



AKADEMIYA



**Africa  
Agriculture  
Watch**

By AKADEMIYA2063



## AFRICA AGRICULTURE WATCH (AAGWa)

*Leveraging Artificial Intelligence (AI)  
& Satellite Remote Sensing Data  
for Decision-making in the African  
Agricultural Sector*

**Concept Note  
April 27, 2023**

### Background

Africa's food production systems constantly battle numerous threats, including climate shocks, conflicts, health crises, plant disease, and pest outbreaks. The disruptions engendered by such crises require accurate and timely data generation to predict and inform agricultural production for better preparedness and intervention planning; however, such data analytics with predictability capabilities is not readily accessible to decision-makers across the continent.

The lack of information about growing conditions can be overcome using today's digital technologies. For instance, remotely sensed data enables real-time tracking of changes in photosynthetic activities on croplands, climate data, and other parameters related to cropping activities. Furthermore, recent developments in machine learning and computer modeling make it possible to predict crop production using the wealth of data from satellite remotely sensed and geospatial data. The weaknesses that hamper access to quality agricultural statistics can also

be overcome by employing digital technologies, from measuring arable land, planted areas, and crop yields to the spatial distribution of harvested quantities.

In response to the preceding analysis of the agricultural data gap in Africa, [AKADEMIYA203](#) developed [Africa Agriculture Watch \(AAGWa\)](#). Launched in 2021, AAGWa is a web-based platform that employs cutting-edge machine learning techniques and satellite remotely sensed data to predict agricultural yields and production levels of several crops across Africa to support decision-making, monitoring, crisis management, and effective intervention planning in local communities.

From a digital platform that intends to contribute to reducing the data gap in the African agricultural sector, the second phase of AAGWa, as the fourth core program at AKADEMIYA2063, will host the organization's efforts in facilitating the adoption and use of emerging technologies by African countries

to achieve their development objectives, in particular, those related to the African Union's (AU) Agenda 2063 and the [African Union's Digital Transformation Strategy for Africa](#) (2020-2030). The latter underscores the need for Africa to prioritize digitally-enabled socio-economic development to leverage the diverse economic opportunities in virtually every sector. A critical objective of this strategy is to harness digital technologies and innovation to transform African societies and economies, notably building a vibrant approach to the digitalization of the


agriculture, health, and education sectors. In light of the foregoing context, AKADEMIYA2063 is hosting an event to mark the official launch of the AAgWa program. The event will facilitate high-level stakeholder engagement around the use of AI and emerging technologies to drive agricultural productivity and strengthen resilience across Africa for better crisis preparedness in the face of shocks such as the Russia-Ukraine war and COVID-19.

## Objectives

The event will mobilize participation from policymakers, research organizations, farmers' organizations, development partners, and think tanks, among others, to deliver on the following specific objectives:


1. Assess and reflect on the state of agricultural data availability in Africa and challenges and opportunities for data generation and use.
2. Analyze AAgWa's value proposition and discuss how the web platform is facilitating access to agricultural data while leveraging AI and other emerging technologies to fill the data gap;
3. Delve into the AAgWa scope of intervention, touching on remote sensing, AI in agriculture, and AI in climate adaptation and mitigation;
4. Discuss opportunities for better policy outcomes across Africa as a result of evidence-based decision-making facilitated by AAgWa's crop production forecasts;
5. Engage with leading experts, practitioners, and policymakers in AI, agriculture, and climate.


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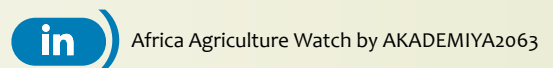
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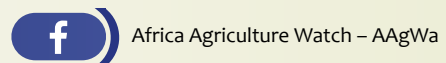
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