawi and CAR are performing nearly or beyond world averages. These trends signal African LLDCs' commitment to pursuing digital trade ambitions.

[33] The implementation rates are computed as indices using several indicators that capture commitments under the WTO TFA – which entered into force in 2017 – and a number of other measures including those related to Cross-Border paperless trade (United Nations, 2019). Overarching trade facilitation measures, including general and digital measures are grouped into five categories: i) cross-border paperless trade;[33] ii) paperless trade;[33] iii) institutional arrangements and cooperation; iv) formalities; and v) transparency. Trade facilitation measures in the surveys accounting more specifically for inclusiveness and sustainability include indicators for: a) Trade facilitation for SMEs; b) Agricultural trade facilitation; and c) Women in trade facilitation.

Figure 6: Implementation rates (percentage) of trade facilitation measures in African LLDCs, 2025



Source: UNDP, based on UN Global Survey on Digital and Sustainable Trade Facilitation. https://www.untfsurvey.org/

Implementing these reforms is essential to foster the positioning of African LLDCs as land-linked economies and achieve the key objectives of the APoA. Higher implementation rates of the reforms have indeed been globally associated with lower trade costs and better logistics performance,[34] a key determinant of economic competitiveness.

FTAs, coupled with resources endowments, have also been drivers of Foreign Direct Investment (FDI) in a number of LLDCs. In 2024, the top five recipients of FDI among LLDCs were Ethiopia, Kazakhstan, Uganda, Mongolia and Uzbekistan (in that order) — accounting for 55 percent of total FDI to the group.[35] This success demonstrates that geographical constraints can be overcome through strategic investments.

4.2. Harnessing the transformation potential of regional and global trade agreements for LLDCs

The effective transformation from landlocked to land-linked status requires greater connectivity. This is partly underpinned by trade facilitation reforms and investments in infrastructures — from transport to technology. The WTO's Enhanced Integrated

[34] United Nations (2019). Digital and Sustainable Trade Facilitation: Global Report 2019. New York.
[35] UNCTAD. 2024. https://unctad.org/system/files/official-document/wir2024_en.pdf

Framework (EIF),[36] which is designed for LDCs as a trade engine for growth, offers a targeted pathway for LLDCs in developing competitive export sectors and improving trade facilitation. It establishes a foundation for these countries to become essential links in regional and global value chains, rather than being isolated endpoints.

The AfCFTA, which entered into force in 2021, offers African LLDCs opportunities to further diversify their economies and integrate markets (see Box 2). Leveraging these opportunities calls for political commitment to long-term development strategies, investment in both hard and soft infrastructure, and the institutional quality needed to sustain development gains.[37] Successful LLDCs[38] such as Rwanda and Botswana have maintained consistent policy implementation over extended periods, invested heavily in human capital development and built strong institutional frameworks for economic management. These countries and others are benefitting from UNDP trade support programmes anchored in the AfCFTA in the areas of capacity strengthening for national institutions and market competitiveness for businesses, especially MSMEs.[39]

Box 2: The AfCFTA: a game changer for Africa, including LLDCs

The AfCFTA offers a transformative pathway for Africa's LLDCs to become strategic land-linked economies. By liberalizing 97 percent of tariff lines within a unified market of 1.3 billion people and a combined GDP of over $3.4 trillion, the “One African Market” initiative opens unprecedented opportunities for LLDCs to integrate into regional value chains. Special provisions tailored for Least Developed Countries, including most African LLDCs,[40] provide flexibility in implementation, while priority service sectors, such as transport and communications, align with LLDCs’ comparative strengths in transit facilitation and services provision.

Crucially, the AfCFTA is expected to yield significant gains for LLDCs in terms of diversification and trade. Zimbabwe, Ethiopia and Burkina Faso, for instance, are expected to derive real income gains above seven percent as result of tariff and non-tariff liberalization under the One African Market.

Rwanda, for instance, is expected to see a 10 percent increase in export volume by 2035 due to AfCFTA-driven trade liberalization. The AfCFTA's broader economic impact on LLDCs extends to FDI, with deeper integration projecting an overall FDI increase up to 159 percent. Sectors such as textiles, processed foods, rubber and plastics, and transport services are all accessible to LLDCs via regional value chains, and are expected to be some of the largest winers. Ethiopia, for example, has already leveraged FDI to grow its textile industry, emerging as a model for industrial diversification among landlocked economies. The AfCFTA is further expected to weigh positively in the country’s manufacturing, construction and communications sectors. Similarly, Zambia is positioned to gain from AfCFTA-induced FDI in agro-processing and mining-related manufacturing, enhancing its export diversification. Meanwhile, Burkina Faso, whose

[36] https://www.wto.org/english/tratop_e/devel_e/teccop_e/if_e.htm
[37] UNDP.2021. Which Value Chains for the Made in Africa revolution. https://www.undp.org/africa/publications/futures-report-2021
[38] https://unctad.org/system/files/official-document/aldc2109_bangkok_LLDC_mtgsummary2_en.pdf
[39] More at https://www.undp.org/africa/afcfta
[40] Out of the 16 African LLDCs, Botswana, Eswatini and Zimbabwe are not Least Developed Countries.

economy heavily relies on agriculture and informal trade, stands to benefit on agro-based value chains.

To fully realize these benefits, LLDCs must move beyond passive participation and actively engage in the negotiation, design and implementation of AfCFTA. This is essential for ensuring that specific challenges such as transit trade, border management, and logistics corridors are addressed effectively.

The success of AfCFTA depends not only on tariff liberalization, but also on the integration of national and regional strategies that address LLDC-specific challenges. This includes leveraging digital trade reforms, such as Rwanda's digitized customs systems, which enhance MSME participation and improve competitiveness. As LLDCs become more engaged in shaping AfCFTA's operational framework, they can secure more equitable outcomes and transform themselves into regional trade hubs. By doing so, the Agreement can become a practical tool for inclusive growth, job creation and poverty reduction across the continent, advancing the objectives of the APoA.

Sources: UNDP based on World Bank (2022). Making the Most of the African Continental Free Trade Area: Leveraging Trade and Foreign Direct Investment to Boost Growth and Reduce Poverty, https://hdl.handle.net/10986/37623

5. Resilience and climate adaptation

5.1. Climate risks facing LLDCs

African LLDCs face an unprecedented convergence of climate vulnerabilities that threaten their transition from land-locked to land-linked economies. These countries operate within a framework of structural fragility, where geographical isolation compounds climate-induced risks across multiple dimensions of development. UNDP analysis[41] reveals that the fragility of LLDC systems manifests most acutely in their extreme weather exposure. Countries like Burkina Faso, Mali and Niger in the Sahel region experience recurring droughts that devastate agricultural productivity, while simultaneously facing increased flooding during irregular rainfall events. Climate variability creates a dual burden where communities must simultaneously prepare for water scarcity and flood management, straining already limited adaptive capacity. The dependency on climate-sensitive sectors represents a critical vulnerability for African LLDCs. The "Beyond Drought" systems thinking approach[42] demonstrates how agriculture, which employs 60-80 percent of the population in countries like Mali and Burkina Faso, operates under increasingly unpredictable precipitation patterns. The Horn of Africa region exemplifies how climate dependency extends beyond agriculture to include pastoralism, where traditional livestock management systems adapt to changing seasonal patterns. When these primary

[41] https://www.undp.org/africa/publications/advancing-inclusive-development-policy-options-burkina-faso-guinea-gabon-mali-and-niger
[42] https://www.undp.org/africa/publications/beyond-drought-systems-thinking-approach-drought-resilience-horn-africa

economic sectors fail, the ripple effects cascade through entire national economies, undermining food security, rural livelihoods and export capacity.

5.2. Climate-resilient systems

Transforming African LLDCs into resilient, land-linked economies requires fundamental shifts toward climate-adaptive trade infrastructure and systems. Critically, all infrastructure types are highly vulnerable to and are major causalities of natural disasters. Repairing infrastructure after natural disasters is often difficult and costly, which can affect industries and other economic sectors of society negatively. Climate-proofing corridors is a cornerstone of the LLDCs transformation, moving beyond traditional road and rail networks to incorporate climate-resilient design principles.[43] The development of climate-resilient transport infrastructure must consider projected climate scenarios. The 2024 Horn of Africa Human Development Report emphasizes how regional integration can enhance prospects for human development through coordinated infrastructure development.[44] This includes elevating critical transport routes above flood-prone areas, incorporating drought-resistant materials in construction and designing flexible systems that can adapt to changing weather patterns. Countries in the Intergovernmental Authority on Development (IGAD) region are exploring innovative approaches such as solar-powered rail systems and wind-energy-supported logistics hubs that reduce both carbon footprints and vulnerability to fossil fuel price volatility.[45]

Additionally, sustainable agriculture logistics systems offer pathways to reduce post-harvest losses while building climate resilience. The IGAD region's experience with financing climate resilience[46] demonstrates how balancing access and impact requires innovative approaches to agricultural value chains. Cold chains infrastructure powered by renewable energy can extend the shelf life of agricultural products, reducing the time pressure that forces farmers to accept low prices during harvest seasons. Digital platforms that connect farmers directly with regional and international markets can reduce intermediary costs while providing real-time climate and market information that enables better decision-making. Low-carbon infrastructure development in LLDCs must balance development needs with long-term climate goals. This includes, for instance, prioritizing renewable energy systems that can operate independently of centralized grids, developing water harvesting and storage systems that capture irregular rainfall, and creating distributed manufacturing capabilities that reduce dependence on imported goods and long supply chains.

6. Strategic policy reforms for LLDC transformation

The shifting narrative of African LLDCs represents a defining moment in their development trajectory, moving beyond traditional constraints toward becoming vibrant land-linked economies. However, realizing this transformation will not be automatic. Rather, it will

[43] https://www.undp.org/china/publications/promoting-sustainable-development-transport-and-economic-corridors-under-belt-and-road-initiative
[44] https://www.undp.org/africa/publications/2024-horn-africa-human-development-report-enhancing-prospects-human-development-through-regional-integration
[45] https://www.un.org/ohrlls/sites/www.un.org.ohrlls/files
[46] https://sdgfinance.undp.org/resource-library/financing-climate-resilience-balancing-access-and-impact-igad-region

require coordinated policy reforms aligned with global, continental and national agendas while uniquely leveraging innovation, inclusive governance, resilience and diversified financing to drive sustainable and inclusive growth. The following strategic policy reforms will be of priority.

6.1. National, regional and global policy alignment

African LLDCs will need to align their national development strategies with key continental and global frameworks**,** including the Awaza Programme of Action, Agenda 2063, the Sustainable Development Goals (SDGs), and those of the RECs to fully harness their land-linked potential. All these agendas speak to the APoA priorities to ensure that progress accelerates in areas of structural transformation, trade facilitation and transport, connectivity, technology, climate resilient and mobilization of international support. National strategies will need to unequivocally incorporate the land-linked narrative, focusing on value addition, trade infrastructure, institutional capacity and socio-economic inclusion to foster diversified and inclusive economies.

6.2. Strengthening institutional capacity for trade facilitation and digital integration

Successful policy reforms will be underpinned by robust and adaptive institutions. As demonstrated in this paper, multilateral and regional trading agreements such as the WTO TFA, the AfCFTA and the RECs remain strong levers for African LLDCs' prosperity. These countries will require enhanced capacities in customs modernization, data management and the implementation of cross-border paperless trade under multilateral agreements like the WTO TFA, AfCFTA and the REC protocols. Digital transformation initiatives, including electronic single windows, blockchain-enabled documentation and smart logistics solutions, should be scaled to reduce trade costs, increase transparency and foster MSME inclusion. Establishing effective corridor management authorities with strong governance can further streamline trade corridors, reduce fragmentation and enhance competitiveness.

6.3. Investing in multi-modal infrastructure and smart logistics

Targeted investments in multi-modal transport infrastructure are needed to position LLDCs as regional trade hubs. This includes integrating road, rail, air, and digital networks rather than isolated endpoints. Moreover, developing efficient dry ports, one-stop border posts and adopting automated customs and cargo handling technologies will reduce transit times and operational costs. All this will require policies that encourage public-private partnerships and innovative logistic solutions tailored to the unique geography and trade profiles of LLDCs, building resilience and redundancy in trade routes.

6.4. Promoting innovation ecosystems and frontier technologies

The necessity of embracing innovation is essential for LLDCs to leapfrog traditional barriers. Policy frameworks should support the growth of digital ecosystems, technology incubators, and skills development programs that enable LLDCs to adopt AI, blockchain, IoT and fintech solutions to optimize supply chains and enhance market access.

Encouraging public-private collaboration and investment in digital infrastructure will catalyse economic diversification and competitiveness within regional and global value chains.

6.5. Driving economic diversification and inclusive value chain development

Economic diversification policies must facilitate industrial upgrading and diversification beyond commodity dependence. This includes incentivizing local content development, supporting MSMEs and enhancing access to finance and markets. Inclusive policies that promote gender equity and youth economic empowerment are critical to ensuring that the benefits of transformation reach all segments of society, thereby reinforcing social cohesion and sustainable growth.

6.6. Building climate resilience and adaptive governance

The need for policy reforms to mainstream climate adaptation into all infrastructure and trade projects cannot be overstated. African LLDCs face intense climate vulnerabilities that threaten economic progress and require adopting climate-resilient design standards and sustainable logistics systems. Strengthening institutional capacity for adaptive governance, disaster risk management and regional cooperation will enhance resilience. Innovative financing mechanisms, including blended finance, climate bonds and insurance products should be scaled to support both immediate climate impact mitigation and long-term adaptive capacity building, prioritizing vulnerable communities.

6.7. Leveraging South-South and triangular cooperation

Strategic partnerships with emerging economies through South-South and triangular cooperation offer significant opportunities to overcome geographic constraints. African LLDCs should actively engage with development partners to mobilize technical assistance, investment and knowledge sharing focused on connectivity infrastructure, trade facilitation and regional integration. Strengthening Aid for Trade programmes and aligning with private sector investments can accelerate transformation.

6.8. Ensuring peace, stability, and inclusive governance

Sustained socio-economic transformation is contingent on peaceful and stable environments. Addressing conflict, terrorism and political tensions, especially in West and Central Africa, must be prioritized to unlock integration and development. Inclusive governance frameworks that promote transparency, equitable resource management and participatory decision-making are critical to fostering durable peace and enabling broad-based prosperity.

6.9. Establishing dedicated platforms for coordination, monitoring and dialogue

An African LLDC engagement platform is essential for coordinated and collective implementation of reforms. This platform would ideally be set up under the AU for the purpose of periodic dialogue, alignment of the APoA with Agenda 2063 and SDGs. Strengthening monitoring and evaluation frameworks with clear indicators will enhance

accountability, enable data-driven policy adjustments and promote the sharing of best practices across LLDCs.

Conclusion

The shifting narrative of African LLDCs towards “land-linked’’ economies, aligned with Awaza Programme of Action for LLDCs (2024–2034), Agenda 2063, SDGs among others, represents a game changer for their development trajectory. LLDCs are no more seen through a narrow lens of traditional constraints of geographic isolation, but as critical nodes of regional and global socio-economic corridors. The shift also requires coordinated policy reforms aligned with global, continental and national agendas while uniquely leveraging innovation, inclusive governance, resilience and financing to drive sustainable and inclusive growth.