

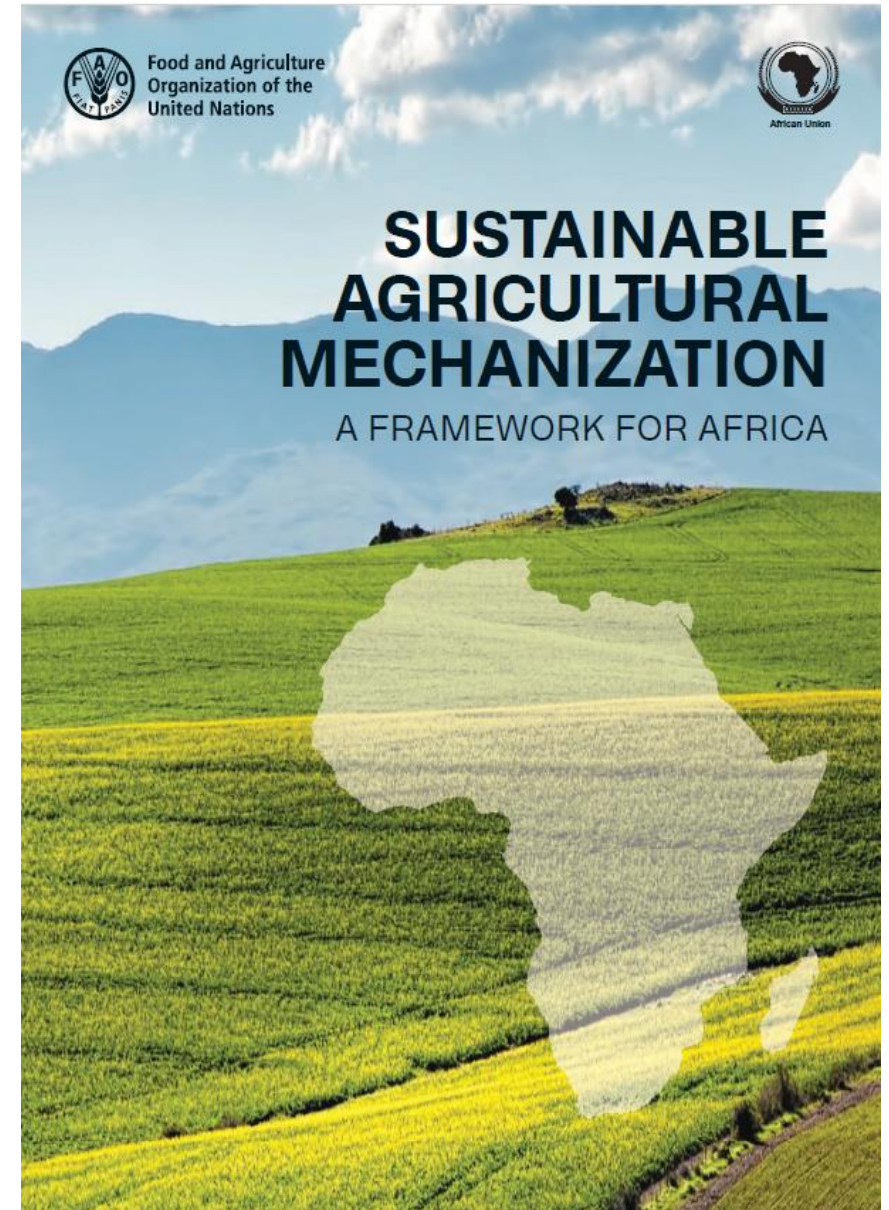
# perspective of operationali zation of the F-SAMA

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# Outline

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1. Introduction
2. Overview of F-SAMA: The Ten Elements
3. Current State of F-SAMA implementation
4. Future Trends in F-SAMA
5. Challenges



# Introduction

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- More than 60 percent of the population of sub-Saharan Africa is smallholder farmers
- Sub-Saharan Africa has a quarter of the world's arable land but only produces 10% of its agricultural output.
- Smallholders manage 80% of the farmland in sub-Saharan Africa.
- Despite an abundance of uncultivated farmland, Africa is a net importer of food, spending \$35 billion per year net on food imports.
- Agricultural productivity has increased far more slowly in sub-Saharan Africa than in other regions of the world, and crops yield only some 20% of what could be achieved



# Introduction

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- Population growth, rapid urbanization, and a young population are major trends shaping the future of African agriculture.
- African agriculture is also facing the challenges of climate change and land degradation.
- If no adequate measures are taken, the future ability of agriculture to produce enough food could be in jeopardy
- In light of these challenges, agricultural mechanization, along with other essential inputs, is crucial for addressing the major



# Overview of F-SAMA: The Ten Elements

## Making Agricultural Mechanization commercially sustainable



- 1 Boosting farm power** through appropriate technologies and innovative business models
- Increase the farm power availability & reduce the use of hand-tools
  - Farmer's ownership of machines or mechanization hire service providers



- Promoting **innovative financing mechanisms** for mechanization
- Mechanization requires long-term commitment
  - Support farmers through leasing schemes, credit or direct grants
  - Private sector to lead the investment efforts
  - Public sector creates a conducive environment



# Overview of F-SAMA: The Ten Elements

## Making Agricultural Mechanization (AM) commercially sustainable

**3** Building sustainable systems for the manufacture and distribution of mechanization inputs

- Establish and operate **viable entities** to manufacture agricultural machinery & implements;
- Invest in viable dealer networks including spare parts supplies and servicing
- Set standards; carry out testing; support franchises for distribution; repair & maintenance.

**5**

Sustainable mechanization **across agrifood value chains**

- SAMA must go beyond on-farm productivity to include post-harvest systems and the entire food chain



- Enhancement of research/technology development, testing, transfer and extension etc

# Overview of F-SAMA: The Ten Elements

## Making Agricultural Mechanization (AM) Environmentally sustainable

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Transform crop production techniques from current **conventional tillage** methods to **sustainable agricultural practices**:

- **Conservation Agriculture (CA)** [Minimum mechanical disturbances (reduced and zero tillage adapted to local conditions; Permanent soil organic cover; Crop diversification]
- Determine the **best land preparation practices** for each African region – Research, sharing experiences, etc.
- Local **innovation and adaptation** are necessary to develop sustainable & appropriate practices
- Short, medium, and long-term planning is essential



# Overview of F-SAMA: The Ten Elements

Making AM in Africa Socio-Economically sustainable

## 7 Socio-economic sustainability and the roles of **small-scale farmers, women, and youth**

- Strategies for SAMA must factor in: **institutional issues** related to small-scale farmers
- Take into account mainstreaming of '**Gender friendly mechanization**' at all stages

## 8 Use SAM to **empower youth** to continue to embrace farming

Human resources development and capacity building for SAMA

- Investing in **human resources** has helped to develop mechanization in Africa
- Mainstream **new areas of knowledge**, such as precision farming and conservation agriculture
- **Capacity development** is essential at all levels, from farmers to artisans, technicians, and professional managers, as well as policy and planning experts.



# Overview of F-SAMA: The Ten Elements

## Overarching elements of the Framework

- 9 Need for a **long-term vision**: policy and strategy issues
  - An overarching element of SAMA is the need for **a long-term vision** combined with the commitment by a wide range of stakeholders.
  - Priority areas for different agro-ecologies and farming systems need to be identified in order to ensure focused intervention on mechanization at the country level
- 10
  - Creating **sustainable institutions** for regional cooperation and **networking**
    - Enhance **Regional cooperation** to bring countries together to tackle common problems and learn from each other
    - Strengthening of **regional capacity**
    - Fostering **South-South collaboration**
    - **Private - Public Partnerships** and, subsequently, joint



# Current State of F-SAMA implementation

- Conducted regional training on mechanization hire service provision
  - 4 countries participated in Ivory Coast (*Benin, Burkina Faso, Côte d'Ivoire and Senegal*) and 5 Countries in Uganda (*Ethiopia, Ghana, Kenya, Uganda, Tanzania and Zambia*).
- Organized global conference on SAM and digitalization (GAMC) in September 2023
- Developed a Roadmap to Leverage Sustainable Agricultural Mechanization for Climate Smart Agriculture (SAM4CSA) in Southern Africa
- Organized webinars for all stakeholders as part of the efforts to operationalize F-SAMA
  - 9 Webinars have been organized with over 1550 participants and 54 speakers.
- Working towards creating collaborative alliances to address mechanization challenges
  - FAO works closely (MoU) with CEMA and the African Conservation Tillage Network (ACT) to operationalize F-SAMA
    - o Capacity development for mechanization hire services



# Current State of F-SAMA implementation

- Supported the formulation of Agricultural Mechanization Strategies in several countries

## **Mali** -

Formulated a new

AMS

**Sierra Leone** -  
Formulated a new  
AM policy

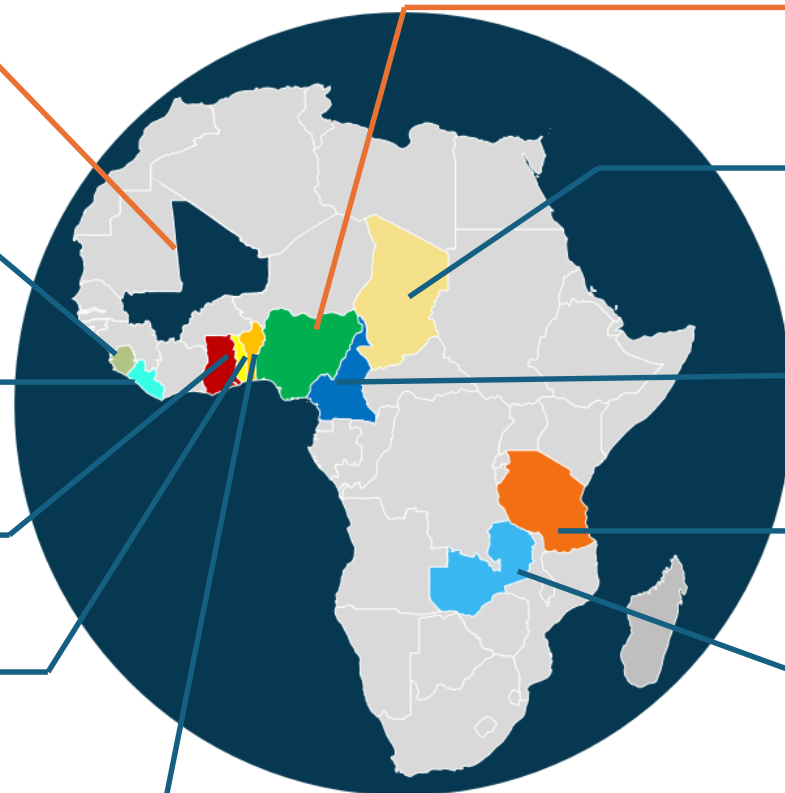
## **Liberia** -

Formulated a new  
AMS

**Ghana** - New  
Agricultural  
Engineering Policy

**Togo** - AMS  
formulation underway

**Benin** - Formulated a  
new AMS



## **Nigeria** -

Intends to  
review the AMS

**Chad** - Formulated a  
new AMS

**Cameroon** - Intends to  
review the AMS strategy

**Tanzania** -AMS  
formulation underway

**Zambia** -  
Formulated a new  
AMS

# uture Trends in F-SAMA (1)

- Continuing to Work on SAM Strategies and Policies
- Continuing to Work on Capacity Development and Education
- Introducing New Technologies
- Developing Climate-Smart Agriculture (CSA) Practices



# Future Trends in F-SAMA (2)

- Securing Funding for Agricultural Mechanization Projects and Programmes
- P-SAMA is tentatively formulated and seeking for funding
- Developing FFS Programs by Integrating the SAM Component
- Fostering closer collaboration between governments and the private sector
- Monitoring and Evaluation:  
Generating Data on Agricultural



# Challenges

- Insufficient involvement of the private sector in mechanization development at country level
- Ineffective enabling environment
- Still seeking the appropriate and **sustainable mechanization business models** suitable for African countries
- As mechanization requires significant capital investment, politicians, partners and donors are hesitant to invest in substantial support



Thank you  
for your attention

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