

# TECHNICAL REPORT

## Fertilizer Technical Working Group 2021 Fertilizer Statistics Validation Workshop Mozambique



**September 21 – 23 2022, Maputo, Mozambique**

*AfricaFertilizer.org is a joint initiative led by IFDC, in partnership with, IFA, Development Gateway, WAFA and the Africa Union to facilitate exchange of information about soil fertility, fertilizers and good agricultural practices in Africa*

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## List of Acronyms

### Abbreviation Definition

<b>AFAP</b>	<b>African Agribusiness Partnership</b>
<b>AFO</b>	<b>AfricaFertilizer.org</b>
<b>AGRA</b>	<b>Alliance for a Green Revolution in Africa</b>
<b>AMOFERT</b>	<b>Mozambique Association for Fertilizer Use and Promotion</b>
<b>DG</b>	<b>Development Gateway</b>
<b>FAO</b>	<b>Food and Agriculture Organization</b>
<b>FTWG</b>	<b>Fertilizer Technical Working Groups</b>
<b>IFA</b>	<b>International Fertilizer Association</b>
<b>IFDC</b>	<b>International Fertilizer Development Center</b>
<b>MCNet</b>	<b>Mozambique Company Network</b>
<b>NGO</b>	<b>Non-Government Organization</b>
<b>USAID</b>	<b>US Agency for International Development</b>
<b>VBA</b>	<b>Village Based Agent</b>
<b>VIFAA</b>	<b>Visualizing Insights on Fertilizer for African Agriculture</b>

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## 1.0. Background

The AfricaFertilizer.org (AFO) initiative is the premier source for fertilizer statistics and information in Africa. It is hosted by IFDC and supported by several partners key, including IFA, Argus Media, and Development Gateway. Since 2009, AFO has been collecting, processing, and publishing fertilizer production, trade, and consumption statistics for the principal fertilizer markets in sub-Saharan Africa.

To address data gaps on fertilizer, AFO has partnered with Development Gateway to create fertilizer dashboards for three countries: Kenya, Nigeria, and Ghana. Five more country platforms have been planned by 2023. The dashboards make data on fertilizer production, price and consumption and use easily accessible. This helps governments develop make policies that address the needs of farmers across sub-Saharan Africa.

Fertilizer Technical Working Groups (FTWG) were established in 2012 in 11 sub-Sahara African countries, these working groups have been responsible for reviewing country level data and presenting statistics results tables for validation by National Technical Working Groups before the publication of the data.

AFO, through its partnership with CountrySTAT, aims to improve the quality and availability of fertilizer data in-terms of production, trade, and consumption to enable decision-makers to have and to use reliable fertilizer data for formulation and monitoring of agricultural development policies, strategies on food security, promotion of fertilizer trade within East and Southern Africa and beyond, as well as update industry actors on new strategies developed in the year under review.

Currently, Development Gateway: An IREX Venture (DG), IFDC's AFO program and Wallace and Associates, with support from the Bill & Melinda Gates Foundation are working to improve fertilizer data in five additional countries - Ethiopia,

Malawi, Mozambique, Senegal, and Zambia-running through to 2023. This year's workshop was held on September 21 -23, in Maputo, Mozambique on the first and second day participant was working data review and comments of 2015 to mid-September 2022 Mozambique fertilizer statistics. On 23<sup>rd</sup> September, Participant agreed on the figures for apparent consumption and recommended harmonization on the data.

## 1.1 Objectives and Expected Outcomes of the Workshop

### 1.1.1 Objectives of the Workshop

- Analyze and validate the fertilizer statistics from 2015 to 2022 on the import, export and consumption in Mozambique.
- Update participants on the VIFAA dashboard and get feedback on the platform.

### 1.1.2 Expected Outcomes of the Workshop

- Fertilizer statistics for 2021 validated.
- Statistical output tables on fertilizer imports, exports, and apparent consumption for 2015 to 2022 prepared.
- Participants feedback on VIFAA dashboard obtained.

## 1.2 Methodology

The methodology of the workshop was presentations, questions/answers, and discussions at plenary sessions. In addition, on the fertilizer processing date, verification was done line per line.

## 2.0 First Day (September 21, 2022)

The morning session of the first day was used to present overview of Africa fertilizer.org activities and share the experience of other countries during the current fertilizer crisis, and the fertilizer dashboard for Kenya. On the afternoon and all day for September 22<sup>nd</sup> validation activities continued on fertilizer import.

## 2.1 Participants

The workshop was attended by 22 participants on the first day and 21 on the second and third day according to the attached list.

**Table 1: Composition of Participants**

Date	Public	Private	NGO	Male	Female	Total
21 <sup>st</sup> Sept 2022	3	10	9	18	4	22
22 <sup>nd</sup> Sept 2022	4	8	9	16	5	21
23 <sup>rd</sup> Sept 2022	4	7	10	15	6	21

## 2.2 Opening Ceremony

The workshop was officially opened by a welcome address from Wilson Leonardo the IFDC Mozambique Country Manager. After he welcomed all participants he emphasized that fertilizer data; import, export and consumption of fertilizers is very important for the country to be able to help the government to make decisions on the fertilizer sector.

Alcides Lampiao, the AFO Fertilizer Market Analyst, gave an overview of the program.

## 2.3 Overview of Africafertilizer.org Activities

Sebastian Nduva, presented the AFO activities.

### *Highlights*

- AFO seeks to provide clear, relevant, and opportune data and market information on fertilizers in the SSA region, with an aim to support the implementation of continental, regional and national agricultural and more specifically fertilizer policies and regulations, and promote the growth and development of competitive markets, to the benefit of both the public and private sector, and fertilizer stakeholders globally.
- AFO seeks to be the leading provider of fertilizer data and information for Africa to support market transparency, improve decision-making, and deliver a more prosperous agriculture sector.
- It is hosted by IFDC and works with key public and private fertilizer sector players, including national FTWGs, fertilizer importers, producers, agrodealers, agriculture/fertilizer experts and consultants.

- The core areas of competence of AFO are Price, Statistics, Markets, Products (Market Situation Statement and policies Support). AFO's other key partners include IFA, which is a donor for fertilizer statistics; DG, also a donor and a partner for fertilizer data visualization and website development; Argus Media, a donor and a partner for fertilizer statistics and market information on a daily and monthly basis. AFAP donor and a partner on the technical support on private sector data and provide statement on cost chain analysis The AFO-Led FTWG's bring together all the stakeholders at national level to validate fertilizer statistics for the country.
- For 2022, AFO conducted FTWG workshops in 12 countries with 5 more planned,
- Recently, FTWG workshops was done in Nigeria Tanzania and Zambia.
- For 2022, AFO will continue to provide fertilizer market information, overhaul its website, and conduct FTWG data validation workshops in Malawi

#### 2.4. Update on Mozambique Fertilizer Landscape

Anastácio, Luís from Division of the Registration and Control of Agrochemical at the Ministry of Agriculture and Rural Development, went ahead to present an update on fertilizer market in Mozambique.

##### *Highlights*

- Mozambique needs appropriate mechanism for data collection since Mozambique imports, exports and transits fertilizers to the Interlock countries. He highlighted the existence of four (4) fertilizer companies, based in the Beira corridor.
- All fertilizer imports and export must be registered at the Ministry of Agriculture and Rural development and the transit companies must request a permit to be part of clearance the cargo Since Covis-19, Ministry of Agriculture has registered low fertilizer importation but with ongoing trials and extension services, consumption might increase this year.
- Beira port being the main corridor for Mozambique and also other inland countries, rigorous processes at the port are hindering importation and overall consumption.

#### 2.5. Current crisis - learning from other countries

Sebastian Nduva led the team on a discussion of learnings from Nigeria and other countries on the current fertilizer market crisis and interventions that have been done against the fertilizer crisis. He also took the participants to accelerator work.

#### **Fertilizer crisis interventions**

##### 2.5.1. West Africa

- Through the regional association Wafa, the countries attracted attention from regional economic blocks i.e., ECOWAS with discussions escalated to the UN through formation of a UN Global Crisis Response Group
- AFO has been feeding data into this consortium through IFA on inventory, crop: fertilizer price ratios, market characterizations etc. to advise next steps
- Lobbying for Urea supply from regional producers e.g., Nigeria
- Lobbying for financing (trade finance) through AfDB

- Alternative sourcing for MOP (Nigeria)

### 2.5.2. Eastern Africa

- Emergency Subsidy fund for 20% of the market, Kenya Q1, Q3 70kt Subsidized fertilizer
- Addition of subsidy scheme in Bulk Procurement System, BPS, TZ
- Product differentiation with reduced prices e.g., Urea to CAN/AS/KYNO PLUS etc.

### 2.5.3. Rwanda

- Discussion with regional producers and manufactures, by 2023 completion of the blending facility under a negotiated contract with OCP to rump up availability.
- Current Initiatives from global stakeholders
- Sustain Africa Initiative, Rabobank working to quantify fertilizer deficit for 4 countries in East and Southern Africa for Trade/specialized finance mechanisms
- UN Economic commission for Africa (UNECA) Via Africa import-export bank to Procure fertilizers in bulk for the sub-region
- Other upcoming initiatives from Africa Fertilizer and Soil Health summit II and USAID

### 2.5.4 Highlights from Mozambique

- Sustenta- This is a program of supplying inputs- seeds, pesticides and fertilizers to farmers. UNPS is leading the program. It covers 50,000 small emerging farmers who own farm size of 1.5ha.
- The government is looking to introduce E-voucher system. This will be first piloted in Manica. It will involve agrodealers and suppliers.
- IFDC has been instrumental in developing e-voucher. There was a system that was developed by IFDC in collaboration with FAO years back.
- AGRA Mozambique is currently working with private sector on another program.
- Ministry of Agriculture should explore different approach across different value chains in order to improve productivity in Mozambique.
- There is a program in Beira corridor that involves agrodealers and using VBA model.
- For the UNECA initiative, we might have to consider that different countries have different fertilizer needs.

### **AFO/DG Accelerator Work**

- AFO has partnered with Development gateway under the VIFAA (Visualizing insights on Fertilizer for African Agriculture) program, to visualize fertilizer statistics into a more appealing manner.
- For East and Southern Africa, 4 validation workshops have been done this year i.e., Zambia, Kenya, Malawi and Tanzania.

- There are prospects of launching 5 more dashboards in the next 2-3 years i.e Ethiopia, Senegal, Mozambique, Malawi, and Zambia.

## 2.6. VIFAA Dashboards- Demo

Viola Kenduiywo took the participant through the Kenya Fertilizer Dashboard.

### Highlights

- Mozambique is only one country at SSA that applies taxes on fertilizer.
- Regulatory bottlenecks such as registration of blends especially for local blenders. The issue not only affects fertilizers but also seeds.
- Lengthy and tedious clearing processes plus the high cost of importation. Because of this, some products have been rerouted to Tanzania's Dar es Salaam. Others to Durban port. Only 15% of imports to Malawi and Zambia goes through Beira port. There are only two bagging companies in Mozambique. This means it takes time to label the bags considering different needs of different farmers.
- The price of the stickers put on bags makes the already pricey products unaffordable for the majority of farmers. Cost Build Up data for Mozambique would be very useful to many stakeholders.

**Figure 1: Participants during the workshop**



## 2.7. Review of available data for Mozambique for VIFAA dashboard

This section was led by Fred and assisted by Sebastian Nduva, where he took all participants through the details available on the Mozambique data and the expected output of the group working section.

## 2.8. Group work -Processing import/export data sets for Mozambique.



**Figure 2: Participants actively Validating 2022 fertilizer import and export data.**

Fred Gyasi the AFO fertilizer statistics specialist took all participants to verify line by line the main detail for fertilizer validation date. Through verification, the stakeholder discovers that there no description to facilitate the identification if the product was for Agriculture or Mining use.

### *Highlights*

- Lack of detailed description of imported or exported fertilizer (e.g. NPK 12-24-12; CAN etc).
- Lack of information on the net value of some imported and exported fertilizers.
- Inconsistency in the data on the Gross weight and unit used.
- Existence of fertilizer importing companies that are not registered at Ministry of Agriculture and Rural Development.
- 

## 3.0 Results of 2015 to mid-September 2022 fertilizer statistics review and validation

### 3.1 Fertilizer Production

From 2015 to mid-September 2022, Mozambique imported from 65,297mt of fertilizer to 252,234mt. The highest import 2015. The main fertilizer importer and Export are Mozambique fertilizer company, Yara Mozambique, OMNIA Mozambique, ETG, Agrifocus, Tobacco and sugar cane company. The country is exporting fertilizer to interlock countries with high volumes in 2016 around 34,575mt.

**Table 2: Mozambique fertilizer Statistics 2015-2022**

MOZAMBIQUE FERTILIZER STATISTICS - TONS								
HS Code	2015	2016	2017	2018	2019	2020	2021	2022*
Production								
Import	252,234	90,449	114,683	95,673	136,635	171,140	167,557	65,297
Export	54,406	341,575	42,871	30,015	91,577	70,607	84,889	28,870
Apparent Consumption	203,293	67,303	75,897	66,347	90,108	135,603	130,468	36,609
<i>*2022 - Data till mid-September.</i>								

### 3.2 Fertilizer Imports

From the official fertilizer data, Mozambique fertilizer is import high volumes of Nitrogen fertilizer including urea because part of it is used as raw material to produce blends for internal consumption and export.

In 2015, Mozambique have reached a peak fertilizer imports with 252,234mt and decrease on between to 2017. From 2019 to 2021 the fertilizer import increased from 136,635mt to 167,557mt. The figures were stable during the last two year because implementation national program for the integration of family farming into productive value chains, which aims to improve the quality of life of rural households through the promotion of sustainable agriculture (social, economic and environmental)-SUSTENTA.

**Table 3: Fertilizer imports in Mozambique, 2015 - 2022**

HS Code	Fertilizer Name	2015	2016	2017	2018	2019	2020	2021	2022*
3102100000	Urea	99,464	36,319	56,797	20,860	53,790	39,380	71,859	15,738
3102900000	Nitrogen Fertilizer	107,957	11,067	13,252	37,721	9,750	26,547	10,218	3,910
3105200000	NPK	21,086	19,479	24,446	21,227	19,580	22,079	22,949	11,207
3102210000	Ammonium Sulphate	2,956	8,163	3,080	2,462	9,370	10,129	18,997	6,899
3105400000	MAP	10,155	3,976	2,355	2,062	12,892	6,292	10,925	6,008
3105300000	DAP	62	211			7,592	5,656	7,794	13,400
3101000000	Organic Fertilizer	1,524	749	1,287	1,302	1,380	31,310	616	268
3104200000	MOP			768	1,887	1,145	6,024	1,897	
	Others fertilizers	9,029	10,486	12,699	8,153	21,136	23,722	22,302	7,867
<b>Total (MT)</b>		<b>252,234</b>	<b>90,449</b>	<b>114,683</b>	<b>95,673</b>	<b>136,635</b>	<b>171,140</b>	<b>167,557</b>	<b>65,297</b>
<i>*2022 - Data till mid-September.</i>									

The lack of adequate legislation with emphasis on a fertilizer law and policy (IFDC, 2012; Simtowe, 2015), instruments (law and policy) that would give more security to the private sector to invest in the installation of local (national) fertilizer manufacturing units, a fact that could reduce the costs of this input (fertilizer) and increase its access and consumption.

### 3.3. Mozambique NPK import, 2015 and 2022

Because of lack of fertilizer description of fertilizer details on the data obtained, it was not possible to estimate volume of different formulation of NPK imported and blended in the country.

According to the blenders attended the workshop, Mozambique is producing local blends for local consumption and to Export using Urea, DAP and MOP as raw material for Blends

### 3.4 Fertilizer Exports

Official fertilizer exports from Mozambique from 2015 to 2021, Mozambique has exports from 54,406mt to 341,575mt, from 2017 the export has decreased 30,015mt to 91,577mt.

### 3.5 Fertilizer Apparent Consumption

**Table 4: Mozambique top fertilizer apparent consumption per year**

HS Code	Fertilizer Name	2015	2016	2017	2018	2019	2020	2021	2022*
3102100000	Urea	93,486	34,431	47,041	14,308	28,304	32,022	65,239	3,910
3102900000	Nitrogen Fertilizer	88,709	10,285	-	36,715	9,750	26,547	7,818	2,561
3102210000	Ammonium Sulphate	792	5,902	3,080	2,215	9,370	8,193	17,367	4,578
3105300000	DAP	62	151	-	-	7,592	5,656	6,294	13,400
3105400000	MAP	10,155	174	2,265	486	12,227	3,614	9,975	-
3105200000	NPK	1,525	11,272	12,728	1,512	-	-	-	14
	Others fertilizers	8,564	5,088	10,782	11,111	22,865	59,571	23,774	12,146
<b>Total (MT)</b>		<b>203,293</b>	<b>67,303</b>	<b>75,897</b>	<b>66,347</b>	<b>90,108</b>	<b>135,603</b>	<b>130,468</b>	<b>36,609</b>

\*2022 - Data till mid-September.

The Mozambique apparent consumption of fertilizers increased from 203,293mt in 2015 to 66,347mt in 2018 and from 2019 start to increase from 90,108mt to 130,468mt in 2021 which is still low compared to 2015.

Reason for low fertilizer consumption

- i. The poor technical assistance.
- ii. Insufficient information on fertilizer use recommendations,

### Comments

To increase the fertilizer consumption, availability at affordable price close to smallholder farmers we need reduce the following cost on import:

- Reduce on port changes which include, cost of weighing trucks, clearing fees, cost of Mcnet and handling cost has increased from 42\$/ton to 60\$/ton an
- During product clearance, the clearance agent must clarify if the raw material is for Agriculture use or Industry to be charged at correct code on tariff book.

## **5.0. Conclusion and Recommendations**

### **5.1. Conclusion**

The FTWG 2022 agreed on the apparent consumption of fertilizer in Mozambique, but the group also agreed that we need to harmonize the data including the description of the fertilizer imported during the period of analyses.

Following that, the fertilizer association AMOFERT in partnership with IFDC/AFO will organize a round table discussion meeting to validate the additional information collected on the fertilizer description and quantities in the presence of Mozambique customs before the next FTWG workshop.

In his closing remarks, Sebastian Nduva, AFO Program Lead, appreciated all participants for their input into the data validation exercise and the VIFAA agenda of the workshop. He also asked each participant to give their feedback on the workshop. The participants appreciated AFO for bringing together stakeholders from various fertilizer industries together and they made recommendation at different levels to have the dashboard in the country

### **5.2. Recommendations at the level of:**

#### **5.2.1. Private Sector.**

- The private sector should invest in organizing the fertilizers market. Quality control and functional laboratories need to be established.
- Share the fertilizer stock with the Ministry of Agriculture and Rural Development quarterly.
- Strengthen the fertilizer association (AMOFERT) for policy advocacy.
- Buy-in from government to support private sector activities in the country.

#### **5.2.2. Public Sector**

- The country needs intervention to increase the use of fertilizers by farmers. Lack of technical knowledge regarding the correct use of fertilizers (type of fertilizers to be applied, time of application, type of crop to be applied) The capacity of fertilizer blending plant is below 20%.
- Missed Links on the food crop value chain to stimulate the use of fertilizers by small producers to obtain higher production per unit area.
- The Ministry of Agriculture and Rural Development should meet with Customs in order to improve the process of data collection and authorization of permits.
- Professionalize the fertilizer sector in Mozambique.
- Cut on operational costs at the port that makes fertilizers expensive.

#### **5.2.3. Team Organization**

- Dashboard is a necessary instrument for the country, as it may allow the collection, processing, and publication of data on the quantity of imported fertilizers, exported as well as national consumption.

- Identify a mechanism for collecting data from the competent institutions on a quarterly basis.
- Need to install national laboratories to allow quality control of fertilizers circulating in the country.
- We need to work on getting more clear and detailed description on product.
- We need a bottom-up and top-down approach to implement the fertilizer policies and get the data on time.

## Annexes

### Agenda

<b>Wednesday 21<sup>st</sup> Sept 2022</b>		
<b>Time</b>	<b>Activity</b>	<b>Responsible</b>
	Registration	Viola K.
0800-0830H	Introduction of participants and Welcome Address	Wilson
0830-0840H	Program overview and objectives	Alcides L.
0840-0900H	Overview of AFO activities	Sebastian N.
0900- 0920H	Update on Mozambique Fertilizer Landscape	MoA Rep
0920-1000H	Learning from other countries - Current crisis - learning from other countries Accelerator countries	Sebastian N. /All
<b>1000-1030H</b>	<b>Coffee break</b>	
1030-1120H	VIFAA Dashboards- Demo	Samuel A/Viola K.
1120-1300H	Methodology and review of available data for Mozambique for VIFAA dashboard	DG/ Fred G.
<b>1300-1400H</b>	<b>Lunch break</b>	
1400-1430H	Data validation process & Review of datasets available for Mozambique.	Fred G.
1430-1700H	Group work-Processing import/export data sets for Mozambique.	All
<b>1700-1730H</b>	<b>Coffee break/Adjourn</b>	<b>Fred G.</b>
<b>Thursday 22<sup>nd</sup> Sept 2022</b>		
0800-0820H	Registration	Viola K.
	Program overview and objectives	Alcides L.
0820-1030H	Group work-Processing import/export data sets for Mozambique	All
<b>1030-1100H</b>	<b>Coffee break</b>	
1100-1300H	Group work-Processing import/export data sets for Mozambique	All
<b>1300 -1400H</b>	<b>Lunch break</b>	
1400- 1630H	Group work-Processing import/export data sets for Mozambique	All
<b>1630 - 1700H</b>	<b>Coffee Break/Adjourn</b>	<b>Fred G.</b>
<b>Friday 23<sup>rd</sup> September 2022</b>		
0800 - 0820H	Registration	Viola K.
	Program overview and objectives	Alcides L.
0820- 1030H	Presentation of validated Country Output tables	Fred G.
<b>1030- 1100H</b>	<b>Coffee break</b>	
1100-1200H	Discussion: Private sector concerns	All
1200-1300H	Use of validated data	Fred G
1300-1330H	Recommendations, next steps and closing remarks	Sebastian N.
<b>1330-1430</b>	<b>Lunch</b>	

## List of participants

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