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A large, colorful mandala graphic in the background, featuring intricate geometric and organic patterns in shades of orange, red, pink, yellow, and green. A black circle is centered over the mandala, containing the title text.

# INDIA AFRICA TRADE

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**Scaling the \$200 billion peak**

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June 2023

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# FOREWORD

*India-Africa bilateral trade has witnessed significant shifts, including trade diversification, strategic partnerships, and geographical expansion. The trade basket has expanded, leading to increased volumes and mutual economic benefits.*

Over the years, India-Africa trade has undergone significant shifts, driven by overarching trade goals and changing dynamics. In the 1990s, both regions aimed to diversify trade and reduce reliance on traditional partners, leading to expanded trade volumes and a broader trade basket. From 2000 to 2010, trade relations experienced remarkable growth, with increased trade volumes and the inclusion of sectors like oil and gas, machinery, and automobiles.

Geographically, India's trade expanded beyond traditional partners to various African countries. The trade basket has expanded as well. Technology transfer and knowledge sharing also intensified during this period. The COVID-19 pandemic posed challenges but also created opportunities for collaboration in healthcare, pharmaceuticals, and digital technologies.

As the world recovers from the pandemic, both regions are poised to strengthen trade ties and explore new avenues of cooperation in the post-COVID era.

The African Continental Free Trade Area (AfCFTA) has expanded the horizons for India - Africa trade. This is predicted to subsequently promote economic progress,

lower poverty, increase employment opportunities, and lessen Africa's reliance on raw materials and natural resources.

For the realisation of AfCFTA's objectives, it is necessary that the continent utilises the critical mass of youth and women, who also remain the core anchor of the AfCFTA. Realising their full potential would however demand considerable policy changes and strategies to facilitate flow of trade. India, already equipped with extensive research, is aiming to spread its best practices through AfCFTA and many more partnering platforms, so that the programmes can be aggressively executed and the goal of sustainable industrialisation can be achieved.

India and Africa have prioritised key sectors to boost bilateral trade and address common challenges. In the food and agriculture sector, both regions focus on food security, promoting agricultural technology and trade. Energy security is achieved through collaborations in the oil and gas sector, with Indian investments in African oil fields. Mining and minerals attract Indian investments, creating value in Africa.

Manufacturing in Africa for exports is encouraged to boost job creation and economic diversification. The pharmaceutical industry sees collaboration in affordable generic medicines and healthcare infrastructure. Electrical machinery and equipment offer technology transfer and capacity building. The automobile and transportation industry benefits from Indian manufacturers setting up assembly plants in Africa. Sustainability



and green energy solutions align with environmental goals, fostering renewable energy adoption and clean-tech advancements.

Africa holds a large youth population but there is also a clear gap in education and training that is yet to be addressed to match the skills that businesses need. It is therefore a pressing concern to nurture the talents for businesses and policymakers for the future.

The research paper analyses the history of India-Africa trade, and offers recommendations for collaborations to

meet the in near future that would help achieve the US\$ 200 billion target set by the two sides.

The report provides sector-wise representation of the existing trade statistics, coupled with key recommendations for each sector.

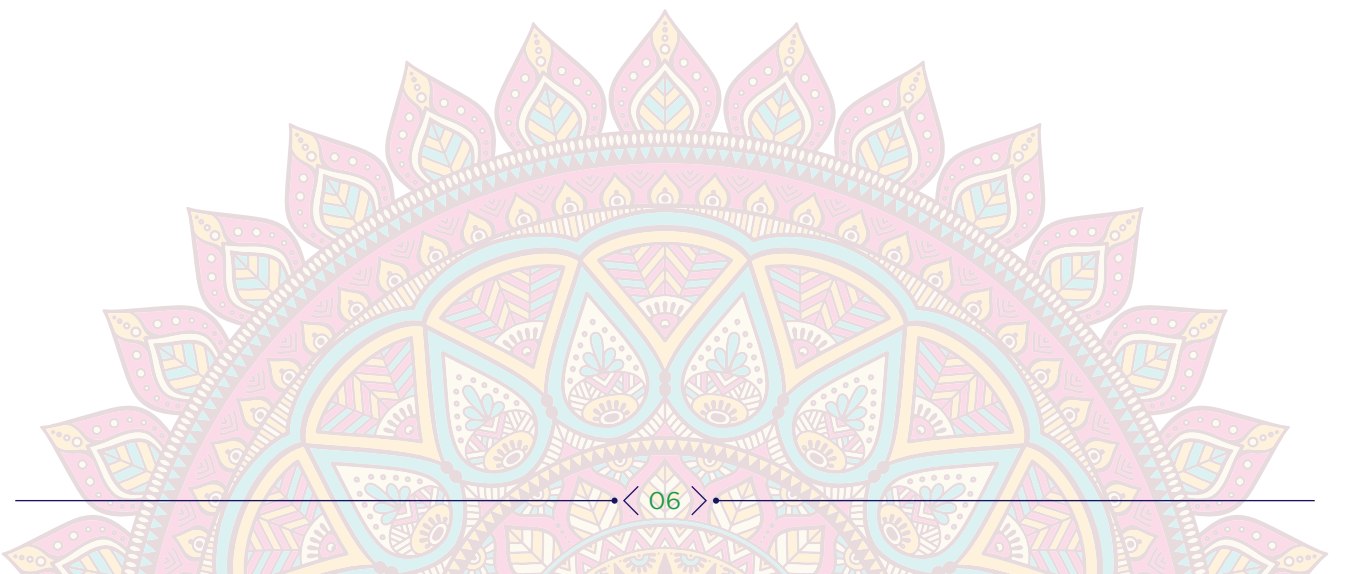
***The research paper analyses the history of India-Africa trade, and offers recommendations for collaborations that would help achieve the US\$ 200 billion target set by the two sides.***

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# 1.

## **INDIA – AFRICA BILATERAL TRADE: THE PARADIGM SHIFTS**



The trade relationship between India and Africa has witnessed significant paradigm shifts over the years, reflecting evolving economic dynamics, changing priorities, and emerging opportunities.

**2000 - 2010:** The decade from 2000 to 2010 witnessed a remarkable upswing in India-Africa bilateral trade, fuelled by a mutual commitment to strengthen economic ties. Overarching trade goals during this period included diversifying the trade basket, promoting value-added exports, and fostering investment partnerships.

The outcomes were noteworthy, with an eight-fold jump in trade volume between India and Africa. The trade basket expanded to include not only commodities but also manufactured goods, pharmaceuticals, machinery, and automobiles. Geographically, East African countries, such as Kenya and Tanzania, emerged as key trading partners for India, in addition to the continued trade with West African nations.

**2010 - 2020:** The period from 2010 to 2020 witnessed a deeper engagement between India and Africa, driven by a shared vision for inclusive growth, capacity-building, and sustainable development. The overarching trade goals included promoting technology transfer, fostering skill development, and expanding cooperation in sectors such as healthcare, agriculture, and renewable energy.

The outcomes of this period were marked by significant progress. The trade basket diversified further, with sectors like information technology, telecommunications, and renewable energy gaining prominence. India's investments in Africa increased, creating jobs and contributing to local development. Geographically, Southern African countries, including South Africa and Zambia, witnessed intensified trade ties with India.

**Post-Covid Period:** The outbreak of the Covid-19 pandemic in 2020 brought unprecedented challenges and disruptions to global trade, including the India-Africa trade relationship. However, it also presented an opportunity for both India and Africa to recalibrate their bilateral trade priorities and explore new avenues for collaboration.

Post-Covid, the overarching trade goals for India and Africa include reviving and strengthening trade ties, promoting resilient supply chains, and fostering digital connectivity. The outcomes of this period are yet to be fully realised, but early indications suggest a renewed focus on sectors such as healthcare, pharmaceuticals, digital services, and e-commerce.

The trade basket is expected to witness further diversification, with a focus on value-added exports, knowledge-intensive industries, and services. Geographically, there is potential for increased trade and investment in sectors like infrastructure, agro-processing, and manufacturing across various regions of Africa.

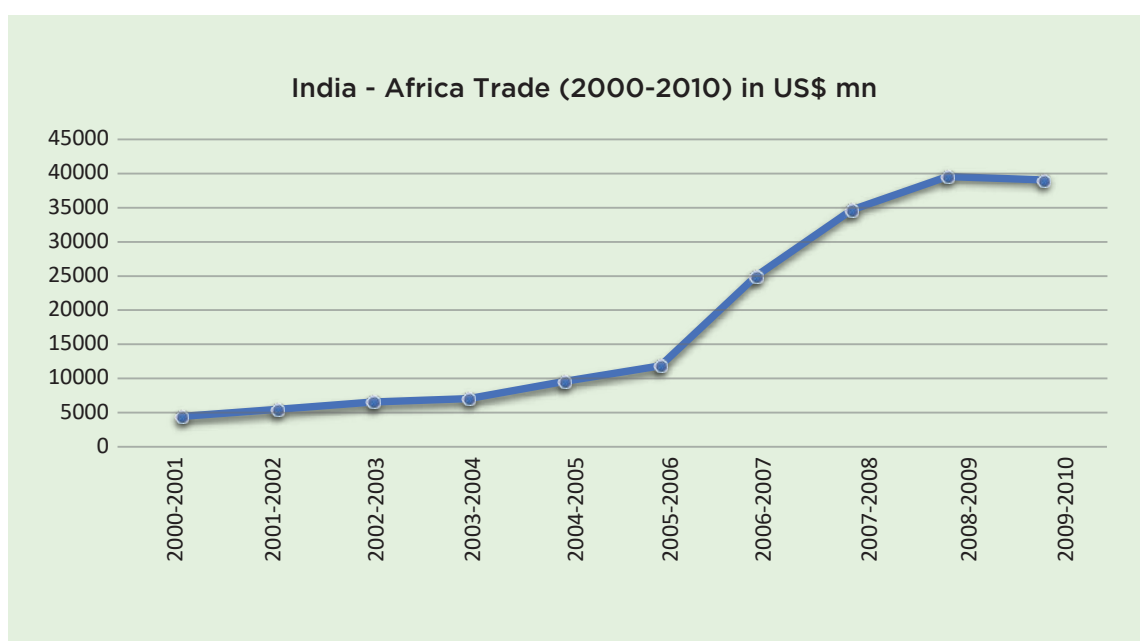
As both India and Africa navigate the post-Covid era, the bilateral trade relationship holds immense potential. By leveraging their respective strengths and addressing challenges together, India and Africa can further enhance trade cooperation, promote inclusive growth, and contribute to the shared prosperity of their nations

*India's exports to Africa during this period primarily consisted of agricultural products such as rice, sugar, tea, and spices. Indian textiles, especially cotton garments, also found a significant market in African countries. On the other hand, India imported raw materials, minerals, and petroleum products from Africa.*

## 2000-2010: Building the Superstructure

During the period from 2000 to 2010, the trade relationship between India and Africa witnessed a remarkable expansion, with the trade volume increasing by a significant factor of eight. The cumulative trade volume between 2000 and 2010 amounted to US\$183.23 billion. This surge in trade displayed a Compound Annual Growth Rate (CAGR) of 24.24%.

At the beginning of the decade, in the year 2000-2001, trade between India and Africa stood at a modest US\$ 4.45 billion, with exports representing 53.51% and imports making up 46.49% of the total in 2000-01. By 2005-06, the export-import ratio shifted to 58.9% and 41.10% respectively, reaching US\$ 11.87 billion.



Data source: Department of Commerce, Ministry of Commerce & Industry, Government of India

From 2006 onwards, an exceptional surge was witnessed in economic cooperation and bilateral trade between the two regions. The global economic crisis led to decline in trade in 2009-10.

Towards the end of the decade, in 2009-10, exports accounted for 34.4% while imports constituted 65.60% of the total annual trade volume.

## Composition of India's Bilateral Trade with Africa

YEAR	TOTAL TRADE (in US\$ mn)	EXPORT (in US\$ mn)	IMPORT (IN US\$ mn)
2000-2001	4,454.94	2,383.79 53.51%	2,071.15 46.49%
2001-2002	5,492.51	2,885.19 52.53%	2,607.32 47.47%
2002-2003	6,567.55	3,130.15 47.66%	3,437.4 52.34%
2003-2004	7,045.78	3,846.27 54.59%	3,199.51 45.41%
2004-2005	9,576.82	5,569.98 58.16%	4,006.84 41.84%
2005-2006	11,869.62	6,991.28 58.90%	4,878.34 41.10%
2006-2007	24,983.01	10,266.99 41.10%	14,716.02 58.90%
2007-2008	34,660	14,189.27 40.94%	20,470.73 59.06%
2008-2009	39,538.79	14,810.69 37.46%	24,728.1 62.54%
2009-2010	39,044.6	13,430.02 34.40%	25,614.58 65.60%
<b>TOTAL</b>	<b>183,233.62</b>	<b>77,503.63 42.30%</b>	<b>105,729.99 57.70%</b>

Data source: Department of Commerce, Ministry of Commerce & Industry, Government of India

Overall, the decade from 2000 to 2010 witnessed a significant and impressive growth in trade between India and Africa. This expansion brought about closer economic ties and greater commercial interactions between the two regions, fostering mutually beneficial partnerships and opportunities for both sides.

### Expansion of Trade Relations: Key Factors

**Geopolitical Factors & More:** The geopolitical landscape played a pivotal role in strengthening India-Africa trade relations during this period. India's engagement with

Africa was driven by its "Focus Africa" programme, aimed at enhancing ties with African nations for strategic and economic cooperation. India recognised the potential for mutually beneficial partnerships with African countries, based on shared values and developmental goals.

The focus was also on fostering mutually beneficial partnerships that promote economic growth, social development, and regional integration. The emphasis was on building sustainable trade and investment relationships that contribute to the overall prosperity of both India and Africa.

### Notable Events and Agreements:

- India-Africa Forum Summit (2008):** The second India-Africa Forum Summit, held in 2008, brought together leaders from India and 14 African nations to strengthen political, economic, and cultural ties. The summit facilitated high-level discussions, resulting in commitments to enhance trade and investment cooperation.
- Trade and Investment Agreements:** Several bilateral agreements were signed during this period to promote trade and investment between India and African countries. These agreements aimed to reduce trade barriers, facilitate investments, and promote business collaborations in sectors of mutual interest.
- Knowledge Transfer and Capacity Building:** India continued to support Africa's development by offering technical assistance, scholarships, and capacity-building programs. Knowledge transfer in areas such as agriculture, healthcare, education, and renewable energy played a crucial role in strengthening bilateral relations.

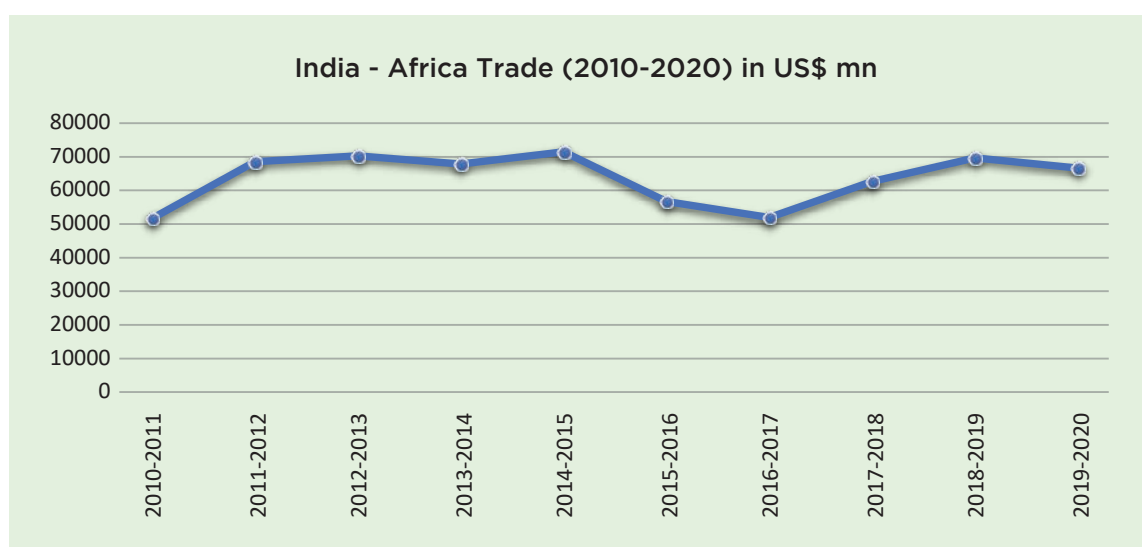
India's engagement with Africa during this period set the stage for deeper economic integration, knowledge sharing, and sustainable development in subsequent years.

## 2010-2020: Building on the Gains

The period from 2010 to 2020 witnessed significant advancements in India-Africa trade relations, characterised by growing trade volumes, sectoral diversification, and deeper economic cooperation. India-Africa trade experienced steady growth during this period, expanding beyond traditional sectors to include emerging areas of mutual interest.

During the decade 2010-2020, the trade between the two entities exhibited CAGR of 2.58%, depicting a relatively modest growth rate. The trade volume remained within a range of US\$ 50 billion to US\$ 72 billion throughout this period.

From 2014-15 onwards, trade experienced a downturn due to slowing global trade, with the volume declining consistently.



Data source: Department of Commerce, Ministry of Commerce & Industry, Government of India

There was a rebound in the next two years, reaching US\$ 69.65 billion in 2018-19. This positive momentum indicated a potential recovery and renewed growth in the trade relationship.

### Composition of India's Bilateral Trade with Africa

YEAR	TOTAL TRADE (in US\$ mn)	EXPORT (in US\$ mn)	IMPORT (IN US\$ mn)
2010-2011	51,666.55	19,710.38 38.15%	31,956.17 61.85%
2011-2012	68,536.04	24,670.72 36.00%	43,865.32 64.00%
2012-2013	70,249.41	29,138.94 41.48%	41,110.47 58.52%

2013-2014	67,849.26	31,222.51 46.02%	36,626.75 53.98%
2014-2015	71,472.78	32,838.12 45.94%	38,634.66 54.06%
2015-2016	56,702.19	25,035.21 44.15%	31,666.98 55.85%
2016-2017	51,970.17	23,125.64 44.50%	28,844.53 55.50%
2017-2018	62,688.62	24,899.61 39.72%	37,789.01 60.28%
2018-2019	69,650.63	28,536.16 40.97%	41,114.47 59.03%
2019-2020	66,678.75	28,986.09 43.47%	37,692.66 56.53%
<b>TOTAL</b>	<b>637,464.4</b>	<b>268,163.38 42.07%</b>	<b>369,301.02 57.93%</b>

Data source: Department of Commerce, Ministry of Commerce & Industry, Government of India



The fluctuations in trade volume reflect the complexities and dynamics of the economic relationship, influenced by a multitude of factors at play.

### Sectoral Diversification:

- a. Agriculture and Food Processing:** Agriculture remained a significant sector in India-Africa trade. Indian agricultural expertise and technologies supported Africa's efforts in achieving food security and agricultural productivity. Trade in agricultural products, such as cereals, fruits, and vegetables, witnessed an upward trend.
- b. Pharmaceuticals and Healthcare:** The pharmaceutical sector emerged as a vital component of India-Africa trade. Indian pharmaceutical companies played a crucial role in providing affordable medicines to African countries, contributing to improved healthcare access and affordability.
- c. Renewable Energy and Clean Technologies:** The focus on sustainable development and green energy created opportunities for collaboration in renewable energy and clean technologies. India's expertise in solar energy, wind power, and energy-efficient solutions found resonance in Africa's pursuit of sustainable energy sources.

### Notable Events and Initiatives:

- a. India-Africa Forum Summit (2015):** The third India-Africa Forum Summit held in 2015 brought together leaders from India and African nations. The summit focused on strengthening political and economic ties, fostering partnerships in trade, investment, and development cooperation.

- b. India's Lines of Credit:** India extended lines of credit and financial assistance to African countries to support infrastructure development, agriculture, healthcare, and capacity-building initiatives. These lines of credit played a crucial role in facilitating trade and investment between the two regions.
- c. Indian Investments in Africa:** Indian companies made significant investments in various sectors across Africa, including manufacturing, telecommunications, infrastructure, and agriculture. These investments contributed to job creation, technology transfer, and economic growth in African countries.

The decade from 2010 to 2020 witnessed significant progress in India-Africa trade relations, characterised by sustained growth, sectoral diversification, and increased investments.

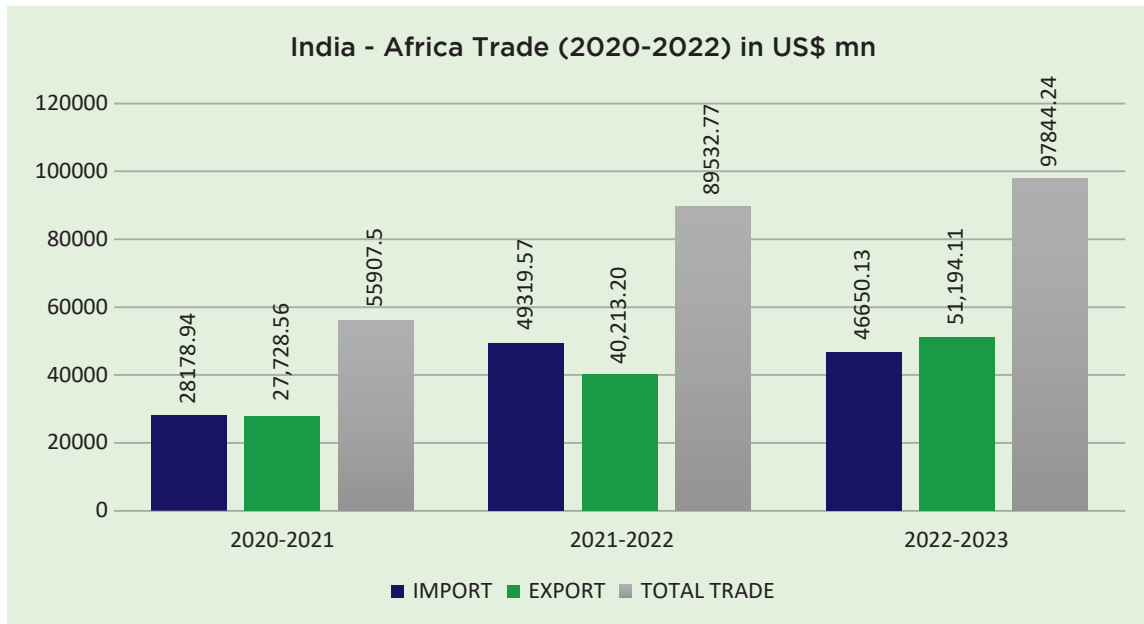
### Post-Covid Period: Breaking new Ground

Despite the challenges posed by the COVID-19 pandemic, India-Africa trade has showcased resilience and demonstrated signs of recovery. Both regions have taken measures to adapt to the changing global landscape, leveraging technology and digital platforms to sustain trade flows and explore new opportunities.

The cumulative trade volume between India and Africa continued to grow, reaching a total of US\$ 243.28 billion by 2022-23. Imports accounted for 51.03% of this trade volume, while exports made up 48.97%.

*The cumulative trade volume between India and Africa continued to grow, reaching a total of US\$ 243.28 billion by 2022-23.*





Data source: Department of Commerce, Ministry of Commerce & Industry, Government of India

Continuing the positive trend, there was a further 9.28% increase in trade volume in 2022-23, resulting in a total trade volume of US\$ 97.84 billion. This upward trajectory suggests sustained growth and strengthening of the trade relationship between the two regions.

In terms of the trade composition, imports accounted for 47.68% of the total annual trade, highlighting India's demand for African products and resources. On the other hand, exports constituted 52.32% of the trade, reflecting Africa's increasing market access and export capabilities.

The CAGR for trade between India and Africa post-2020 was recorded at 6.32%. This indicates a moderate but consistent growth rate in the trade relationship during this period, demonstrating the potential for further expansion and collaboration in the future.

### Digital Transformation and E-commerce

**a. Digital Initiatives:** The post-2020 period witnessed a surge in digital initiatives to enhance trade facilitation and streamline processes.

Online platforms and e-commerce solutions have played a crucial role in connecting Indian and African businesses, promoting cross-border trade, and expanding market access.

**b. Technology Transfer and Capacity Building:**

India's expertise in digital technologies, including fintech, e-governance, and e-commerce has been shared with African countries. This has supported Africa's digital transformation journey, empowered businesses and fostering inclusive growth.

### Sectoral Focus and Diversification

**a. Information Technology and Software Services:**

India's prowess in the IT sector has translated into increased collaboration with African countries. Indian IT companies have provided software services, technology solutions, and capacity-building support to drive digitalisation efforts in Africa.

**b. Renewable Energy and Sustainable Development:**

The focus on renewable energy and sustainable development has gained prominence in India-Africa trade.

India's experience in solar energy, wind power, and energy-efficient solutions has been shared with African nations, fostering partnerships in the green energy sector.

- c. Healthcare and Pharmaceuticals:** The healthcare sector, particularly pharmaceuticals, remains a key area of collaboration. Indian pharmaceutical companies continue to supply affordable medicines to African countries, contributing to improved healthcare access and capacity-building initiatives.

### **Global Events and Partnerships: The Building Blocks**

- a. India-Africa Partnership in Multilateral Forums:** India and African countries have strengthened their collaboration in multilateral forums, including the United Nations and World Trade Organization. They have advocated for common interests, such as trade liberalization, development assistance, and addressing climate change.

- b. African Continental Free Trade Area (AfCFTA):** The implementation of AfCFTA has opened new opportunities for trade and investment between India and Africa. India has expressed its interest in exploring the potential of this landmark agreement and deepening economic integration with African countries.

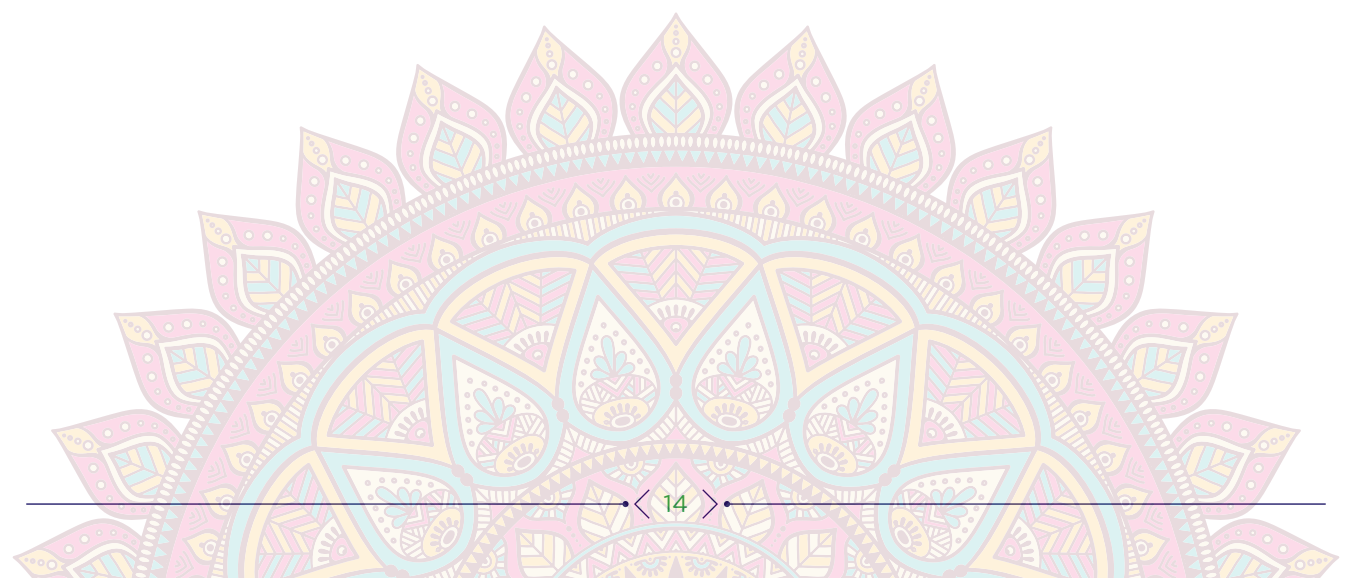
India has continued to support capacity-building initiatives in Africa through scholarships, training programmes, and knowledge-sharing platforms. These efforts aim to empower African youth, professionals, and entrepreneurs to contribute to their countries' economic development and strengthen bilateral ties.

Through strategic partnerships, knowledge exchange, and leveraging global events, India and Africa are poised to deepen their economic cooperation, explore new frontiers of trade, and address common challenges in the years ahead. The evolving India-Africa trade landscape holds immense potential for inclusive development, job creation, and fostering closer people-to-people ties.



# 2.

## THE AFCFTA OPPORTUNITY



Keeping in mind the Sustainable Development Goals (SDGs) of the United Nations and the 2030 target for their achievement, African countries have united under the aegis of the African Union (AU) to identify development opportunities and create a roadmap for intra-continental cooperation and growth, primarily in the form of Agenda 2063 and the African Continental Free Trade Area (AfCFTA).

The establishment of the AfCFTA offers a special opportunity to realise this integration of common goals amongst nations, which will subsequently promote economic progress, reduce poverty, increase employment possibilities, and bring down Africa's reliance on raw materials and natural resources. The Agreement was constructed around trade facilitation measures designed specifically for the African market and targeted at streamlining import, export, and transit processes.

Beyond trade in physical products, the AfCFTA is also observed to facilitate discussions about services, investments, competition law, digital trade, and intellectual property rights. This would henceforth fuel the continent's comprehensive regional integration.

AfCFTA is also anticipated to increase household incomes and generate an expanse of employment possibilities that will help push over 50 million<sup>1</sup> people out of extreme poverty by 2035.

With a total gross domestic product (GDP) of US\$3.4 trillion, this initiative to integrate nations is currently bringing together close to 1.4 billion people in 55 nations. Realising its full potential would however need considerable policy changes and steps to facilitate flow of trade.

For the realisation of the stated objectives it is necessary that the continent utilises the critical mass of youth and women, who also

remain the core anchor of the AfCFTA. This would back the continent's development strategy, propel economic advancement in Africa and fulfil Sustainable Development Goals and bring the nations closer to achieving "Agenda 2063".

## Imperatives for Africa

The AfCFTA holds immense potential to significantly boost African economies' competitiveness and foster their integration into Global Value Chains (GVC). In addition to diversifying the continent's exports and creating a more resilient economy, AfCFTA would also assure strategic boosting of economies of scale and streamlining Foreign Direct Investment (FDI) into the continent.

Capacity building and institutional support are essential to realise the AfCFTA's goal, which would support the African nations in taking advantage of the growing international trade flows. Building trade and productive capacities is essential, as is educating firms on the tools and resources they can use. This way firms would be empowered to become more productive.

With fewer trade restrictions in the continent, Africa is gradually becoming a single free market as a result of the AfCFTA. Similar initiatives would be required to boost international trade with nations outside of Africa.

Deals made through AfCFTA are expected to lower tariffs between member nations and enforce regulatory measures like sanitary standards, technological controls, as well as keep a check on facilitation of trade and services.

***With a total gross domestic product (GDP) of US\$3.4 trillion, this initiative to integrate nations is currently bringing together close to 1.4 billion people in 55 nations.***

<sup>1</sup> [https://www.google.com/url?sa=i&rct=j&q=&esrc=s&source=web&cd=&cad=rja&uact=8&ved=0CAIQw7AJahcKEwjgKuW86v\\_AhUAAAAAHQAAAAQAw&url=https%3A%2F%2Fwww.worldbank.org%2Fen%2Fnews%2Fpress-release%2F2022%2F06%2F30%2Ffree-trade-pact-could-help-lift-up-to-50-million-africans-from-extreme-poverty&psig=AOvVaw3me0HF1mzySK93KAEa1fE&ust=1686046653322716](https://www.google.com/url?sa=i&rct=j&q=&esrc=s&source=web&cd=&cad=rja&uact=8&ved=0CAIQw7AJahcKEwjgKuW86v_AhUAAAAAHQAAAAQAw&url=https%3A%2F%2Fwww.worldbank.org%2Fen%2Fnews%2Fpress-release%2F2022%2F06%2F30%2Ffree-trade-pact-could-help-lift-up-to-50-million-africans-from-extreme-poverty&psig=AOvVaw3me0HF1mzySK93KAEa1fE&ust=1686046653322716)

Upon full implementation of AfCFTA, the regional markets and economies are expected to undergo remarkable transformations and the output of natural resource, manufacturing and service industries are likely to be enlarged.

AfCFTA represents a major opportunity for countries to boost growth, reduce poverty, and broaden economic inclusion and is expected to produce the following results:

- The AfCFTA is predicted to increase intra-African trade by 52.3% by doing away with import duties and by doubling it if non-tariff obstacles are also removed.
- By 2050, it is anticipated that the AfCFTA will have increased the size of Africa's economy to US\$ 29 trillion<sup>2</sup>.
- Increase the earnings of nearly 68 million people who make less than US\$ 5.50 a day and help 30 million Africans escape the trap of extreme poverty.
- Build up Africa's income by US\$ 450 billion (an increase of 7%) by 2035, while raising global income by US\$ 76 billion.
- Boost manufacturing-related exports to the extent of US\$ 560 billion from Africa.
- Encourage greater wage increases for women (10.5%) as compared to men (9.9%).
- Increase pay for both skilled and unskilled workers by 10.3% for the former and 9.8%<sup>3</sup> for the latter.

The COVID-19 pandemic and the earlier 2014 Ebola Disease Outbreak have shown that public health catastrophes can have a substantial impact on trade among African Union Member States and between Africa and the rest of the globe. As an initiative taken to expand the healthcare and education sector, Indian institutes have

come forth to offer 1,000 doctors, nurses, and paramedics free medical education over a five-year period, as well as free medical consultation to 4,000<sup>4</sup> students. Through the second phase of the pan-African e-Network project—e-VidyaBharati and e-ArogyaBharati Network Project—India is assisting Africa in bridging the digital divide.

Innovative solutions are required because the pandemic has increased Africa's finance need to US\$ 345 billion. Africa requires significant financial resources to support the private sector, generate jobs, offer social protection to weaker communities, and encourage inclusive growth.

### India's Partnering Role

As the landmark AfCFTA gains ground after coming into effect on 1 January 2021, India awaits as an enthusiastic partner to participate actively in physical infrastructure-development projects that are essential for boosting intraregional commerce. With the abolition of tariffs on 90% of the trade items, the continental Free Trade Agreement is anticipated to increase intra-regional commerce from its current level of around 17% of all trade in Africa to an estimated 52% in five years. Addressing this gap, Indian industry would be encouraged to open operations in the 230<sup>5</sup> special economic zones (SEZs) across Africa to undertake AfCFTA's promised expansion of market access while also assisting in the development of regional value chains that are essential to the industrialisation of Africa.

***With the abolition of tariffs on 90% of the trade items, the continental Free Trade Agreement is anticipated to increase intra-regional commerce from its current level of around 17% of all trade in Africa to an estimated 52% in five years.***

<sup>2</sup> <https://au-afcfta.org/purpose-the-afcfta/>

<sup>3</sup> <https://www.worldbank.org/en/topic/trade/publication/the-african-continental-free-trade-area>

<sup>4</sup> <https://www.newindianexpress.com/opinions/columns/2021/aug/17/a-makeover-for-the-india-africa-economic-partnership-2345542.html>

<sup>5</sup> <https://www.newindianexpress.com/opinions/columns/2021/aug/17/a-makeover-for-the-india-africa-economic-partnership-2345542.html>



Long-term targets under the Indian Government's Focus Africa project may be in line with Africa's Agenda 2063, which would make the priorities for the Indian government's partnership with Africa obvious in the short, medium, and long terms. Then, with the help of private investments and blended finance, this might be utilised to mobilise development aid for the implementation of the many Agenda 2063 objectives. Aid from India would be required in fulfilling the responsibilities of:

- Reducing trade expenses in order to evenly establish a market across the entire continent. This will also call for legislation and regulations that permit the free flow of goods, capital, and information across international boundaries, foster competitive business environments that can increase investment and productivity, and encourage increased foreign competition and FDI that can increase the productivity and innovation of domestic firms.
- In industries where job losses are anticipated, governments will need to be prepared to provide workers with suitable safety nets and retraining laws.
- Assisting governments in creating measures to improve the workforce's capacity to seize new opportunities.

India is poised to play a guiding role in the strengthening of AfCFTA through renewable energy and transformative green industrialization, agriculture, food and nutrition security. Additionally, India would be able to assist in strengthening finance institutions, participating in multilateral forums, and contributing to a global green new deal that enhances the effectiveness of AfCFTA.

Even though there is still a youth bulge in Africa, there is also a visible disconnect between the education and training that is now offered and the skills that businesses require.

There is the necessity to cultivate not only the abilities required by businesses today but also the skills of the future. Given the diversity of Africa, digital infrastructure can also be leveraged to close the gap in the education sector. For instance, the Ministry of Education, Government of India launched the Digital Infrastructure for Knowledge Sharing (DIKSHA) online learning platform in Africa in September 2020.

Some Indian businesses have already invested in Mauritius. More market-driven investments are needed in this industry, particularly for the creation of language training facilities in other African nations, since this will further strengthen the bonds between the two markets. India could therefore extend collaborations on projects related to entrepreneurship, human resource management, and skill development.

Apart from establishing connectivity between educational institutes and industries, India could also supervise the connectivity that needs to be fostered at the inter-Africa level too. There is a need for a more inward-looking approach to strengthen the trickle effects of development, especially those that extend beyond national and global physical corridors. Through cooperative initiatives and financing for infrastructure, India has made some progress in developing the African continent's transportation infrastructure.

***Additionally, India would be able to assist in strengthening finance institutions, participating in multilateral forums, and contributing to a global green new deal that enhances the effectiveness of AfCFTA.***

There are already programmes in place, such as the Programme for Infrastructure Development in Africa (PIDA), which was brought in place through a collaboration between the African Union Commission (AUC), the African Development Bank (AfDB), and the New Partnership for Africa's Development Planning and Coordination Agency (NPCA).

There exist supply side constraints for the implementation of these programmes like lack of good transportation and logistics infrastructure, inadequate information and communications technology and energy infrastructure. India, already being in a position to have thoroughly explored these regions, could extend its best practices so that PIDA can be aggressively implemented and the agenda of sustainable industrialisation can be met.

Even though several Indian telecommunications businesses have made investments in Africa, there still exists a large scope for India and Africa to partner in exploring the applications of information and communication technologies. India has profited from similar applications in recent years in industries including agriculture, national identity, healthcare, and more lately, education.

Growing population, rising incomes, and integrated marketplaces all present

enormous prospects for corporate expansion, which would fulfil the rising levels of demand. It is the responsibility of both India and the least developed nations (LDCs) of Africa to expand and broaden bilateral trade flows so that the duty-free tariff preference (DFTP) programme that the government of India provides to all 34 African LDCs is successfully utilised.

The DFTP programme will be most effective when the recipient economies expand their manufacturing industries and focus on the Indian markets for value-added items. India also greatly values increased youth exchange and interactivity between the two sides' along with emphasised intergovernmental cooperation to help health and education services in Africa. Indian collaboration in solar and renewable energy sources, and a larger role in financial technologies to assist African countries, had till date fuelled significant transformations and also support exploring new avenues under AfCFTA.

***India also greatly values increased youth exchange and interactivity between the two sides' along with emphasised intergovernmental cooperation to help health and education services in Africa.***

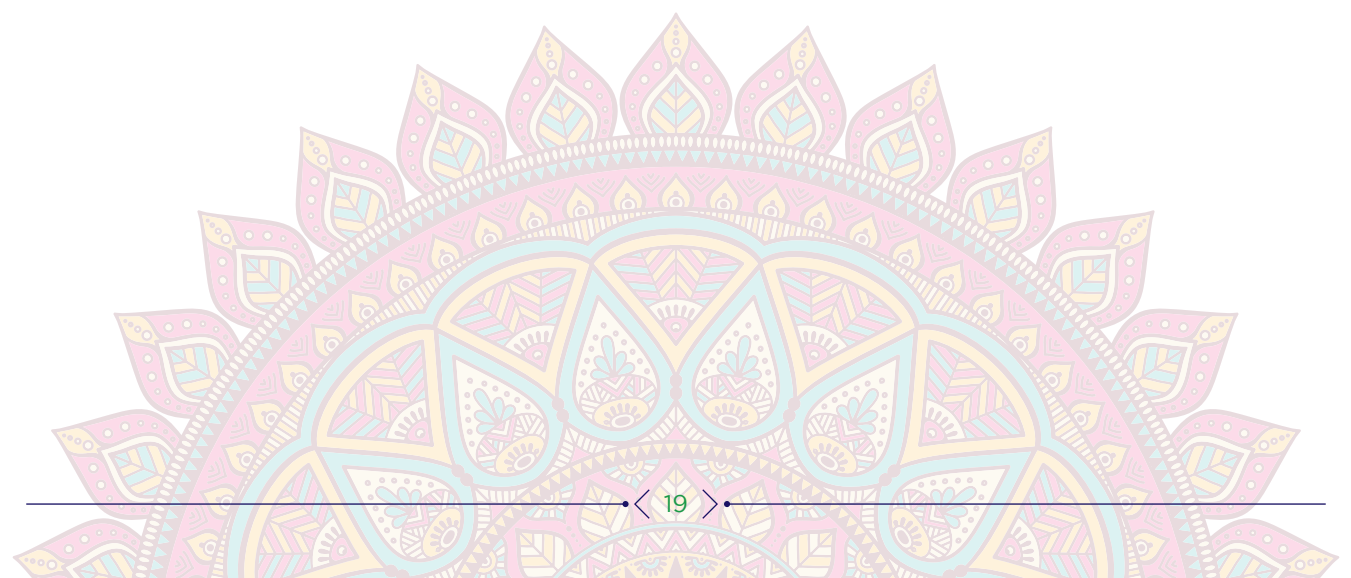
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# 3.

## **KEY SECTORS: BOOSTING BILATERAL TRADE**



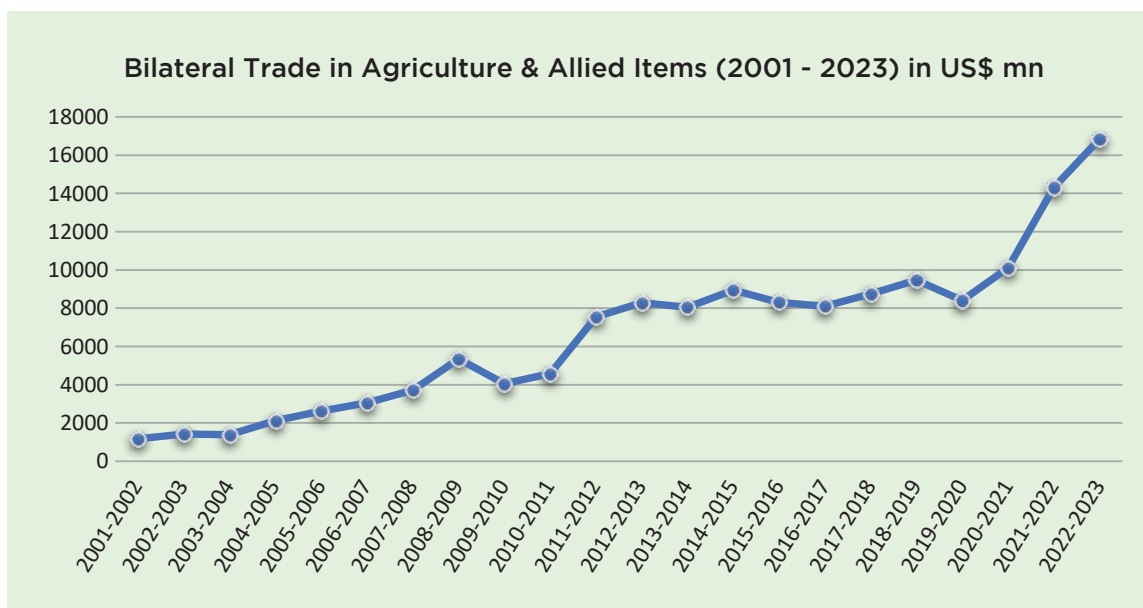
India and Africa share a significant bilateral trade relationship across various key sectors that play a vital role in shaping trade ties between the two regions. These sectors include food and agriculture, oil and gas, mining and minerals, manufacturing, pharmaceuticals, electrical machinery and equipment, automobiles, and sustainability. Focusing on these sectors has the potential to boost bilateral trade and contribute to the overall development and growth of both India and Africa.

By leveraging each other's strengths and promoting collaboration, India and Africa are poised to further deepen their bilateral trade ties, drive economic growth, and contribute to the overall development and prosperity of both regions.

## A. Agriculture and Allied Sectors

Trade in agriculture between India and Africa has a rich historical context, dating back centuries. The current status of trade in agriculture trade between India and Africa demonstrates substantial growth and increasing trade volumes. India has emerged as a significant market for African agricultural products, while African countries have become important suppliers of various agricultural commodities to India.

In 2022-23, trade between India and Africa in the agriculture and allied sector reached an all-time high of US\$ 16.8 billion. This significant increase in trade volume showcases the growing importance of agricultural trade between the two regions.



Data source: Department of Commerce, Ministry of Commerce & Industry, Government of India

Looking ahead, the future prospects for agricultural trade between India and Africa remain promising. With an estimated Compound Annual Growth Rate (CAGR) of 13.54%, trade has the potential to reach approximately US\$ 45 billion by 2030. This projection highlights the significant growth opportunities that lie ahead in the

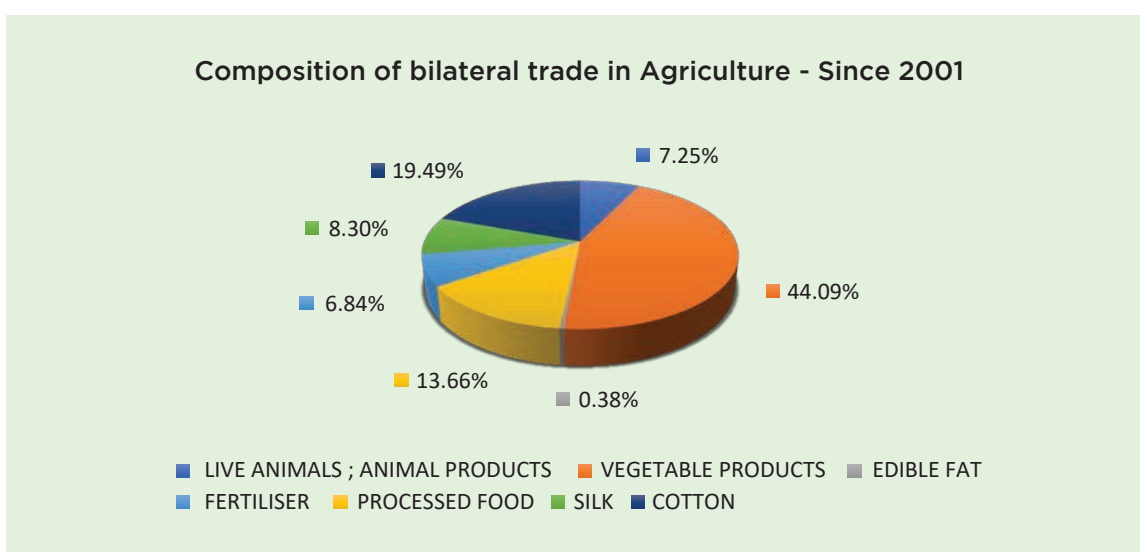
agricultural sector for both India and African countries.

As both regions continue to invest in agricultural development, technology transfer, and market linkages, the trade is expected to flourish, creating new opportunities for farmers, agribusinesses, and consumers in both India and Africa.

The COVID-19 pandemic has had a significant impact on agricultural trade between India and Africa. Despite the challenges, the trade has witnessed exponential growth, demonstrating the resilience of both regions. The post-COVID period has seen a surge in trade, reflecting the strong commitment from India and Africa to maintain and strengthen trade relations. This growth can be attributed to the essential nature of agricultural

products, adapted trade practices, and the recognition of food security and supply chain resilience.

India has been actively exporting various products to Africa, including meat and edible meat offal, sugar, cereals, cotton, processed foods, tea, and coffee. On the other hand, Africa has been a key supplier of fertilizers, oilseeds, fruits, vegetables, spices, coffee, and tea to India.



Department of Commerce, Ministry of Commerce & Industry, Government of India

Among the traded commodities, vegetable products, primarily cereals, have accounted for the largest share, constituting approximately 44.09% of the entire trade volume since 2001. Cotton follows as the second most traded commodity, representing 19.49% of the trade, while processed foods hold a significant share of 13.66%. Silk, animal and animal products, and fertilizers also contribute substantially to the trade, accounting for 8.30%, 7.25%, and 6.84%, respectively.

***Animal products, and fertilizers also contribute substantially to the trade, accounting for 8.30%, 7.25%, and 6.84%, respectively.***

### Key Recommendations

Agricultural trade between India and Africa could be augmented further by:

- India continuing to share its expertise in soil health and efficient water usage schemes for sustainable agricultural practices.
- Collaborations between Indian and African governments, private sector, and farmers to ensure market access and treat agriculture as a business.
- Facilitating digital access to markets, quality inputs, and financial services for farmers through Indian companies' support.

- Strengthening value chains in Africa’s agricultural transformation, including farm mechanisation, irrigation, and food processing, with India as a key partner and promote the use of AAA technologies, i.e., affordable, appropriate and adaptable.
- Encouraging innovative financing mechanisms, such as public-private partnerships, to modernise agriculture in African countries.
- Increasing Indian investment in key sectors like fertilizer manufacturing, food processing, and horticulture, while promoting environmental sustainability.
- Emphasising climate resilience and environmentally friendly practices in agriculture through Indian expertise and collaboration.
- Establishing cold storage infrastructure across Africa could be explored as a viable solution to prevent food wastage.

- Intertwining the goal of achieving self-sufficiency in food production with food security, considering Africa’s vast land potential to become a significant global food supplier.

## B. Minerals and Mining Sector

The mining and mineral sector plays a vital role in trade between India and Africa. Both regions possess rich mineral resources, This sector significantly contributes to economic growth, employment generation, and revenue generation in both India and African countries.

The total trade in the mining and mineral sector between India and Africa since 2001 stands at US\$ 43.13 billion, with an export-import proportion of 22.7% and 77.3%, making India a net importer in this sector. The total trade for the year 2022-23 reached US\$ 23.69 billion, with the highest trade volume recorded in the year 2014-15, amounting to US\$ 37.83 billion.



Data source: Department of Commerce, Ministry of Commerce & Industry, Government of India

India has been a significant importer of minerals from Africa, while African countries have relied on India's expertise in mining technology and investment. This relationship has evolved over time, with increased cooperation, investment, and trade in the mining and mineral sector.

Currently, Indian companies are actively engaged in exploration, extraction, and processing of minerals in various African countries. The trade encompasses both raw minerals and value-added products derived from these minerals, contributing to economic development in both regions.

The mining and mineral sector holds great importance for India and Africa as it serves as a crucial source of revenue, employment, and foreign exchange earnings. For India, minerals are essential for industrial production and infrastructure development. African countries benefit from mining activities by attracting foreign investment, fostering economic growth, and promoting local development.

The three main components of the mining and mineral sector are:

- i) Salt, sulphur, earths, and stone, plastering materials
- ii) Ores, slag, and ash
- iii) Mineral fuels, mineral oils, gas, and allied products.

These components contribute to the overall trade in the mining and mineral sector, with a composition of 2.1%, 2.5%, and 95.4% respectively.

Both India and African countries possess abundant mineral resources, including coal, iron ore, diamonds, gold, and other precious metals. India contributes its technological expertise and investment in mining operations, while African countries offer vast mineral reserves and favourable geological conditions for exploration and extraction.

The growing global demand for minerals, driven by industrialisation and infrastructure development, presents opportunities for India and Africa to meet this demand through their mining sectors. India's increasing domestic consumption and Africa's potential as a mineral supplier create a favourable environment for bilateral trade in this sector.

Trade policies, bilateral agreements, and frameworks play a crucial role in facilitating mining and mineral trade between India and Africa. Governments have implemented measures to streamline investment, improve regulatory frameworks, and promote sustainable mining practices. These initiatives encourage collaboration, protect investments, and ensure responsible mining activities.

Furthermore, the significant growth trajectory observed in the mining and mineral sector between India and Africa underscores the promising opportunities that lie ahead. The estimated CAGR of 7% over the last five years since 2018-19 showcases the resilience and potential of this sector in fostering economic development and driving bilateral trade.

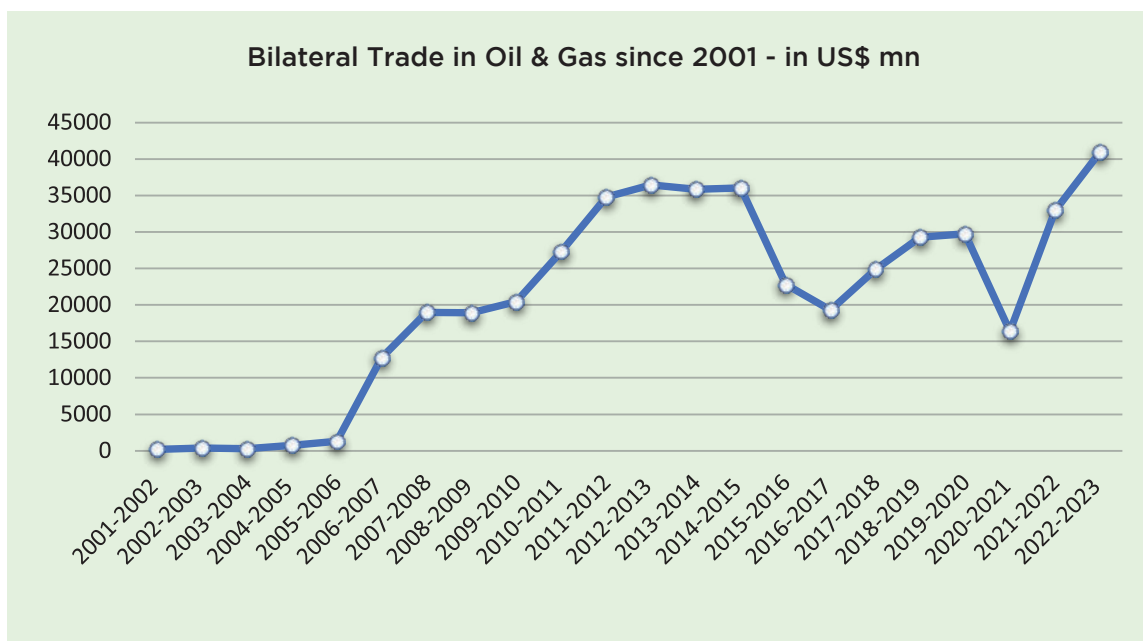
To harness this growth potential, it is imperative for India and Africa to prioritise strategic initiatives and partnerships. Joint exploration ventures, technology transfers, and knowledge sharing platforms can facilitate the discovery and development of untapped mineral resources.

It is essential for governments and industry stakeholders to foster an attractive investment climate, ensuring policy stability, transparent regulations, and secure tenure rights. By creating a conducive environment for investment, both India and Africa can attract capital inflows, advanced technologies, and expertise, thereby boosting production capacities and expanding their mineral export capabilities.

In addition to trade growth, it is equally important to focus on sustainable mining practices that prioritise environmental conservation, community engagement, and social responsibility. Responsible mining initiatives, such as environmental impact assessments, land reclamation measures, and community development programmes, can mitigate the ecological and social impacts associated with mining activities. By adopting sustainable practices, India and Africa will be able to ensure the long-term viability of the mining sector while promoting inclusive growth and safeguarding natural resources for future generations.

### Oil and Gas

The total trade between India and Africa in the oil and gas sector since 2001 amounts to US\$ 460.68 billion. Of this total, India's exports account for 23.5%, while imports make up 76.5%. The annual trade in this sector was initially less than US\$ 250 million until 2005-06. However, it experienced significant growth, reaching a peak of US\$ 36.04 billion in 2014-15. Subsequently, there was a decline, reaching a low of US\$ 16.39 billion in 2020-2021. However, there has been an exponential growth since then, with the trade reaching an all-time high of US\$ 40.91 billion in 2022-2023.



Data source: Department of Commerce, Ministry of Commerce & Industry, Government of India

Oil and gas are mineral fuels that account for 95.4% of the mining and mineral sector. This is the reason why the trade trends observed in the oil and gas sector mirror those of the mining and mineral sector. The sector plays a crucial role in both India and African countries.

For India, a stable and diversified supply of energy resources is essential for sustaining economic growth and meeting the energy

needs of its population. African countries view the oil and gas sector as a key driver of economic development, foreign investment, revenue generation, job creation, infrastructure development, and technological advancements.

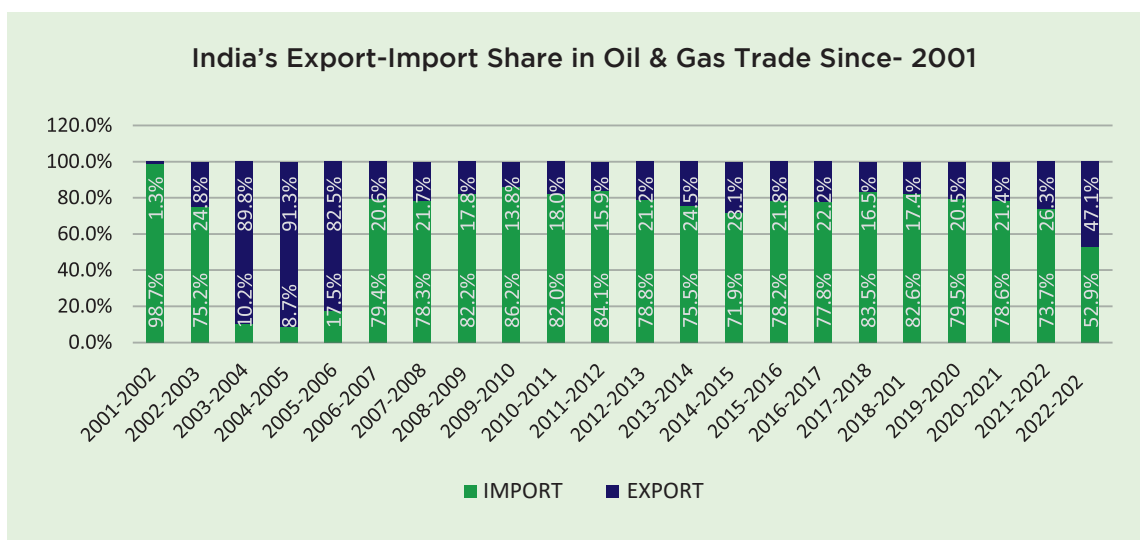
India brings expertise in downstream activities such as refining, marketing, and distribution of petroleum products.



Indian companies have made significant investments in African countries, contributing to their capacity building and technological advancements in the oil and gas sector. African countries, with their vast reserves, serve as attractive suppliers to meet India's energy demands.

India's dependence on African countries for meeting its domestic energy requirements is evident in the consistent trend of being a net importer of oil and gas. This reliance has been a driving factor in the India-Africa oil and gas trade. Since 2006-07, imports have consistently accounted for more than

70% of the total trade. However, in 2022-2023, there was a relative decrease in the import proportion, which accounted for 52.9% of the trade. This shift in the import-export ratio signifies a potential change in the dynamics of the India-Africa oil and gas trade, with India possibly exploring other sources or reducing its reliance on imports. Nonetheless, the trade relationship between India and African countries remains strong, with oil and gas trade continuing to play a crucial role in meeting India's energy needs and fostering economic cooperation between the two regions.



Data source: Department of Commerce, Ministry of Commerce & Industry, Government of India

India's growing energy demand, fueled by population growth, urbanisation, and industrialisation, creates a significant market for oil and gas imports. African countries, with their abundant reserves, are well-positioned to meet this growing demand. The geographical proximity of Africa to India enhances the feasibility of a steady and reliable supply.

Various trade policies, bilateral agreements, investment protection mechanisms, and memorandums of understanding have

played a pivotal role in facilitating oil and gas trade between India and Africa. These measures have created a conducive environment for collaboration, trade, technology transfer, capacity building, and knowledge exchange, deepening the partnership between the two regions.

This partnership not only contributes to the energy security and economic growth of both regions but also strengthens the overall bilateral relationship between India and African countries.



## Key Recommendations

- Governments should create an enabling environment by implementing transparent and investor-friendly policies. These include streamlining regulatory procedures, ensuring legal certainty, and providing incentives for investment in the mining and mineral sector.
- Encouraging R&D activities will drive innovation, improve mining techniques, and foster sustainable practices. Investing in geological surveys, exploration technologies, and mineral beneficiation will enhance the value addition and competitiveness of the mining sector.
- Developing robust infrastructure, such as transportation networks, ports, and storage facilities, will facilitate efficient movement of minerals. Enhancing logistical capabilities will reduce trade barriers, lower transportation costs, and improve the overall competitiveness of the sector.
- Investing in human capital development through training programmes and educational initiatives will build a skilled workforce in the mining and mineral sector. This will enable local communities to actively participate in and benefit from mining activities, leading to inclusive growth and sustainable development.
- Encouraging responsible sourcing of minerals through certification programmes and traceability systems will ensure ethical practices and prevent the trade of conflict minerals. Collaboration between governments, industry stakeholders, and civil society organisations can help establish robust supply chain mechanisms.

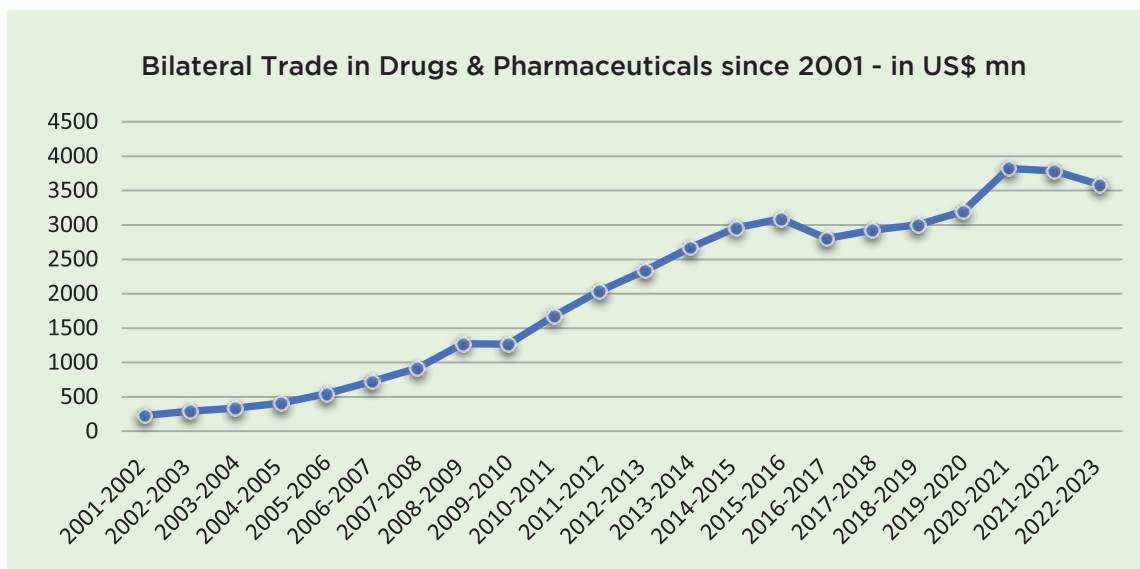
- Mining projects should prioritise the social and economic well-being of local communities and respect the rights of indigenous peoples. This involves engaging in meaningful consultations, providing fair compensation, and promoting community development initiatives.
- Mining companies should embrace corporate social responsibility by investing in community development projects, promoting local employment, and supporting social welfare programmes. This will foster positive relationships with local communities and contribute to sustainable development.

## C. Drugs & Pharmaceuticals

The drugs & pharmaceuticals sector holds immense importance in the bilateral trade between India and Africa. It plays a critical role in addressing healthcare needs, promoting public health, and driving economic growth in both regions. The sector encompasses the production, distribution, and sale of medicines, vaccines, medical devices, and other healthcare products.

Since 2001, the total trade in drugs & pharmaceuticals between India and Africa has reached an impressive value of US\$ 43.88 billion. The consistent growth in trade reflects the increasing demand for medicines and healthcare products in Africa, as well as India's capacity to cater to these needs.

***Since 2001, the total trade in drugs & pharmaceuticals between India and Africa has reached an impressive value of US\$ 43.88 billion.***

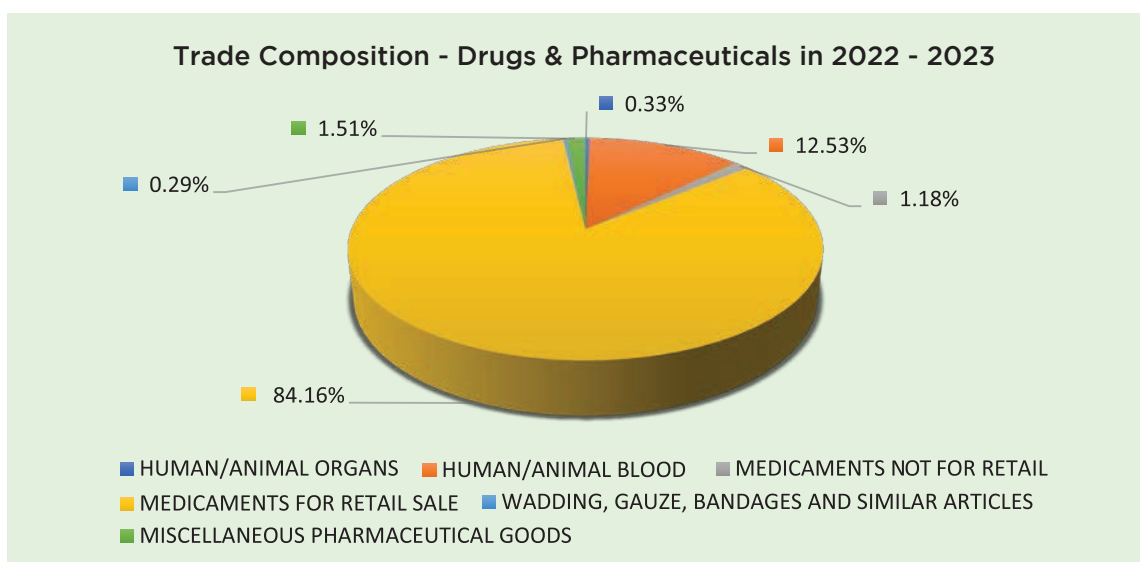


Department of Commerce, Ministry of Commerce & Industry, Government of India

Trade in drugs & pharmaceuticals reached new heights in recent years. In the year 2020-21, the trade volume soared to an all-time high of US\$ 3.8 billion. Analysing the trade composition, it is evident that medicaments, including pharmaceutical products for both retail and non-retail sale, constitute the largest share, accounting for 85.34%. This category encompasses a wide range of medicines, including essential drugs, over-the-counter medications, and specialised pharmaceuticals. The significant

trade volume in medicaments reflects the crucial role played by Indian pharmaceutical companies in meeting the healthcare needs of African populations.

Another noteworthy category in the trade is human/animal blood, which accounts for 12.53% of the total trade. This includes various blood-related products such as plasma, serum, and blood components, which are crucial for medical treatments, diagnostics, and research purposes.



Data source: Department of Commerce, Ministry of Commerce & Industry, Government of India

Additionally, articles such as wadding, gauze, and bandages contribute 0.29% to the pharmaceutical trade.

Out of the total trade volume since 2001, India's exports account for 99.7%, highlighting India's status as a major supplier of pharmaceutical products to African countries.

Indian pharmaceutical companies have been successful in establishing a strong presence in African markets, providing a wide range of essential medicines and generic alternatives at competitive prices. This has played a crucial role in improving access to affordable healthcare and supporting healthcare systems in African countries.

Trade in this category is one of the most promising in the overall basket for the future. Firstly, Africa's population is rapidly expanding, resulting in increased healthcare needs and demand for pharmaceutical products. India, with its expertise in manufacturing affordable generic medicines, is well-positioned to cater to this rising demand.

Additionally, the strong presence of Indian pharmaceutical companies in African markets and their ability to offer cost-effective healthcare solutions have further contributed to the upward trend. These companies have established robust distribution networks, supply chains, and partnerships with local stakeholders, facilitating the accessibility and availability of quality medicines across the African continent.

Moreover, both India and African countries recognise the importance of collaboration in research and development, capacity building, and technology transfer in the pharmaceutical sector. These collaborative efforts aim to address healthcare challenges specific to Africa, develop innovative healthcare solutions, and

promote local manufacturing capabilities. Such initiatives foster a mutually beneficial environment and contribute to the growth and sustainability of the India-Africa pharmaceutical trade.

It is important to note that achieving this projected growth requires continued efforts in fostering trade partnerships, strengthening regulatory frameworks, and addressing challenges related to intellectual property rights, quality standards, and access to affordable medicines. By proactively addressing these issues and capitalising on the opportunities available, the India-Africa pharmaceutical trade can reach new heights, ultimately contributing to improved healthcare access, healthcare infrastructure development, and overall bilateral cooperation.

### Key Recommendations

- Establishing testing laboratories in Africa by Indian pharmaceutical companies can not only boost local confidence but also open up new market opportunities and expand their customer base in the region.
- Collaboration in Ayurveda and traditional medicines between India and African countries presents a strategic business opportunity for Indian pharmaceutical companies to tap into the growing demand for alternative and holistic healthcare solutions, creating a competitive advantage in the market.
- Assisting African countries in addressing the issue of medical waste disposal can be seen as a business investment in sustainability. Indian pharmaceutical companies can explore partnerships to provide waste management solutions, which can enhance their corporate social responsibility image and create long-term business relationships.

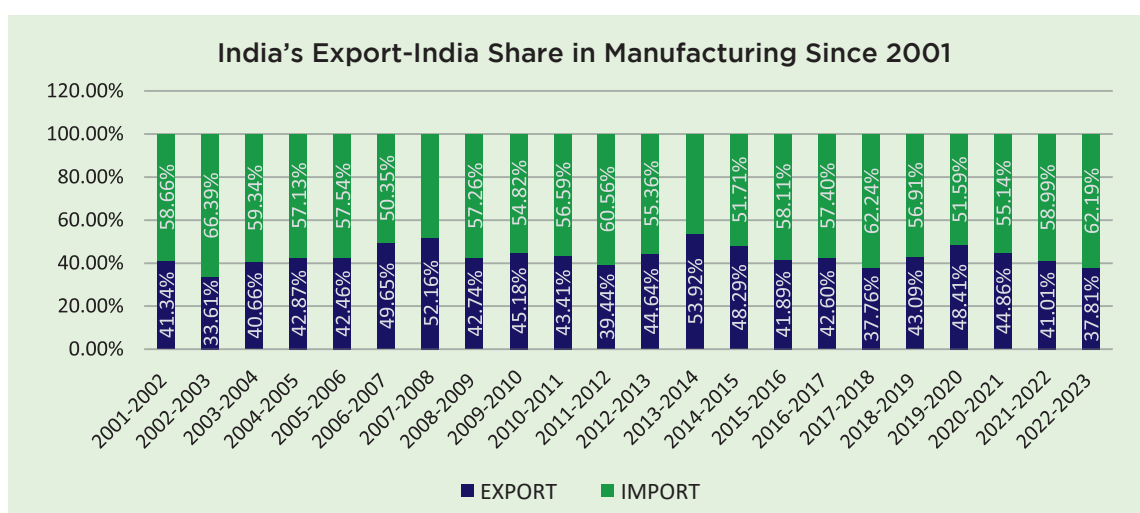
- Working with traditional healers in African countries as basic medical service providers can offer Indian pharmaceutical companies access to traditional healthcare markets, providing an opportunity to develop and market products specifically tailored to these segments
- Simplifying regulatory processes for drug and medical device clearances in African countries can attract more investments from Indian pharmaceutical companies.
- Sharing new and innovative medical technologies, including AI and VR, from India with African countries can position Indian pharmaceutical companies as technology leaders and foster collaborations, potentially leading to joint research and development projects, licensing agreements, or technology transfer initiatives.
- Developing a comprehensive healthcare ecosystem aligns with the business objective of providing end-to-end solutions. By expanding their offerings beyond specific medicines, Indian pharmaceutical companies can establish themselves as complete healthcare partners, diversify revenue streams, and create long-term customer loyalty.
- Upgrading and expanding telemedicine delivery systems with digital interventions opens up opportunities for Indian pharmaceutical companies to provide remote healthcare services, leveraging technology to reach underserved areas and capture new market segments, ultimately driving revenue growth.

## D. Manufacturing

The manufacturing sector holds immense significance in driving economic growth and industrial development. Bilateral trade between India and Africa in the manufacturing sector has witnessed substantial growth, contributing to the strengthening of economic ties between the two regions.

Since 2001, the total trade in the manufacturing sector between India and Africa has reached an impressive US\$ 308.7 billion. To avoid duplicating, data for pharmaceuticals, fertilizers, cotton, silk, and transportation are removed from the dataset used for manufacturing sector.

Export from India constitutes 43.34% of the total trade, reflecting India's position as a major exporter of manufactured goods. Imports account for 56.66%, highlighting the opportunities for African countries to enhance their manufacturing capabilities and reduce import dependency.



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With an estimated Compound Annual Growth Rate (CAGR) of 10.46%, the annual trade is projected to reach around US\$ 54 billion by 2030. This growth trajectory presents significant opportunities for collaboration, investment, and technology transfer between the two regions.

In the manufacturing sector, India has been a net importer, reflecting the demand for various manufactured goods in the Indian market. This creates avenues for African countries to tap into India's growing market by supplying goods that cater to India's

specific requirements and preferences. Strengthening trade ties in the manufacturing sector can contribute to Africa's export diversification and economic development.

The manufacturing sector trade between India and Africa reached an all-time high of US\$ 28.17 billion in 2021-22. To unlock the full potential of the manufacturing sector, both India and Africa should explore opportunities for trade facilitation, market expansion, and value chain integration.



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The manufacturing sector encompasses a wide range of industries, including chemicals, textiles, paper, arms and ammunition, wood, glass, ceramic, and base metals. Strengthening collaboration across these industries can lead to the exchange of expertise, technological advancements, and enhanced production capacities.

To promote economic development and job creation in Africa, it is essential to focus on initiatives that foster manufacturing and value addition within the continent. African

countries should prioritise the development of local manufacturing capabilities, attracting investment, and promoting entrepreneurship. This can be achieved through the establishment of industrial parks, special economic zones, and skill development programmes. Such efforts will contribute to the "Make in Africa" vision and reduce dependency on imports.

***India has been a net importer, reflecting the demand for various manufactured goods in the Indian market.***

Promoting investment in the manufacturing sector and facilitating technology transfer are crucial for the sustainable growth of the sector in Africa. Indian companies could play a significant role by investing in manufacturing facilities, sharing technical expertise, and fostering R&D collaborations. This will not only enhance Africa's manufacturing capabilities but also contribute to job creation and knowledge transfer.

Investments in infrastructure, logistics networks, and trade facilitation measures are vital for bolstering the manufacturing sector trade between India and Africa. Enhancing connectivity, reducing trade barriers, streamlining customs procedures, and improving transportation systems will create an enabling environment for smooth and efficient trade flows. Both India and African countries should work together to improve trade infrastructure and develop robust supply chains.

### Key Recommendations

- Encourage cross-sector collaboration between Indian and African manufacturers by facilitating partnerships between industries that complement each other. For example, promoting collaborations between the textile industry in India and the garment manufacturing industry in Africa can create integrated supply chains and enhance production capacities.
- Foster joint infrastructure development projects in the manufacturing sector, such as industrial parks, special economic zones, or logistics hubs. These shared facilities would provide a conducive environment for manufacturing activities and attract investment from both Indian and African companies.
- Encourage African countries to leverage their unique local knowledge and resources by promoting reverse technology transfer. Indian manufacturers can learn from African traditional techniques and practices, integrating them into their manufacturing processes. This exchange of knowledge can lead to innovative and culturally relevant products that cater to both domestic and international markets.
- Organise cultural exchange programmes and business delegations between Indian and African manufacturing communities. These programmes would provide opportunities for manufacturers to learn about each other's cultural nuances, business practices, and consumer preferences, fostering trust and understanding between the two regions.
- Promote co-creation and design thinking initiatives in the manufacturing sector. Encourage Indian and African manufacturers to collaborate on product development, combining their expertise and creativity to design innovative and market-responsive products. This approach would result in tailored solutions that cater to the specific needs and preferences of African consumers.
- Emphasise sustainable and inclusive manufacturing practices as a cornerstone of India-Africa bilateral trade. Encourage manufacturers to adopt sustainable production processes, incorporate renewable energy sources, reduce waste, and promote fair labour practices. This focus on sustainability and inclusivity would enhance the reputation of Indian and African manufacturers, leading to increased market demand and international partnerships.



- Establish business incubation centres specifically tailored to the needs of the manufacturing sector. These centers would provide mentorship, access to capital, technical support, and market intelligence to budding entrepreneurs and small-scale manufacturers. By nurturing and supporting emerging manufacturing enterprises, India and Africa can foster a vibrant entrepreneurial ecosystem and drive economic growth.

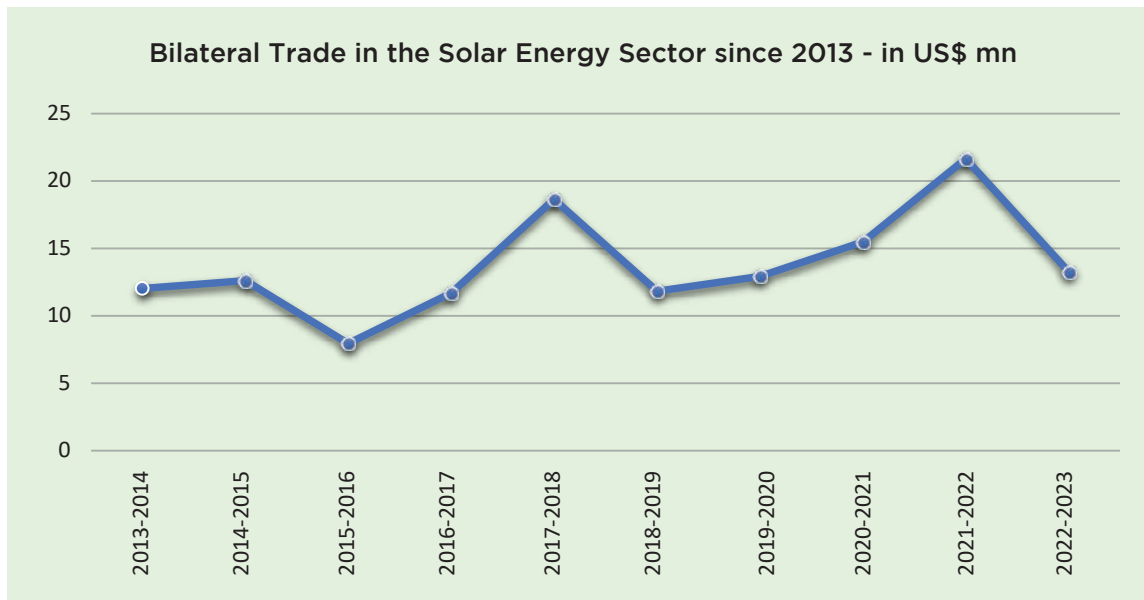
### E. Sustainability & Green Energy

The sustainability and green energy sector has emerged as a crucial area of cooperation and collaboration between India and Africa. With a shared commitment to clean-tech, geothermal energy, and renewable energy, both regions have recognised the importance of harnessing green technologies to address energy needs while mitigating environmental impact. This sub-section

explores the bilateral trade dynamics, key initiatives, and future prospects in the sustainability and green energy sector between India and Africa.

The total trade between India and Africa in the solar energy sector since 2013 amounts to US\$ 138.09 million. It is noteworthy that India has maintained a net exporter status in this sector, with exports constituting 93.48% of the total trade. This highlights India's expertise and growing capabilities in the production and supply of solar energy solutions. Moreover, it reflects the increasing demand for clean and sustainable energy options in Africa, as the continent strives for economic growth while minimising carbon emissions.

Critical minerals play a vital role in manufacturing products essential for the green energy sector, such as lithium batteries. These commodities are encompassed within the "electrical machinery and equipment sector" to avoid duplication.



Department of Commerce, Ministry of Commerce & Industry, Government of India



Clean-tech, which encompasses various clean and sustainable technologies, has gained significant traction in the India-Africa bilateral trade. This includes energy-efficient solutions, waste management technologies, and eco-friendly manufacturing practices. Both regions recognise the potential of clean-tech to drive economic development, create employment opportunities, and contribute to sustainable growth. By sharing best practices and promoting technology transfer, India and Africa can enhance their clean-tech capabilities and strengthen bilateral trade in this sector.

Geothermal energy holds immense promise for both India and Africa. India, with its advanced geothermal exploration and extraction technologies, can offer valuable expertise to African countries that possess significant geothermal resources. Geothermal energy is a reliable and renewable energy source that can contribute to reducing greenhouse gas emissions and meeting the growing energy demand in Africa. Through collaborative projects and knowledge sharing, India and Africa can tap into the potential of geothermal energy and foster sustainable development.

Green energy and renewable energy have become central themes in the India-Africa bilateral trade. India, with its robust renewable energy sector, including solar, wind, and hydroelectric power, has the capacity to support Africa's transition to green and sustainable energy sources. The Africa Renewable Energy Initiative (AREI), launched in 2015, aims to achieve universal access to energy in Africa through renewable energy sources. India's experience in renewable energy development can play a vital role in supporting AREI and facilitating technology transfer, capacity building, and investments in Africa's renewable energy sector.

To further strengthen bilateral trade in the sustainability and green energy sector, both India and Africa can focus on several key initiatives. First, promoting R&D collaborations between academic institutions and industry players can drive innovation and create cutting-edge solutions in clean-tech, geothermal energy, and renewable energy. This can be achieved through joint research projects, technology exchanges, and knowledge-sharing platforms.

Second, encouraging public-private partnerships can stimulate investments and facilitate technology transfer in the sustainability and green energy sector. By providing incentives and creating an enabling policy environment, governments can attract private sector participation in renewable energy projects, clean-tech initiatives, and geothermal energy development.

Third, capacity building programmes can enhance technical skills and knowledge in sustainable energy technologies. India can offer training programmes and workshops to African professionals and technicians, equipping them with the necessary expertise to implement and maintain green energy projects. This will not only strengthen the human capital in the sector but also create employment opportunities and foster economic growth.

Fourth, establishing a framework for regulatory harmonisation and standardisation can facilitate trade in green energy products and technologies. By aligning regulations, standards, and certifications, India and Africa can remove barriers to market entry, promote quality assurance, and ensure the seamless flow of sustainable energy solutions.

***Through collaborative projects and knowledge sharing, India and Africa can tap into the potential of geothermal energy and foster sustainable development.***

## Key Recommendations

- Strengthen transmission and distribution systems through the construction and rehabilitation of sub-stations and switching stations, as well as upgrading and refurbishing network infrastructure and expanding networks.
- Promote the opening up of Africa's national energy systems, allowing member states to participate in regional and continental power markets, thus fostering greater energy integration.
- Create attractive concession agreements in the energy sector to attract private investments in Africa.
- Develop energy storage solutions, including standalone fuel cell-based backup power systems and microgrid systems with hydrogen production using electrolyzers, to ensure continuous and reliable energy supply.
- Facilitate international collaboration to support technology transfer and provide financing for Africa's smooth transition to green energy.
- Increase private investments in renewable energy projects by implementing a robust policy framework that drives the continent's energy transformation.
- Utilise public finance, including climate finance, to bridge the funding gap and incentivize private sector investments in renewable energy projects.

- Encourage private investments in various energy sectors, such as demand-side management through pre-payment meters, smart metering for energy management services and equipment, and the manufacturing of energy-efficient CFL and LED bulbs.

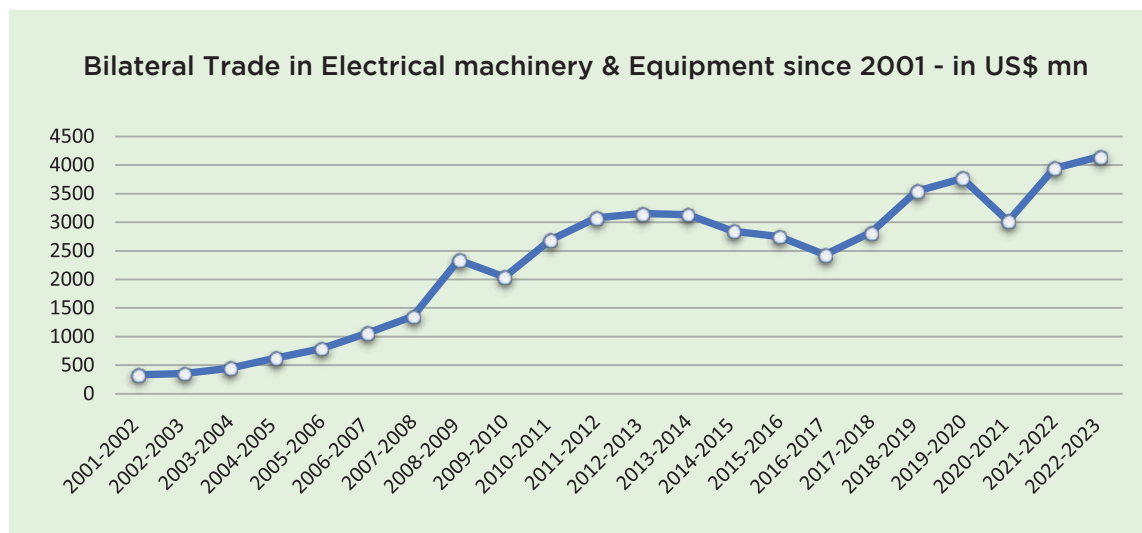
## F. Electrical Machinery and Equipment

Bilateral trade between India and Africa has witnessed significant growth and diversification in recent years. One sector that has emerged as a key component in this trade partnership is the electrical machinery and equipment sector. This sector holds immense potential, contributing to economic development and fostering technological advancements in both regions.

The electrical machinery and equipment sector has gained prominence as an emerging industry in both India and Africa. Since 2001, the bilateral trade in this sector has reached an impressive US\$ 50.66 billion, demonstrating its significance in fostering economic cooperation between the two regions. Notably, export constitutes a substantial share of this trade, accounting for 93.6%, reflecting India's strength as a competitive exporter in this sector. Meanwhile, imports comprise a relatively smaller portion, standing at 6.4%.

***Export constitutes a substantial share of this trade, accounting for 93.6%, reflecting India's strength as a competitive exporter in this sector.***

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Department of Commerce, Ministry of Commerce & Industry, Government of India

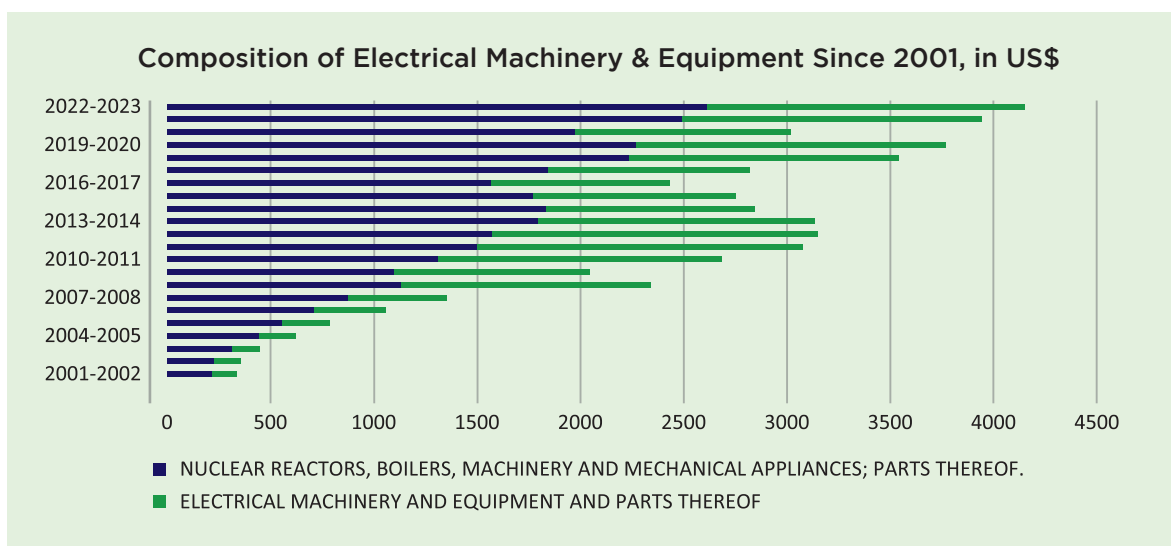
In the year 2022-23, the trade in the electrical machinery and equipment sector reached an all-time high of US\$ 4.14 billion. The electrical machinery and equipment sector has experienced a positive growth trajectory, with an estimated Compound Annual Growth Rate (CAGR) of 12.73%. This upward trend indicates the potential for further expansion in bilateral trade. Projections suggest that by 2030, the total trade in this sector could reach an impressive US\$ 9.59 billion. Such projections underline the opportunities for mutually beneficial collaboration and investment between India and African countries.

India has consistently been a net exporter of electrical machinery and equipment to Africa. This highlights the competitive edge and technological prowess of Indian companies in manufacturing and supplying quality electrical products. With a strong focus on innovation, Indian exporters have successfully catered to the diverse requirements of African markets, providing reliable and cost-effective solutions.

The Electrical Machinery and Equipment sector consists of two main components, each contributing to the bilateral trade dynamics:

- a. Nuclear reactors, boilers, machinery, and mechanical appliances, along with their parts, account for a significant share of the trade, representing 60% of the total. This indicates the growing demand for energy-related infrastructure and equipment in Africa, where Indian companies have made substantial contributions.
- b. Electrical machinery and equipment, including their parts, constitute the remaining 40% of the trade. This segment encompasses a wide range of products, such as generators, transformers, and electrical appliances, reflecting the increasing demand for modernizing electrical infrastructure and supporting various industries in Africa.

***The electrical machinery and equipment sector has experienced a positive growth trajectory, with an estimated Compound Annual Growth Rate (CAGR) of 12.73%.***



Department of Commerce, Ministry of Commerce & Industry, Government of India

Several factors drive the bilateral trade in the electrical machinery and equipment sector between India and Africa:

- a. Growing Infrastructure Development:** Africa's rapid infrastructure development, including power generation, transmission, and distribution projects, has created a significant demand for electrical machinery and equipment. India's expertise and competitive pricing make it an attractive partner for African countries seeking reliable and efficient solutions.
- b. Technological Advancements:** Indian companies are renowned for their advancements in electrical technologies, offering innovative and sustainable solutions. These advancements align with Africa's aspirations for modernisation and sustainable development, creating opportunities for collaboration and knowledge sharing.
- c. Capacity Building and Skill Development:** India's experience in the electrical machinery and equipment sector provides opportunities for capacity building and skill development in Africa.

Through collaborations and partnerships, Indian companies can contribute to training programs and knowledge transfer, fostering the growth of a skilled workforce in the electrical sector.

The India-Africa bilateral trade in the electrical machinery and equipment sector presents both opportunities and challenges:

- a. Opportunities:** With projected growth and expanding markets, Indian companies can explore joint ventures, partnerships, and investments in Africa. This can include establishing local manufacturing units, setting up distribution networks, and providing after-sales support, thereby creating employment opportunities and contributing to the local economy.
- b. Challenges:** Regulatory frameworks, customs procedures, and trade barriers can pose challenges to the smooth flow of trade. Addressing these challenges requires harmonisation of standards, simplification of trade processes, and the establishment of favorable business environments to encourage investment and trade facilitation.

The bilateral trade in the electrical machinery and equipment sector between India and Africa reflects a dynamic partnership that fosters economic growth, technological advancements, and infrastructure development. As Africa continues to invest in energy and infrastructure projects, the demand for electrical machinery and equipment will persist, providing Indian companies with ample opportunities for expansion and collaboration. By leveraging their expertise, innovation, and competitive pricing, Indian companies can further strengthen their presence in the African market, contributing to the sustainable development of both regions.

### Key Recommendations

- Indian companies should consider establishing local manufacturing units or production facilities in Africa. This would not only contribute to job creation and skill development but also enhance the confidence of African consumers in the quality and reliability of Indian electrical products.
- Encouraging collaborations and partnerships between Indian and African companies can facilitate technology transfer, knowledge sharing, and joint R&D. This would enable the development of tailored solutions that cater to the specific needs of the African market.
- Indian companies should focus on providing comprehensive after-sales support services, including maintenance, repair, and spare parts availability. This would ensure customer satisfaction and strengthen long-term business relationships.
- Indian companies should actively engage with African governments and regulatory authorities to address trade barriers, streamline customs procedures, and harmonise standards.

This would facilitate smoother trade flows and reduce administrative burdens.

- Indian companies can collaborate with financial institutions to offer favorable financing options for African customers. This would help overcome financial barriers and encourage investment in electrical infrastructure projects.

### G. Transportation

The transportation sector including automobiles is an emerging industry that plays a pivotal role in the economic development of countries. India and Africa, with their growing economies and increasing demand for vehicles, have forged a significant bilateral trade relationship in this sector.

The trade between India and Africa in the transportation sector has witnessed substantial growth since its inception. Over the past two decades, the cumulative bilateral trade in automobiles stands at an impressive US\$ 52.96 billion, reflecting the increasing importance of this sector in their trade relations.

In terms of trade composition, India has emerged as a net exporter in the transportation sector. Out of the total trade since 2001, exports from India constitute a significant majority, accounting for 94.1%, while imports represent 5.9%. This trade asymmetry underscores India's competitive advantage and its ability to meet Africa's demand for automobiles.

***India and Africa, with their growing economies and increasing demand for vehicles, have forged a significant bilateral trade relationship in this sector.***

In the fiscal year 2021-22, the trade volume peaked at US\$ 5.13 billion, followed by a slight contraction to US\$ 4.88 billion in 2022-23. The India-Africa automobile trade has demonstrated an overall upward trend, showcasing its resilience and potential. With an estimated Compound Annual

Growth Rate (CAGR) of 15.62%, the sector is projected to reach approximately US\$ 13.48 billion by 2030. This growth trajectory reflects the expanding market opportunities, rising disposable incomes, and increased mobility needs in both regions.



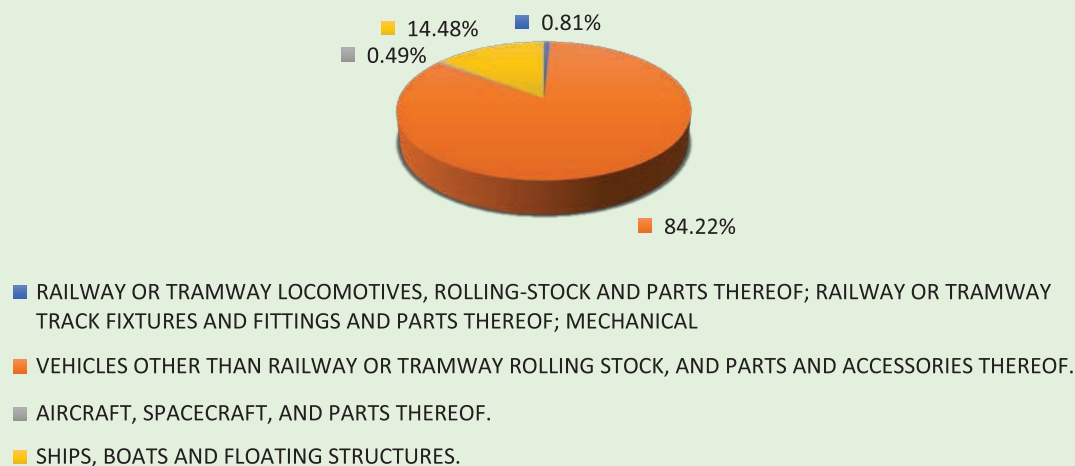
Department of Commerce, Ministry of Commerce & Industry, Government of India

The India-Africa transportation sector trade comprises several key components that contribute to its overall dynamics. These include railway or tramway locomotives, rolling stock, and parts thereof, railway or tramway track fixtures and fittings and parts thereof, mechanical components, vehicles other than railway or tramway rolling stock and parts and accessories thereof, aircraft, spacecraft, and parts thereof, and ships, boats, and floating structures. Each component plays a crucial role in shaping the trade patterns and facilitating the exchange of goods between India and Africa.

Within the transportation sector, different sub-segments have varying degrees of trade prominence. Notably, vehicles other than railway or tramway rolling stock and parts and accessories thereof account for the majority, constituting 84.22% of the total trade. This highlights the significance of automotive vehicles in driving the India-Africa automobile trade. Additionally, railway or tramway locomotives, rolling stock, and associated parts constitute 0.81% of the trade, followed by aircraft, spacecraft, and parts thereof (0.49%), and ships, boats, and floating structures (14.48%).



### Composition of India's Trade with Africa in Transportation Sector Since 2001



Department of Commerce, Ministry of Commerce & Industry, Government of India

The India-Africa transportation sector trade presents several emerging trends and opportunities. One notable trend is the increasing demand for affordable and efficient vehicles, particularly in African countries experiencing rapid urbanisation and growing middle-class populations. This demand provides an avenue for Indian automobile manufacturers to expand their market presence and cater to Africa's evolving mobility needs. Furthermore, advancements in electric and hybrid vehicles present an opportunity for collaboration and technology transfer between India and Africa, fostering sustainable and environmentally friendly transportation solutions.

The India-Africa bilateral trade in the transportation / automobile sector showcases immense potential for growth and mutually beneficial partnerships. With India's expertise in manufacturing and Africa's expanding market, there is ample opportunity to foster a thriving automobile trade ecosystem. By leveraging emerging trends, addressing challenges, and implementing the recommended strategies,

India and Africa can forge a prosperous future in the automobile sector, contributing to economic growth, job creation, and sustainable development in both regions.

#### Key Recommendations

To achieve the projected CAGR and maximise the potential of India-Africa transportation sector trade, the following may be recommended actions:

- **Strengthening manufacturing capabilities:** Indian automobile companies can explore opportunities for establishing manufacturing facilities in Africa, enabling localised production and creating jobs while catering to regional demand.
- **Promoting skill development and capacity building:** Collaborative efforts can be undertaken to enhance technical skills and expertise in the automobile sector, empowering African countries to develop their manufacturing capabilities and foster a skilled workforce.

- **Encouraging R&D collaborations:** Partnerships in R&D can drive innovation and product development, enabling the production of vehicles tailored to African market requirements and preferences.
- **Facilitating trade policies and reducing barriers:** Streamlining customs procedures, reducing trade barriers, and harmonising regulations can enhance the ease of doing business and promote smoother trade flows between India and Africa.
- **Promoting sustainable mobility solutions:** India can share its expertise in sustainable mobility solutions, including electric and hybrid vehicles, renewable energy integration, and efficient transport systems, to support Africa's transition towards greener and more sustainable transportation.

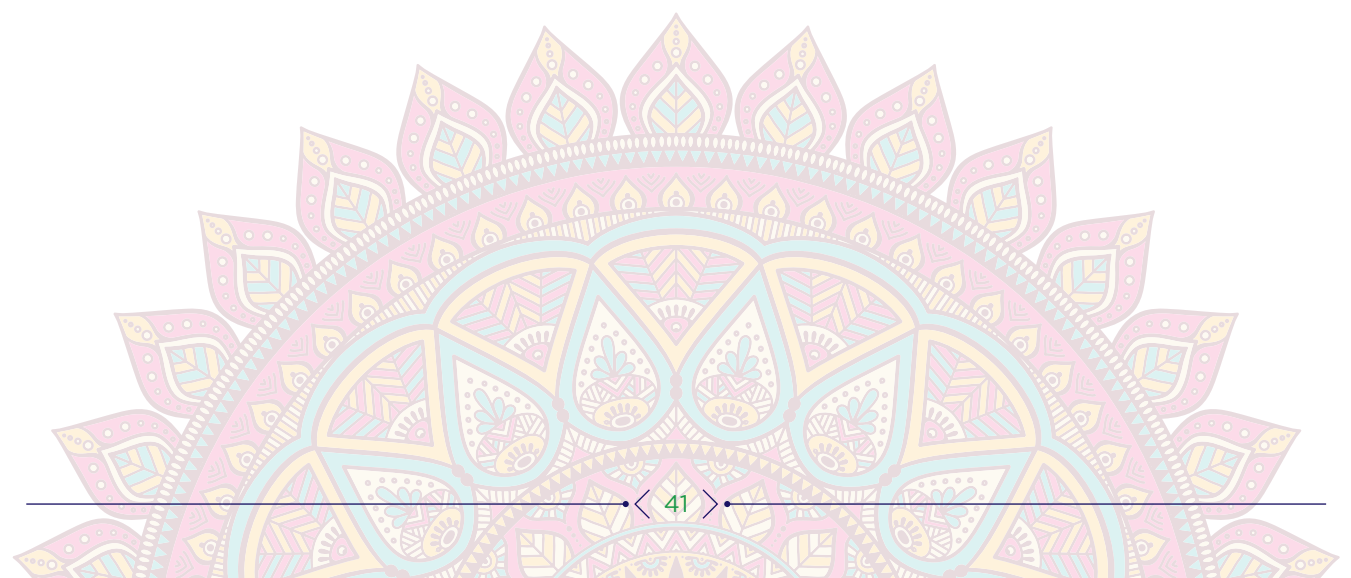
*The India-Africa transportation sector trade presents several emerging trends and opportunities.*

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# 4.

## KEY ENABLERS FOR EXPANDED TRADE: AREAS OF COOPERATION



## A. Infrastructure Development

Export-Import Bank of India had launched a scheme which in 2005, popularly came to be called as the Indian Development and Economic Assistance Scheme (IDEAS). It has been brought into action, keeping one of its main objectives as expanding the existing relationships between India and Africa. Since then IDEAS Lines of Credit had been profusely promoted under the umbrella of South-South Cooperation.

The loans extended have turned out to be particularly crucial for the development of infrastructure in Africa. Provided that they are directed towards assisting future longer-term economic growth rather than short-term financial gain, these projects were required to pass the economic feasibility standards in order to procure the longer-term subsidised capital.

Programme for Infrastructure Development in Africa (PIDA) was another initiative established at a multi-sector continental level, and was specifically dedicated to fulfil the gap in infrastructural development. Five out of the top 12<sup>6</sup> regional priorities of the African Union according to Agenda 2063 would also fall under the PIDA projects.

Indian infrastructural projects started taking shape in Africa since the building of Nyabarongo Dam, prior to which most of the focus was on cooperation projects like training programmes. The dam, being a flagship project was one of the most significant ones that has been sponsored during the first ten years since the commencement of LoCs. However, it also revealed that more attention needs to be accorded to quality and environmental issues in project delivery.

### Recommendations

- India's strong domestic economic growth, liberal economic policies, increased competitiveness of domestic

firms and a growing Indian diaspora in these regions can be identified as one of the starting points to expand overseas investments. These could be strategically channelised into the markets of Africa, abundant with natural resources and growing market opportunities. Indian domestic firms can expand their network presence in these favourable investment destinations.

- There exists an immediate need to fuel the engagement of India's corporate sector in Western and Northern African nations. The establishment of the International Solar Alliance (ISA) in March 2018 has played a crucial role in directing the attention of Indian companies towards newer markets in Western and Northern Africa and similar project pipelines need to be created for other sectors too.
- Companies may be encouraged to report CSR and ESG achievements in overseas operations so that these activities can be stepped up by them.
- Affordable housing at upcoming urban centres is yet another opportunity. As per World Bank estimates, Africa now enjoys the world's fastest urbanisation rate. Half of Africa's population will live in towns and cities by 2040. Urbanisation is closely linked to increase in income levels. Therefore, such population will have the ability to pay for the infrastructure products and services.
- The transportation sector and ICT sector can be enhanced in the Indian financing basket. Another domestically feasible solution could be to relocate the public funding to projects like that of energy towards lower-return projects like transport. This would enable a crowding-in effect to take place and therefore boost both private as well as public participation as well.

<sup>6</sup> <https://pp2.au-pida.org/wp-content/uploads/2020/04/English-Analytical-Report-Integrated-Corridor-Approach-and-Selection-Criteria.pdf>

## B. Education & Skills Development

Education and capacity building have been major focuses of India's development cooperation with Africa since the early 1960s, when the Indian Technical and Economic Cooperation (ITEC) programme came into effect. Concessional lines of credit are one of the many new development cooperation tools that have been developed recently alongside capacity building.

With the help of programmes like the Pan African e-Network Programme (PANE-NP), e-VidyaBharati and e-ArogyaBharti (e-VBAB), and others, India has been striving to bring Right to Education into African households. The ITEC programme, also assisted in offering quick online training courses to upskill the African populace.

Several African country ambassadors attended an event that the Amrita Vishwa Vidyapeetham Institute hosted, wherein to improve teamwork in education the institute provided over 200<sup>7</sup> scholarships for African students. This was followed with the establishment of eight vocational training centres (VTCs), eight information technology centres, and a Centre for Geo-Informatics Applications in Rural Development (CGARD) in Madagascar. To promote entrepreneurship and business skills, the India-Rwanda Entrepreneurship Development Centre in Kigali was inaugurated by Dr S Jaishankar, Hon. Minister of External Affairs, Government of India.

### Gaps to be addressed

India is in a position to comprehend some of the higher education-related issues that exist in Africa and offer answers through strategic investment in Africa's education sector. The areas of intervention have to be narrowed down to be able to effectively devise programmes that would target each of the existing problems from the root levels.

## Recommendations

- Conduct collaborative research with leading Indian and African institutions and establish partnerships that are advantageous to both parties. Possible avenues of cooperation between India and Africa include faculty development programmes, student exchanges, student enrolments, faculty exchanges, and collaborative research.
- E-Vidya Bharati and E-Arogya Bharati Network Project (E-VBAB), which aims to offer 5 years of free tele-education to 4000 students, free medical education to 1000<sup>8</sup> doctors, nurses, and paramedics, and free medical consulting to African countries can be strengthened to assist Africa in overcoming the digital handicap.
- About 39.3% of the African population is reported to have internet access, so India's online education platforms have a good opportunity to expand in the region as they are mostly future-driven in nature.
- Knowledge partnerships especially in technical training with the private sector would help in strengthening curricula and research to make the graduates employable. Training or vocational centres can be set up to impart industry required skills to African students.
- Promote projects like that of IIT Madras which is soon set to open its first ever overseas campus in Tanzania's Zanzibar. The initial batch is likely to consist of 50 undergraduate and 20<sup>9</sup> postgraduate students, taking up Data Science and Artificial Intelligence courses. This way the students from Africa would enjoy the access to the same benefits as those enjoyed by students in India, including opportunities for internships at the world's top companies.

<sup>7</sup> [https://www.mea.gov.in/Speeches-Statements.htm?dtl/35509/Remarks\\_by\\_Minister\\_of\\_State\\_for\\_External\\_Affairs\\_Shri\\_V\\_Muraleedharan\\_at\\_the\\_Valedictory\\_Session\\_of\\_17th\\_CII\\_EXIM\\_Bank\\_Conclave\\_on\\_IndiaAfrica\\_Growth](https://www.mea.gov.in/Speeches-Statements.htm?dtl/35509/Remarks_by_Minister_of_State_for_External_Affairs_Shri_V_Muraleedharan_at_the_Valedictory_Session_of_17th_CII_EXIM_Bank_Conclave_on_IndiaAfrica_Growth)

<sup>8</sup> <https://www.investindia.gov.in/team-india-blogs/make-india-case-africa>

<sup>9</sup> [https://www.thehindu.com/news/international/first-iit-in-tanzania-to-open-in-october-2023/article66915115.ece#:~:text=Indian%20Institute%20of%20Technology%20\(IIT,name%20IIT%20Madras%20at%20Zanzibar](https://www.thehindu.com/news/international/first-iit-in-tanzania-to-open-in-october-2023/article66915115.ece#:~:text=Indian%20Institute%20of%20Technology%20(IIT,name%20IIT%20Madras%20at%20Zanzibar)



Though the initial set of instructors at Zanzibar will be from India, the long-term objective would be to train a cadre of IIT-trained local instructors to carry the mantle.

- Analysing the demand for courses in forensic sciences from African students under the Indian government's various scholarship programmes, a decision to open a NFSU campus in an African country has also been considered and may be implemented.
- Education experts may be welcomed to participate on a contractual basis, and aid in meticulous upgradation of study material and curriculum by introducing best education practices. Education models that have been successful in other nations can also be replicated.
- India could assist schools in Africa to adopt attractive schemes for the students like the mid-day meals. Providing food security to children coming from underprovided backgrounds can greatly enhance the drop-out rates as well as prevent malnutrition.
- Another important intervention could be acting to implement Technical Vocational Education and Training (TVET). This would strategically help to overcome the issues of illiteracy and unemployment, especially in youth and women.

***India could assist schools in Africa to adopt attractive schemes for the students like the mid-day meals. Providing food security to children coming from underprovided backgrounds can greatly enhance the drop-out rates as well as prevent malnutrition.***

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## C. Space Technology & Cooperation

Through collaboration in space research & satellite technology, space applications, such as, monitoring and weather forecasts, India and Africa can join hands for disaster management and urban planning.

The partnership between India-Africa on expanding their presence in space economy has been working towards South-South cooperation. India's maiden space flight programme to carry astronauts into space is being developed stage by stage and there exist huge possibilities of African countries collaborating with India over the same.

South Africa and Egypt have strategically expanded their cooperation in the Indian space sector to establish research in space, satellite communications. In a quest to provide its engineers with advanced know-how in developing satellite subsystems, employing artificial intelligence in projects concerning space-economy and developing precise and innovative application in space, the Egyptian Space Agency is looking forward to extend its partnership with India.

The bilateral agreement for collaboration in space sciences that India and Africa entered into with South Africa in 2018 serves as an example of the growing partnership between the two continents.

With the emerging space sector, African nations have been striving to utilise space capabilities to confront the socio-economic problems their nations have been facing. RSA, otherwise known as Rwanda Space Agency proclaimed that Starlink belonging to SpaceX has been duly approved and licensed for providing the country with internet and connectivity facilities by means of satellites. The agency's goal of investing in this sector is to enable the under-exposed regions of Rwanda to enjoy the benefits of connectivity.



Currently, Starlink is functioning in Nigeria, facilitating the nation achieve its target of extending broadband services to its citizens by the year 2025.

With all of these initiatives pushing the sector towards new heights, the African space-economy is estimated to be worth over \$20<sup>10</sup> billion. Boosting investments from private and public entities henceforth would open up new arenas in education and job sectors. A well-equipped and trained set of professionals would carry forward the legacy and fuel innovations.

India experienced a similar development graph of the space-sector and it has successfully built its own communication and meteorological satellites, that have driven crucial advancements in the communications, weather forecasting and disaster management fields. India also developed its own crop-monitoring satellite capturing and transmitting data about the quality and quantity of crops. Additionally, the remote sensing satellite technologies also monitor and predict the occurrence of floods, therefore mitigating the potential damage caused by natural calamities too.

Expanding cooperation in the space and satellite sector could be of benefit to both regions and support better livelihood options.

## **D. Digital Transformation & E-Governance**

The Pan African e-Network Project (PAeNP) has served as one of the most notable examples of India and Africa's collaboration in digital technology. It is estimated that Pan African E-Network Project has helped in imparting quality education to African students in almost 47<sup>11</sup> African countries. India is additionally known to have made investments in IT related education in Kenya and Botswana. High-end computers have been distributed

to the countries of Ghana, Tanzania, and Uganda. India helped in establishing the Ghana-India Kofi Annan Centre of Excellence in Information and Communications Technology in Accra and agreed to establish a comparable IT center in Ethiopia. These instances demonstrate India's readiness and capacity to aid in the digital revolution in Africa.

Even though Africa's digital infrastructure is still emerging gradually, it nevertheless has enormous potential in bringing the continent together through digital and new technologies. India has domestically introduced innovative digital e-governance programmes like Digital India, BharatNet, Pradhan Mantri Jan Dhan Yojana, IndiaStack, etc. to bring about digital transformation. If initiatives similar to these could be successfully implemented in African nations, along with a focused approach to skill development, their economy might considerably benefit and expand the employability of African students.

### **Gaps to be addressed**

India has demonstrated that, while building physical infrastructure can take years or even decades, it is always possible to fill this gap in physical infrastructure by boosting digital infrastructure. The challenge lies in replicating the Indian model of so-called JAM trinity (Jan Dhan or financial inclusion, Aadhaar or unique identification, and mobile phones combination), which enables high-quality digital connectivity over the country.

A number of African nations, including Morocco, Seychelles, Egypt, Kenya, and Tanzania have appreciable internet access rates. While nations like Mali, Mozambique, the Democratic Republic of the Congo, Niger, and Chad possess moderate access, countries like South Africa, Nigeria, and other African nations have insufficient internet connectivity.

<sup>10</sup> <https://spacenews.com/african-space-agencies-have-the-potential-to-lead-the-global-space-race/#:-:text=However%2C%20Africa%27s%20space%20economy%20is,opportunity%20through%20jobs%20and%20education.>

<sup>11</sup> [https://mea.gov.in/Portal/ForeignRelation/Pan\\_African\\_e\\_docx\\_for\\_xp.pdf](https://mea.gov.in/Portal/ForeignRelation/Pan_African_e_docx_for_xp.pdf)

## Recommendations

- The Digital India programme brought internet connectivity to a number of gram panchayats in rural India by laying optical fibres across the country. A comparable example from Africa is the Ghana Card which also delivers public services but at the moment, their enrolment and distribution remains limited as printing centres are limited. There are ample opportunities for the Ghana Card to learn from India's Aadhar on the usage of cloud technology for data management since these generate huge amounts of data.
- Although India has been keen to share its knowledge and business know-how with African countries, the focus should be to produce more IT skilled individuals who can learn from Indian counterparts and apply it, based on local requirements. This includes reducing the cost of data and increasing access to fixed line broadband, spurring corporate ventures in the tech ecosystem, and providing Africans with the skills they need to take part in this digital transformation.

## E. Healthcare & Pharma

India emerged as an attractive destination for medical tourism, from 5.4% of overall tourists visiting India in 2010 to 15.4% in the year 2019. In this, the proportion of African citizens travelling to the country for medical care has nearly tripled in the past ten years.

In order to achieve higher health coverage, further partnerships between African and Indian healthcare providers can be established. These partnerships should include investments in telemedicine, hospital construction, and capacity building.

***The proportion of African citizens travelling to India for medical care has nearly tripled in the past ten years.***

## Gaps to be addressed

The pharmaceutical industry in Africa is still in its incubation stages. Effective intervention needs to be induced in order to kick-start the production of generic medications involving competitive pricing models.

Major challenges also lie in strategically channelising the funds released under credit lines from Indian government, including funding to manufacture medicines, funding to improve the ICT interventions in healthcare sector and medical tourism.

## Recommendations

- The upgrading of the Africa Centre for Disease Control (Africa CDC) to an AU agency can be further studied to explore the opportunities wherein Indian industries can lend in their expertise. India has been the largest supplier of pharmaceuticals and vaccines to Africa and this can be raised to an effective partnership by engaging with the newly emerging African Medicines Agency.
- The existing projects supporting telemedicine, mHealth, mobile neuro-ophthalmology services, e-pharmacy, NCG-Vishwam Cancer Care Connect, Electronic Resources in Medicine (ARMED) Consortium, National Digital Wellbeing Platform, National Digital Health Mission (NDHM) and National Nutrition Mission have contributed to the African health-care system. Further, India has also provided medical equipment and telemedicine support through top Indian institutions such as the All India Institute of Medical Sciences (AIIMS), and engaged the local African institutions to train the frontline healthcare workers to control the Covid health crisis. Such initiatives need to be expanded.

- In order to attract investments, private funders may be provided with certain incentives like exemption of tax in healthcare education and training services, or tax holidays for investors who aided in either setting up hospitals with significant number of beds or for investors who operate large scale facilities in rural areas.

## F. Renewable Energy & Clean Technologies

India's position as a leading global force in climate action was reaffirmed upon the establishment of International Solar Alliance, which it co-founded with France. This multi-country cooperation association was suggested, with members from the "sunshine belt" nations that lie entirely or in part between the Tropics of Cancer and Capricorn.

With global level initiatives like these, India can offer the African nations more options to harness solar energy. In order to provide access to electricity for Africans, under the concessional LOCs for solar projects, most of which will be off-grid, India has already set aside US\$2<sup>12</sup> billion. Along with the African Development Bank Group, India is working to create 10,000 MW of solar power systems in the Sahel region. ISA's new programme to increase the deployment of mini-grids in Africa is in the pipeline. This programme is designed to focus on design, adoption of common standards, aggregating demand, aiding in the establishment of global credit enhancement and de-risking mechanisms, evaluating demand and cost requirements, identifying and developing consumer-friendly payment models.

### Gaps to be addressed

It has been maintained that with falling solar generation costs over the past decade, solar can be the cheapest source of electricity in Africa. There is a challenge on one side to lessen Africa's carbon footprint and on the

other side, a need to come up with creative ways to sustainably utilise its current resources in order to fulfil its rising energy needs.

Attention needs to be directed towards skill development, expansion of micro-grid projects, utility-scale renewable energy programmes, introduction of cutting-edge technology, or assistance with initial assembly and followed by manufacturing of solar and wind power equipment.

### Recommendations

- ISA should be encouraged to expand its flagship programmes in Africa like Scaling Solar Applications for Agriculture; Affordable Finance at Scale; and Scaling Solar Mini-grids. Two additional programmes-Scaling Residential Rooftop Solar and Scaling Solar E-mobility and Storage-are in the pipeline, which upon implementation can open up new areas of business. An appraisal of such ISA initiatives and activities would enable the creation of sustainable livelihoods through job creation, increased incomes, poverty reduction, improved productivity, quality education and healthcare, food security, and social stability. Improved access to solar energy also ensures sustainable consumption and production, and contributes to environmental conservation by reducing deforestation and land degradation.
- In Africa, the link between climate change and sustainable development is two-way, with enormous resources required for both climate change mitigation and adaptation.

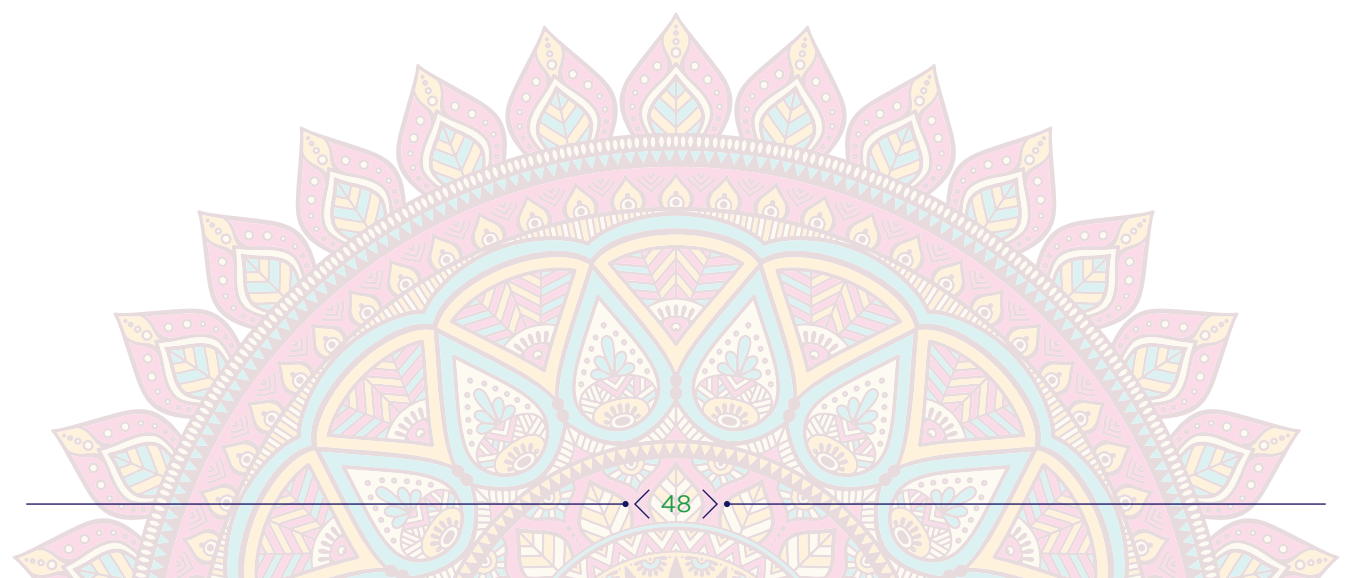
***Along with the African Development Bank Group, India is working to create 10,000 MW of solar power systems in the Sahel region.***

<sup>12</sup> <https://smartpowerindia.org/multi-billion-dollar-africa-india-partnership-aims-to-eradicate-energy-poverty/>



# 5.

## CONCLUSION



The potential between the two regions of Africa and India is immense. India has greatly stepped up its cooperation and commitment to the African continent. With existing trade and investment opportunities expanding and new areas of partnership emerging rapidly, the two sides can benefit enormously from engaging with each other through targeted initiatives and partnerships.

While the efforts of the governments of both sides are commendable, these should encourage and facilitate the participation of private sector on both sides.

Under the G20 India agenda, the Business Engagement Group of B20 India has set up a special Action Council which has been deliberating on many of the areas where the businesses of G20 nations can support African integration and development.

The Action Council has agreed upon various priorities and is developing relevant recommendations on these.

**Human Capital:** The focus here is on creating funding for healthcare, developing systems for education at all levels, and introducing best practices in skilling.

**Agriculture:** Adequate training for farmers, and improving access to inputs like fertilizers, irrigation, and capital, while increasing levels of mechanization and agricultural value-add are outlined to leverage Africa's natural resources for food security and income growth.

**Structural Transformation:** This includes measures to improve the investment landscape through promoting manufacturing enterprises, especially through focused industrial parks. Bringing MSMEs into the formal ecosystem and accessing finance better are also priorities. Energy access will be a key area for

structural transformation and policy priorities extend to effective planning and innovative means of financing.

**Trade Facilitation:** AfCFTA is the single largest reform to transform intra-continental trade in Africa and truly make it a single common market. This would also set the base for integration into global value chains through stronger industry and businesses.

The member states stand at different levels of preparedness to benefit from the agreement. There is a need to create or strengthen Trade Facilitation Committees and promote additional preferential trade measures for Africa.

**Physical and Digital Connectivity:** Investments are required in essential digital infrastructure such as high-speed fixed broadband networks and internet servers amongst others, to drive digital transformation

The Action Council has focused on formulating recommendations that enable mobilization of private capital into the continent, through financing support as well as strategy formulation at national levels.

With India leading the focus on Africa at the G20 global platform as also prioritising its economic cooperation with the continent, the opportunities for businesses of both sides are immense.

*The Business Engagement Group of B20 India has set up a special Action Council which has been deliberating on many of the areas where the businesses of G20 nations can support African integration and development.*









## Confederation of Indian Industry

The Confederation of Indian Industry (CII) works to create and sustain an environment conducive to the development of India, partnering Industry, Government and civil society, through advisory and consultative processes.

CII is a non-government, not-for-profit, industry-led and industry-managed organization, with around 9,000 members from the private as well as public sectors, including SMEs and MNCs, and an indirect membership of over 300,000 enterprises from 286 national and regional sectoral industry bodies.

For more than 125 years, CII has been engaged in shaping India's development journey and works proactively on transforming Indian Industry's engagement in national development. CII charts change by working closely with Government on policy issues, interfacing with thought leaders, and enhancing efficiency, competitiveness and business opportunities for industry through a range of specialized services and strategic global linkages. It also provides a platform for consensus-building and networking on key issues.

Extending its agenda beyond business, CII assists industry to identify and execute corporate citizenship programmes. Partnerships with civil society organizations carry forward corporate initiatives for integrated and inclusive development across diverse domains including affirmative action, livelihoods, diversity management, skill development, empowerment of women, and sustainable development, to name a few.

As India strategizes for the next 25 years to India@100, Indian industry must scale the competitiveness ladder to drive growth. It must also internalize the tenets of sustainability and climate action and accelerate its globalisation journey for leadership in a changing world. The role played by Indian industry will be central to the country's progress and success as a nation. CII, with the Theme for 2023-24 as 'Towards a Competitive and Sustainable India@100: Growth, Inclusiveness, Globalisation, Building Trust' has prioritized 6 action themes that will catalyze the journey of the country towards the vision of India@100.

With 65 offices, including 10 Centres of Excellence, in India, and 8 overseas offices in Australia, Egypt, Germany, Indonesia, Singapore, UAE, UK, and USA, as well as institutional partnerships with 350 counterpart organizations in 133 countries, CII serves as a reference point for Indian industry and the international business community.

## Confederation of Indian Industry

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