

Data & Digital Solutions

The Visualizing Insights on Fertilizer for African Agriculture (VIFAA) Program

Data-Driven Responses to Africa's Fertilizer Needs

Since 2017, [The Visualizing Insights on Fertilizer for African Agriculture \(VIFAA\)](#) program has been addressing key data gaps through fertilizer dashboards in [Kenya](#), [Ghana](#), and [Nigeria](#) in collaboration with the private sector and government to respond efficiently and effectively to changes in the fertilizer market, ensuring that sufficient quantities and appropriate fertilizers reach farmers at the right time for planting.

Development Gateway: An IREX Venture (DG), International Fertilizer Development Center's (IFDC's) AFO program, and Wallace & Associates, with support from the Bill & Melinda Gates Foundation (BMGF), are working to improve fertilizer data in five additional countries: Senegal, Ethiopia, Malawi, Zambia, and Mozambique. The data provided through VIFAA is now accessible through [AfricaFertilizer.org](#), a comprehensive resource for fertilizer data in more than 18 sub-Saharan Africa countries. Users of the new AfricaFertilizer.org website can create customized data visualizations for cross-country comparisons and access timely information on fertilizer markets.

Background

As fertilizer is the most expensive agricultural input for farmers, it is critical to make sure they have the right type of fertilizer at an affordable price and at the right time. Not a single country in sub-Saharan Africa (SSA) is self-reliant on the primary nutrients (i.e., nitrogen, phosphorus, and potassium) needed for crops to grow. Thus, decisions on when to import and how much fertilizer to import needs to be made months before the rains come (the majority of farmers do not have access to irrigation and are reliant on the annual rains to water their crops).

Finding reliable data to inform these decisions in SSA is often a difficult undertaking. If available at all, data is usually fragmented and siloed within government ministries or closely held by private companies. Also, the release of this data is often significantly delayed or in a format that makes analysis difficult. This lack of reliable data is a significant barrier for stakeholders in the agriculture value chain who need information about the market for decision-making.

To address these data gaps, DG supports country and regional engagements to understand the priorities with regard to fertilizer needs and designs approaches for promoting fertilizer data use. DG leads the co-design process for **user-friendly dashboards** for easy access and analysis of key information. VIFAA fills key data gaps through **data collection and innovation investments** and supports **change management for data use** through training and advisory services.

AfricaFertilizer.Org (AFO)¹ is an initiative under IFDC that is supported by various global partners, including the International Fertilizer Association, BMGF, United States Agency for International Development, and others. In order to address the gaps in fertilizer data, AFO has collected, processed, and published fertilizer sector statistics on fertilizer availability and market information in SSA since 2009, with the **goal of increasing fertilizer nutrient use to 50 kg/ha**.

AFO also has worked to consistently collect, process, and publish official national statistics on production, trade, consumption, and price. AFO collects this data in three ways: direct collection through consultants and field data collectors; partnerships and data sharing agreements with market analysis firms, private sector, government ministries, customs, and revenue authorities; and initiatives such as the [National Fertilizer Technical Working Groups](#).

Co-Designing Dashboards to Support Data Use for Decision-Making



¹ AFO aims to contribute to the development of a sustainable and profitable agriculture sector in Africa through the provision of clear and opportune information on fertilizers, such as production, trade, consumption, and market intelligence to fertilizer stakeholders within the African continent.

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In order to address key data gaps, we started with in-depth assessments in several African countries. We spoke with nearly 100 stakeholders to understand their priorities, how to turn those priorities into indicators, and then, we set out to co-design country and regional dashboards.

The assessment confirmed some of what we knew. For example, the most important fertilizer indicator at the national level is the average consumption of fertilizer per area of cropland (i.e., kilograms per hectare [kg/ha]), which highlights the average amount of fertilizer being used by farmers across geographical regions. In 2006, the [Abuja Declaration on Fertilizer for an African Green Revolution](#) set 50 kg/ha as the primary target for countries to reach. This average fertilizer consumption indicator (i.e., kg/ha) serves as a high-level measure; however, having a holistic understanding of what factors contribute to fertilizer consumption rates requires additional information.

Based on the public and private sector stakeholder feedback, we categorized this information under four themes:

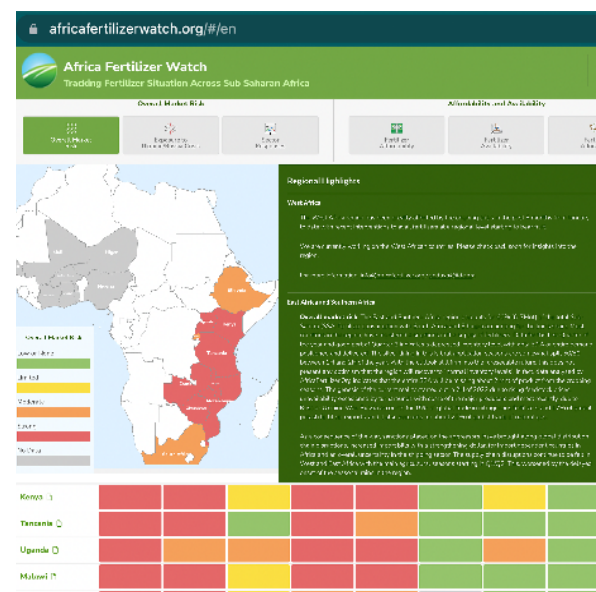
1. *Price:* How much does fertilizer cost throughout the entirety of the value chain?
2. *Product Availability and Production:* How much product is available in the country?
3. *Fertilizer Use:* What types of products are farmers applying and to which crops? (Optimal fertilizer combinations and quantities vary by crop type.)
4. *Policy:* What is the policy environment and considerations around fertilizer that impact the factors above?

The Africa Fertilizer Watch: Tracking Fertilizer Across Sub-Saharan Africa

In August 2020, DG, IFDC, and AFO developed a [COVID-19 Fertilizer Watch Dashboard](#) to provide visual feedback for how pandemic-induced supply chain disruptions were impacting the fertilizer market.

Similarly, we released the [Africa Fertilizer Watch Dashboard](#) (pictured below) in July 2022 to visualize market disruptions from the Russian invasion of Ukraine. The Africa Fertilizer Watch Dashboard focuses on key fertilizer market indicators in order to support efficient and effective responses from development partners and the private sector regarding the

price increases related to the evolving emergencies. The Africa Fertilizer Watch Dashboard provides decision-makers with the information they need to ensure sufficient quantities of appropriate fertilizers reach farmers in time for planting. This early warning system is targeted to inform decisions on subsidies, early positioning of cargo from global markets, credit guarantee schemes, development partners' involvement through finance mechanisms, and other interventions to protect fertilizer availability. Indicators include overall market risk, affordability, availability, allocations, port and logistics, and transit and borders. Africa Fertilizer Watch can now be accessed through [AfricaFertilizer.org](https://africafertilizerwatch.org).



Interested in learning more about our VIFAA Program? Reach out to Charlene Migwe-Kagume at cmigwe@developmentgateway.org and Sebastian Nduva at snduva@ifdc.org.