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INDUSTRIAL DEVELOPMENT ORGANIZATION



Overview of agricultural machinery trade and manufacturing in Africa

AFRICA- MECHANIZE VIRTUAL WEBINAR No. 12

Date: Thursday, 13th June 2024

Time: 09:00 – 11:00 hrs GMT

FRAMEWORK FOR SUSTAINABLE AGRICULTURAL MECHANIZATION IN AFRICA - F-SAMA

organized by the United Nations Food and Agriculture Organization (UNFAO), www.fao.org, the African Union Commission (AUC) <https://au.int/> and the African Conservation Tillage Network (ACT) www.act-africa.org



UNIDO in Brief

UNIDO is the specialized agency of the United Nations with a unique mandate to promote inclusive and sustainable industrial development.

172
Member
States

684
staff
members

665
ongoing
projects

\$200M
technical
cooperation
delivery/year

UNIDO maintains
**Investment and Technology
Promotion Offices in**

10

Locations (Beijing, Berlin,
Bonn, Lagos, Manama,
Moscow, Rome, Seoul,
Shanghai and Tokyo).

**Regional sustainable
energy centres exist in**

9

Locations (Bridgetown,
Cairo, Kampala, Kathmandu,
Luanda, Nuku'alofa, Praia,
San Salvador and
Windhoek).

UNIDO partners
with

65

**National Cleaner
Production Centres** of the
Global Network for
Resource Efficient and
Cleaner Production
(RECPnet).





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UNIDO's Thematic Priorities

01

Supporting sustainable supply chains so that developing country producers get a fair deal and scarce resources are preserved.

02

Limiting climate breakdown by using renewable energy and energy efficiency to reduce industrial greenhouse gas emissions.

03

Ending hunger by cutting post-harvest losses and developing agribusiness value chains.



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Our Focus



Directorate of SDG Innovation and Economic Transformation

Designing and delivering new and innovative services for the SDGs

**Agribusiness &
Infrastructure
Development**

**Fair production,
sustainability standards &
trade**

**Climate and technology
Partnerships**

Public private partnerships

Innovative finance & IFIs

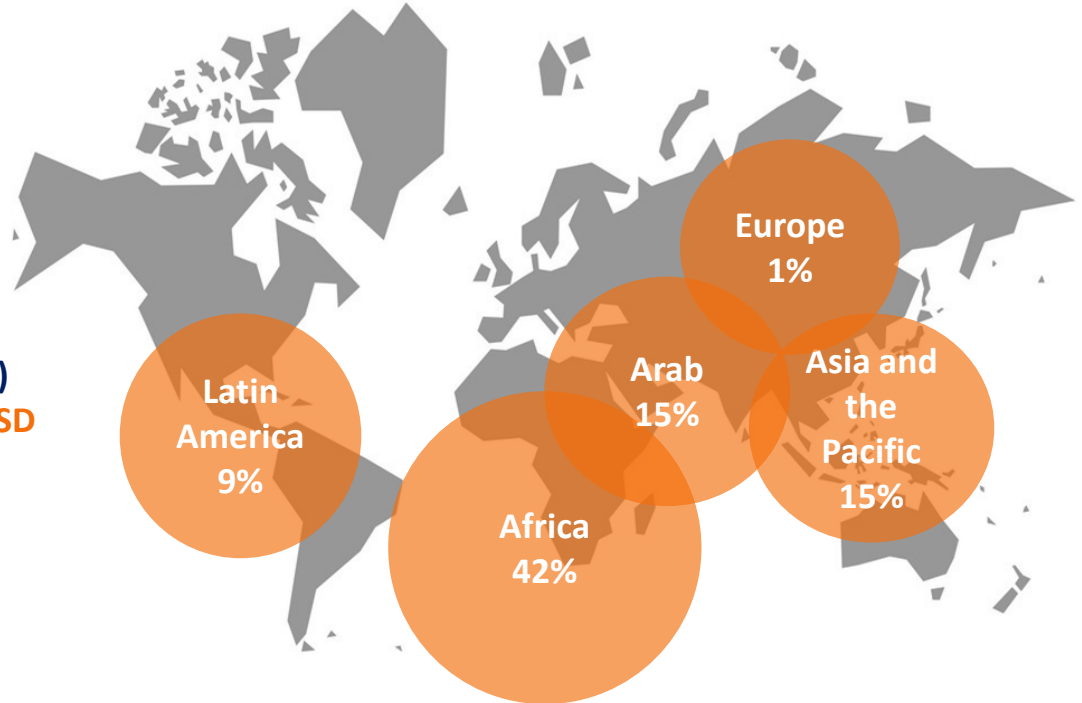
**Quality and result
monitoring**



Where we currently work



124 ongoing projects (68 IET/AGR)
Overall portfolio value: 310 mil USD
Main donors:





Agribusiness and Infrastructure Development

Paving the way to sustainable rural development and a structurally transformed and modernized agribusiness sector

Food Security and Food Systems Unit

- Food systems transformation and value chain development
- Partnership with FAO and WFP
- Support the creation and upgrading of SMEs
- Specialized Centers of Excellence.
- SPS and food safety compliance capacity
- Enterprise level- food safety capacity

Rural Development, Agro-industries and Industrial Parks Unit

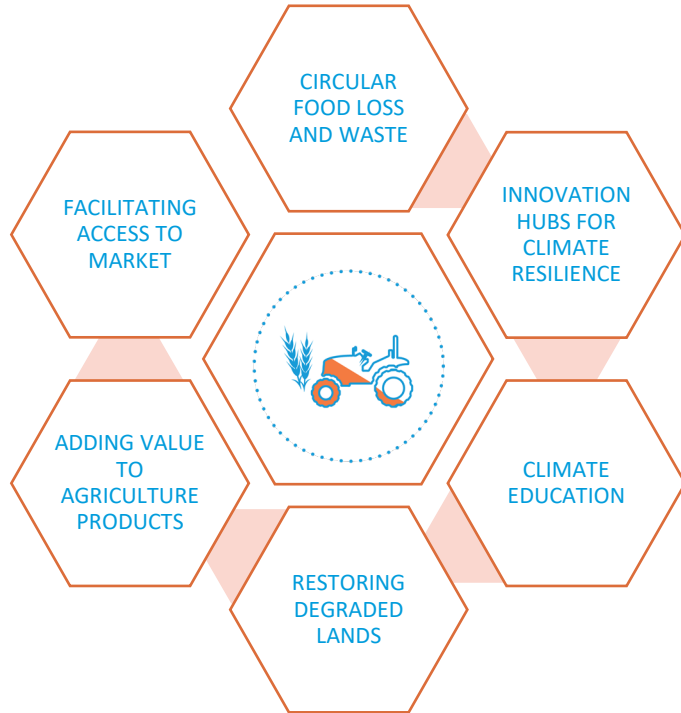
- Development of sustainable agro-industrial parks
- Development of sustainable agricultural supplier networks (leather, textile, coffee and agro-machinery)
- Skills development for agro-processing and the development of new and improved products

Agro-Innovation and Bioeconomy Unit

- Land based/green industries
- Productivity and sustainability of agricultural production adapting to climate change
- Innovative business models & technology deployment Agro machinery
- capacity building



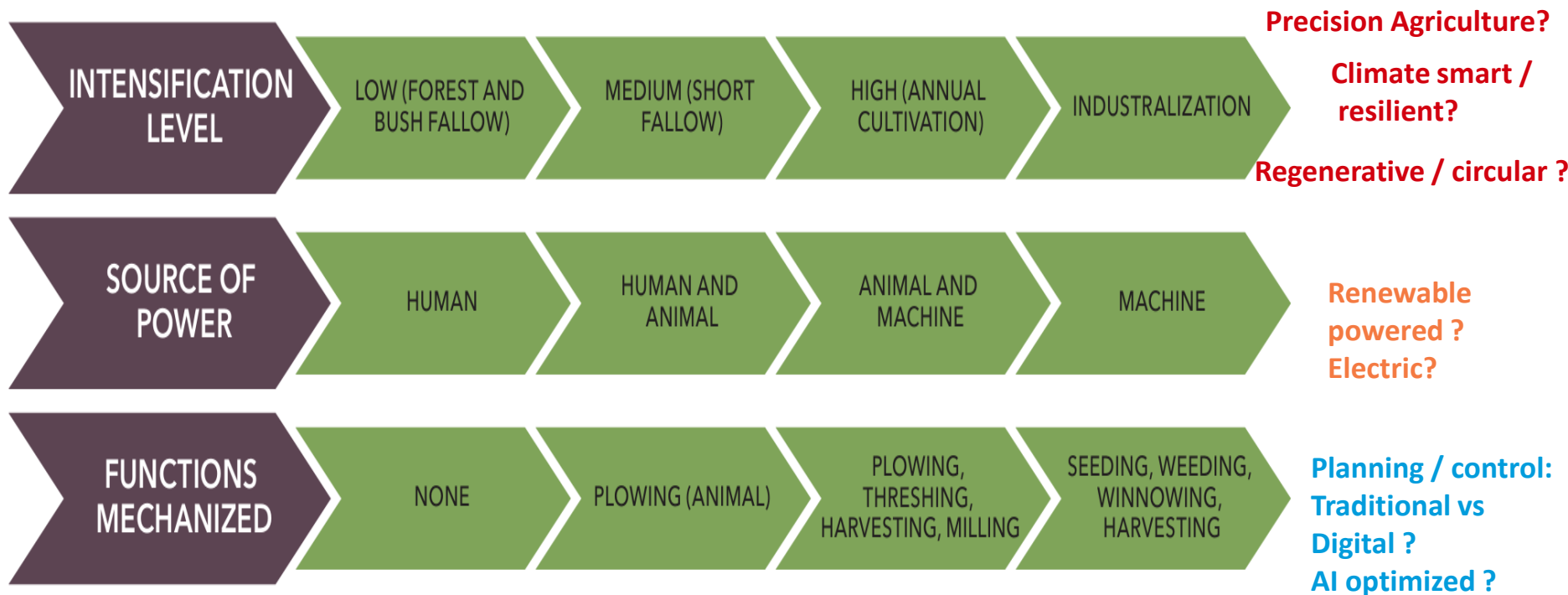
IET/AGR Approach



- Build sustainable bio based industries incorporating regenerative practices, industrial symbiosis etc.
- MSME support to access financing and incentives for resilient food systems
- Tracability, transparency and true cost accounting of impact of climate on livelihoods
- Develop voluntary quality schemes & standards for MSMEs to access markets
- Promote climate resilience policies for private sector (food systems & forest products)
- Platforms (business, technology, skills) for equitable knowledge sharing among actors (public, private sector)



Figure 1 Overview of sequential adoption of mechanization



Source: Adapted from Pingali, Bigot, and Binswanger (1987).



Data source

- UNIDO is the mandated UN agency to collect and maintain industrial statistics internationally.
- Industry is defined according to ISIC (International Standard Industrial Classification of All Economic Activities), Revision 4, including:
 - Mining and quarrying (ISIC Rev. 4 Section B)
 - Manufacturing (ISIC Rev. 4 Section C)
 - Electricity, gas, steam and air conditioning supply (ISIC Rev. 4 Section D)
 - Water supply; sewerage, waste management and remediation activities (ISIC Rev. 4 Section E).
- The database for structural analysis and long-term industrial development analysis include **INDSTAT**, **IDSB**, **National Accounts** and **Manufacturing Trade**, providing aggregate as well as highly detailed data on industrial sectors, including variables such as *output*, *value added*, *employment* and *international trade*.



Data source (2)

- Agricultural and forestry machinery is classed in ISIC Revision 4 as **Class 2821**
2821 Manufacture of agricultural and forestry machinery, including
 - —manufacture of tractors used in agriculture and forestry
 - —manufacture of walking (pedestrian-controlled) tractors
 - —manufacture of mowers, including lawnmowers
 - —manufacture of agricultural self-loading or self-unloading trailers or semi-trailers
 - —manufacture of agricultural machinery for soil preparation, planting or fertilizing: ploughs, manure spreaders, seeders, harrows etc.
 - —manufacture of harvesting or threshing machinery: harvesters, threshers, sorters etc.
 - —manufacture of milking machines
 - —manufacture of spraying machinery for agricultural use
 - —manufacture of diverse agricultural machinery: poultry-keeping machinery, bee-keeping machinery, equipment for preparing fodder etc. machines for cleaning, sorting or grading eggs, fruit etc.
- In INDSTAT4 2024, only 9 of 54 African countries reported sporadically from 2010 to 2022



Data Source (3)

- **UNComtrade: The United Nations Comtrade database**
 - It aggregates detailed global annual and monthly trade statistics by product and trading partner for use by governments, academia, research institutes, and enterprises.
 - Data compiled by the United Nations Statistics Division
 - It covers approximately 200 countries and represents more than 99% of the world's merchandise trade.
 - Information can be extracted in a variety of formats, including API developer tools for integration into enterprise applications and workflows.
- **Product classifications in UNComtrade database:**
 - HS
 - BEC
 - SITC



Data Source (4)

- **Agricultural and forestry machinery by HS 4-digit code including:**
 - **8432 - Agricultural, horticultural or forestry machinery for soil preparation or cultivation; ...**
 - **8433 - Harvesting and threshing machinery, straw and fodder balers, grass or hay mowers; ...**
 - **8434 - Milking machines and dairy machinery**
 - **8435 - Presses, crushers and similar machinery; used in the manufacture of wine, cider, fruit juices or similar beverage**
 - **8436 - Agricultural, horticultural, forestry, poultry-keeping, bee-keeping machinery ...**
 - **8701 - Tractors; (other than tractors of heading no 8709)**



Data Source (5)

- The trade data used in this report/slides are mainly from WITS (The World Integrated Trade Solution)
- WITS software provides access to international merchandise trade, tariff and non-tariff measures (NTM) data.



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<https://wits.worldbank.org/>



Trade Stats ▾ Tariffs ▾ Non-Tariff Measures ▾ GVC ▾ API ▾ Analytical database Tools ▾ Bulk Download



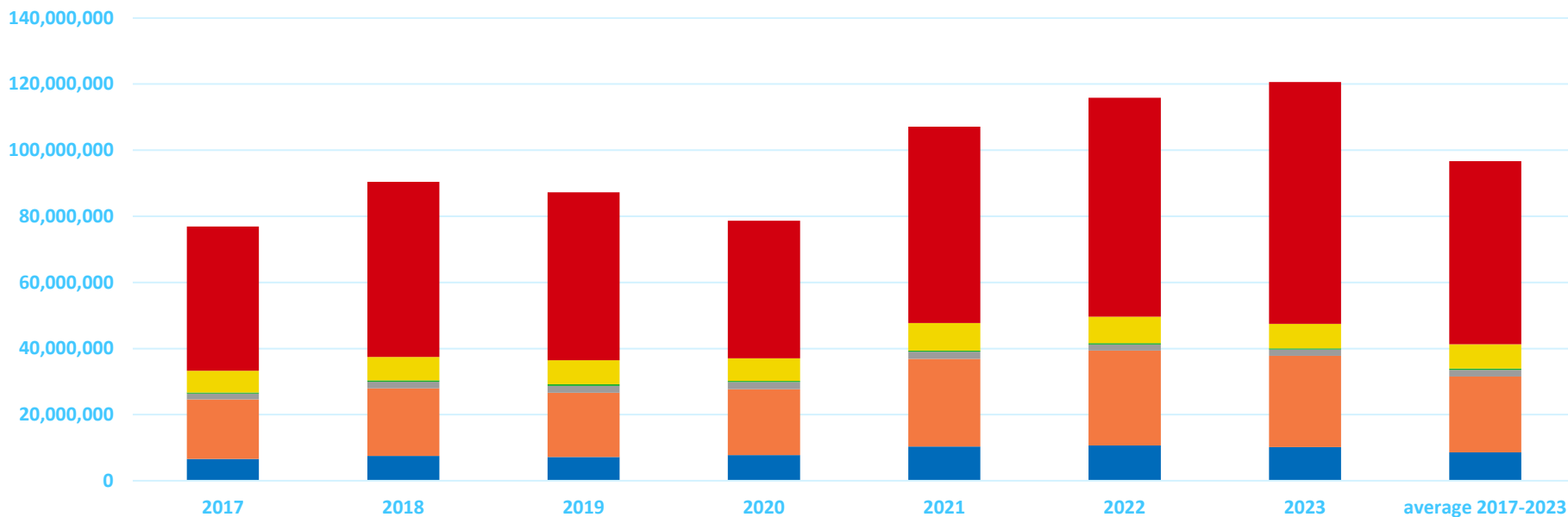
HS-2017 Nomenclature



Global: sum of 6 Agro - Mechanization Machine Imports	Africa: sum of 6 Agro – Mechanization Machine Imports	
96.7 Bn \$/ yr	2.8 Bn \$ / yr	~ 2.9% of global total
World total reported	44 reporting countries, AFR	
Average annual values 2017 – 2023		



[1,000 \$ US/ yr]

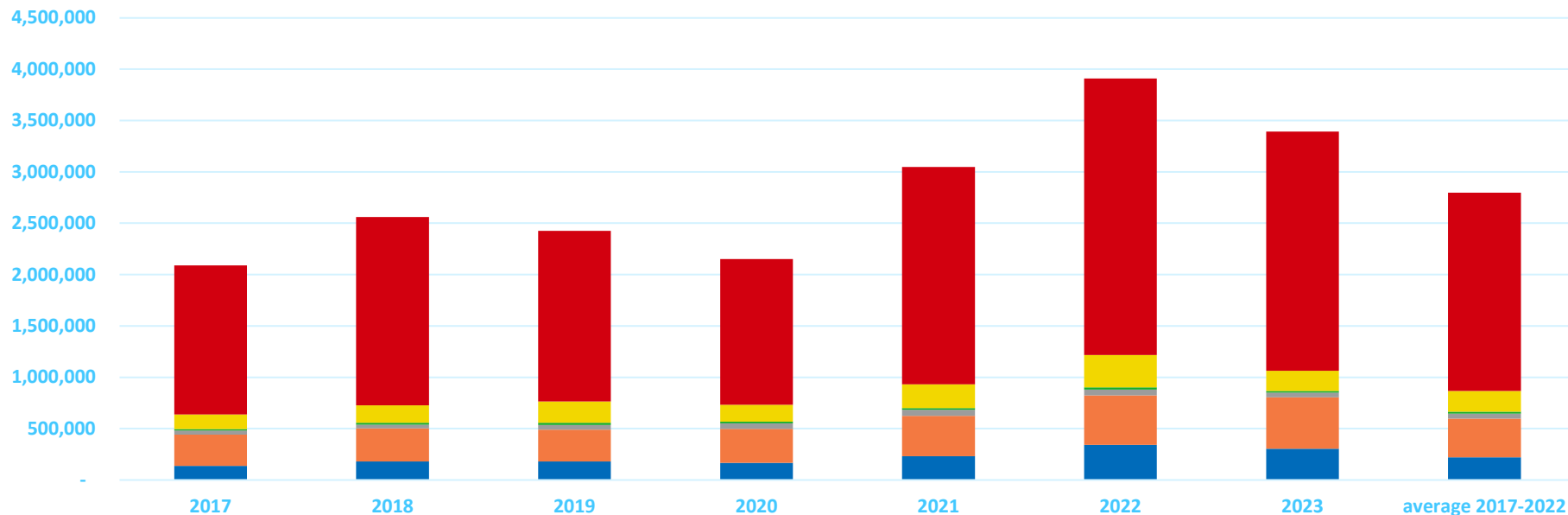


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- 8433 - Harvesting and threshing machinery, straw and fodder balers, grass or hay mowers; ...
- 8432 - Agricultural, horticultural or forestry machinery for soil preparation or cultivation; ...



Agro-Mechanisation Imports: Africa

[1,000 \$ US/yr]



■ 8432 - Agricult., horticult. or forestry machinery, soil preparation or cultivation; ...

■ 8433 - Harvesting / threshing machinery, balers, mowers; ...

■ 8434 - Milking, dairy machinery

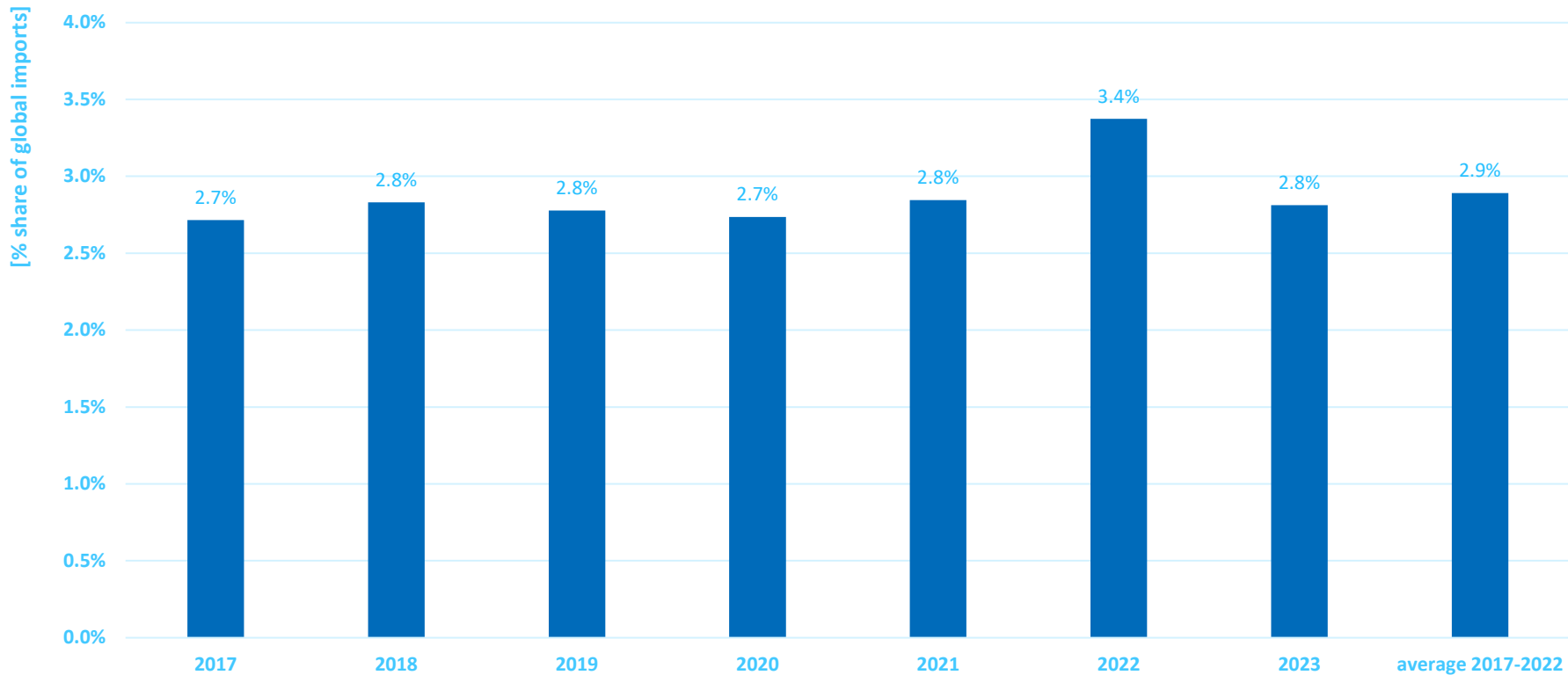
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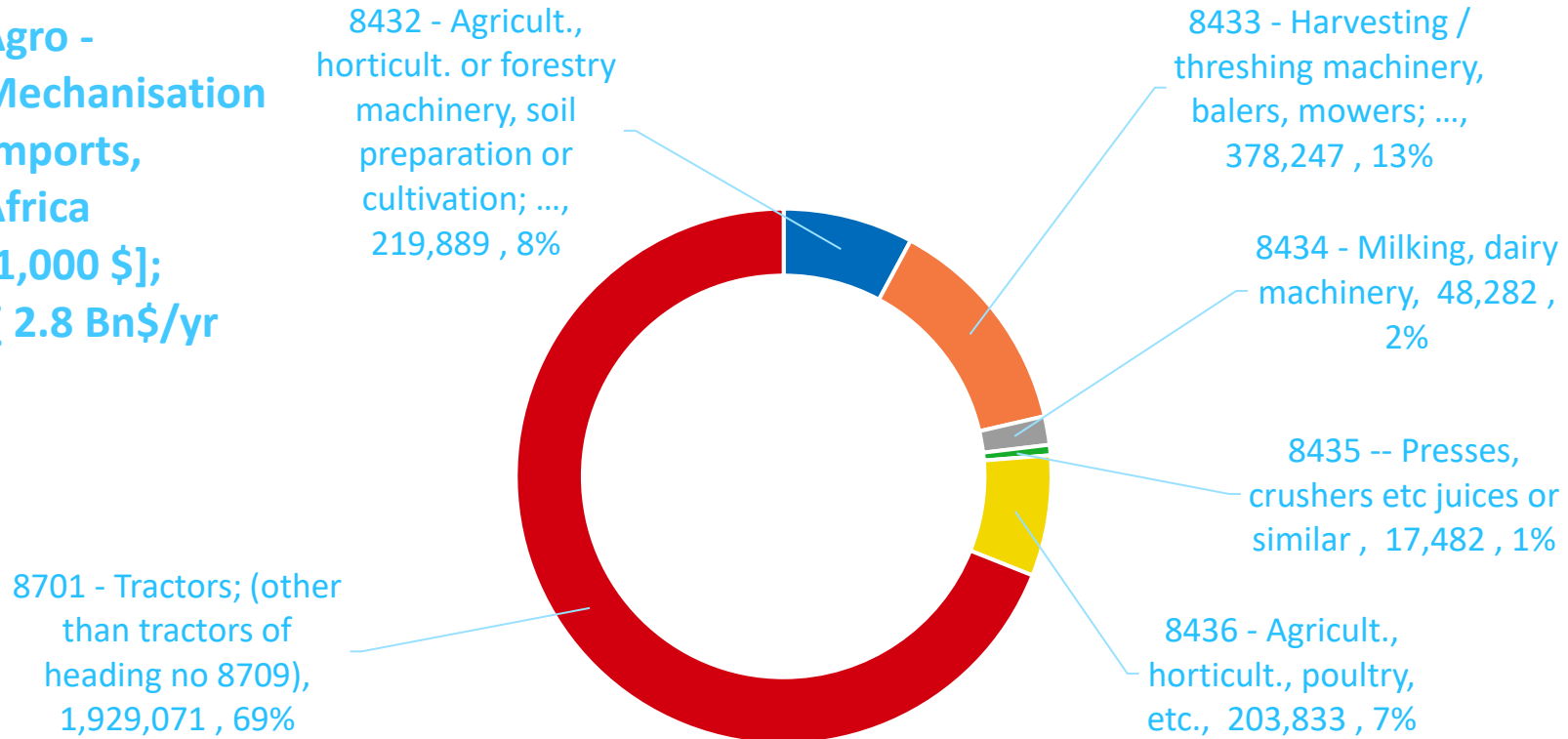


Global share of Agro-Mechanisation equipment imported in Africa



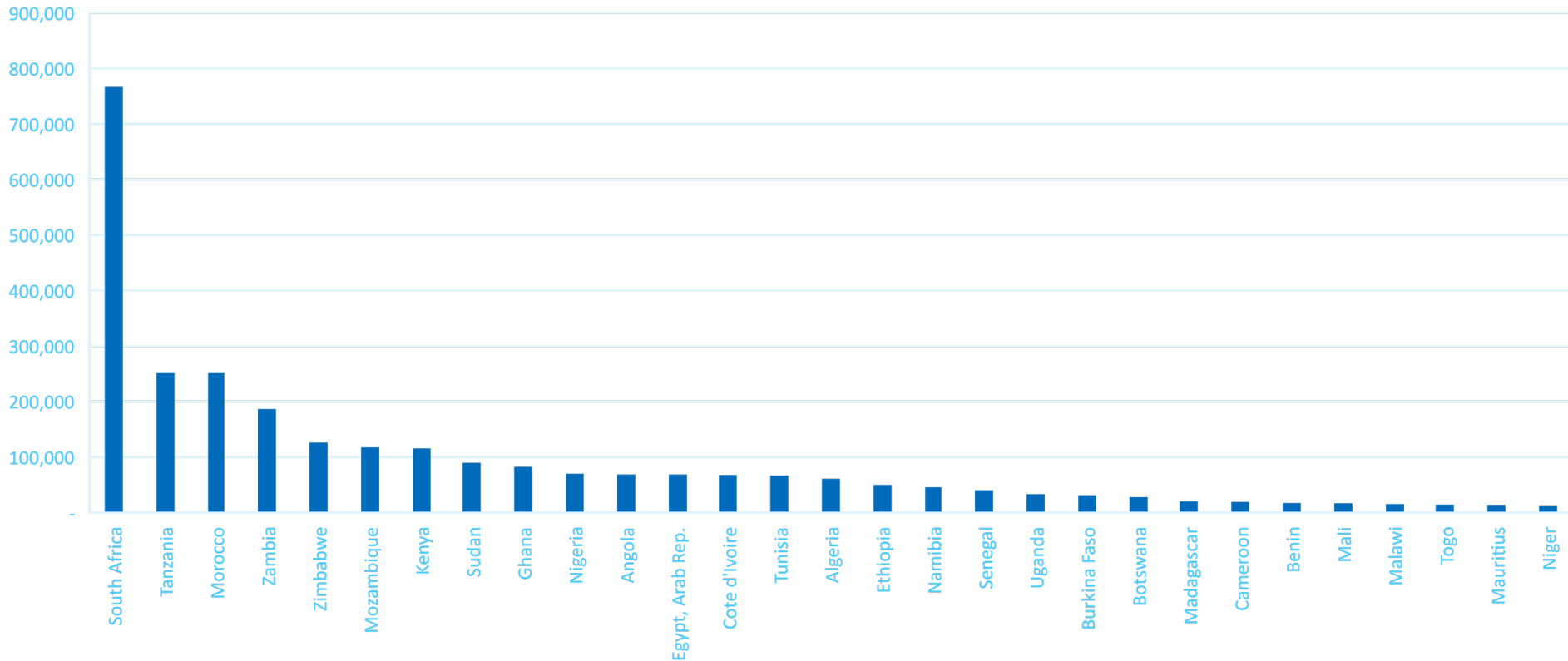


**Agro -
Mechanisation
Imports,
Africa
[1,000 \$];
Σ 2.8 Bn\$/yr**



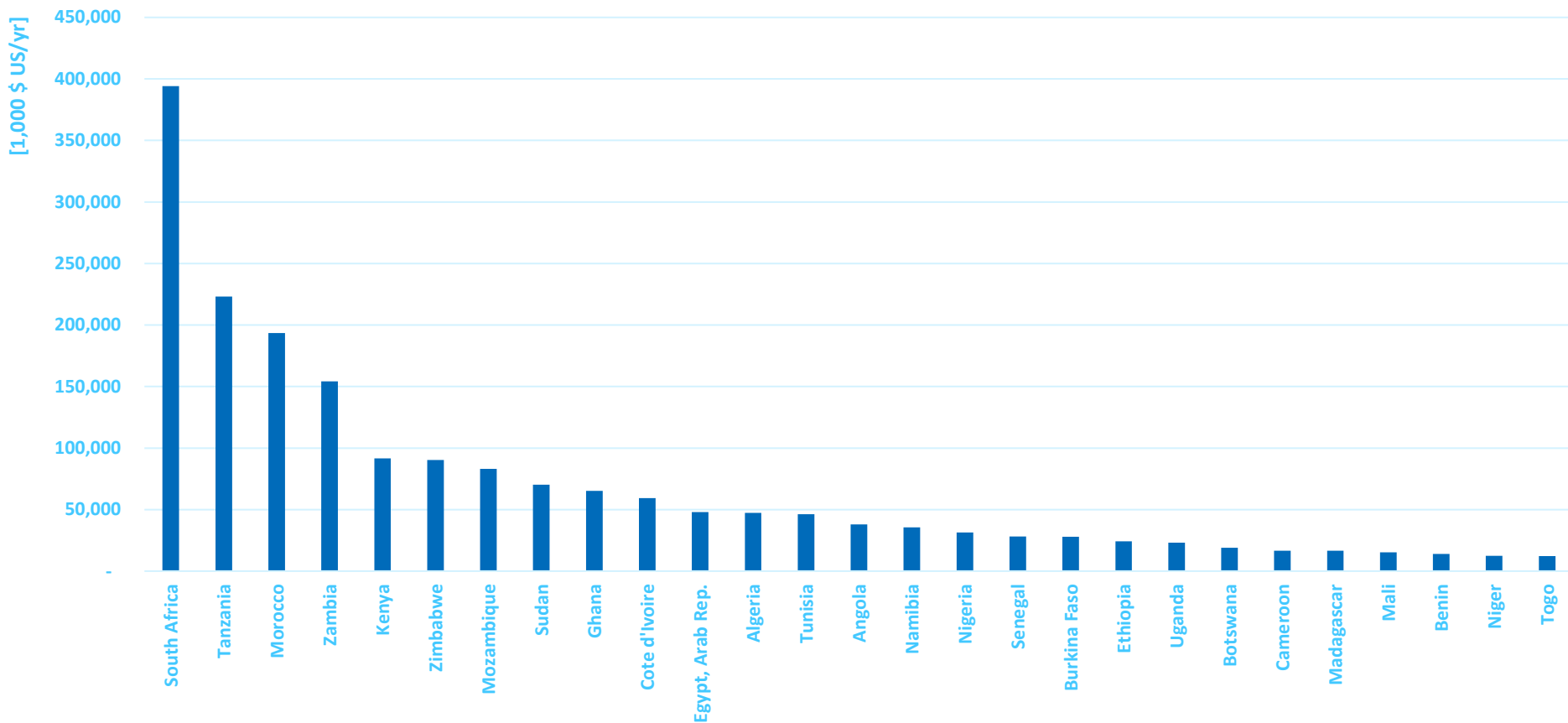


Agro mechanisation imports (>10M\$/yr)





Tractor Imports Africa (> 10M \$/yr)





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https://www.unido.org/sites/default/files/files/2018-03/WP092012_Ebook.pdf

WORKING PAPER 09/2012



The structure and growth pattern of agro-industry of African countries



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SAVE THE DATE:

November 5-7, 2024

Addis Ababa, Ethiopia



WORLD WITHOUT HUNGER CONFERENCE

A WORLD WITHOUT HUNGER IS POSSIBLE

<https://www.unido.org/world-without-hunger-conference>