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A Legal Guide to Strengthen the Mozambican Fertilizer Market



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Acronyms

AFAP	African Fertilizer and Agribusiness Partnership
AGRA	Alliance for a Green Revolution in Africa
AMOFERT	Mozambican Association for Dialogue and Promotion of Fertilizer Use
AMS	Aggregate Measure of Support
AOAC	Association of Analytical Communities
AU	African Union
B2B	Business-to-Business
CAADP	Comprehensive Africa Agriculture Development Program
CAN	Calcium Ammonium Nitrate
CCF	Country Cooperation Framework
COMESA	Common Market for Eastern and Southern Africa
DAP	Diammonium Phosphate
EAC	East African Community
ECOWAS	Economic Community of Western African States
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
FISP	Farmer Income Support Program
FOB	Free on Board
GDP	Gross Domestic Product
GoM	Government of Mozambique
Ha	Hectare
IARM	Institute for Agricultural Research of Mozambique
IIAM	Agricultural Research Institute of Mozambique
IFDC	International Fertilizer Development Centre
IFPRI	International Food Policy Research Institute
ISO	International Organization for Standardization
Kg	Kilogram
Km²	Square Kilometers
MBS	Mozambique Bureau of Standards
MDGs	Millennium Development Goals
MFA	Mozambique Fertilizer Authority
MoA	Ministry of Agriculture
MoT	Ministry of Trade
MT	Metric Ton
MZN	Mozambican Metical
NAFSN	New Alliance for Food Security and Nutrition
NEPAD	The New Partnership for Africa's Development

NML	New Markets Lab
NPK	Nitrogen, Phosphorous, and Potassium
NTB	Non-Tariff Barriers
PEDSA	Strategic Plan for Agricultural Development
PPP	Public-Private Partnerships
PPS	Public Private Partnership
RAP	Regional Agricultural Policy
REC	Regional Economic Community
R&D	Research and Development
SADC	Southern Africa Development Community
SDGs	Sustainable Development Goals
S&DT	Special and Differential Treatment
SSTP	Scaling Seeds and Technologies Partnership Program
TFTA	Tripartite Free Trade Agreement
UN	United Nations
USAID	United States Agency for International Development
USD	United States Dollar
VAT	Value-Added Tax
WACoFeC	West Africa Committee for Fertilizer Control
WTO	World Trade Organization

Executive Summary

Access to quality agricultural inputs, including fertilizer, will play an important role in achieving the goals that governments and non-state actors have set to eradicate poverty and ensure food security, including under the New Alliance for Food Security and Nutrition (New Alliance) and Sustainable Development Goals (SDGs). Mozambique has taken a number of steps to advance these goals, generate sustainable growth in the agricultural sector, and address the needs of smallholder farmers and the rural poor. However, while Mozambique has experienced gross domestic product (GDP) growth in the last decade, an estimated 54 percent of its population still lived in poverty in 2014 (Rural Poverty Portal), and the agricultural sector continues to face challenges.

At present, access to agricultural inputs in Mozambique, including quality fertilizer, remains limited, and use of such inputs is the exception rather than the rule. Mozambique's current rate of fertilizer use is among the lowest on the continent. The key factors impacting limited use of agricultural inputs in Mozambique (as in many other African countries) are availability and affordability of the inputs, both of which are directly impacted by the legal and regulatory framework. A well-designed legal and regulatory system will play a critical role in enabling the development, access, and availability of high-quality agricultural inputs, contributing to a vibrant agricultural sector that will benefit Mozambique's small-scale farmers. Legal systems also will play a role in creating robust food systems, strengthening food security, reducing rural poverty, and ensuring environmental sustainability.

Mozambique has pledged to address certain priority policy challenges, including the development and implementation of domestic and regional agro-inputs policies that encourage greater private sector participation in production, marketing, and trade under the New Alliance (G8 Cooperation Framework, n.d.), and steps are underway to address these gaps. A well-designed legal and regulatory framework, with streamlined procedures for market entry and trade could encourage the availability of a wide-range of fertilizers that would cater to the different needs of farmers working in different soil and climatic conditions. Similarly, a well-designed legal and regulatory system could improve the affordability of fertilizer by reducing costs of importation, transport, and distribution. Conversely, a complex and inefficient regulatory system may discourage the availability and affordability of fertilizers through cumbersome requirements, thereby increasing costs.

Mozambique's legal and regulatory framework for fertilizer is quite new and was put in place only in 2013. The framework consists of only a Regulation on Fertilizer Management, 2013 (Fertilizer Regulation), which was issued by the Council Ministers, and not a Fertilizer Act done through Parliament. This makes Mozambique's system vulnerable to change by the executive at any time, and, as is true in all legal systems, regulations do not have the same force of law as an

Act would. This situation has raised some question on the stability and predictability of the regulatory system in Mozambique. In addition, an autonomous regulatory agency was not created by the regulatory framework, and this is a notable gap in Mozambique's institutional structure. Despite these gaps in law and regulation, it is notable that Mozambique, in collaboration with AFAP, USAID, and the International Fertilizer Development Center (IFDC), has established a public-private dialogue to coordinate changes in fertilizer law and regulation, the Mozambican Association for Dialogue and Promotion of Fertilizer (AMOFERT). This platform is an example of a good regulatory practice that other countries should consider.

As the legal and regulatory system is tested in practice, a number of new opportunities, challenges, and gaps are arising. A draft Fertilizer Act has been developed, as initiated and driven by AMOFERT, and is now being considered by the government. The proposed Act, if passed, would mark a significant improvement over the current situation by addressing some of the limitations, loopholes, and gaps in the existing legal and regulatory framework, including establishment of an autonomous fertilizer institution. (the proposed changes will be highlighted in Table 1 below and in the following chapters).

This Legal Guide to Strengthen the Mozambican Fertilizer Market (Mozambique Legal Guide or Legal Guide) has been developed by the New Markets Lab (NML) in collaboration with the African Fertilizer and Agribusiness Partnership (AFAP) under the '*Support for the Establishment of a Regional Fertilizer Policy and Regulatory Framework for East and Southern Africa*' project, which is being implemented with support from the Scaling Seeds and Technologies Partnership (SSTP) of the Alliance for a Green Revolution in Africa (AGRA) through the U.S. Agency for International Development (USAID). The project is designed to contribute to the development of a regulatory environment that is conducive to open markets and encourage harmonization of fertilizer policies in the region, thereby increasing the availability of a wide range of better quality fertilizer grades, types, and technologies to farmers in Eastern and Southern Africa at more affordable prices. The project covers Ethiopia, Malawi, Mozambique, and Tanzania, each of which is the subject of a separate Legal Guide.

Both primary and secondary data were used in the development of this Legal Guide, including legal texts, regulations, policy documents, studies, and reports collected from different sources. In particular, AFAP studies on the four focus countries provided useful information and data. NML and AFAP carried out consultations in July 2016 in Maputo, Mozambique with representatives of key stakeholders involved in the fertilizer industry, including government institutions, fertilizer companies, and farmer organizations. These consultations helped the partners gain knowledge of stakeholder priorities, experiences, and challenges with the legal and regulatory system.

The Mozambique Legal Guide is structured in three chapters, which provide detailed information on the market, policy, legal, and regulatory framework for fertilizer in Mozambique and identify key regulatory challenges and approaches along the entire fertilizer value chain. Chapter One sets the context by providing background information on the Mozambican agricultural sector and level of fertilizer use in the country. It also takes a cursory look at the fertilizer market along the entire supply chain: manufacturing, distribution, and importation. Chapter Two examines the policy, legal, and regulatory frameworks governing fertilizer in Mozambique. Among other things, the chapter covers business registration, licensing, permits, product registration, and import requirements. Chapter Two also assesses the legal and regulatory framework and raises implementation challenges that are likely to impact agricultural sector development. Chapter Three discusses these implementation challenges and presents efforts underway to encourage regional harmonization of fertilizer regulatory frameworks.

Mozambique's policies and strategies recognize that improving the agricultural sector is key to reducing poverty and advancing economic development. However, agricultural productivity remains among the lowest in the region due in part to limited use of agricultural inputs such as fertilizer. The Government of Mozambique has started to take measures to increase the use of agricultural inputs, and a well-designed legal and regulatory framework will help realize this objective by facilitating the movement of quality and affordable fertilizer along the supply chain.

The regulatory framework in Mozambique could best be characterized as a work in progress. Development of the regulatory framework did not begin until 2012, when the Fertilizer Strategy was issued followed by the Fertilizer Regulation in 2013. The Fertilizer Regulation was a temporary executive intervention to fill a gap in the regulatory system, and a more solid legal structure would benefit the sector. A number of other challenges remain to be addressed as well, including the absence of an autonomous agency to regulate fertilizer.

Approval of the draft Fertilizer Act could significantly improve the regulatory environment in Mozambique; however, putting in place a good regulatory framework and an appropriate institution for fertilizer is only the first step. Implementation of the regulatory system will likely continue to be a challenge, as in other countries, and addressing capacity needs in order to encourage effective enforcement of regulatory frameworks will be an important next step.

The Legal Guide is designed to articulate the legal and regulatory framework in the fertilizer supply chain and identify key regulatory challenges facing the fertilizer market. Because it is meant to serve as a guide, it could be used to share information on the legal and regulatory environment, facilitate discussion among stakeholders, and guide ongoing efforts to establish an enabling environment conducive to development of the fertilizer sector. The key legal and regulatory issues presented in the Legal Guide are summarized in Table 1 below.

Table 1: Summary of Key Regulatory Issues in Mozambique

Issue	Current Status	Possible Approaches
Addressing Regulatory Gaps and Clarifying Regulatory Discretion	<ul style="list-style-type: none"> • The current Fertilizer Regulation has critical gaps and relatively wide discretion in some areas. For example, the regulation does not provide detailed rules on the criteria to evaluate fertilizer for registration. • In many areas, the Fertilizer Regulation provides wide regulatory discretion, including the power of revoking registrations, which is defined in very general terms. • Overall, expansive regulatory discretion and different interpretation of regulations can lead to inconsistent application and possible rent seeking activities, resulting in possible increases in farm gate prices for fertilizer. 	<ul style="list-style-type: none"> • Minimize uncertainty by providing details on regulatory provisions and functions through subsidiary legislation or issuance of detailed guidelines outlining how regulatory agencies will exercise discretionary power. These steps will help create a transparent and predictable regulatory framework and minimize the possibility of varying regulatory interpretations and possible rent seeking behavior.
Addressing Regulatory Fragmentation/ Creating a One-Stop Shop	<ul style="list-style-type: none"> • Multiple government institutions are involved in fertilizer regulation, which creates a significant burden on fertilizer importers and contributes to increased costs. • The new draft Fertilizer Act would establish an autonomous fertilizer agency, which would be a positive step forward. Although creation of this institution would reduce transaction costs, help preserve institutional memory, and build necessary regulatory expertise, the draft legislation, in its current state, stops short of establishing the agency as a one-stop shop that coordinates functions. 	<ul style="list-style-type: none"> • Establish an independent regulatory agency that can act as a one-stop shop, where businesses could complete all requirements. This agency could play an important role in facilitating a more efficient regulatory environment for the fertilizer industry. As Mozambique aims to significantly expand use of fertilizer in the country, streamlining the regulatory structure becomes increasingly urgent. The resulting reduction of regulatory costs will translate to reduced price of fertilizer at the farm gate level.
Addressing Challenges with Regulatory Instruments	<ul style="list-style-type: none"> • The current Fertilizer Regulation was issued by the Council of Ministers as an attempt to fill a gap in the legal system. In general, creating regulations before a governing law can lead to challenges in the design and implementation of the legal and regulatory framework. • As an act of the Council of Ministers rather than the parliament, regulations are less predictable in nature than a law and are not subject to parliamentary oversight. • In addition, the Fertilizer Regulation is lower in legal hierarchy than a Parliamentary Act, and, in case of conflict between the Fertilizer Regulation and any Act of Parliament, the latter would prevail. 	<ul style="list-style-type: none"> • Address the challenges associated with the design of the current regulatory framework by approving the draft Fertilizer Act.

Filling Gaps in Bio-Fertilizer Regulation	<ul style="list-style-type: none"> • While Article 4 of the Fertilizer Regulation does not seem to exclude bio-fertilizer from the definition of fertilizer, no specific provisions exist that take into account the unique nature of bio-fertilizers. 	<ul style="list-style-type: none"> • Address gap on bio-fertilizer regulation through the draft Fertilizer Act and subsequent regulations.
Implementing Subsidiary Legislation	<ul style="list-style-type: none"> • A comprehensive legal and regulatory system for fertilizer typically consists a Fertilizer Act that establishes the legal framework and subsequent Fertilizer Regulations with details on the framework's implementation. In a sense, the current Fertilizer Regulation attempts to provide both the framework and the details needed for its implementation, but the Fertilizer Regulation falls short of both objectives in many cases. 	<ul style="list-style-type: none"> • Enact the draft Fertilizer Act, which, in its current form is designed to provide a legal framework and is expected to be followed by more detailed regulations or other legal instruments such as directives.
Clarifying Fertilizer Registration Process	<ul style="list-style-type: none"> • Although Mozambique requires registration of fertilizer, the specific requirements are not clear. • Registration is required even for a fertilizer that is already in use in Mozambique, although the regulatory objective behind this requirement is not evident. • Current regulations seem to suggest that a fertilizer that is well-known in the international market would be required to undergo the same registration process as a new fertilizer. This requirement impacts options for different varieties of fertilizer with affordable prices for Mozambican farmers. • Any alteration in fertilizer composition, formulation type, quantity, or quality triggers a new registration process. This means that even small changes in the formulation of a registered fertilizer can require a completely new registration. This will negatively affect blends, because blends would be considered new and would need to go through the registration process even if there is only a change in formulation of nutrients already known to the Mozambican market. • Registration is valid for five years and can be renewed for a similar period upon payment of the renewal fee. The registration renewal process can be quite lengthy and the timing uncertain. In light of this, stakeholders have questioned the need for registration renewal. 	<ul style="list-style-type: none"> • Establish clear requirements for fertilizer registration through additional regulations or directives in order to create transparency and stability in the fertilizer regulatory system. • Eliminate the registration requirement for fertilizers well known in the international market (including those registered in the regional market), even if new to the Mozambican market, in order to benefit Mozambican farmers. In such cases, testing for quality and efficacy would suffice to ensure quality. • Eliminate registration requirements for blend fertilizers to boost investment in blending and provide farmers with more fertilizer options tailored to their soil needs. The quality of blend fertilizers could be checked through testing. • Evaluate registration renewal requirements, as there appears to be no regulatory purpose for requiring renewal. Inspection could ensure the quality of fertilizers even after five years. • Provide specific requirements for revocation of fertilizer registrations through regulations or other subsidiary legal instrument in order to enhance transparency and predictability in the regulatory system. • Look at other good regulatory practices. For example, some

	<ul style="list-style-type: none"> • The reasons for revocation of fertilizer registration are not clearly defined, which can lead to arbitrary application of the regulatory framework. • Mozambique seems to follow the approved list approach, whereby a fertilizer can be imported only if it is included on an established list. According to many stakeholders, this approach unnecessarily restricts the availability of fertilizers in the country and reduces options for farmers. This regulatory approach contributes to the limited fertilizer range registered in the country, which is not wide enough to cater to all soil types, crops and agro-ecological conditions prevailing in Mozambique. 	<p>countries in Africa, such as Zambia and South Africa, have adopted a regulatory approach whereby the government maintains a list of nutrients rather than a list of fertilizer grades. Fertilizer products offered for sale must be properly labeled with a guaranteed analysis and weight, and quality is controlled through ex post (instead of ex ante) mechanisms. Such an approach would allow for regulated quality at the retail level without unduly restricting market introduction of new fertilizer compositions based on approved ingredients.</p> <ul style="list-style-type: none"> • Although a good regulatory practice, ex post controls (measures taken following market entry rather than preceding it; leading up to and including truth-in-labeling approaches) do require sufficient enforcement capacity, and enhancing the capacity of Mozambican regulatory agencies will be critical.
Enhancing Standards and Quality Control	<ul style="list-style-type: none"> • No Mozambican standards currently exist for fertilizer, although there are now settled international standards for fertilizer imported into Mozambique. Mozambique could initiate a process to develop equivalent national standards that are tailored to particular geographic or infrastructural factors. • Quality control of imported fertilizer helps control entry of counterfeit and adulterated fertilizers, and Mozambique, requires all imported fertilizer to be analyzed for quality. 	<ul style="list-style-type: none"> • Encourage collaboration between the Ministry of Agriculture (MoA) and Mozambican Bureau of Standards (MBS) on fertilizer standards to both enforce international standards and develop appropriate equivalent national standards. Since standards development in Mozambique is demand-driven, the MoA has already initiated development of standards and should expedite the process and collaborate with other relevant agencies to develop standards for blends. • Ensure quality by requiring that imported fertilizer be accompanied by a certificate of quality issued by a recognized certification authority of the country of origin of the exporter.
Increasing Inspection Capacity	<ul style="list-style-type: none"> • Only 38 qualified fertilizer inspectors exist in the country, and some lack adequate training to conduct fertilizer inspections. 	<ul style="list-style-type: none"> • Increase the number of inspectors and improve their capacity through continuous training to help improve regulatory functions across the fertilizer value chain. • Leverage existing related services, such as extension services, in order to increase capacity for inspections.
Foreign Exchange Policy	<ul style="list-style-type: none"> • Mozambique's foreign currency policy requires all 	<ul style="list-style-type: none"> • Foreign currency related measures and restrictions pose a

	<p>registered fertilizer suppliers to convert all foreign receipts into 50 percent MT, and the government has put in place foreign exchange restrictions.</p>	<p>significant challenge to fertilizer importers.</p> <ul style="list-style-type: none"> Fertilizer is a critical commodity, and the government should reconsider foreign exchange measures as they relate to fertilizer.
Streamlining the Process for Import Permits	<ul style="list-style-type: none"> An import authorization is required for each consignment and is valid for three months, with renewal for the same period possible. Regulators assert two reasons for requiring an import permit for each consignment: one is quality control and the other data collection, yet these goals could be achieved through other means. Fertilizer importers see the requirement as an unnecessary burden. 	<ul style="list-style-type: none"> Consider eliminating import permits or issuing them for the entire period of the validity of the import license. Quality can be ensured through existing quality control procedures which exist irrespective of the import permit requirement. Introducing an online portal for submitting fertilizer registration documents (these have to be completed in triplicates for the three line ministries responsible, and evaluation can take up to 4 months).
Ensuring Appropriate Penalties for Violations	<ul style="list-style-type: none"> Under the Fertilizer Regulation, penalties are prescribed as “sanctions,” or fines, and “additional sanctions,” or measures that may be applied on top of fines. Fines may be too light (with the maximum of MZN 250,000 for adulteration and MZN 75,000 for selling unregistered fertilizer), yet additional sanctions appear severe in some cases. For example, “additional measures” for adulteration and selling unregistered fertilizer include closing the business in question. 	<ul style="list-style-type: none"> Evaluate penalties in light of deterrence goals, with penalties set at an appropriate level and fines raised without additional sanctions.
Addressing Import Duties and Value-Added Tax (VAT)	<ul style="list-style-type: none"> Mozambique imposes a 2.5 percent customs duty on inorganic fertilizer. The duty is set to be eliminated per the Fertilizer Strategy as part of the government’s drive to enhance agricultural productivity through increased use of fertilizer, although this has not happened yet. While fertilizer is exempt from VAT, services related to fertilizer, such as port and transport services, are still subject to a 17 percent VAT. 	<ul style="list-style-type: none"> Eliminate the customs duty and the VAT for fertilizer-related services, which could lower the price of fertilizer and increase affordability of fertilizer in line with the government’s regulatory goals.
Improving Access to Finance	<ul style="list-style-type: none"> Farmers’ access to quality seed, fertilizer, and agrochemicals is limited by challenges in accessing finance. 	<ul style="list-style-type: none"> Address certain legal elements of financial services delivery and tools for financing and present innovative solutions to challenges with access to finance, such as those around institutional capability (legal structures for aggregation models, including cooperatives, and other financial services delivery mechanisms), risk management (creation of collateral registry), and bankability.

		<ul style="list-style-type: none"> • Focus on analysis and increased collaboration between regulators and financial services providers to develop models that could close gaps related to financing for seeds, fertilizers, and agrochemicals.
Encouraging Regional Harmonization	<ul style="list-style-type: none"> • Farmers near national borders share similar soils and farming systems with farmers in neighboring countries. Regional harmonization of fertilizer rules and regulations would enable farmers in Mozambique to benefit from fertilizers developed in neighboring countries without having to register each fertilizer blend anew. • Mozambique is a member of the Southern African Development Community (SADC) and Common Market for Eastern and Southern Africa (COMESA). • COMESA, in partnership with AFAP, has undertaken a review of national policies and regulations on fertilizer importation, manufacturing, distribution, and use, with the aim of developing recommendations for the establishment of a harmonized regulatory framework for the region. • Regional harmonization of fertilizer in SADC has not yet moved forward. The SADC Ministers of Agriculture adopted the Regional Agricultural Policy (RAP) in 2014. While an important development in the move towards regional harmonization of agricultural policies, including fertilizer and other inputs, the RAP is meant only to define some common objectives and measures to guide members rather than serving as a binding mechanism that prescribes specific obligations for the member states. • In SADC, the broad policy objectives included in the RAP would need to be translated into specific legal instruments. As it stands now, the RAP represents a political commitment but not a legal commitment. 	<ul style="list-style-type: none"> • Encourage development of a regional fertilizer strategy within COMESA and SADC to increase competition in the local market and allow manufacturers and suppliers the opportunity of operating in a larger market with fewer constraints. It also could reduce administrative costs by sharing resources and facilities within the regional market. • Mozambique could take a lead on fertilizer harmonization efforts within the COMESA and SADC, as stakeholders in Mozambique’s fertilizer market stand to benefit from a harmonized regional market.
Strengthening Capacity of the National Fertilizer Dialogue Platform	<ul style="list-style-type: none"> • In Mozambique, AMOFERT is playing an important role by serving as a center of dialogue on fertilizer issues among a range of stakeholders (government, the private sector, and civil society). Such a platform, where issues affecting fertilizer could be discussed and addressed, is one way of 	<ul style="list-style-type: none"> • Strengthen AMOFERT’s capacity and extend funds for its different projects to ensure the continuity of the dialogue on fertilizer issues and help create a healthy fertilizer industry in the country.

	<p>establishing a healthy fertilizer enabling environment. In addition to facilitating regular dialogue, the platform also could improve understanding of the respective roles and responsibilities of the public and private sectors in the fertilizer market.</p> <ul style="list-style-type: none"> • AMOFERT has become a well-recognized forum in the country on issues related to fertilizer regulation, and it initiated drafting of the new draft Fertilizer Act of Mozambique, which is currently being reviewed by the government. 	<ul style="list-style-type: none"> • Mozambique’s fertilizer platform is an example of a good practice that could be replicated in other countries.
<p>Raising Awareness of the Legal and Regulatory System</p>	<ul style="list-style-type: none"> • Stakeholders have reported that importers, suppliers, agrodealers, farmers, and even regulators have limited knowledge and awareness about legal and regulatory frameworks. • Limited knowledge of legal processes and difficulty accessing legal assistance leaves smallholder farmers vulnerable and undermines efforts to implement formal legal frameworks to regulate and strengthen the fertilizer market. • Smallholder farmers in Mozambique are the most vulnerable group in the fertilizer industry because of their lack of knowledge about their rights and obligations in fertilizer transactions. 	<ul style="list-style-type: none"> • Address challenges through (i) increased dissemination of information regarding laws and regulations, particularly as these systems change over time, (ii) the provision of assistance to farmers in preparing or interpreting legal documents such as contracts, and (iii) the provision of transactional legal services to individuals working with the agricultural sector. • All of these steps could be done in combination with the development of a legal education curriculum to train and equip lawyers with the necessary facilities for effective delivery of agricultural legal services to stakeholders. Training farmers on different aspects of fertilizer laws and regulations that impact them and enhancing their knowledge about their rights and obligations could make them informed partners in the fertilizer industry.

Source: New Markets Lab

Chapter One:

An Overview of the Agricultural Sector and Use and Supply of Fertilizer in Mozambique

Overview of the Agricultural Sector in Mozambique

Mozambique, which is located on the east coast of Southern Africa and covers an area of 801,590 square kilometers (km²), has significant untapped agricultural potential. Agricultural exports comprise only 16 percent of total exports, and despite substantial growth in production over the last few years, Mozambique continues to be a net importer of agricultural products.

In 2014, Mozambique's population was estimated at 26 million people, with 68 percent of the population in rural areas (World Bank 2015). The agricultural sector contributes about 28 percent of gross domestic product (GDP) and is a pillar of the national economy (Rural Poverty Index). In addition, the sector employs approximately 80 percent of the active population, including 90 percent of the country's female labor force and 70 percent of the male labor force (Rural Poverty Index). If poverty is to be reduced, development of the agricultural sector will be fundamental.

Mozambique has 10 agro-ecological zones, mainly defined by rainfall and type of soil. There are over 36 million hectares (ha) of arable land, of which only 10 percent is in use (IFDC 2012). Approximately 90 percent of farmers in Mozambique are subsistence and small-scale producers, each cultivating an average of about 1.1 ha of land. The most important food crops are maize and cassava; cashew nuts, tobacco, cotton, and sugarcane are grown as cash crops (PEDSA 2010).

Mozambique has one of the best economic performance records in recent years in Africa, achieving an average annual growth rate of seven percent in the last decade (World Bank Development Indicators 2015). Its growth rate fell to 6.3 percent in 2014 as a result of the price increases in food and oil (World Bank Development Indicator 2015).

Despite its growth rate, over 50 percent of the Mozambican population still lives in poverty, which is higher in rural areas due to limited development of the agricultural sector, limited access to the market, and low productivity of food crops. Agricultural productivity in Mozambique is comparatively low within Africa. Average cereal yields in Mozambique (approximately 700 kg per ha) are below the average yields of neighboring countries (e.g., 2.1 tons per ha in Malawi and 2.7 tons per ha in Zambia). Limited access to inputs is one reason for Mozambique's low agricultural productivity (National Fertilizer Strategy 2012).

Eradication of extreme poverty and hunger are commitments of the international community and part of the New Alliance commitments, Millennium Development Goals (MDGs), and, building upon these, the SDGs, which aim to eradicate poverty and hunger by 2030. Given that a large majority of the poor in Africa, including Mozambique, live in villages and rely heavily upon agriculture, agricultural productivity and rural development are a significant factor in all of these efforts. The New Alliance, launched in May 2012, was founded upon the understanding that investment in agriculture is key to ending hunger and poverty in Africa and that creating the conditions that will allow the African countries to improve agricultural productivity and develop their agroindustry by attracting more private investment in agriculture will help unlock this potential (New Alliance 2014).

The ten New Alliance participating countries, including Mozambique, adopted ‘Country Cooperation Frameworks’ (CCFs), which list policy commitments, including those to reform or develop policies that will facilitate responsible private investment in agriculture in support of smallholder farmers. Notably, the Government of Mozambique has made commitments to facilitate increased access of fertilizer and other inputs by developing or reforming policies and regulations to enhance the participation of the private sector in the production, importation, and distribution of inputs including fertilizer (New Alliance 2012; See Box 1 below, which outlines commitments related to inputs, including fertilizer). Mozambique’s commitments include more fertilizer-specific items than do the commitments of some other countries. Action on a number of commitments is in progress, and fully addressing identified constraints and implementing the government’s commitments could significantly improve the climate for private investment in agriculture, enhance food security, and address poverty.

Commitments to increase investment in agriculture also abound within African institutions. In 2014, the African Union (AU) launched the Comprehensive African Agriculture Development Program (CAADP), which, among other things, requires African governments to allocate 10 percent of their national budgets to agriculture to attain a six percent annual growth rate in the agricultural sector and a 20 percent reduction in poverty for the entire continent. This commitment was reaffirmed by the AU Heads of State and Government in 2014 under the Malabo Declaration on Accelerated Agricultural Growth and Transformation for Shared Prosperity and Improved Livelihood, which pledged to end hunger in Africa by 2025 through, *inter alia*, doubling current agricultural productivity levels. Increased access to quality and affordable crop inputs will play a major role in these efforts.

Box 1: Mozambique’s Inputs-Related Commitments Under the G8 Cooperation Framework to Support the New Alliance for Food Security and Nutrition

Objective	Framework Policy Actions (G8)
Establish policies and regulations that promote competitive, private sector agricultural input markets, especially for smallholder farmers	<ol style="list-style-type: none"> 1. Revise and Implement National Seed Policy, including: <ul style="list-style-type: none"> • Systematically cease distribution of free and unimproved seeds except for pre-identified staple crops in emergency situations. • Allow for private sector accreditation for inspection. 2. Implement approved regulations governing seed proprietary laws which promote private sector investment in seed production (basic and certified seed). 3. Revise and approve legislation regulating the production, trade, quality control and seed certification compliant with the Southern African Development Community (SADC) seed protocol requirements. 4. Develop and implement a national fertilizer regulatory and enforcement framework. <i>Status: Ongoing; Draft Fertilizer Act proposed.</i> 5. Assess and validate the National Fertilizer Strategy. <i>Status: Ongoing.</i>
Promote the liberalization and facilitation of trade and marketing of agricultural products, especially for smallholder farmers	<ol style="list-style-type: none"> 10. Eliminate the Simplified VAT scheme and replace with the existing ISPC (Simplified Tax for Small Contributors).

Source: Adapted from G8 Cooperation Framework to Support the “New Alliance for Food Security and Nutrition” in Mozambique

In recognition of the urgent need for a strategic investment program to increase the availability and use of fertilizer in the continent, the AU Ministers of Agriculture convened in Abuja on 12 June 2006 and adopted the Abuja Declaration on fertilizers for an African green revolution. The Abuja Declaration has 12 resolutions, which include promoting regional trade in fertilizers, increasing usage of fertilizer to at least 50 kgs per ha, improving fertilizer value chain financing, improving distribution channels of fertilizers, promoting investment in fertilizer production, and improving access to complimentary inputs such as improved seed varieties and draught power.

Mozambique’s agricultural policies and strategies clearly recognize the role of fertilizer and other inputs to increase agricultural productivity and eradicate poverty, and thus they call for the increased use of fertilizer and other inputs. Both the **Strategic Plan for Agricultural Development** (PEDSA 2010-2019) and the **Mozambique Fertilizer Strategy** (2012) emphasize increased use of fertilizer and other inputs as critical elements in enhancing agricultural productivity and promoting economic development. The legal and regulatory environment will play a critical role in translating the broad goals of the public sector at the international, regional, and national levels into concrete action to enhance use of fertilizer and increase agricultural productivity. Depending upon their design and implementation, legal and regulatory frameworks

can encourage or discourage the availability of and access to fertilizer, and the numerous rules and requirements will individually and together play a role. African governments should thus ensure that legal and regulatory systems facilitate, not inhibit, their desire to enhance agricultural productivity, *inter alia*, through increased use of fertilizer.

Fertilizer Use in Mozambique

Fertilizer use is lower in Mozambique than in other parts of Africa. In 2014, fertilizer use was 9.3 kg per ha of arable land, which is well below the sub-Saharan African average of about 18 kg per ha of arable land (World Bank 2015). In contrast, fertilizer use in Malawi, Zambia, and Zimbabwe in the same period was 43.2 kg per ha, 42.1 kg per ha, and 36.8 kg per ha, respectively (World Bank 2015). Use of fertilizer in Mozambique also is far below the Abuja Declaration target of 50 kg per ha by the year 2015.

Fertilizer consumption is driven predominantly by the commercial agricultural industry and used mainly for the production of cash crops such as tobacco, cotton, and sugarcane. Only about four percent of the farmers use inorganic fertilizer (USAID 2015). As a result, average yields on staple crop crops such as maize remain low among smallholder farmers. In the last few years the Government of Mozambique has tried to promote the use of fertilizer in order to enhance agricultural productivity. Accordingly, fertilizer consumption grew from 50,000 MT in 2010 to more than 189,139 MT in 2014 (USAID 2015).

The cost of fertilizer is one of the key issues affecting access to fertilizer in Mozambique, especially for smallholder farmers (USAID 2015). Prices of fertilizer in Mozambique are higher than in other African countries (see Table 2). These prices are also higher in relation to crop prices than in countries like Kenya and Ethiopia (USAID 2015).

Table 2: Fertilizer Cost Comparisons

Country	Price (USD/MT (2011-2012))
Ghana	475
Ethiopia	614
Tanzania	682
Zambia	760
Mozambique	1023

Source: World Bank, Agribusiness Indicators

The main cost components for fertilizer are the product cost (FOB price), followed by internal transport and profit margins (USAID 2015; IFDC 2012), with the former accounting for 69 percent and the latter for 61 percent (USIAD 2015). While FOB prices are subject to

international market prices and are out of the control of importers, a notable portion of the fertilizer price can be attributed to other factors, which, if effectively addressed by regulators, could significantly cut the cost and make these inputs more accessible to farmers. These factors include transport, infrastructure, costs associated with regulation (such as registration, licensing and permits), and limited competition in the sector. The resulting costs can be addressed in a number of ways, including by removing unnecessary bottlenecks in the value chain, improving infrastructure, expanding access to finance, and reducing the costs of licensing and other regulatory compliance (Seed and Fertilizer Policy in Africa, 2013). Understanding the reason for high costs along the distribution line is critical for an effective regulatory system that aims at improving efficiency and reducing some cost elements. These factors will be discussed in greater detail below.

The quality of Mozambique’s transport infrastructure (physical and institutional) is lower than that of most other African countries. The poor quality of transport infrastructure not only causes small-scale farmers to pay a higher price for fertilizer and other inputs but also results in lower prices for their agricultural products (USAID 2015). Investment in transport infrastructure is certainly critical to transforming agriculture in the country in general and to ensuring availability and affordability of fertilizer and other inputs for small farmers.

Profit margins also are higher in Mozambique compared to other countries. The significant margins in Mozambique are partly explained by the relatively thin fertilizer dealer networks in the country (USAID 2015). Mozambique has far fewer fertilizer distribution points than other African countries (World Bank Agribusiness Indicators). Because of the low number of farmers who use fertilizer, servicing widely dispersed distribution points is costly, and these costs are recouped through high margins (USAID 2015). The major sellers of fertilizer have only 22 selling points, of which only 14 are outside of Beira and Maputo. Only one is located north of Beira (USAID 2015).

Table 3: Comparison of Fertilizer Dealer Networks

Country	Dealers/10,000 farmers
Ghana	8.4
Kenya	5.8
Ethiopia	2.2
Tanzania	1.3
Mozambique	0.3

Source: World Bank Agribusiness Indicators (2012)

This situation can be attributed to the lack of incentives for the use of fertilizers due to poor commercialization of food markets and crops. For example, input providers have little incentive

to increase the amount or variety of inputs available due to lack of effective demand (Fertilizer Strategy 2012).

On the demand side, access to finance remains low among farmers and agrodealers. In order to improve small holder farmers' access to fertilizers, the government of Mozambique (primarily MoA) in collaboration with the European Union (EU), the Food and Agriculture Organization of the United Nations (FAO), and the International Soil Fertility and Agricultural Development Centre (IFDC), implemented a pilot voucher-based fertilizer and seed subsidy program in 2009. The subsidy program has improved use of fertilizer, but access to finance remains a critical impediment to further expanding the use of fertilizer in the country.

The primary fertilizers used in Mozambique are urea and NPK for food crops (maize, rice and vegetables); urea, NPK and CAN for tobacco, and urea, NPK, and CAN, and DAP for sugarcane (Fertilizer Strategy 2012).

Table 4: Estimated Fertilizer Use on Various Crops in Mozambique in 2013 and 2014

Crop	Fertilizer 2013 ton	Percent 2013 %	Fertilizer 2014 ton	Percent 2014 %	Average ton	Average %	Cumma- lative %
Sugarcane	71 938	40,52%	81 188	42,92%	76 563	41,76%	41,76%
Tobacco	46 175	26,01%	55 011	29,08%	50 593	27,59%	69,35%
Banana	29 471	16,60%	32 200	17,02%	30 836	16,82%	86,17%
Baby corn	10 742	6,05%	5 285	2,79%	8 014	4,37%	90,54%
Vegetables	2 184	1,23%	3 561	1,88%	2 872	1,57%	92,11%
Pines	0	0,00%	2 700	1,43%	1 350	0,74%	92,84%
Cereals, Vege- tables & Pulses	5 110	2,88%	2 681	1,42%	3 896	2,12%	94,97%
Chilies	2 392	1,35%	2 171	1,15%	2 282	1,24%	96,21%
Maize	1 163	0,66%	1 610	0,85%	1 386	0,76%	96,97%
Peas	1 672	0,94%	1 076	0,57%	1 374	0,75%	97,72%
Fine beans	897	0,51%	789	0,42%	0 843	0,46%	98,18%
Potatoes	292	0,16%	384	0,20%	0 338	0,18%	98,36%
Rice, paddy	135	0,08%	145	0,08%	0 140	0,08%	98,44%
Sunflower	120	0,07%	135	0,07%	0 128	0,07%	98,51%
Cotton	120	0,07%	117	0,06%	0 119	0,06%	98,57%
Jatropha	70	0,04%	90	0,05%	0 080	0,04%	98,62%
Soybeans	61	0,03%	13	0,01%	0 037	0,02%	98,64%
Eucalyptus	5 000	2,82%	0	0,00%	2 500	1,36%	100,00%
Total	177 544	100,00%	189 157	100,00%	183 350	100,00%	

Source: Zandamele 2015

Urea in particular is expensive because it is imported from South Africa, where it is brought in from other countries (IFDC 2012). Fertilizer is transported by road and is a heavy product to transport, resulting in high transaction costs.

Fertilizer Production, Procurement, and Distribution

The fertilizer market in Mozambique is fully liberalized, and private companies are the main players in the industry (See Table 5). The four main private input companies (namely, Green Belt, Mozambique Fertilizer Company, OMNIA, and ETG) are responsible for the importation of most of the fertilizer into the country. The principal source of fertilizer for use by the Mozambican smallholder farmers is South Africa, and fertilizer is generally brought into Mozambique duty free under the trade rules of SADC. Beira Port, Nacala Port, and South Africa (by truck) are the main entry points for fertilizers in Mozambique.

There are approximately 15 small and medium companies that sell inputs as wholesalers and retailers, such as Africa Fertilizer Ltd., Agrifocus, Agroglobal, TECAP and Rural Solutions, with representation in almost all provincial capitals and some district headquarters (AFAP 2016) (See Table 5). It is estimated that there are only about 400 effective agrodealers throughout the country; they serve approximately four million farm households (AFAP 2015), which forces farmers to travel long distances to find the nearest agrodealer.

Table 5: Major Importers and Distributors of Fertilizer in Mozambique

No	Name
1	Africa Fertilizers Lda
2	Agrifocus Lds
3	Agroglobal Lda
4	Biochem
5	ETG
6	Green Belt Fertilizers
7	Kynoch
8	Lusosem
9	Mitsui Corporation
10	Mozambique Fertilizer
11	Omnia
12	Saval Sa
13	Tecap Lda

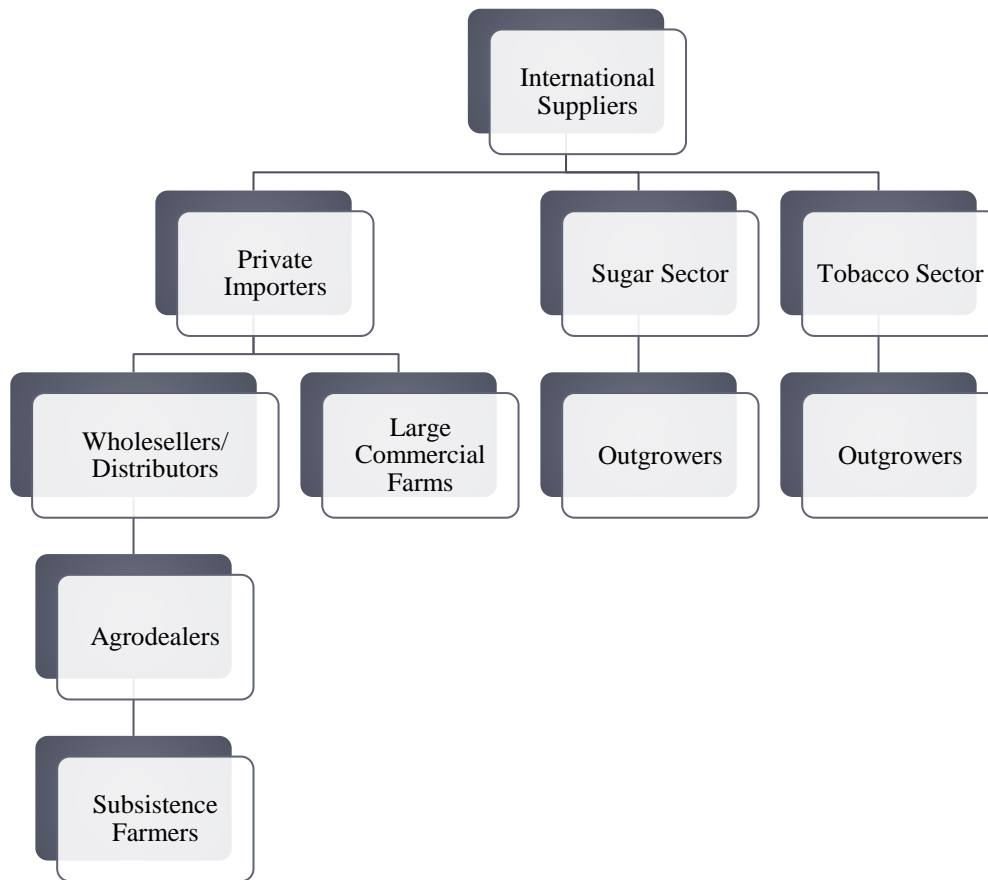
Source: AFAP 2016

Fertilizer supply is inefficient, with high costs due to (a) relatively expensive sourcing from South Africa, where the fertilizer industry does not enjoy the economies of scale of the major international producers; (b) small volumes shipped; and (c) high transportation costs incurred through the use of both small vessels engaged in coastal shipping and trucks traveling over poor road networks (AFAP 2015).

It is notable the price of fertilizer in landlocked Malawi, which uses Mozambique’s ports to import its fertilizer, is lower than the price in Mozambique. This is a clear indication of the inefficiency of the supply system in Mozambique. In 2010, the price of urea per ton in Mozambique was USD 882, compared to USD 701 in Malawi. The price of CAN in the same year per ton in Mozambique was USD 820, while it was USD 734 in Malawi (Africafertilizer.org).

Inefficiencies can be traced to each stage of the supply chain (See Figure 1) in the country, including the port operations in Beira and Nacala, where virtually all fertilizer imported into the country is offloaded, as well as the domestic transportation infrastructure, which adds to the costs of distribution (USAID 2015). These inefficiencies in Mozambique will have a spillover effect on countries that import their fertilizer through Mozambique’s ports, such as Malawi, Zambia, and Zimbabwe.

Figure 1: Fertilizer Supply Chain in Mozambique



Source: Modified from AFAP (2016) and IFDC (2012)

Mozambique's imports of fertilizer are generally small compared to other countries, and the country could benefit from economies of scale by coordinating imports with those of other countries. This efficiency gain will allow larger shipments at lower unit costs offloaded in the Mozambican ports. Mozambique is one of the few African countries that levies customs duties on fertilizer imports (2.5 percent). Although the customs duty accounts only for approximately 1.8 percent of the total costs, it nonetheless is a cost factor (IFDC 2012). Mozambique's Fertilizer Strategy calls for the removal of the customs duty as part of the broader strategy to improve the agro-input system in the country, but this has not yet been realized.

Local fertilizer production remains small-scale, with a few companies blending fertilizers using imported raw materials in Beira and Chimoio and in central provinces of Sofala and Manica (AFAP 2015). Mozambique has some high-quality phosphate deposits that could be exploited, and the government is seeking foreign investment in nitrogen fertilizer production to make use of the country's large natural gas reserves (AFAP 2015).

Fertilizer Subsidies

The Government of Mozambique introduced a fertilizer subsidy program, the FISP, in 2009. The FISP is a voucher-based program intended to stimulate fertilizer demand (World Bank 2014), which was meant to increase maize production and reduce import dependency (Carter et al. 2016). The FISP is implemented by the MoA in partnership with the FAO and the IFDC and covers 73 percent of the cost of 12.5 kg of seed and 100 kg of fertilizer (World Bank 2014). More than 15,000 farmers were given vouchers, which were used mainly for maize production, with the balance used for rice production (World Bank 2014).

From 2007 to 2013 the Mozambican government spent about USD 1.1 billion on fertilizer programs, with 93 percent dedicated to the subsidy scheme and roughly USD 150 million used for inputs (Carter et al. 2016). There were some initial positive findings concerning the direct and indirect benefits of the subsidy system (World Bank 2014), and there is evidence that maize yields increased as a result of increased use of fertilizer (Carter et al. 2016). The MoA completed the pilot program and launched a four-year subsidy program for the period 2014 to 2018, targeting 30,000 farmers in five provinces. The subsidy package is composed of improved seed, fertilizer, and crop protection products. Despite yielding some benefits, the program has been controversial, in part due to the appropriateness and sustainability of the system and also due to the way in which it is being administered.

With regard to the appropriateness of the subsidy program, FISP seems to be well-tailored to the particular context in Mozambique. As noted earlier, fertilizer use remains extremely low in Mozambique, with only about four percent of smallholder farmers using fertilizer, and farmers lack knowledge of the potential benefits of fertilizer use and have difficulty accessing financing

for fertilizer and other inputs. An expanded subsidy program could induce wider familiarity and take-up, which, in turn, could result in a change of farming patterns that could lead to productivity improvements. However, the program should be guided by well-defined objectives and an exit strategy. It also should be clear that the subsidy program is meant only as a temporary program designed to address a specific problem until farmers gain better knowledge about the benefits and use of fertilizer.

A number of stakeholders have also raised concerns with the system related to its sustainability. FISP constitutes a major investment for the government and its development partners. From 2007 to 2013 the Mozambican government spent about USD 1.1 billion on fertilizer programs, and 93 percent of this went into the subsidy scheme (ACB 2015). The system may present a challenge for Mozambique, given limited resources, and the government and donors may not be able to sustain such a large subsidy program indefinitely. Again, this calls for a careful articulation of the objectives of the program and a clear timeline to phase it out once the objectives have been met (including popularizing fertilizer use by farmers). A more sustainable approach to encourage increased use of fertilizer in the country may be to enable farmers to buy fertilizer from the market if the price is reasonable, with the government focused on addressing the demand-side and supply-side constraints affecting fertilizer production, importation, and distribution as well as easing the regulatory process.

Most of the concerns surrounding the FISP are, however, related to the way in which the system is being administered and implemented. Some of these concerns include: delays in settlement of the vouchers (reimbursement); administrative challenges; lack of transparency; and selection of beneficiaries based on political considerations (rather than need).

Given the legal and regulatory focus of this Mozambique Legal Guide, the international disciplines on agricultural subsidies are worth a brief mention for context. The Agreement on Agriculture of the World Trade Organization (WTO) establishes disciplines on domestic subsidies that Members may provide to their agricultural sectors. Agricultural domestic support measures that have a direct effect on production and trade are subject to certain disciplines that determine the extent of their use. Measures are classified according to a “traffic light system” comprised of an amber box, blue box, and green box, and all Members must commit to reduce the amount of money spent on domestic support measures for the agricultural sector each year, i.e., their “Aggregate Measure of Support (AMS).” Measures that fall under the amber box, or subsidies that distort trade and production such as some input support subsidies, count towards the AMS calculation, and any amber box subsidy above the AMS is prohibited.

However, Article 6(2) of the Agreement on Agriculture provides for special and differential treatment (S&DT) for developing countries, exempting certain domestic support measures from the AMS calculation. Under Article 6(2), developing countries Members may exempt from their AMS calculation any domestic support measures that are intended to “encourage agricultural and

rural development” as “an integral part of the development programmes of developing countries,” including “agricultural input subsidies generally available to low-income or resource-poor producers.” As a developing country, the S&DT provisions of the Agreement on Agriculture, would apply to Mozambique, which would likely pertain to the FISP program. Domestic support is, however, a complicated area of law and would bear further assessment. It is important to be aware of this context, and no other international or regional trade rules limit Mozambique’s ability to provide input subsidies.

Chapter Two: The Institutional, Policy, Legal, and Regulatory Framework for Fertilizer

Fertilizer Policy and Strategy

Countries typically govern fertilizer through a combination of policy and legal instruments. A fertilizer policy generally is viewed as the foundation that sets the overall direction for developing the enabling environment for fertilizer, with laws and regulations then enacted to create more specific, more binding rules and obligations. Mozambique does not have a specific policy on fertilizer, but it did establish a fertilizer strategy in 2012, as discussed below.

Box 2: Mozambique's Policy, Legal, and Regulatory Instruments

Current Instruments:

- Strategic Plan of Agricultural Sector Development (PEDSA) (2010-2020)
- Fertilizer Strategy, 2012
- Fertilizer Regulation, 2013

Instruments under Development:

- Fertilizer Act

Source: New Markets Lab

As an overarching policy, Mozambique's **Strategic Plan of Agricultural Sector Development (PEDSA)** is the government's blueprint for the development of the agricultural sector for 2010-2020. PEDSA aims to contribute to food security and producer income in a competitive and sustainable manner, guaranteeing social and gender equity. PEDSA envisages doubling annual agricultural production in 10 years and increasing agricultural productivity to an annual average growth rate of 7.25 percent through increased productivity (higher yields per ha) and expansion of cultivated area. To transform the country's agricultural sector, PEDSA emphasizes that the government should promote an enabling environment for investment through policy reforms and the provision of public services in infrastructure, market information and management of natural resources, and research and extension services.

Specifically, the PEDSA outlines the following objectives:

- Consolidate agricultural research and link with extension;
- Develop a network of agrodealers to transfer seed and fertilizer technologies;
- Develop product value chains and markets; and
- Encourage public-private partnerships (PPPs) for investments in agriculture.

Mozambique's **Fertilizer Strategy** seeks to stimulate the supply and demand of fertilizer to and from farmers in order to increase soil and crop productivity, while taking into account environmental considerations. The strategy recognizes that no region of the world has been able to expand agricultural growth rates, and thus tackle hunger, without increasing fertilizer use.

Box 3: Specific Targets of Mozambique's Fertilizer Strategy

- Increase use of fertilizers by least 90,000 MT; 120,000 MT and 150,000 MT in 2013, 2014, and 2015, respectively;
- Exempt fertilizer transactions from custom duties and VAT by 2012
- Establish fertilizer regulatory framework
- Approve Fertilizer Regulations (2012)

Source: Fertilizer Strategy

The specific objectives of the Fertilizer Strategy include:

- Design and implement a subsidy program for fertilizers and complementary inputs (seed, market information, etc.) for farmers;
- Establish training programs for farmers on fertilizer use and management;
- Promote the development and adoption of integrated use and management of fertilizers; and
- Facilitate access to credit.

The expected results of the Fertilizer Strategy are:

- Increased availability and consumption of fertilizers;
- System for quality control on fertilizer;
- Increased knowledge among technicians, farmers, extension agents, and others on the proper use and management of fertilizers;
- Improved environment for the establishment of a fertilizer industry;
- Updated soil mapping;

- Increased number of farmers using fertilizers;
- New technologies for production of organic fertilizers;
- Approval and implementation of fertilizer regulations; and
- Preparation and implementation of fertilizer subsidy programs.

Institutional Framework

Mozambique does not yet have a sound institutional structure for fertilizer development. Mozambique's **Fertilizer Regulation** does not establish an autonomous fertilizer agency and instead calls for a multi-sectoral body, the Registrar within the **MoA** (See Box 4), to oversee enforcement of the regulatory framework.

Box 4: Powers and Responsibilities of Mozambique's Registrar

- Propose the ban of certain fertilizers;
- Propose the updating and reinforcement of regulatory measures related to fertilizer management;
- Propose the ratification of conventions and other international standards applicable to fertilizer management;
- Supervise, inspect and control all activities related to the production, export, import, transit, transport, use, donation, commercialization, handling, elimination, and management of fertilizers;
- Collect samples, perform analysis and testing of fertilizers distributed in Mozambique, at any time and place and to the extent deemed necessary, to ensure that they comply with the provisions of the Fertilizer Regulation and International Standards and respect treaties and International Conventions to which Mozambique is part;
- Publicize the dangers of misuse and handling of fertilizers;
- Build capacity among State and local authorities, municipalities and promotion centers and rural extension on fertilizer matters; and
- Ensure compliance with and disseminate the Regulations

Source: Fertilizer Regulations (2013)

The Fertilizer Regulation also establishes a **Technical Advisory Committee on Fertilizers (Advisory Committee)** to advise the MoA on matters related to fertilizers, including the implementation of legislation (Fertilizer Regulation Article 6). Chaired by the MoA, the Advisory Committee draws its membership from different ministries (health, environment, natural resources, trade and industry, science and technology) and other agencies such as the **National Institute of Standards and Quality** (Fertilizer Regulations Article 9). While the Fertilizer Regulation requires that the Advisory Committee should include a representative from

among producers, there is no specific requirement to include representatives of importers or traders of fertilizer.

Mozambique does have a process for fertilizer registration, and the Fertilizer Regulation established the **Technical Evaluation Committee for the Registration of Fertilizer** that would draw from a range of ministries and agencies including **MoA; Ministry of Health; Ministry of Land, Environment and Rural Development**; and the **Institute for Agriculture Research of Mozambique** (Fertilizer Regulations Article 7). The Committee is entrusted with a wide mandate to evaluate registration applications and propose the approval or disapproval of registration of fertilizers; determine technical conditions to be followed in the import, export, production, donation, commercialization, handling, and application of fertilizers; and propose restrictions on the use of certain fertilizers (Fertilizer Regulations Article 8).

Box 5: The Mozambican Association for Dialogue and Promotion of Fertilizer Use

AFAP, in partnership with USAID and IFDC, helped to create the Mozambican Association for Dialogue and Promotion of Fertilizer Use (AMOFERT). AMOFERT is a platform through which the public sector, private sector, non-governmental organizations (NGOs), development partners, producers, and other stakeholders in the fertilizer value chain can identify and discuss key issues affecting the fertilizer sector.

Unique Characteristics of AMOFERT:

- Forum to discuss issues exclusively related to fertilizer
- Membership across a wide spectrum of actors and stakeholders
- Drafted the Fertilizer Act with the participation of stakeholders

Other specific issues under discussion include:

- Taxes charged along the fertilizer value chain, including imports
- Specific policies, which can stimulate the performance of the fertilizer sector

Source: Based on Field Consultations by New Markets Lab and AFAP

Mozambique's institutional structure also is unique because of a public-private platform for fertilizer policy, the **Mozambican Association for Dialogue and Promotion of Fertilizer (AMOFERT)**, See Box 5), created by AFAP, USAID, and the IFDC. AMOFERT is an example of a good regulatory practice, as it establishes a channel for dialogue around current and proposed policy and legal measures. In particular, AMOFERT has been active in the development of the new draft Fertilizer Act.

Legal and Regulatory Framework

Carefully designed and implemented fertilizer laws and regulations can help facilitate availability, quality, and access to fertilizer by end users. By setting clear standards for fertilizer quality and efficacy, these legal instruments can mitigate investment risk and boost the confidence of fertilizer businesses and farmers. Apart from establishing basic requirements for the production, licensing, shipment, and sale of fertilizer, a well-designed legal and regulatory fertilizer system can streamline the fertilizer value chain and reduce costs. It also can facilitate access to new fertilizer compounds by permitting new products to enter the country.

The Government of Mozambique increasingly has recognized the importance of agriculture in the country's economy and its central role in economic development and poverty reduction. A well-designed legal and regulatory system for fertilizer could help Mozambique achieve its development objectives by facilitating efficient and less costly movement of fertilizer along the value chain. Standalone regulation of fertilizer is a relatively recent development in Mozambique. A specific regulation governing fertilizer was issued only in 2013, and Mozambique does not yet have a Fertilizer Act (although a draft Fertilizer Act now exists).

Previously, fertilizer was treated as a chemical substance, and its importation and use were treated in the same way as other chemicals. The absence of a specific regulatory framework governing the entire fertilizer value chain was highlighted in the 2012 Fertilizer Strategy. In 2013, the Council of Ministers issued the **2013 Fertilizer Regulation** as a way to expedite development of a legal system by leaving a Fertilizer Act which would require the Parliament for subsequent action.

This is a somewhat uncommon way of building a legal system for fertilizer, however, as regulations are normally preceded by parent legislation (such as a Fertilizer Act). Regulations are typically developed to enforce an Act and provide additional detail on its procedures, however Mozambique's experience is not necessarily unique. This form of rulemaking has its advantages and disadvantages. On the one hand, developing regulations before a parent act can be a quicker procedure, as this is an administrative legal action that the executive branch can carry out without an act of Parliament, the latter of which is typically a much more complex and timely process. On the other hand, regulations are a less reliable legal instrument than legislation, because there are fewer checks and balances on their development (the executive branch has this power, which sometimes is exercised without sufficient notice and comment), thus creating uncertainty in the market. In addition, regulations have less authority than Parliamentary acts, and any conflict between the two instruments would be resolved in favor of the latter. All in all, this creates an enabling environment that may not be attractive to potential investors in the sector. A Fertilizer Act in Mozambique would contribute to a more stable and predictable legal and regulatory framework on fertilizer than the Fertilizer Regulation alone can.

The Fertilizer Regulation is divided into eight chapters, each chapter addressing different aspects of fertilizer market regulation (see Box 6).

Box 6: The Structure of Mozambique's Fertilizer Regulation

Chapter One: General Provisions

- Objectives of the Regulation
- Scope of application of the Regulation

Chapter Two: Institutional Competencies

- Establishes the Registrar to administer the Regulation
- Establishes the Technical Evaluation Committee for registration of fertilizers and determine its competence
- Establishes the Technical Advisory Committee on Fertilizers

Chapter Three: Registration

- Requirements and application for registration
- Rules on the registration of fertilizer
- Procedures for Registration
- Criteria for evaluation

Chapter Four: Production, Import, Export, Storage, Commercialization and Transport of Fertilizer

- Requirements for production of fertilizer
- Import requirements
- Export and transit
- Storage of fertilizer
- Transport and Packaging

Chapter Five: Inspection

- Competence of inspectors
- Inspection procedures

Chapter Six: Fees, Offenses and Penalties

- Amount and distribution of fees
- Offenses and penalties for violations of the provisions of the Regulation

Chapter Seven: Special Provisions

- Standards for fertilizer deficiency
- Obsolete fertilizer

Chapter Eight: Final Provisions

- Remission
- Inter-institutional agreements

Source: Fertilizer Regulation 2013

There are a number of requirements to engage in the fertilizer business in Mozambique, some of which are applicable to the fertilizer business specifically (provided for by the Fertilizer Regulation), while others apply to any business activity in the country. These requirements are described below.

Commercial Registration and Business Licensing

The Fertilizer Regulation does not contain rules on registration and licensing of fertilizer businesses. Any person who wishes to engage in the fertilizer business should go through the registration procedures provided for by the relevant laws and obtain a certificate of registration (Decree-Law 1/2006 of 03 May).

In Maputo, the **Commercial Registrar Office of Maputo** conducts business registrations. An application for registration shall be accompanied by the following documents:

- Notarized certificate of Articles of Association (*estatutos*);
- Notarized copy of Government Gazette (*Boletim da República*); and
- Proof of payment of the registration fees.

There is no fixed fee for registration, and the fee differs according to the share capital of the company. A company with capital share up to MZN five million will be charged 0.2 percent of the capital registration fee, while a company with a capital share over MZN five million will be charged 0.1 percent of the capital (World Bank Doing Business 2015).

In addition to registration, a businessperson in Mozambique needs to obtain an operating license. The requirements for licenses vary for the commercial and the industrial sectors.

The application for commercial licenses includes the following documents:

- Simple plan of the premises;
- Notarized certificate of Articles of Association (*estatutos*);
- Commercial registration certificate;
- Proof of right to occupy the business premises, which can take the form of either a rental agreement or property title;
- Copy of the proof of issuance of the Unique Tax Identification Number; and
- Notarized copy of the identity document of the person signing the application letter.

Requirements for industrial licenses vary depending on the category of the particular industry. These include large-scale, medium-scale, small-scale, and micro-scale (based on the investment amount and number of workers). Small-scale industry licenses are granted at the provincial level, while medium- and large-scale industry licenses are approved at the national level by the **Ministry of Industry and Commerce** in Maputo. Micro-industry enterprises are exempt from industrial licensing and instead are only required to register before trading occurs.

The industrial license application includes following information and documents:

- Name and details of representative, and address of company headquarters;
- Copy of the certificate of Articles of Association (*estatutos*);
- Copy of the commercial registration (*registro comercial*);
- Address of planned factory;
- Proof of payment of fee;
- Proof of ownership, lease agreement or land usage title;
- Project plan; and
- Notarized signature of the company's authorized representative.

The fee for operating licenses is 50 percent of the minimum wage for the public sector, which is revised every year (World Bank Doing Business 2015).

There are separate rules for import and export licenses. First, both import and export licenses must be requested from the Ministry of Industry and Commerce. Second, the applicant must specifically refer to “import and export” in the “Objectives of the Company” article of its Articles of Association (*estatutos*). Otherwise, the procedures and requirements are the same as for commercial licenses. An import license is valid for one year from the date of issue, and an export license is valid for the period of validity of the company's operating license (*alvará*).

The Government of Mozambique has established several measures to improve the business environment that have implications for the fertilizer sector. In 2014, Mozambique launched the Integrated Platform for Services to Citizens (the e-BAÚ Platform), which has helped to reduce the number of procedures required to obtain a business license and linked various regulatory offices at the provincial and ministerial levels. As a result, the process has simplified from five procedures to merely two, and is much faster, as applicants can obtain their business licenses in 10 days instead of the previous 36 days.

Production and Distribution

The **Fertilizer Regulation** includes rules on fertilizer production and distribution by authorized and licensed companies. The construction, adaptation, or alteration of fertilizer production and storage facilities is subject to authorization from the Registrar based on an inspection report by a team drawn from **Ministries overseeing the areas of agriculture, environment, industry and trade, public works, and health** (Article 22 Fertilizer Regulation).

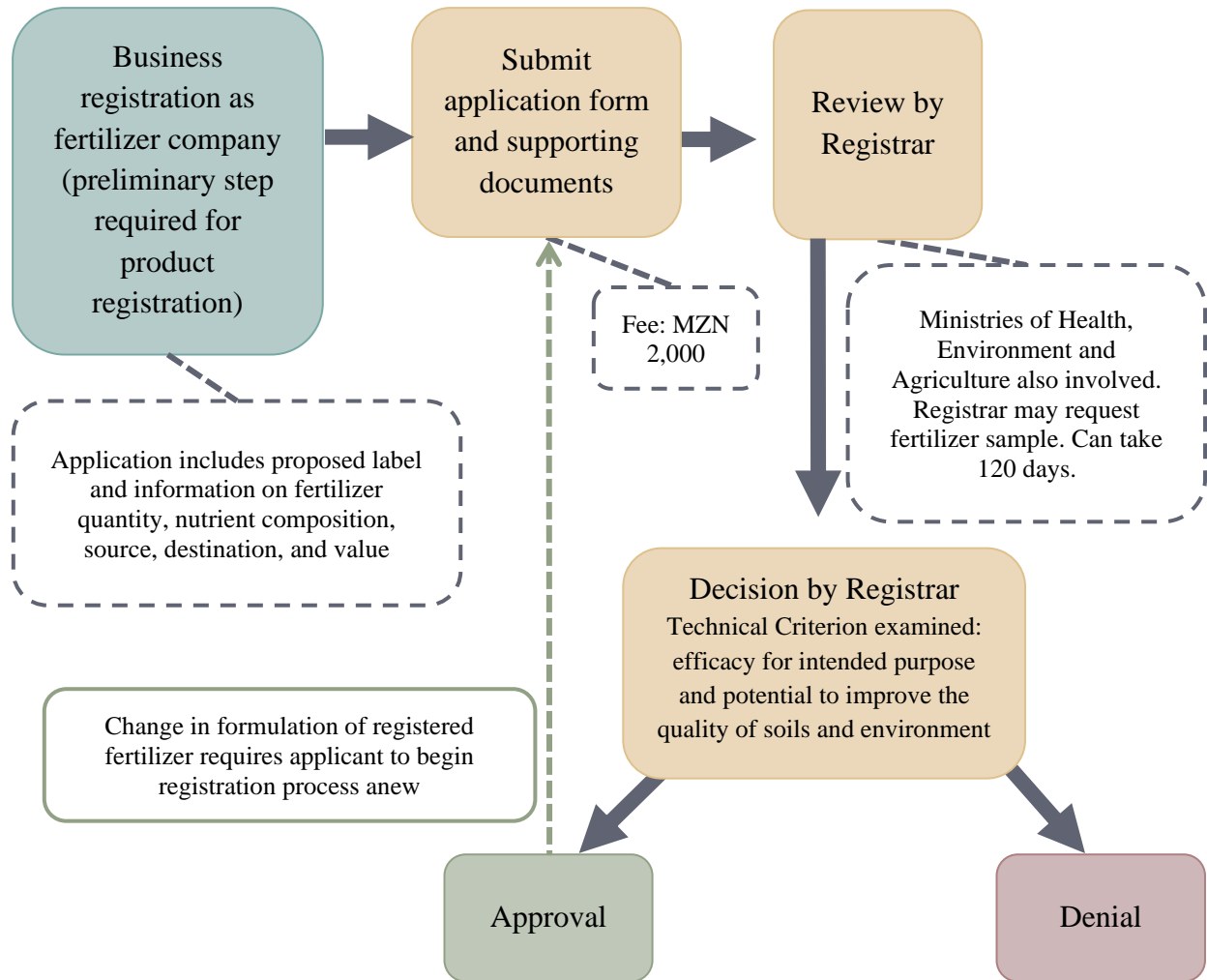
The Fertilizer Regulations provide guidelines for the establishment of fertilizer testing laboratories at production sites. Accordingly, fertilizer production facilities must have a laboratory duly equipped with technical and human resources that ensure the control of raw materials and the technological process used to guarantee the conformity of the product with reference standards. The laboratories are subject to periodic inspections by the ministries overseeing the areas of agriculture, environment and health (Article 23 Fertilizer Regulation).

Distribution of fertilizer can only be carried out by fertilizer distributors registered by the Registrar and in possession of a certificate (Article 30 Fertilizer Regulation). A fertilizer distributor is required to provide to the Registrar, on a semi-annual basis, the samples of fertilizers acquired or sold as well as stocked. The commercialization of fertilizers with nutritional low weight deficiencies and for experimental purposes is forbidden.

Product Registration

As discussed above, the production, distribution, and importation of fertilizer in Mozambique are subject to registration under the requirements of the **Fertilizer Regulation** (Article 10 Fertilizer Regulation). Fertilizers themselves must also be registered, and in order to register a fertilizer product, the applicant must first be registered as a fertilizer company. The registration of fertilizers can be for experimental, interim, or definitive use. The application consists of the application form, including all supporting documents, and the proposed label (Article 14.1 Fertilizer Regulation). In principle, an applicant is only required to supply details of the fertilizer (quantity, nutrient composition, source, destination, value etc.), and there is no requirement for testing samples of the product to be registered.

Figure 2: Fertilizer Registration Process in Mozambique



Source: New Markets Lab

In practice, however, the Registrar may, if necessary, request a sample of the product and the containers (Article 14.3 Fertilizer Regulation). Any alteration in the fertilizer composition, quantity, quality of ingredients, or formulation type generates a new registration process (Article 14.4 Fertilizer Regulation). Requiring a new registration process for even small changes in product composition will negatively affect blending efforts, since such products would need to go through the registration process even if there is only a change in the formulation of nutrients already known in the market. Under the current regulation, registration is required even for a fertilizer already in use in Mozambique. The purpose of such a rule is not clear to stakeholders. Once registered and used in the country, the quality of the fertilizer could be ensured through other regulatory tools, such as inspection and random checking and testing rather than through registration, which is cumbersome and costly.

The Fertilizer Regulation sets forth two technical criterion to evaluate a fertilizer for the purpose of registration: (1) efficacy for intended purpose and (2) potential to improve the quality of soils and environment (Article 16.1 Fertilizer Regulations). In practice, fertilizer registration involves three separate approval processes by three institutions: **the Ministries of Health, Environment, and Agriculture**. The entire process may take up to 120 days to complete, and the registration fee is MZN 2,000 (or approximately USD 67). The Registrar may issue an interim registration certificate when the available data is insufficient to make a final decision on the request (Article 11.3 Fertilizer Regulation). An interim registration will become a definitive registration when a final decision is made to register the fertilizer. The approval of a fertilizer registration application is subject to the submission of the final label, which identifies the product; registration holder; provisions, precautions, and warnings; and guidelines for use (Article 15.1 Fertilizer Regulation).

Fertilizer registration is valid for five years (Article 12.2 Fertilizer Regulation) and can be renewed for a similar period upon payment of the renewal fee (MZN 1,000). The registration renewal process also can be quite lengthy and the timing uncertain. In light of this, stakeholders have questioned the regulatory purpose behind the requirement for registration renewal.

The Registrar may revoke a registration for “technical, scientific or institutional” reasons (Article 18 Fertilizer Regulation). A decision for revocation is to be communicated by a letter from the Registrar containing the reasons for the decision. The registration holder affected by the revocation decision may, within 30 days from the date of receipt of the notice of revocation, oppose it in writing to the Registrar, who must take a final decision no later than 30 days from the receipt of the opposition. The registration holder also may appeal to the Minister of Agriculture against a final decision from the Registrar.

There are two challenges that arise. First, the reasons for revocation are not clearly defined and could be subject to arbitrary application. Second, appeal of the final decision of the Registrar could be made to the Minister in charge of agriculture, which is essentially the same body that made the initial decision. An independent review of the final decision could provide more objective review opportunities for companies that had registrations revoked.

The Registrar must publish the list of registered fertilizers in Mozambique on a semi-annual basis (Article 19 Fertilizer Regulation). Under the current regulations, Mozambique follows the approved list approach, whereby a fertilizer can be imported only if it is included on an established list. Many stakeholders have voiced concerns with this approach, as it unnecessarily restricts the availability of fertilizers in the country and reduces options for the farmers.

Some countries in Africa, such as Zambia and South Africa, have adopted a different regulatory approach whereby the government maintains a list of nutrients rather than a list of fertilizer grades. Fertilizer products offered for sale shall then be properly labeled with a guaranteed

analysis and weight, and the quality control of the product is based on the truthfulness of the claims of the label (truth-in-labeling).

The fertilizer range registered in Mozambique is not wide enough to cater to all soil types, crops and agro-ecological conditions prevailing in Mozambique and an ex post regulatory approach (regulatory measures taken following market entry rather than preceding it), including a truth-in-labeling approach, would allow for regulation of quality at the retail level without unduly restricting private competition through the introduction of new compositions based on approved ingredients. Although a good regulatory practice, such an approach does require a degree of capacity to enforce, and Mozambique could begin to implement ex post regulatory controls over time. In any case, enhancing the capacity of regulatory institutions will be critical as Mozambique's fertilizer market grows.

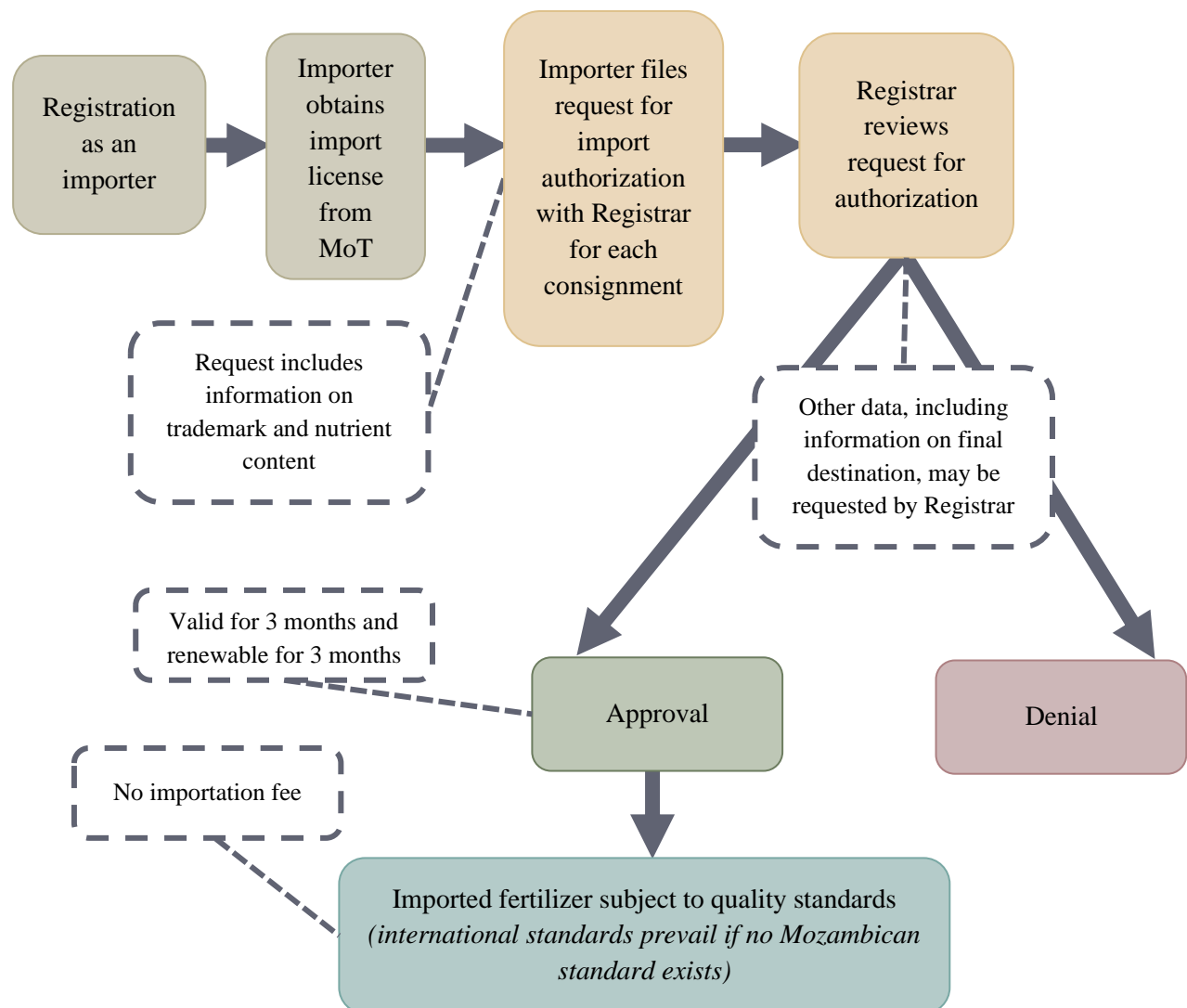
Import and Export

In addition to the requirement that fertilizer importers be registered under the Fertilizer Regulation, imports of fertilizer into Mozambique must obtain authorization from the **MoA**. Import authorization requests must contain information on the fertilizer trademark and nutrient content. The Registrar also may request other data from the applicant, including information on the final destination of the fertilizer.

When a registered fertilizer is imported, its origin cannot be changed without the prior consent of the Registrar. Import authorizations are valid for three months, renewable if needed for the same period. There is no importation fee but as pointed out earlier, an importer of fertilizer, like any other importer, also should obtain an import license from the **Ministry of Trade (MoT)**.

The importer assumes the responsibility of the quality of the fertilizer and its compliance with standards established under the law. In the absence of specific standards, Mozambican standards will prevail, and, if they do not exist, international standards will govern.

Figure 3: Process for Importing Fertilizer into Mozambique



Source: New Markets Lab

Currently, there is no legislation that prescribes fertilizer standards, nor are there Mozambican standards for fertilizers, although international standards do exist. The **Mozambican Bureau of Standards (MBS)** asserts that its standards development process is demand-driven and that no request has been made from the MoA. Since there are now settled international standards for the fertilizers being imported to Mozambique, equivalent Mozambican standards could be developed that reflect the country’s geographic and institutional considerations.

Quality control of imported fertilizer is an important issue, and managing the entry of counterfeit fertilizers into the country remains a challenge. One way of ensuring quality could be to require

that any imported fertilizer to be accompanied by a certificate of quality issued by a recognized certification authority of the country of origin of the exporter.

The regulatory purpose behind requiring an import permit for each consignment remains unclear, and fertilizer importers see the requirement as an unnecessary burden. Regulators assert two reasons for requiring an import permit for each consignment: quality control and data collection. However, the role of the import permit in quality control is unclear, since every consignment of fertilizer goes through the same quality control procedure, irrespective of the import permit requirement. Requiring an import permit for each consignment may allow maintenance of up-to-date data on the fertilizer imported into the country, but such data should be readily available from customs records. Import permits could thus either be eliminated or issued for the entire period of the validity of the import license, rather than for each consignment.

As previously mentioned, Mozambique imposes a 2.5 percent customs duty on inorganic fertilizer (with the exception of imports from the SADC region, which are duty free). This duty exists despite the call under the Fertilizer Strategy to eliminate the customs duty as part of the government's drive to enhance agricultural productivity through, *inter alia*, increased use of fertilizer and other inputs.

VAT is not charged on fertilizer; however, a 17 percent VAT is levied on the port-related fees and charges for services as well as on the transport of the product from the port upcountry. These costs, even if individually small, contribute to the cost buildup of fertilizer. Stakeholders assert that both the customs duty and the VAT on all services related to fertilizer, including transportation, should be eliminated in order to make fertilizer more affordable, especially to the Mozambican smallholder farmers.

Fertilizer exports from Mozambique require prior authorization issued by the Registrar (Article 26 Fertilizer Regulation). In case of refusal, the Registrar must provide the rationale in writing. Moreover, in the handling of export requests, the Registrar must comply with all conventions and international standards of which Mozambique is part. The **Fertilizer Regulation** provides little guidance as to what the specific requirements for export authorization are, but, in practice, the requirements are related to the provision of basic information, such as the fertilizer trademark, the nutrient content, quantity to be exported, country of destination, and so forth. Mozambique does not impose an export duty on fertilizer.

Article 27 of the Fertilizer Regulation also offers provisions for fertilizers in transit. In addition to imports and exports, fertilizers in transit through the country also are subject to prior authorization by the Registrar (Article 27 Fertilizer Regulation).

The authorization request for fertilizer transit must be submitted by an accredited representative of the importer who assumes the responsibility for the product in the country, and must contain:

- Trademark of the product;
- Nutrient(s) and respective content(s);
- Date of manufacturing and expiry;
- Consignment number;
- Country of origin and final destination;
- Port of entry and exit from Mozambique; and
- Names and addresses of the importer and exporter.

Failure to present the fertilizer transit permit at the border implies non-permission to entry into the country. The transit of fertilizers must comply with provisions of international conventions, protocols, and/or standards as well as international safety in the transport of fertilizers by land, air, or sea. Fertilizers in transit through the national territory shall have a label with information on safety measures.

Transport, Packaging, and Labeling

Article 31 of the Fertilizer Regulation requires fertilizer transport to be done in properly secured vehicles to prevent environmental pollution. Transporting fertilizers with human and animal foodstuff is prohibited. The transport and packaging of fertilizers must be done in compliance with applicable legislation. Article 32 of the Fertilizer Regulation requires packages containing fertilizers to display a label approved by the Registrar and guarantee safety in handling through proper durability and resistance so as not to compromise the quality of the product or constitute danger for public, animal, or environment health.

All fertilizer containers for distribution in Mozambique must have a label approved by the Registrar, which must be visible and set in readable form. A fertilizer label must identify the product; the registration holder; applicable provisions, precautions and warnings; and guidelines for use (Article 15 Fertilizer Regulation). All units on the label must be expressed in International Units System, and all information required on the label must be written in Portuguese and may contain the same information in other languages. The labeling of fertilizers should comply, as applicable, to the standards prescribed in Mozambican Standards NM 15 relating to general requirements for labeling of pre-packaged products.

Quality Control

Inspection is an important mechanism for quality control. The **Fertilizer Regulation** provides some rules on how inspection should work and outlines the powers and responsibilities of the inspector. An inspector, duly accredited by the Registrar, will evaluate and control the compliance of standards defined in the Fertilizer Regulation (Article 34 Fertilizer Regulation). However, as previously discussed, there are currently no standards for fertilizer in Mozambique. Inspection thus is conducted to determine the appropriateness to the soil or the environment.

Business establishments dealing with fertilizers are required to facilitate access of inspection technical staff, provide all information requested by inspectors, and comply with the recommendations issued by them. Whenever loss of technical quality is detected in a given fertilizer, or its use has the potential to damage the quality of soil or the environment, the inspectors must issue a suspension order. Quality control for fertilizers is performed by regional laboratories of the **Institute for Agricultural Research of Mozambique (IARM)**.

Fertilizer inspection is supposed to be done by inspectors from the **Agricultural Research Institute of Mozambique (IIAM)**. However, there are only 38 qualified fertilizer inspectors in the country, and not all of them are adequately trained to conduct fertilizer inspections. Given the importance of inspection to ensuring the quality of fertilizer, increasing the number of inspectors and building their capacity should be prioritized.

Overall, the Fertilizer Regulation seeks to ensure the quality of fertilizer on the market in Mozambique, following the regulatory principles of public health and animal and environmental protection (Article 2 Fertilizer Regulation). The Fertilizer Regulation appears to be designed to emphasize ex ante control over the process rather than establish a system for facilitating the importation, distribution, and use of fertilizer, however. While other countries have a similar regulatory approach, good practices in fertilizer regulation are designed facilitate the movement of fertilizer along the value chain while maintaining quality control, without sacrificing one for the other.

The draft Fertilizer Act does embody this balance to a greater degree than the current system, based on the following objectives.

- To stimulate, promote and regulate the use of fertilizers in order to increase soil and crop productivity while taking into account environmental considerations; and
- To promote and ensure the development of infrastructure for the installation of industries for the production of fertilizers.

Chapter Three: Implementation of Legal System Governing Fertilizer in Mozambique and Regional Harmonization

Regulatory Implementation

As noted earlier, the regulatory framework in Mozambique is still relatively new, and additional changes are under development, such as the enactment of a new Fertilizer Act. The current system contains gaps in both its design and implementation.

The new draft Fertilizer Act, in its current form, does foresee the establishment of an autonomous agency, the Mozambique Fertilizer Authority (MFA), which will be responsible for enforcing the Fertilizer Act and accompanying Regulations. This centralized authority should reduce transaction costs, build necessary regulatory expertise, and develop regulatory capacity overall. However, the draft Fertilizer Act could go a step further and establish the agency as a one-stop shop to resolve the issue of regulatory fragmentation. Given the country's ambitious plan to expand the use of fertilizer, reducing unnecessary procedures and requirements becomes an important step in reducing costs, which will translate to lower prices for fertilizer at the farmgate level. Establishing the MFA as a one-stop shop would play an important role in facilitating a more efficient regulatory environment for fertilizer trade overall.

In addition to regulatory fragmentation, regulatory design is another critical issue with Mozambique's existing regulatory framework. As discussed, the current Fertilizer Regulation was issued by the Council of Ministers, and the Mozambican Parliament has not yet passed a Fertilizer Act. While the Fertilizer Regulation was put in place to fill a regulatory gap to some degree, this approach has created some challenges. Executive actions can be much more easily reversed than acts of Parliament, and thus the current regulatory framework is less predictable and sustainable. In addition, as an act of the Executive Branch rather than Parliament, the Fertilizer Regulation is lower in hierarchy and a less reliable legal instrument.

A related issue is the absence of subsidiary legislation that provides details on the Fertilizer Regulation. Standard law-making practice is to establish the legal framework through an Act of Parliament, with details left to regulations. In a sense, the current Fertilizer Regulation attempts to provide both the framework and the details needed for its implementation, but the Fertilizer Regulation falls short of both objectives in many cases. This lack of detail has created significant problems in the implementation of the Fertilizer Regulation, but it will likely be resolved partially when the Fertilizer Act is adopted, although the regulations may need to be amended to conform to the Fertilizer Act.

The current Fertilizer Regulation does not provide for a sufficiently robust quality control system, which is the regulatory purpose at the heart of a well-functioning legal system for fertilizer. Although international standards for fertilizer exist, both locally manufactured and imported fertilizers must also meet Mozambican standards under the Regulation; however, national standards equivalent with international standards do not yet exist. The MBS claims that there have not been demands for standards on fertilizer from the MoA. Indeed, there appears to be very weak cooperation between the MoA and the MBS on fertilizer issues which may partially explain this gap. Standards play a critical role in ensuring that fertilizer produced in the country or imported is relevant to the needs of farmers in the country, and the MoA should work closely with the MBS in this regard. Further, the Registrar relies heavily upon the expertise and facilities of other institutions given the lack of a centralized authority, and MGS could be an important partner given its specialized expertise.

Still another limitation in the legal and regulatory framework relates to broad discretion in some areas of implementation, such as fertilizer registration. The Fertilizer Regulation lacks sufficient detail regarding specific documentation required, evaluation criteria, and cancellation of registration. Further, application of such requirements could change from time to time. Details also are sparse in other areas, such as the requirements for importation. In other areas, broad discretion granted to the regulator could lead to abuse. A case in point is the power of revocation of registration, which is defined in very general terms: revocation is possible for “a technical, scientific or institutional reason.” Overall, this broad discretion could negatively impact the predictability of the regulatory system.

Another challenge arises with regard to the penalties for violation of the Fertilizer Regulation. Penalties are categorized as sanctions, specifically “sanctions” or “other sanctions” (Annex III Fertilizer Regulation). “Sanctions” are fines, while “additional sanctions” are additional measures on top of a fine. While the fines may be too light (with the maximum of MT 250,000 for adulteration and MT 75,000 for selling unregistered fertilizer), the “additional sanctions” may be too strict. Adequate deterrence might include increasing the fines, for example, without requiring additional sanctions.

There also are no specific regulations on bio-fertilizers. Although Article 4 of the Fertilizer Regulation does not seem to exempt bio-fertilizer from the definition of fertilizer, which includes “any *organic* or inorganic material *of natural* or synthetic origin added to a soil to supply certain elements essential to the growth of plants,” no specific rules take into account the unique nature of bio-fertilizers. For example, it is not clear what the import permit requirements are for bio-fertilizer; nor are there clear rules on standards for quality, labeling, and packaging of such fertilizers.

However, perhaps one of the most pressing, overarching challenges regarding the legal and regulatory regime is insufficient capacity. Establishing regulatory and institutional frameworks is one crucial step, but laws and institutions will be ineffectual if enforcement is lacking or limited. Mozambique's regulatory institutions face capacity challenges that must be overcome in order to increase efforts to enforce adulteration at the retail level when the product is sold from open bags. Capacity for enforcement should be strengthened, with a focus on increasing the number of trained inspectors. Improved testing and inspection capacity would not only bring down costs and improve the efficacy of fertilizer, but such capacity development would also allow for soil testing that could pave the way for the blending of soil-specific and crop-specific formulations, which, when properly tested and labeled, could address an important need in the market. Improving capacity also could help Mozambique shift from a system of ex ante regulatory control to a system of ex post regulation, which would be more aligned with the needs of the private sector as the fertilizer industry grows.

Regional Integration

As movement to harmonize Africa's regions gains momentum, economic and trade policies are becoming much more than national issues. In addition to national level laws and regulations, trade increasingly is subjected to regional and multilateral treaties. Mozambique is a member of the WTO, COMESA, and SADC. Along with the East African Community (EAC), COMESA and SADC have joined together to establish the Tripartite Free Trade Area (TFTA).

Mozambique's Fertilizer Strategy highlights the importance of regional fertilizer policy as a way to reduce fertilizer costs and increase use. Expanded regional fertilizer markets could realize efficiencies and economies of scale in trade, manufacturing, research and development (R&D), and testing. Regional approaches could expand the market for fertilizer by harmonizing fertilizer policies among member states, allowing more efficient trade of fertilizer, and giving rise to acceptance of fertilizer compounds and shipments that have been approved or inspected by a neighboring country. When well-implemented, regional efforts could help avoid duplicate testing and compliance costs and allow for the redistribution of fertilizer across borders as demand develops throughout the season. Achieving regional standards, however, requires regulatory cooperation and support to countries without adequate existing capacity for inspections, laboratory testing, and regulatory enforcement.

Some regulators appear to be reluctant to advance regional fertilizer harmonization based on the assertion that fertilizer is soil-specific, or in other words what is good in one region or sub-region might not be good in others. However, soil types and rainfall patterns cut across countries, meaning that neighboring countries are potentially the best, nearest source of supply and/or best market outlet for appropriate fertilizer types. Expanding input markets across borders, therefore, could be of significant benefit in achieving the economies of scale and savings on transport costs

needed to bring input prices down and improve choice and availability (Keyser et al (2015)). It also is important to note that harmonization can be misconstrued to mean creating uniform national regulations, but, as is true with international standards, regional harmonization often actually allows for differences in national legal and regulatory systems as long as regional standards are met (NML 2015).

The Abuja Declaration called for the AU Member States and Regional Economic Communities (RECs) to take appropriate measures to reduce the cost of fertilizer procurement at national and regional levels, particularly through the harmonization of policies and regulations to ensure duty- and tax-free movement across regions and the development of capacity for quality control. Although this commitment was scheduled to be implemented by 2007, regional harmonization of fertilizer regulation has not progressed to a great degree in most regions. Regional fertilizer harmonization stands in contrast to harmonization of seed regulations, where there has been significant effort at the regional level, even though implementation challenges remain.

Some steps have been initiated to facilitate regional harmonization of fertilizer systems. For example, COMESA, in partnership with AFAP, has undertaken a review of national policies and regulations on fertilizer importation, manufacturing, distribution, and use, with the aim of developing recommendations for the establishment of a harmonized regulatory framework for the region. Ultimately, the COMESA initiative is aimed at facilitating free trade of fertilizers across borders in the region, but a process will need to be put in place to reach this goal over time.

Work also has begun to harmonize fertilizer regulation within the EAC. The *EAC Harmonized Regulatory Instruments and Procedures for the Fertilizer Market* was adopted in September 2014 as one of the priority activities in the implementation of the EAC Food Security Action Plan (AFAP 2015). However, these initiatives have not yet been translated into practical action. To begin with, the framework document has not been submitted to the EAC Heads of State for possible adoption and subsequent domestication by the member states. The different legal instruments in support of the framework also are yet to be developed. The EAC harmonization effort is thus at a very initial stage, and it will likely take some time for a harmonized fertilizer regime to emerge in the EAC.

Regional harmonization on fertilizer within SADC has not advanced significantly yet, although commitments to agricultural development and increased use of inputs are evident. The 2004 SADC Dar es Salaam Declaration on Agriculture and Food Security noted that inappropriate national agricultural and food policies and inadequate access by farmers to key agricultural inputs and markets still are among the major underlying reasons for the prevalence of hunger in the region. In order to address these problems, the Dar es Salaam Declaration called for the implementation of a series of short- and long-term measures aimed at strengthening cooperation

between SADC Member States through the development of coherent regional policies and programs.

In 2014, the SADC Ministers of Agriculture adopted the Regional Agricultural Policy (RAP), which seeks to “define common agreed objectives and measures to guide, promote and support actions at regional and national levels in the agricultural sector of the SADC Member States in contribution to regional integration and the attainment of the SADC Common Agenda.”

The RAP aims to enhance regional trade in agriculture by further reducing tariffs and other barriers to trade. It also calls for improving farmers’ access to and participation in regional input and output markets. The RAP interventions include:

- Promoting competition in input and output markets;
- Promoting regional agricultural value-chains, Business-to-Business (B2B) and Public-Private Partnerships (PPP) to increase production including importation, and distribution of agricultural inputs and provide markets for outputs;
- Eliminating tariffs and non-tariff Barriers (NTB) within SADC countries for trade in relevant intra-regional inputs and outputs, in line with the SADC Protocol on Trade; and
- Eliminating/reducing tariffs and non-tariff barriers in relevant inputs with third countries.

While the RAP does signal a move towards regional harmonization of agricultural policies, including fertilizer and other inputs, it is intended to outline some common objectives and measures to guide members and does not provide specific obligations (binding or not binding) with respect to fertilizer.

Efforts to harmonize fertilizer regulation are farther along within the Economic Community of West African States (ECOWAS), which provides an interesting benchmark for the other regional work (See Box 4). The ECOWAS Council of Ministers formally enacted Regulation C/REG.13/12/12 Relating to Fertilizer Quality Control in the ECOWAS Region (ECOWAS 2012) at its ordinary session held in Abidjan on 2 December 2012. The regional regulations for fertilizer provide a detailed set of procedures for the functioning of domestic and regional fertilizer markets based on ex post regulation (truth in labeling approach) and harmonized quality control standards (Keyser et al (2015)). Consistent with this approach, countries should not maintain approved lists of fertilizer types that can be sold to farmers and must allow importation of any type of fertilizer from another ECOWAS country as long as it is truthfully labeled and does not contain harmful substances. In principle, countries with such systems can freely trade fertilizer between one another, with imported fertilizer being subject to the same quality control procedures and level of inspections as it was in the country of origin, thereby improving consumer confidence and minimizing border delays (Keyser et al 2015). To support the ECOWAS Regulation, four implementing regulations also have been developed. However, the

ECOWAS Commission has so far adopted none of the four implementing regulations for fertilizer (Keyser et al 2015).

Box 7: Key Provisions of the ECOWAS Fertilizer Regulations

- **Product Registration Not Required:** The regional framework for fertilizer is built around the principle of truth in labeling. Countries therefore must not maintain approved lists of fertilizer types that can be sold to farmers or require product registration tests.
- **Free Movement of Fertilizers:** Fertilizers that comply with the prescribed quality standards shall be entitled to free movement throughout the ECOWAS region. Prior notification to the competent authority in the concerned countries is all that should be required to import and/or export fertilizer.
- **Standard Quality Definitions and Labeling Requirements:** Countries shall observe standard definitions of fertilizer terms and ensure that all fertilizer containers are clearly labeled with a minimum set of information including guaranteed nutrient content.
- **Requirements for Inspection and Analysis:** Member states are required to develop Inspection and Analysis Manuals based on Association of Analytical Communities (AOAC), International Organization for Standardization (ISO), and/or EU standards that describe the modalities and procedures for fertilizer sampling and inspection and business inspection.
- **Tolerance Limits:** The regulations set out specific tolerance limits for nutrient deficiency, weight, and maximum allowable heavy metal limits. Any product that exceeds the prescribed tolerance limits or contains other materials that are injurious to plant health shall not be allowed for sale.
- **Fertilizer Producers and Traders to be Licensed Professionals:** Licenses are compulsory for all fertilizer sector participants including importers, manufacturers, agrodealers, and distributors and must be renewed every three years by the official quality control and certification service of each member state. Every agrodealer or person selling fertilizer shall display the license in a conspicuous spot.
- **Manufacture and Importation:** The conditions and modalities to manufacture and import fertilizer will continue to be governed at the national level by regulations in each member state.
- **Access to Information:** Member states are required to ensure the full participation of fertilizer sector participants in public decision making on fertilizer related matters and organize public access to fertilizer related information available to public authorities.
- **Oversight and Administration:** The West Africa Committee for Fertilizer Control (WACoFeC), funded by the ECOWAS Commission, shall serve to monitor and facilitate the implementation of the regulations and support development of the national fertilizer sectors in the region.
- **Right to Appeal and Confidentiality:** Manufacturers, importers, and distributors will have the right to appeal any decision taken against them by licensing authority and to have their information treated confidentially.

Source: John C. Keyser et al (2015)

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