Mozambique Highly Hazardous Pesticides and Alternatives Report

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Mozambique Highly Hazardous Pesticides and Alternatives Report

Introduction

This document intends to give an overview of the current situation of highly hazardous pesticides (HHPs) in Mozambique. According to the Food and Agriculture Organisation (FAO) definition,"HHP" includes **pesticides linked with high incidence of severe or irreversible adverse effect on human health or the environment**. This definition of HHP is similar to the definition of POPs pesticides, which are considered as pesticides that present particularly high levels of acute or chronic hazards to health or the environment, according to internationally accepted classification systems. The Ministry of Land and Rural Development (MITADER), together with The Ministry of Agriculture and Food Security (MASA), the Ministry of Health (MISAU), donors and other different stakeholders, were deeply engaged in reviewing Mozambique's new National Implementation Plans (NIPs) of the Stockholm Convention on POPs which accommodate all the new policy, regulatory and national communication strategies on POPs. Africa Foundation for Sustainable Development (AFSD), in collaboration with academia (UEM) was the NGO involved in developing programs of chemicals and waste management, and promoting awareness and good practice activities in communities.

This study was based on institutional and stakeholder's engagement; consultation with community-based farmers and agrochemical suppliers; reports; workshops; data collection and field work survey. The data given by the Ministry of Agriculture and Food Security was a key element of our work, because they are the main regulatory entity of chemicals and pesticides in the country.

This report was accomplished with financial and technical support from IPEN and describes the process, methodology and recommendations to develop a national strategy plan on HHPs.

Acknowledgments

The collaboration between MITADER, MASA, MISA, the provincial government and small holder farmers of the Naamacha district was at the core of this research of the current situation of HHPs in Mozambique, in favor of an ecosystem-based approach to pest and pesticide management. We would like to thank Sidonio Contage (Stockholm Convention Focal Point) and Samson Cuamba (Rotterdam Convention Focal Point) at the Ministry of Land, Environment and Rural Development, and Eng° Delfina and Anastacio Luis at the Ministry of Agriculture and Food Security for their contributions to this process, as well as Khalid Cassam, Pesticides Project Coordinator at FAO. We are equally grateful to the Mahelane, Mafuiane, Matsequenha, Mahubo and Macaneta communities and association represented by Mr. Samuel Gulundo and Ms.Marisa Esculudes. Special thanks to Fernando Mucavel, extension officer who coordinates all the field work. This research was possible due to financial and technical support from IPEN, and we are thankful for their valuable guidance during the project and drafting of the document. We would also like to thank Filipe Mate (Academia - University Eduardo Mondlane) and Harvey Keown (AFSD South-Africa) and Augusto Correa (the GEF - UNDP–Small Grants Programme Coordinator).

1. Introduction to Mozambique

1.1 Country overview

The Republic of Mozambique lies on the eastern coast of southern Africa between longitudes 10° 27'and 26° 52'south and between latitudes 30°12'and 40° 51' of west latitude, and covers an area of approximately 800,000 square kilometers, out of which 13,000 are made of interior waters. The rest is firm land. Mozambique has 4,330km land borders; itborders: north– Tanzania; west - Malawi, Zambia, Zimbabwe, and the South Africa province of Mpumalanga. The south Mozambique boarder is with Swaziland and the South African Kwazulu Natal Province, and the Indian Ocean is on the east side. The country is divided into a coastal lowland plateau of 200-600 meters in the center and south of the country, rising to 1,000 in the northeast. All of Mozambique's 25 major river systems flow into the Indian Ocean. The largest and most historically significant is the Zambezi, whose 820km Mozambican section is navigable for approximately 460km.

Population

The size of the population is approximately 30.970,332. 52% of the population is represented by women. More than 45% of the population its below 15 years old and 2.5% are above 64 year old. The percentage of the population (15-65) that is economically active is 52%. The population growth rate is estimated to be 1.9%; fertility rate of 5 births/woman; the birth rate 45/1000; andlife expectancy of 41 years. The literacy rate is around 45%.The majority of literate people

have only the elementary and basic education. Unemployment reaches 30% of the economically active population, being more severe among the females.[1]

1.2 Agriculture activities and main production in Mozambique

Agriculture occupies about 80% of the population, yet contributes to only 20% of the gross domestic product (GDP). The agriculture activities in Mozambique are supplemented with manufacturing, mining, trade, construction and services.

The family agriculture sector produces mainly for subsistence and internal trade. The cash crops grown in different parts of the country serve mainly for export. The main cash crops are tea, cotton, tobacco, maize and sugar cane, and, in recent times, flowers and other high value crops. Cassava, sugar cane and soya beans are resilient crops and currently the country's key crops of subsistence. Creating more efficient supply chains for small and medium-size producers is facilitated in order to feed a growing private demand for cassava such as in production of beer, bio-plastic bags, processed food and ethanol improving the value chain. While cassava contributes to around 3% of the calories consumed in Mozambique, it accounts for 6% of the country's GDP. Until now there has not been any large-scale commercial interest in the crop. Cassava is highly resistant to drought and chemicals such as fertilizer or pesticides, and can be stored in soil for 24 to 36 months.

The industrial sector, despite its small contribution to the GDP, supplies important consumer goods both to the domestic and international markets. The main manufacturing products are textiles, foodstuffs, beverages, leather and non-metallic products.

Horticultural exports have been a major source of export-led growth in many developing countries, and Mozambique has the potential for further development of this sector. In the south and central regions, there are opportunities to cultivate high-value vegetable crops and flowers for exports to external markets.

1.3 National registration of pesticides

Mozambique adopted a National Environmental Policy (NEP) in 1997. Since environmental management involves multi-sectoral as well as multidimensional issues, this Policy is a framework document, and gives direction on elements to be considered in order to mainstream environmental matters into sectoral policies. The main objectives of the Policy are to provide a framework for environmental management issues for various sectors in order to achieve sustainable development; ensure sustainability, security, and equitable use of resources to meet the basic needs of the present population without compromising those of the future generations, degrading the environment or risking health or safety; and advocate for development and

[1]UNEP-POPS-NIP-Mozambique-1.English%20(1).pdf

application of environmentally-friendly pest control methods (without specific reference to POPs). In absence of national boundaries, the environment emphasizes the importance of international cooperation with regards to environmental issues, therefore Mozambique participates and implements relevant bilateral, sub-regional, regional and international treaties and programs that are related to environmental and human health protection such as the control of toxic substances. These include the Bamako, Basel, Rotterdam and Stockholm Conventions, among others.

Talking of POPs management and other chemicals regulation in the country, it's important to mention that the previous legal framework on POPs and other toxic chemicals, according to the the first NIP (2006-2017), did not cover all the relevant issues. These include compensation, clean-up and emergency response to spills and accidents, as well as the national, city, municipal, town and village contingency plans.

The reviewed and updated NIP II, elaborated during 2017-2018 by the Ministry of Land and Rural Development to be officially approved by the Parliament in the next General Assembly (2019), provides the legal and institutional framework for sustainable management of POPs and other chemicals, as well as the health and human being issues, impact and risk assessments, prevention and control of pollution, waste management, the blue economy issues, environmental quality and standards, and public participation.

The country itself doesn't produce intentional POPs, and they are equally prohibited for import without legal review by relevant institutional authorities.

Replacing chemicals with biology and phasing out HHPs with agroecology are the new approaches, and also the recommendations by NGOs, that are incorporated in the reviewed NIP II. This will enable a new agricultural production policy model**. Agricultural productivity can be better improved through agroecology than it can be through continued and increasing use of pesticides and other inefficient industrial agrochemical inputs.** We can only successfully achieve this through conservation and protected natural resources and ecosystems, and by improving the livelihoods and well-being of the community. A new agro-ecological model can support farmers' needs, government policies and international agreements. NGOs such as IPEN, Pesticide Action Network (PAN), and ViaCampesina play important roles in system transformation, where farmers have the right to food sovereignty, which consists of an effective right to a healthy and environmentally-friendly food/diet and consumption. This means to have control of the natural resources; in particular, the land, water, seeds, and electricity, which are public assets and rights.

To prioritize biodiversity protection requires a determined action, taking into consideration that hundreds of living species are lost or contaminated on a daily basis as a result of the current production model,consumption and misuse of pesticides and agrochemicals and other chemicals;

it means access to information; planning and provision of services that meet the local demand of producers and the communities; decentralization and capacity-building in the communities for greater responsiveness to farmers and rural operators relative to food and public health services; creation of urban organic vegetable garden markets; and creation of ecological or organic consumption groups and cooperatives.

1.4 Institutional framework

In 1995, the National Environmental Policy (Resolution5/95, of August 3) of Mozambique aimed at the progressive eradication of poverty and improvement of the quality of life of Mozambicans, as well as the reduction of environmental damage. The Ministry of Land and Rural Development was the responsible institutional entity in charge of promulgating regulations covering, among others, compliance with international obligations; promotion of alternative to POPs and other chemicals; disposal of obsolete stocks of POPs; and regulation.

The National Environmental Policy Analysis (PNA) represents the basis for a sustainable development of Mozambique, as well as the reduction of environmental damage. The policy requires that the government includes an environmental component in all development plans and gives a clear indication to the legislators of the importance of environmental issues (DPICPS & DPCAA 2009). It is also supports to establish and encourage the government's emngagement with stakeholder including the private sector and NGOs in environmental management. It requires that the government work with local communities to create a better understanding of the patterns of resource use and the methods and traditional ways of management, and predicts that the government will strengthen the capacity of the communities to meet and apply rules and principles of management of natural resources (DPICPS & DPCAA, 2009). Creation of legal conditions and institutional capacity is important to enable the decentralization of community management of natural resources, in order to eradicate poverty.

The main objective of the environmental policy is to ensure the sustainable development of the country, taking into account specific conditions, through an acceptable compromise between socio-economic progress and realistic protection of the environment.

The policy aims to ensure:

1. A quality of life appropriate to the citizens;
2. The management of natural resources and the environment in general;
3. Promotion of local community involvement in planning and decision-making on natural resources use;
4. Protection of ecosystems and the essential ecological processes; and
5. Integration of regional and global efforts in finding solutions to environmental problems.

In addition to the Environmental Policy and Law, there are other regulatory instruments already in place, such as the Environmental Quality Standard and Regulations, the Guide for Environmental Impact Assessment (EIA) process, and the Registration of Pesticides Regulation. The new environmental regulatory framework incorporates all updated policies, such as:

- ✓ Green Economy Action Plan (2013-2014)
- ✓ Gender and Climate Change Action Plan Strategy (2010-2014)
- ✓ Adaption, Mitigation Climate Change Strategy (2013-2025)
- ✓ Renewable Energy Strategy (2011-2025)
- ✓ Integrated Action Plan (Environmental Sector and Rural Development) (2017-2018)
- ✓ Biodiversity and Conservation Biological Action Plan in Mozambique (2015-2035)
- ✓ Energy Strategy (2009)
- ✓ Biodiesel Policy Strategy (2009)
- ✓ Land Occupation and Directories and Process
- ✓ LNG Environmental Policy and Regulatory Operations (2010)
- ✓ BIOFUND (2012)
- ✓ Conservation Areas Laws (2014)

The entities responsible for pesticides in Mozambique are the Ministry of Agriculture and Food Security (MASA), in coordination with the Ministry of Land Environment and Rural Development (MITADER) and the Ministry of Health (MISAU). The three institutions are designated by the pesticides Regulation Ministerial Diploma 153/2002 as being ultimately responsible for ensuring that the Regulation is translated into a set of actions that will guarantee that pesticides are managed in a way that do not pose a threat to human, plant and animal health or to the overall health of the environmental components.[2]The table below makes a summary of the roles and responsibilities of the above three main ministries / sectors and subsectors in what relates to pesticides and HHPs management.

[2]Plano%20de%20Gestão%20Integrada%20de%20Pesticidas.pdf

Institutions, roles and responsibilities

Sectors/Government Departments	Roles and Responsibilities
Agricultural Sector	
MASA is the central government department in pesticides management (PM). It is involved in the process through three main units and areas of operation, namely: The National Directorate of Agriculture and Silviculture (DNAS) and its respective units at the central and provincial (DPASA) and district (SDAE) levels that deal with plant and animal diseases. The National Agrarian Research Institute (IIAM) National Directorate of Agrarian Extension Services (DNEA)	In its capacity as the overall manager of plant and animal production and related services, including health, MASA is the main institution responsible for pest management. DNAS is the MASA's unit directly responsible for plant and animal production. IIAM is the main research institution in the agrarian sector in Mozambique, focused on the improvement of crops production, seeds improvement, integrated pest management, capacity-building and training. DNEA is MASA's entity responsible for training, communication and technical assistance and organization of producers, mainly small and medium size farmers, including the subsistence family sector.
Health Sector	
MISAU is the central entity responsible for public health. It fulfils its role through one national directorate, the National Directorate of Public Health (DNSP), which has a series of units,including the Department of Environmental Health (DSA).	DSA fits within the framework of MISAU's organizational structure. The DSA is part of the National Directorate of Public Health and falls under the Deputy National Director for the "Prevention and Control of Diseases." At the provincial level, the DSA is a unit under the Department of Community Health within the DPS, and at the district level, the activities are undertaken by the Community Health Unit that is part of the SDMAS.
Environmental Sector	
MITADER is the central entity responsible for the health of the environmental components such as water, soil, air, flora and fauna. It exercises its role through two main units: AQUA (environmental quality agency)	In its capacity as the overall manager of environmental Policy aspects and related services, MITADER is the main institution responsible for controlling the potential implication of pesticide use

DNAB, which is responsible for environmental licensing of activities through the Department of Environmental Licensing (DLA), as well as the Department of Environmental Education (DEA).	AQUA is the leading institution for environmental quality management by, amongst other activities, establishing environmental standards to be adhered to and defining ways and procedures to put them in place. DNAB is responsible for the licensing of activities and for promoting environmental education.

The Instituto Nacional de Normalização (INNOQ) was established on 24 March 1993 by Law Decree 02/93 of the Council of Ministers, under the Ministry of Industry and Energy. It is an autonomous body that acts as the recognized central body responsible for defining and implementing quality policy and for coordinating all standardization and quality activities at the national level, with the main responsibilities of: Promotion of standardization and quality in the manufacturing of products and the performance of the services; and cooperation with regional and international organizations engaged with the quality control, setting standards and operations with the aim to improve the conditions for consumers production in conjunction with Improved domestic and international trade.

All institutions are represented at central, provincial and district levels. In recognition of the multidisciplinary character,the above-mentioned institutions and others are organized in a series of collective management and technical bodies to deal with different aspects of pesticides management. The most important, which are chaired by MASA and also include the private sector, are:

- Registration: through the Agrochemical Registration and Control Department (RRCA) and its technical arm the Technical Assessment Committee for Pesticides Registration; and
- Advisory: through the Technical Advisory Committee for Agrochemicals.

The NIP II ensures all legal preventive and mandatory policies for POPs and other chemicals or toxics such as PCBs, PCDD (dioxins) and PCDF (furans). MITADER is also responsible for the open burning and carbon emission control. The Ministry of Health has also implemented some policies and actions for the use and replacement of DDT for malaria vectors control. The promoted alternatives include physical, chemical and biological controls. The Ministry has also developed some guidelines on environmental health and sanitation; these guidelines need to be harmonized not only internally, but also aligned with cross-cutting issues, international initiatives[3] and other actors and stakeholders.

[3] Countries Programmes, Protocols and Conventions.

1.5 International chemicals conventions: Stockholm, Rotterdam, Minamata Conventions and relations with their focal points

LegallyBinding Instruments

In 2002, during the World Summit on Sustainable Development in Johannesburg, heads-of-states agreed that "governments, relevant international organizations, the private sector and all major groups should play a vital role in changing unsustainable consumption and production patterns." As set out in Principle 15 of the Rio Declaration, and to support developing countries in strengthening their capacity for the sound management of chemicals and hazardous wastes by providing technical and financial assistance, the following actions are important at all levels:

Mozambique ratified the international instruments such us: **Stockholm Convention** on Persistent Organic Pollutants (2004); **Rotterdam Convention**on Prior Informed Consent Procedures for Certain Hazardous Chemicals and Pesticides in International Trade (2003); and **Basel Convention** on the control of Transboundary Movements of Hazardous Waste and their Disposal.

Additionally, CSOs & NGOs play significant roles by encouraging stakeholders to undertake concerted efforts towards HHPs phaseout at the local, national, regional and international levels, with more effort on safety, promotion of alternatives and strengthening national regulations.

2.0 Status of pesticides use in Mozambique

Mozambique not only needs specific laws on HHPs, but also a laboratory capacity to analyze the residues of HHPs in the environment and in the food chain. Academia, the Ministry of Agriculture and the Ministry of Health have laboratories with some limited analytical capacity to the required level.

The Decree n°6/2009 March 31 on Pesticide Management provides the necessary rules and guidelines for the registration, packaging, labelling, storage and elimination of pesticides. This decree prohibits the production, importation and use of POPs pesticides in the country. It is the responsibility of the Ministry of Agriculture to ensure accurate application of the decree. It is the responsibility of the Ministry,through the Advisory Committee, to prepare and implement the list that would expedite the registration, collection and evaluation of data on efficacy of pesticides. The inventory of POPs undertaken in 2004 revealed that there are about 750 metric tonnes of obsolete stocks of POPs pesticides (including Aldrin, Dieldrin, and Toxaphene) and 364 metric tonnes of obsolete stocks of DDT stored in several areas within the country, such as in Boane and Maputo. The situation is occurring in Mozambique because the country does not have any adequate hazardous waste management centre to dispose of collected obsolete pesticides. The

inventory revealed that DDT was imported to the country since 1998 for agriculture and public health purposes (malaria prevention and control).

Until 2017, DDT was being used in Mozambique for malaria vectors control, according to the Stockholm Convection agreement. Since 2017 the country started to use Actelic 300 and Deltametrina (deltamethrin) for malaria vector control.

The agriculture sector is dominated by poor technology and low productivity, use of fertilizers, pesticides, and other agrochemicals, and a lack of knowledge in relation to harmful properties to public health. The latter is a new phenomenon that is growing in alarming proportions in the society and within the consumers. In Mozambique, this is evidenced by an example of contaminated cabbage, which caused deaths of family members and affected health of several people in Matola Rio, Pretilerio M[4].

2. Table: Relevant Mozambican laws and regulations

Laws and regulations and brief description
Ministerial Diploma 153/2002 of 11 September 2002 (Pesticides Regulation) This is a joint diploma issued by the Ministries of Agriculture, Health, and Environment for the management and use of pesticides in Mozambique. It stipulates that the use of pesticides is subject to their prior product registration with the Ministry of Agriculture. The Ministry of Health establishes permissible levels of pesticide residue in food stuffs based on FAO guidelines. Pesticides must be clearly labelled and identified and be color-coded depending on their level of toxicity. The use, storage, handling, sale and removal or destruction of pesticides may be subject to environment licensing
Decree 6/2009 of 31 March 2009 (Pesticides Management Regulation) The objective of the Regulation is to ensure that all processes that involve working with or handling pesticides are not performed in a situation that may harm the public, animal and environmental health. The Regulation applies to the registration, production, donation, trading, importation, exportation, packing, storage, transport, handling, use and elimination of pesticides and adjuvants, by individual or collective persons, for agricultural, livestock, forestry, public health protection, domestic and other purposes. Among other aspects, the regulation identifies the institutions involved in pesticide management, and sets up bodies with the responsibility of performing specific tasks in the area, such as the (i) Technical Assessment Committee for Pesticides Registration, and the (ii) Technical Advisory Committee for Agrochemicals. It also provides and updates regularly (annually) the list of pesticides products that can be used in Mozambique. These are classified according to their toxic potential (Article 9). Out of the

[4]https://jornaldomingo.co.mz/index.php/sociedade/10553-incidentes-com-couve-contaminada-agricultores-

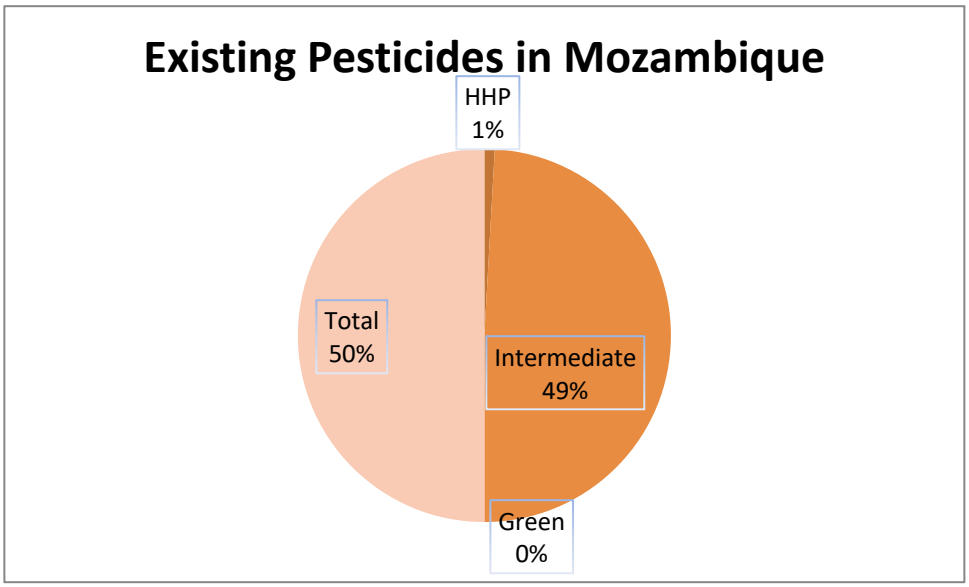
188 registered pesticides, 109 are class III; 67 class II; and 12 class I (Class I are the most toxic ones).
The Regulation also stresses that the companies or entities employing people for pesticide storage, trading, transport, application and elimination shall ensure continuing and updated training of their staff, including rules for combating fires, intoxication, first-aid, spills and other hazards. The companies are entrusted with the responsibility of training their staff, and the government entities in the MASA are responsible for the preparation and administration of the courses. MASA also elaborates on the need for information dissemination and establishes limitations for pesticide advertisement.
Decree n. 18/2004 Regulation on Environmental Quality and Effluents' Emissions amended by Decree No. 67/2010 (see below) The aim is to define environmental quality patterns for granting an effective control and management of pollutant concentration levels in environmental components. The annexed Regulation is composed of 26 articles and 6 annexes divided in six Chapters. It defines air quality standards and emission requirements, as well as water classification according to the uses and related quality control requirements (with special regards to potable water). Moreover, it rules on soil quality and noise emissions. The Annexes provide technical requirements and standards. Decree No. 67/2010 amending the Regulation on Environmental Quality and Effluents' Emissions amends articles 23 and 24 and Annexes I and V of the Regulation on Environmental Quality and Effluents' Emissions, related to taxes for special authorizations and new fines and sanctions for illegal activities. Annexes IA and IB deal with new standards of air quality, atmosphere polluting agents and parameters for carcinogenic Inorganic and organic agents. Annex V lists potentially harmful chemical substances.

Current pesticides situation in Mozambique

In the year of 2012 Mozambique scrutinized the permitted pesticides for import and short-listed and permitted 79 formulated products containing a total of 30 active ingredients. 17 active ingredients had not been imported for several years because they were no longer used[5]. According to data gathered from the Mozambican National Directorate of Agrarian Services in 2018,188 different types of pesticides were recorded as being imported or used in the County.From this number 35 are considered HHPs. Looking at the percentage, Mozambique imports or uses only 1% of HHPs, which can seem less dangerous; however, lately pesticides have caused tragic incidents that killed members of an entire family[6]. Because of that incident, HHPs should not be used. Article 7 of Stockholm Convention obliges each Party to develop and implement a plan for the Implementation of its obligations under the Convention. The Stockholm Convention has banned the use of DDT in countries; but eliminating DDT was a major challenge for Mozambique due to the prevalence of malaria. In 2017 the country started to use Acteclic 300 and Deltametrina as malaria vector, totally replacing DDT. However, thereare DDT-contaminated storage areas still in the country, where we need to do more work and map all the affected areas.

[5]http://www.fao.org/in-action/mozambique-prohibits-highly-hazardous-pesticides/en/

[6]Users/Thelma/Desktop/FOOD%20SAFETY%20OR%20SOVEREIGNTY%2029102018%20(1).pdf



Mozambique national HHPs situation

The major pesticides producer that operates in Mozambique is Syngenta, a Swiss-based company that manufactures and exports pesticides, herbicides, fungicides and insecticides for variety of crops including corn, cereals, fruits, vegetables, and home garden pesticides for consumers. The company revenue just in the year of 2017 estimated $12.65 billion USD.

Those used in Mozambiqueare: alachlor; aldicarb; carbendazim; carbofuran diafenthiuron; diazionon (> 300g/l); diclofop – methyl; difenacoum; ethion; fenamiphos; iprodion; furfural; methidathion; methiocarb; monocrotophos; terbufos; thiodicarb; zinc phosphide; brodifacoum (formulações líquidas-0.75 e 2.5g/l); difenacoum; difethialone; fenamiphos; methamidophos; benomyl; methomyl 900g/kg; chlorfenvinphos; carbaryl; oxyfluorfen; 2,4-D dimethylamine; paraquat; endosulfan; and diuron.

In the annex at the end of this document is a list of criteriafrom the World Health Organization (WHO) about how to classify pesticides as HHPs(or not).

2.2. The list of HHPs amongst the list of nationally registered pesticides

Extremely Hazardous (Class I a): Active Ingredients of Pesticides Imported and Used in Mozambique	

Aldicarb Difethialone Parathion methyl Brodifacoum Diphacinone Phenylmercury acetate Bromadiolone Disulfoton Phorate Bromethalin Ethoprophos Phosphamidon Calcium cyanide Flocoumafen	Sodium fluoroacetate Captafol Fonofos Sulfotep Chlorethoxyfos Hexachlorobenzene Tebupirimfos Chlormephos Mercuric chloride Terbufos Chlorophacinone MevinphosDifenacoum Parathion
Highly Hazardous (Class l b) Technical Grade Active Ingredients of Pesticides (common)	
Acrolein Ethiofencarb Omethoate Allyl alcohol Famphur Oxamyl Azinphos Fluoroacetamide Pentachlo rophenol Butocarboxim Formetanate Pindone Butoxycarboxim Chloro propanediol Lead arsenate Strychnine Coumaphos Mecarbam Tefluthrin Coumatetralyl Mercuric oxide Thallium sulfate	Ethyl Fenamiphos Oxydemeton methyl Azinphos methyl Flucythrinate Paris green {C} Blasticidin Furathiocarb Pirimiphos ethyl Cadusafos Heptenophos Propaphos Calcium arsenate Isazofos Propetamphos Carbofuran Isofenphos Sodium arsenite Chlorfenvinphos Isoxathion Sodium cyanide

Zeta methyl Methidathion Thiometon Dichlorvos Methiocarb Triazophos	cypermethrin Methamidophos Thiofanox Demeton Dicrotophos Methomyl Vamidothion Dinoterb Monocrotophos Warfarin Edinofenphos Nicotine Zinc phosphide
Moderately Hazardous (Class II) Technical Grade Active Ingredients of Pesticides	
Alanycarb Endosulfan Paraquat Anilofos Endothal Fenobucarb Piperophos Bilanafos Fenpropidin Pirimicarb Bioallethrin Fenpropathrin Prallethrin Bromoxynil Fenthion Profenofos Brobuconazole Fentin acetate Propiconazole Bronopol Ferntin hydroxide Propoxur Butamifos Fenvalerate Cartap Fuberidazole Pyrethrins Chloralose	Sodium Pebulate Azaconazole Esfenvalerate Permethrin Azocyclotin Ethion Phenthoate Bendiocarb Etrimfos Phosalone Bensulide Fenitrothion Phoxim Bifenthrin Prosulfocarb Butylamine Fipronil Prothiofos Carbaryl Fluxofenim Pyraclofos Carbosulfan Formothion Pyrazophos HCH Pyroquilon Chlordane

Gamma	Guazatine
Haloxyfop	Quinalphos
Quizalofop	Chlorfenapyr
Iminoctadine	tefuryl
Spiroxamine	Chlorphonium chloride
Cuprous oxide	Heptachlor
loxynil	Rotenone
Suiprofos	Chlorpyrifos
Cyanazine	Imazalil
loxynil octanoate	Sodium fluoride
Terbumeton	Clomazone
Cyanophos	Imidacloprid Sodium
Isoprocarb	Hexafluorosilicate
Tetraconazole	Copper sulfate
Cyfluthrin	cynalothrin
Lambda	Thiacloprid
cyfluthrin	Beta
Mercurous chloride	sodium
Thiobencarb	Thiodicarb
Cynalothrin	Alpha
Metaldehyde	cypermethrin
Thiocyclam	Methacrifos
Cypermethrin	Triazamate
Metam	Cyphenothrin
Metolcarb	Methasulfocarb
Tridemorph	Trichlorfon
Difenzoquat	Deltamethrin
Metribuzin	Methyl isothiocyanate
Vernolate	Tricyclazole
Dimethoate	Diazinon
Dichlorprop	Molinate
Alachlor	Xylylcarb
Copper hydrixide	Dinobuton Nabam
Diclofop	Diquat Naled
Allethrin	Acephate
Copper ox	Chlormequat (chloride)
ychloride	Dichlorbenzene
Dienochlor	Acetochlor
Ametryn	Chloracetic acid
Cucloate	Dichlorophen
Diethyltoluamide	Acifluorfen
Amitraz	Chlorthiamid
Cyhexatin	Cyproconazole
Difenoconazole	Dimethachlor

Azamethiphos Cymoxanil Dimepiperate Bensultap	Bentazone Dazomet Dimethamethryn Bromofenoxim Desmethryn Dimethipin Butroxydim Dicamba Dimethylarsinic acid Chinomethionat Dichlormid Diniconazole
Technical Grade Active Ingredients of Pesticides Unlikely to Present Acute Hazard in Normal Use	
Acephate Mecoprop Bentazone Acetochlor Mecoprop Dinocap Metamitron Chloracetic acid Diphenamid Metconazole Chlorthiamid Dithianon Methylarsonic acid Copper hydrixide Dodine Napthyloxyacetic acid Octhilinone Etridiazole Nitrapyrin butyl Azamethiphos Paclobutrazol Fluchloralin Bensultap Pendimethalin Flufenacet Mecoprop Pimaricin	Bromofenoxim Acifluorfen Mefluidide Butroxydim Alachlor Mepiquat Chinomethionat Allethrin Metalaxyl Chlormequat (chloride) Metolachlor Copper oxychloride Empenthrin Myclobutanil Nuarimole Esrocarb octylbicycloheptene Fenothiocarb Ame tryn Dicarboximide Ferimzone Amitraz Oxadixyl Fluazifop Pirimiphos methyl Flurprimidol

Fluoroglycofen Mecoprop of 56 Flusilazole Mepiquat Propachlor Flutriafol Metalaxyl Propanil Fomesafen Metamitron Propargite Furalaxyl Metconazole Pyrazoxyfen Glufosinate Methylarsonic acid Pyridaben Hexazinone Metolachlor Pyridaphent thioethyl Bensultap Simetryn	Meflu idide Prochloraz hion Hydramethylnon Myclobutanil Pyridate Iprobenfos Napthyloxyacetic acid Pyrifenox Isoprothiolane Nitrapyrin Quinoclamine Isoproturon Ametryn Quizalofop Isouron Amitraz Resmethrin Malathion Azamethiphos Sethoxydim

Source: Masa, 2018[7]

2.2.1 Active ingredients

The list of active ingredients includes: diclhorvos methamidophos, 2, 4-D dimethylamine, paraquat, diuron, oxyfluorfen, endosulfan, oxamyl and mancozeb.

2.2.2 Crops using HHPs

According to an FAO study conducted in Mozambique, vegetables and fruits are the main crops using most HHPs, such as: cabbage, lettuces, tomatoes, cucumber, pineapple, and sweet potatoes, amongst others.

2.3 General data on the volume of HHPs used in agriculture

There is no official data available.Pesticides registered with the then National Directorate of Agrarian Services (DNSA), now National Directorate of Agriculture and Silviculture (DNAS), under the current Ministry of Agriculture and Food Security (MASA), can be used in Mozambique. These include a list of pesticides products that are classified according to their toxic potential (Article

[7]http://www.masa.gov.mz/wp-content/uploads/2018/05/IRRIGA_PMP_-Final-for-Disclosure.pdf

9). Out of the 188 registered pesticides, 109 are class III; 67 class II and 12 class I (Class I are the most toxic). Composition and physical-chemical characteristics of the pesticides proposed for registration are to conform to the specifications from the World Health Organization (WHO) and the United Nations Food and Agricultural Organization (FAO), and should appear on the label. The regulation also requires proper packaging and handling, which meet the necessary requirements regarding measures to control the entire cycle of pesticides foreseen under the Pesticides Management Regulation. These include:

- The use of Class I pesticides is subject to a 1-year renewable authorization to be issued by the CATERP (Technical Assessment Committee for Pesticides Registration), based on a formal request, with the following data attached: curriculum vitae, health certificate confirming appropriate health for the handling of pesticides and certificates confirming the technical training of the applicant.

- Pesticides can only be used by adults. The applicants for Class I pesticides shall have a basic level of schooling granted by institutions recognized by the DNSAS.

- The DNSAS can submit the applicant to a test in order to measure his / her technical capabilities.

- Pesticide spraying by pregnant or breast feeding women and minors is prohibited (Art. 30) as precautionary principle for occupational health and safety.

2.4 HHPs banned in other countries but in use in the country

Alachlor; aldicarb; carbendazim; carbofuran, endosulfan and diuronare in use in Mozambique.

2.5 Human health and environmental impacts; and humans rights related issues associated with HHPs

The impacts of HHPs in human health are associated to handling, exposure, and its management. Pesticides are poisons and harmful to humans as well as to the environment. They are toxic and when in contact with skin, can cause a number of health effects, also linked to a range of series acute and chronic including cancer.

HHPs impact members of communities differently due to their social roles. Women, people with physical disabilities, elders, breast feeding mothers and children are more vulnerable to all kinds of exposure related to HHPs. Chemicals companies distribute pesticides with safety information written in English instead of the local languages which makes the the understanding more challenging even for few of the Mozambiqans that can read and understand their national language. Alarmed by seeing women spraying pesticides while carrying babies on their backs and using chemical containers to collect water, AFSD took action to work with the business

community, the Ministry of Environment, and other stakeholders to ensure that appropriate safety information is provided. AFSD also worked to promote natural alternatives to pesticides and develop chemical disposal facilities. These efforts form part of Mozambique's national plan to implement the Stockholm Convention on Persistent Organic Pollutants (POPs), while also contributing to national initiatives to achieve food security, reduce poverty and safeguard the environment.

The agricultural sector is a relatively stable sector creating income opportunities and that gets focus of assistance from different groups that include volunteers and the civil society organizations that try to bridge farmers to access to regional markets. However, todate, the sector is dominated by poor technology and low productivity as well as the human health and invironmental impacts arising from the use of HHPs.

2.6 National provisions to phase out HHPs

With regard the national provision to phase out banned HHPs there are two central instruments that regulate pesticides in Mozambique. Those instruments are: Ministerial Diploma 153/2002 of 11 September 2002 (Pesticides Regulation) and Decree 6/2009 of 31th March 2009 (Pesticides Management Regulation)there are complemented by Decree 18/2004 Regulation on Environmental Quality and instruments and Effluents' Emissions amended by Decree nr. 67/2010. These documents emphasize how to avoid and minimize the potential negative effects of pesticides; in such contexts, the adoption of Integrated Pests Management (IPM) can be a better alternative to be taken as one approach. IPM is amix of farmer-driven, ecologically-based pest control pratices that seek to reduce realiace on chemical pesticides. It involves:

I. Managing pests (keeping them below economic impact levels) rather than seeking to eradicate them.
II. Relying,to the extent possible, on non-chemical measures to keep pest populations low.
III. Sellecting and applying pesticides, when they have to be used (rational use), in a way that minimizes adverse effects on beneficial organisms, humans and the environment.

2.7 Companies /associations representing the pesticide industry in Mozambique

EXISTING PESTICIDES IN MOZAMBIQUE								
Nº.	**PRODUCT**	**SUBSTÂNCIA**	**CATEGORY**	**CLASS**	**FOR.**	**AGENT**	**Valid**	**Situation**
667	Abate 50% EC	Temephos 500 g/l	Insecticida	III	EC	Agrolândia, Lda	2016.03.02	Registered
979	Acarthrin 20% EC	Fenpropathrin 200 g/l	Insect./Acar.	II	EC	Agrifocus, Lda	2015.08.30	Registered
769	Acatop 55% SC	Fenbutation Oxide 550 g/l	Insecticida	II	SC	Agrifocus, Lda	2015.11.30	Registered
653	Accotab 33% EC	Pendimetalina 330 g/l	Herbicida	III	EC	Agrolândia, Lda	2016.03.02	Registered

EXISTING PESTICIDES IN MOZAMBIQUE								
826	Ace 75% SP	Acephate 750 g/kg	Insecticida	III	SP	Export Marketing CO, Lda	2015.03.30	Registered
771	Acephate 75% SP	Acephate 750 g/kg	Insecticida	III	SP	Agrolândia, Lda	2016.03.02	Registered
1240	Aceta-Cure 90% EC	Acetochlor 900 g/l	Herbicida	III	EC	Curechem Moçambique, Lda	2017.03.30	Registered
1089	Acmidazol 20% SL	Acetamiprid 200 g/l	Insecticida	II	SL	Contabill (Moç.), Lda	2015.09.30	Registered
695	Actara 25 WG	Thiamethoxam 250 g/kg	Insecticida	III	WG	Prime Moçambique, Lda	2015.11.30	Registered
1178	Actellic 30% CS	Pirimiphos Methyl 300 g/l	Insecticida	III	CS	Agrifocus, Lda	2016.11.30	Registered
106	Actellic 50% EC	Pirimifos metill 500 g/l	Insecticida	III	EC	Agrifocus, Lda	2016.08.30	Registered
949	Agita 1% GB	Thiamethoxam 10 g/kg+	Insecticida	III	GB	Agrifocus, Lda	2015.03.30	Registered
949	Agita 1% GB	Tricozene 1 g/kg+	Insecticida	III	GB	Agrifocus, Lda	2015.03.30	Registered
948	Agita 10% WG	Thiamethoxan 100 g/kg+	Insecticida	III	WG	Agrifocus, Lda	2015.03.30	Registered
948	Agita 10% WG	Tricozene 0,05 g/kg+	Insecticida	III	WG	Agrifocus, Lda	2015.03.30	Registered
1237	Agrisulph 80% WG	Enxonfre 800 g/kg	Fungicida/Acaricida	III	WG	Agrifocus, Lda	2017.02.29	Registered
1121	Agrithion 64% UL	Fenthion 640 g/l	Insecticida	II	UL	Agrifocus, Lda	2016.04.30	Registered
1120	Agrithrin 1,2% UL	Ciflutrina 12 g/l	Insecticida	II	UL	Agrifocus, Lda	2016.04.30	Registered
1190	Agro-Fenvarelato 20% EC	Fenvarelato 200 g/l	Insecticida	II	EC	Agro Global, lda	2017.02.29	Registered
1196	Agromate 72% SL	MSMA 720 g/l	Herbicida	II	SL	Afrigrow Moçambique, Lda	2017.02.29	Registered
624	Agromectin 1.8% EC	Abamectina 18 g/l	Insecticida	II	EC	Agrifocus, Lda	2016.11.30	Registered
1153	Alfa 10% EC	Alfa-Cipermetrina 100 g/l	Insecticida	II	EC	Afrigrow Moçambique, Lda	2017.02.29	Registered
1188	Alfapor Spray And Dip	Alfa-cipermetrina 50 g/l	Insecticida	II		Medimoc, S.A	2017.03.30	Registered
1189	Alfatix Spray And Dip	Flumetrina 20 g/l	Insecticida	III		Medimoc, S.A	2017.03.30	Registered
1227	Alligator 50% EC	Pendimentalina 500 g/l	Herbicida	III	EC	Afrigrow Moçambique, Lda	2017.02.29	Registered

EXISTING PESTICIDES IN MOZAMBIQUE								
460	Alpha-cipermetrina 10% EC	Alfa-cipermetrina 100 g/l	Insecticida	II	EC	Sapec S.A.	2015.03.30	Registered
1125	Altair 75% WG	Isoxaflutole 750 g/kg	Insecticida	III	WG	Agrifocus, Lda	2015.05.31	Registered
1266	Ametryn-Cure 80% WP	Ametryn 800 g/kg	Herbicida	III	WP	Curechem Moçambique, Lda	2017.03.30	Registered
1002	Amiflex 23,75% TR WP	Amitraz 237,5 g/l	Insecticida/carracicida	III	WP	Agrifocus, Lda	2017.02.29	Registered
813	Amigard 12.5% EC	Amitraz 125 g/l	Carracicida	II	EC	Agrifocus, Lda	2014.12.31	Registered
1187	Amitix Spray DIP	Amitraz 125 g/l	Insecticida	III		Medimoc, S.A	2017.03.30	Registered
259	Antracol 70% WP	Probinebe 700 g/kg	Fungicida	III	WP	Agrolândia, Lda	2015.11.30	Registered
1164	Aphiscure Gold 51% SP	Acephate 500 g/kkg+	Insecticida	III	SP	Curechem Moçambique, Lda	2017.02.29	Registered
1164	Aphiscure Gold 51% SP	Imidacloprid 18 g/kg+	Insecticida	III	SP	Curechem Moçambique, Lda	2017.02.29	Registered
874	Apron Star 42% WS	Difenaconazol 20 g/kg +	Insect/Fung.	III	WS	Prime Moçambique, Lda	2015.11.30	Registered
874	Apron Star 42% WS	Metalaxyl 200 g/kg +	Insect/Fung.	III	WS	Prime Moçambique, Lda	2015.11.30	Registered
874	Apron Star 42% WS	Thiamethaxam 200 g/kg +	Insect/Fung.	III	WS	Prime Moçambique, Lda	2015.11.30	Registered
1104	Arietis 25% SC	Azoxistrobin 250 g/l	Fungicida	III	SC	Agrifocus, Lda	2016.03.02	Registered
1295	Armicarbazone 700 WG	Armicarbazone 700 g/kg	Herbicida	III	WG	Afrigrow Moçambique, Lda	2017.06.30	Registered
827	Arrow 5% EC	Alpha-Cypermetrina 50 g/l	Insecticida	II	EC	Export Marketing CO, Lda	2015.03.30	Registered
926	Arrozan 48% SL	Bentazone 480 g/l	Herbicida	III	SL	Agrifocus, Lda	2016.11.30	Registered
782	Arroztar 25% EC	Oxadiazão 250 g/l	Herbicida	III	EC	Agrifocus, Lda	2016.08.30	Registered
325	Arsenal 25% SL	Imazapyr 250 g/l	Herbicida	II	SL	Agrolândia, Lda	2016.03.02	Registered
1179	Atack Citronela Mosquito Coils	d-Allethrin/Pynamin Forte 0,2%	Inseticida	III		Aggy, Lda	2017.02.29	Registered
1146	Atack Control Insect Repellent Spray	IR 3535 0,25%	Repelente	III		Aggy, Lda	2017.02.29	Registered

EXISTING PESTICIDES IN MOZAMBIQUE								
1145	Atack Insect Killer	d-Allethrin /Pynamin Forte 0,2%	Insecticida	III		Aggy, Lda	2017.02.29	Registered
1144	Atack RoachKiller	Tetramethrin 0,0485+	Insectcida	III		Aggy, Lda	2017.02.29	Registered
510	Atrazerba 50% FL	Atrazina 500 g/l	Herbicida	III	FL	Sapec S.A.	2015.03.30	Registered
351	Avi-Ciflutrina 1,2% UL	Ciflutrina 12 g/l	Insecticida	II	UL	Moz Vector Control	2015.11.30	Registered
980	Avi-Fenitrothion 96% UL	Fenitrothion 960 g/l	Insecticida	II	UL	Moz Vector Control	2015.12.30	Registered
395	Avi-Fenthion 64% UL	Fenthion 640 g/l	Insecticida	II	UL	Moz Vector Control	2015.11.30	Registered
832	Avi-fenvarelate 20% EC	Fenvarelate 200 g/l	Insecticida	II	EC	Moz Vector Control	2016.03.02	Registered
886	Avi-Lambda Cyhalothrin 5% EC	Lambda-Cyhalothrin 50 g/l	Insecticida	II	EC	Moz Vector Control	2015.11.30	Registered
833	Avi-Sipermetrina 20% EC	Cipermetrina 200 g/l	Insecticida	II	EC	Moz Vector Control	2015.11.30	Registered
884	Avisnail 5% RB	Cabaryl 20 g/kg+	Insecticida	III	RB	Agrolândia, Lda	2016.03.02	Registered
884	Avisnail 5% RB	Metaldehyde 30 g/kg+	Insecticida	III	RB	Agrolândia, Lda	2016.03.02	Registered
462	Azupec 80% WP	Enxofre 800 g/kg	Fungicida	III	WP	Sapec S.A.	2015.03.30	Registered
697	Bactivec	Bacillus Thuringensis S.H. 14	Biolarvicida	III		Biochem, lda	2016.08.30	Registered
961	Bacto power BTI	Bacillus Thuringensis Var Israelensis-Spores	Insecticida	III		Bio Power (Africa), Lda	2017.05.31	Registered
1117	Balence HF 23 ES	Beaveria bassica estripe HF 23 1,12%	Insect. Biológico	III		Bedson Moçambique, Lda	2016.09.30	Registered
842	Bandit 35% SC	Imidacloprid 350 g/l	Insecticida	II	SC	Agrifocus, Lda	2015.03.30	Registered
903	Bandit 70% WG	Imidacloprid 700 g/kg	Insecticida	II	WG	Agrifocus, Lda	2016.08.30	Registered
194	Basagran 48% SC	Bendioxido 480 g/l	Herbicida	III	SC	Agrolândia, Lda	2016.03.02	Registered
1003	Baycor 30% DC	Bitertanol 300 g/l	Fungicida	III	DC	Agrolândia, Lda	2016.03.02	Registered
433	Bayfidan 25% EC	Triadimenol 250 g/l	Fungicida	III	EC	Agrolândia, Lda	2016.03.02	Registered
997	Bayfidan 3% GR	Triadimenol 30 g/kg	Fungicida	III	GR	Agrolândia, Lda	2015.11.30	Registered
916	Baygon cCockroaches ants Odurless	Cypermethrin 1,04 g/kg	Insecticida	III		Abba Representações, Lda	2017.02.29	Registered

EXISTING PESTICIDES IN MOZAMBIQUE								
916	Baygon cCockroaches ants Odurless	Imiprothrin 1,0 g7kg+	Insecticida	III		Abba Representações, Lda	2017.02.29	Registered
917	Baygon Cockroaches and Ants	Imiprotrin 1,0 g/kg+	Insecticida	III		Abba Representações, Lda	2015.04.30	Registered
914	Baygon Mosquitos Cockroaches ants and flies extra Odourless	Imiprothrin 0,34 g/kg+	Insecticida	III		Abba Representações, Lda	2017.02.29	Registered
914	Baygon Mosquitos Cockroaches ants and flies extra Odourless	Pipernil Butoxide 10 g/kg	Insecticida	III		Abba Representações, Lda	2017.02.29	Registered
914	Baygon Mosquitos Cockroaches ants and flies extra Odourless	Prallethrin 0,4 g/kg+	Insecticida	III		Abba Representações, Lda	2017.02.29	Registered
914	Baygon Mosquitos Cockroaches ants and flies extra Odourless	Tetrachlorvinphos 2.0 g/l+	Insecticida	III		Abba Representações, Lda	2017.02.29	Registered
628	Baygon Multipurpose Insect Spray	Imiprothrin 0,34 g/kg+	Insecticida	III		Abba Representações, Lda	2015.11.30	Registered
628	Baygon Multipurpose Insect Spray	Piperonyl Butoxide 10 g/kg+	Insecticida	III		Abba Representações, Lda	2015.11.30	Registered
628	Baygon Multipurpose Insect Spray	Prallethrin 0,4 g/kg+	Insecticida	III		Abba Representações, Lda	2015.11.30	Registered
628	Baygon Multipurpose Insect Spray	Tetramethrin 2,0 g/kg+	Insecticida	III		Abba Representações, Lda	2015.11.30	Registered
482	Baytan 15% DS	Triadimenol 150 g/kg	Fungicida	III	DS	Agrolândia, Lda	2015.11.30	Registered
346	Bayticol 2% EC	Flumetrina 20 g7l	Carracicida	III	EC	Sogrep, Lda	2017.03.30	Registered
745	Bb Plus	Beauveia bassica 2x10 esporos/g	Insecticida	III		Agrifocus, Lda	2016.04.30	Registered
467	Benopec 50% WP	Benomil 500 g/kg	Fungicida	III	WP	Sapec S.A.	2015.03.30	Registered
828	Best 48% EC	Chlorpyrifos 480 g/l +	Insecticida	II	EC	Export Marketing CO, Lda	2015.03.30	Registered
1083	Biokmetine 5% EC	Emamectin Benzoate 50 g/l	Insecticida	II	EC	Agrifocus, Lda	2015.11.30	Registered
1204	Biomiprid 20% SP	Acetamiprid 200 g/kg	Insecticida	III	SP	Agrifocus, Lda	2017.02.29	Registered
699	Biomiprid 22.2% SL	Acetamiprid 222 g/l	Insecticida	III	SL	Agrifocus, Lda	2016.08.30	Registered

EXISTING PESTICIDES IN MOZAMBIQUE								
1080	Biophos 57% FW	Fosforeto de Aluminio 570 g/kg	Insecticida	I	FW	Agrifocus, Lda	2016.09.30	Registered
1082	Biotick 1% PO	Flumethrin 10 g/kg	Insecticida	III	PO	Agrifocus, Lda	2015.05.31	Registered
1111	Bispirice 40% SC	Sódio Bispyribac 400 g/l	Insecticida	III	SC	Neoquímica, lda	2016.03.02	Registered
1293	Brigader 75% WG	Halosulfuron-Mthryl 750 g/kg	Herbicida	III	WG	Afrigrow Moçambique, Lda	2017.06.30	Registered
952	Brokir 0,075% CB	Brodifacoum 0,75 g/l	Rodenticida	I	CB	Agrifocus, Lda	2015.04.30	Registered
1233	Bromacil 80% WP	Bromacil 800 g/kg	Herbicida	III	WP	Afrigrow Moçambique, Lda	2017.04.30	Registered
1222	Bromopropylate 50% EC	Bromopropylate 500 g/l	Insect./Acaricida	III	EC	Afrigrow Moçambique, Lda	2017.04.30	Registered
1216	Bromoxynil 25,5% EC	Bromoxyl 255 g/l	Herbicida	III	EC	Afrigrow Moçambique, Lda	2017.02.29	Registered
947	Browser 24% SL	Picloram 240 g/l	Herbicida	III	SL	Agrifocus, Lda	2015.03.30	Registered
1035	Bugstop 22,5% ULV	S-Bioallethrin 15 g/l	Insecticida	II	UL	Fumilar, Lda	2016.11.30	Registered
1036	Bugstop Alpha-Cypermethrin 5% WP	Alfa Cypermethrina 50% g/kg	Insecticida	II	WP	Fumilar, Lda	2016.11.30	Registered
1038	Bugstop bacillus Thuringensis WG	Bacillus Thuringiensis var Israelensis(Bti) 3200 IU/mg	Insecticida	III	WG	Fumilar, Lda	2016.11.30	Registered
1039	Bugstop Bromadiolone 0,005% BB	Bromadiolone 0,05 g/kg	Rodenticida	I	BB	Fumilar, Lda	2016.11.03	Registered
1040	Bugstop Insect Repellent Lotion PC	Diethyltoluamide 195 g/kg	Insecticida	III	PC	Fumilar, Lda	2016.11.30	Registered
1186	Bugstop Lambda-Cyhalothrin 10% CS	Lambda-cyhalothrin 100 g/l	Insecticida	II	CS	Fumilar, Lda	2017.02.29	Registered
1041	Bugstop Lambda-Cyhalothrin 10% WP	Lambda-Cyhalothrin 100 g/kg	Insecticida	II	WP	Fumilar, Lda	2016.11.30	Registered
323	Bulldock 0,05% GR	Beta ciflutrina 0,05 g/kg	Insecticida	II	GR	Agrolândia, Lda	2015.11.30	Registered
1229	Buprofenzin 50% WP	Buprofenzin	Insecrida	III	WP	Afrigrow Moçambique, Lda	2017.04.30	Registered
470	Calda bordaleza Sapec 20% WP	Sulfato de cobre 200 g/kg	Fungicida	II	WP	Sapec S.A.	2015.03.30	Registered

EXISTING PESTICIDES IN MOZAMBIQUE								
1156	Carbo 25% EC	Carbosulfan 250 g/l	Insectcida	II	EC	Curechem Moçambique, Lda	2017.02.29	Registered
504	Carbofurão 5% GR	Carbofurão 50 g/kg	Insecticida	II	GR	Sapec S.A.	2015.03.30	Registered
599	Caribur 25% EC	Triadimenol 250 g/l	Fungicida	III	EC	Sapec S.A.	2015.03.30	Registered
506	Carratox 12,5% EW	Amitraz 125 g/l	Carracicida	III	EW	Sapec S.A.	2015.03.30	Registered
522	Carrotox pour-on 3% SC	Amitraz 30 g/l	Carracicida	III	SC	Sapec S.A.	2015.03.30	Registered
1134	Cekumetrin 10% EC	Cipermetrina 100 g/l	Insecticida	II	EC	Agro Global, lda	2016.09.30	Registered
1137	cekuthoate 40% EC	Dimetoato 400 g/l	Insecticida	III	EC	Agro Global, lda	2016.09.30	Registered
1029	Celcron 50% EC	Profenofos 500 g/l	Insecticida	II	EC	TECAP, LDA	2016.09.30	Registered
1028	Celphos 57% FT	Fosforeto de aluminio 570 g/kg	Insecticida	I	FT	TECAP, LDA	2016.09.30	Registered
797	Censor 20% SC	Fipronil 200 g/l	Insecticida	II	SC	Agrifocus, Lda	2016.08.30	Registered
1163	Chemaron 58% SL	Metamidofos 585 g/l	Insecticida	I	SL	Curechem Moçambique, Lda	2017.02.29	Registered
1163	Chemeron 58% SL	Metamidofos 585 g/l	Insecticida	I	SL	Curechem Moçambique, Lda	2017.02.29	Registered
1149	Chemlaxyl 72% WP	Metalaxyl 80 g/kg+	Fungicida	III	WP	Curechem Moçambique, Lda	2017.02.29	Registered
1148	Chlopyrifos 48% EC	Chlorpyrifos 480 g7l	Insecticida	II	EC	Curechem Moçambique, Lda	2017.02.29	Registered
1213	Chlorimuron - Ethyl 25% WG	Chlorimuron Ethyl 250 g/kg	Herbicida	III	WG	Afrigrow Moçambique, Lda	2017.06.30	Registered
1200	Chloroflo 50% SC	Chlorotalonil 500 g/l	Fungicida	III	SC	Afrigrow Moçambique, Lda	2017.02.29	Registered
1148	Chlorpyrifos 48% EC	Chlorpyrifos 480 g/l	Insecticida	II	EC	Curechem Moçambique, Lda	2017.02.29	Registered
517	Cialon 10% WP	Lambda-cialotrina 100 g/kg	Insecticida	II	WP	Sapec S.A.	2015.03.30	Registered
549	Cialon 2,5%EC	Lambda-cialotrina 25 g/l	Insecticida	II	EC	Sapec S.A.	2015.03.30	Registered
545	Ciclor 72% EC	Cipermetrina 120 g/l +	Insecticida	II	EC	Sapec S.A.	2015.03.30	Registered
545	Ciclor 72% EC	Clorpirifos 600 g/l +	Insecticida	II	EC	Sapec S.A.	2015.03.30	Registered

EXISTING PESTICIDES IN MOZAMBIQUE								
641	Ciper Pro 72% EC	Cipermetrina 120 g/l+	Insecticida	II	EC	Agrifocus, Lda	2016.08.30	Registered
641	Ciper Pro 72% EC	Profenofos 600 g/l+	Insecticida	II	EC	Agrifocus, Lda	2016.08.30	Registered
1159	Class 25% DF	Chloromuron Ethyl 250 g/l	Herbicida	III	DF	Curechem Moçambique, Lda	2017.02.29	Registered
1184	Claw 50% SC	Metazachlor 500 g/l	Herbicida	III	SC	Agrifocus, Lda	2016.11.30	Registered
1010	Climax 60% WP	Metsulfuron - Methyl 600 g/kg	Herbicida	III	WP	Agrifocus, Lda	2016.07.31	Registered
1274	Clomazone 48% EC	Clomazone 480 g/l	Herbicida	II	EC	Afrigrow Moçambique, Lda	2017.03.30	Registered
1113	Cock Brand	D-Allthrin	Repelente	III		Evergreen, Lda	2015.11.30	Registered
1138	Cock Brand Micro Fumança e Perfumado	D-Allethrin 3,5 g/kg	Insect.7Repelente	III		Maet Trading	2016.09.30	Registered
1139	Cock brand Repelente Dispositivo Eléctrico e líquido para Mosquitos.	Transflutrin 10 g/l	Insect.Repelente	III		Maet Trading	2016.09.30	Registered
1141	Cock Brand Repelentes Líquido Para Mosquitos	Transflutrin 10 g/l	Insect./Repelente	III		Maet Trading	2016.09.30	Registered
1140	Cock brand Sem Fumança	D-Allethrin 3,5 g/kg	Insect./Repelente	III		Maet Trading	2016.09.30	Registered
845	Codal Gold 402.5 DC	Prometryn 250 g/l+	Herbicida	III	DC	Syngenta, Agro Services	2015.03.30	Registered
845	Codal Gold 402.5 DC	S-Metolacloro 162,5 g/l+	Herbicida	III	DC	Syngenta, Agro Services	2015.03.30	Registered
1011	Colony 75% WP	Chlorsulfuron 750 g/kg	Herbicida	III	WP	Agrifocus, Lda	2016.07.31	Registered
868	Colosso 12.5% PO	Cipermetrina 50 g/l+	Carracicida	III	PO	TECAP, LDA	2015.11.30	Registered
868	Colosso 12.5% PO	Citronelal 5 g/l+	Carracicida	III	PO	TECAP, LDA	2015.11.30	Registered
868	Colosso 12.5% PO	Clorpirifos 70 g/l+	Carracicida	III	PO	TECAP, LDA	2015.11.30	Registered
866	Colosso Pulverização 41% EC	Cipermetrina 150 g/l+	Insecticida	III	EC	TECAP, LDA	2015.11.30	Registered
866	Colosso Pulverização 41% EC	Citronelalal 10g/l+	Insecticida	III	EC	TECAP, LDA	2015.11.30	Registered
866	Colosso Pulverização 41% EC	Clorpirifos 250 g/l+	Insecticida	III	EC	TECAP, LDA	2015.11.30	Registered

EXISTING PESTICIDES IN MOZAMBIQUE								
851	Confidor 70% WG	Imidaclopride 700 g/kg	Insecticida	II	WG	Agrolândia, Lda	2015.11.30	Registered
455	Controler 48% SE	Alacloro 336 g/l +	Herbicida	III	SE	Sapec S.A.	2015.03.30	Registered
455	Controler 48% SE	Atrazina 144 g/l +	Herbicida	III	SE	Sapec S.A.	2015.03.30	Registered
967	Cooper Aerosol Fly and Mosquito Killer	Pertrin 15 g/kg+	Insecticida	III	AE	Moz Vector Control	2015.11.30	Registered
967	Cooper Aerosol Fly and Mosquito Killer	Piperonyl Butoxide 15 g/kg+	Insecticida	III	AE	Moz Vector Control	2015.11.30	Registered
871	Cooper Count - N 316 SL	Acetato de Amónio Cúprico	Fungicida	III	SL	Soluções Rurais, lda	2017.02.29	Registered
1235	Copper-Flow-Plus 31.5% SL	Acetato de amónio de cobre 315 g7l	Fungicida/Bactericida	III	SL	Agrifocus, Lda	2017.02.29	Registered
1034	Cotvalerate 20% EC	Fenvalerate 200 g/l	Insecticida	II	EC	Agrifocus, Lda	2016.11.30	Registered
1307	Cotzeb 80% WP	Mancozeb 800 g/kg	Fungicda	III	WP	Chanral Mozambique, Lda	2017.06.30	Registered
843	Courage 70% WS	Imidacloprid 700 g/kg	Insecticida	II	WS	Agrifocus, Lda	2015.04.30	Registered
1236	Crater 455 SC	Mancozeb 455 g/l	Fungicida	III	SC	Agrifocus, Lda	2017.02.29	Registered
956	Crescendo 48% EC	Clomazone 480 g/l	Herbicida	III	EC	Agrifocus, Lda	2015.11.30	Registered
746	Crop Guard 90% EC	Furfural 900 g/l	Nematicida	I	EC	Agrifocus, Lda	2015.04.30	Registered
1201	CungFu 53,8% SC	Hidróxido de Cobre 538 g/l	Fungicida	III	SC	Afrigrow Moçambique, Lda	2017.02.29	Registered
1180	Cupagrex 50% WP	Oxicloreto de cobre 500 g/kg	Insecticida	III	WP	Agro Global, lda	2017.02.29	Registered
459	Cuprital 50% WP	Oxicloreto de cobre 500 g/kg	Fungicida	III	WP	Sapec S.A.	2015.03.30	Registered
126	Curaterr 10% GR	Carbofurão 100 g/kg	Insect./Nematicida	I	GR	Agrolândia, Lda	2015.11.30	Registered
1162	Curethane 80% WP	Mancozeb 800 g/kg	Fungicida	III	WP	Curechem Moçambique, Lda	2017.02.29	Registered
1000	Cyflex 1% PO	Cyflutrina 10 g/l	Inescticida/Acaricida	III	PO	Agrifocus, Lda	2017.02.29	Registered
662	Cylence 1% PO	Ciflutrina 10g/l	Insecticida	III	PO	Sogrep, Lda	2015.11.30	Registered
1194	Cyperin 20% EC	Cipermetrina 200 g/l	Insecticida	II	EC	Afrigrow Moçambique, Lda	2017.02.29	Registered

EXISTING PESTICIDES IN MOZAMBIQUE								
1302	Cypermethrin 10% EC	Cypermethrin 100 g/l	Herbicida	II	EC	Chanral Mozambique, Lda	2017.06.30	Registered
1034	Cypermethrin 20% EC	Cypermethrin 200 g/l	Insecticida	II	EC	Chanral Mozambique, Lda	2017.06.30	Registered
862	Cypermil 5% PO	Cipermetrina 50 g/l+	Carracicida	III	PO	TECAP, LDA	2015.11.30	Registered
863	Cypermil Pulverização 15% SL	Cipermetrina 150 g/l	Insect./carr,	II	SL	TECAP, LDA	2015.09.30	Registered
1195	Datathion 50% EC	Mercaptotião 500 g7l	Insecticida	II	EC	Afrigrow Moçambique, Lda	2017.02.29	Registered
620	Daw MCPA 400 SL	MCPA 400 g/l	Herbicida			Afrigrow Moçambique, Lda	2016.11.30	Registered
817	Daz-Dust 2% DP	Diazinon 20 g/kg	Insecticida	III	DP	Sogrep, Lda	2015.11.30	Registered
816	Dazzel N.F 30% EC	Diazinon 300 g/l	Insect./Carracicida	II	EC	Sogrep, Lda	2015.11.30	Registered
311	Decis D 10,4% UL	Deltametrina 4 g/l+	Insecticida	II	UL	Sapec S.A.	2015.03.30	Registered
311	Decis D 10,4% UL	Dimetoato 100 g/l+	Insecticida	II	UL	Sapec S.A.	2015.03.30	Registered
783	Decis Forte 10% EC	Deltametrina 100 g/l	Insecticida	II	EC	Agrolândia, Lda	2015.11.30	Registered
1112	Defender 25% EC	Triadimenol 250 g/l	Fungicida	II	EC	Neoquímica, lda	2016.03.02	Registered
889	Deli Tab 25% TB	Deltametrina 250 g/l	Insecticida	II	TB	Agrifocus, Lda	2016.01.31	Registered
446	Delta 2,5% EC	Deltametrina 25 g/l	Insecticida	II	EC	Sapec S.A.	2015.03.30	Registered
480	Delta Super 25,75% EC	Deltametrina 7,5 g/l +	Insecticida	I	EC	Sapec S.A.	2015.03.30	Registered
480	Delta Super 25,75% EC	Monocrotofos 250 g/l+	Insecticida	I	EC	Sapec S.A.	2015.03.30	Registered
474	Delta TOP 40,9% EC	Deltametrina 9 g/l +	Insecticida	II	EC	Sapec S.A.	2015.03.30	Registered
474	Delta TOP 40,9% EC	Dimetoato 400 g/l+	Insecticida	II	EC	Sapec S.A.	2015.03.30	Registered
520	Deltatrine 2,5% EC	Deltametrina 25 g/l	Insecticida	II	EC	Sapec S.A.	2015.03.30	Registered
519	Deltatrine 2,5% WP	Deltametrina 25 g/kg	Insecticida	III	WP	Sapec S.A.	2015.03.30	Registered
523	Deltatrine 5% WP	Deltametrina 50 g/kg	Insecticida	II	WP	Sapec S.A.	2015.03.30	Registered
696	Demand 2.5 CS	Lamblacialotrina 2.5g/l	Insecticida	III	CS	Syngenta, Agro Services	2014.12.31	Registered

EXISTING PESTICIDES IN MOZAMBIQUE								
524	Detox 5% EC	Deltametrina 50 g/l	Carracicida	II	EC	Sapec S.A.	2015.03.30	Registered
789	Diatomites 100% WP	Dióxido de Silica	Insecticida	III	WP	Diatomites de Moçambique, Lda	2015.08.30	Registered
1155	Dichlorvos 10% EC	Diclorvos (DDVP)100 g/l	Insecticida	I	EC	Curechem Moçambique, Lda	2017.02.29	Registered
1220	Diclofop - Methyl 37,8% EC	Dicofop-Methyl 378 g/l	Herbicida	III	EC	Afrigrow Moçambique, Lda	2017.06.30	Registered
1086	Difacoum 0,005% Pellet	Brodifacoum 0,0055 g/kg	Rodenticida	I	RB	Contabill (Moç.), Lda	2015.08.30	Registered
435	Dimetoato 40% EC	Dimetoato 400 g/l	Inseticida	II	EC	Agrolândia, Lda	2016.03.02	Registered
870	Dimilin 2% GR	Diflubenzuron 20 g/kg	Insecticida	II	GR	Agrifocus, Lda	2015.11.30	Registered
869	Dimilin 2% TAB	Diflubenzuron 20 g/kg	Insecticida	III	TB	Agrifocus, Lda	2015.11.30	Registered
869	Dimilin 2% TB	Diflubenzuron 20 g/kg	Insecticida	III	TB	Agrifocus, Lda	2015.11.30	Registered
957	Dinamic 70% WG	Amicarbazone 700 g/kg	Herbicida	III	WG	Agrifocus, Lda	2015.11.30	Registered
461	Dipec 80% WP	Diurão 800 g/kg	Herbicida	III	WP	Sapec S.A.	2015.03.30	Registered
1119	Diprimid 20% SL	Imidacloprid 200 g/l	Insecticida	II	SL	Neoquímica, lda	2016.03.31	Registered
1075	Dithane NT 60% OS	Mancozeb 600 g/kg	Fungicida/Acaric.	III	OS	Afrigrow Moçambique, Lda	2016.11.30	Registered
1078	Dithane NT 80% WP	Mancozeb 800 g/kg	Fung./Acaricida	III	WP	Afrigrow Moçambique, Lda	2016.11.30	Registered
1202	Divos 100% EC	Dichlorvos 1000 g/l	Insecticida	I	EC	Afrigrow Moçambique, Lda	2017.02.29	Registered
718	Doom Mosquito Coils	Prallethrin 0,40 g/Kg	Insectcida	II		Amazon Marketing, Lda	2017.06.30	Registered
722	Doom Super Deadly Killing	Pralethrin 0,04 g/kg	Insecticida	II		Amazon Marketing, Lda	2017.06.30	Registered
344	Drastic deadline 1% DP	Flumethrin 10 g/l	Carracicida	II	DP	Sogrep, Lda	2015.11.30	Registered
1098	Duduthrin 5% EC	Lambda cyhalothrin 50 g/l	Insecticida	II	EC	Twiga Chemicals Indust.Moz. lda	2015.08.30	Registered
681	Duett 25% SC	Carbemdazim 125 g/l +	Fungicida	III	SC	Agrolândia, Lda	2016.03.02	Registered
681	Duett 25% SC	Epoxiconazole 125 g/l+	Fungicida	III	SC	Agrolândia, Lda	2016.03.02	Registered

EXISTING PESTICIDES IN MOZAMBIQUE								
623	Dursban 48% EC	Clorpirifos 480 g/l	Insecticida	II	EC	Afrigrow Moçambique, Lda	30.11.2016	Registered
623	Dusban 48% EC	Clorpirifos 480 g/l	Insecticida	II	EC	Afrigrow Moçambique, Lda	2017.02.29	Registered
537	Dynamec 018 EC	Abamectin 18 g/l	Insecticida	II	EC	Prime Moçambique, Lda	2016.04.30	Registered
1072	Ectomin 10% EC	Cypermethrin 100 g/l	Carracicida	III	EC	Agrifocus, Lda	2015.08.30	Registered
954	Ectopor 2% SA	Cypermethrin 20 g/l	Insecticida	III	SA	Agrifocus, Lda	2015.03.30	Registered
472	Ekyp MZ 72% WP	Mancozeb 640 g/kg+	Fungicida	III	WP	Sapec S.A.	2015.03.30	Registered
472	Ekyp MZ 72% WP	Metalaxil 80 g/kg+	Fungicida	III	WP	Sapec S.A.	2015.03.30	Registered
982	Emamectin Benzoate 1,9% EC	Emamectin benzoate 19 g/l	Insecticida	II	EC	Agrifocus, Lda	2016.03.31	Registered
1027	Endocel 35% EC	Endosulfao 350 g/l	Insecticida	I	EC	TECAP, LDA	2016.09.30	Registered
447	Endopec 35% EC	Endosulfão 350 g/l	Insecticida	I	EC	Sapec S.A.	2015.03.30	Registered
825	Enticer 35% EC	Endosulfão 350 g/l	Insecticida	I	EC	Export Marketing CO, Lda	2015.03.30	Registered
1197	Epicure 0,4% SL	Abamectin 4 g7l	Insecticida	III	SL	Afrigrow Moçambique, Lda	2017.02.29	Registered
1245	Ethe-Cure 48% EC	Ethephon 480 g/l	Herbicida	III	EC	Curechem Moçambique, Lda	2017.03.30	Registered
518	Eticide 101% EC	Etião 1010 g/l	Insecticida	II	EC	Sapec S.A.	2015.03.30	Registered
508	Etylit MZ 70% WP	Fosety-Aluminio 350 g/kg +	Fungicida	III	WP	Sapec S.A.	2015.03.30	Registered
508	Etylit MZ 70% WP	Mancozebe 350% g/kg+	Fungicida	III	WP	Sapec S.A.	2015.03.30	Registered
879	Extreme 50% WG	Chlorimuron 500 g/kg	Herbicida	III	WG	Agrifocus, Lda	2015.11.30	Registered
791	Extreme 75% WP	Chlorimuron 107 g/kg	Herbicida	III	WP	Agrifocus, Lda	2016.08.30	Registered
791	Extreme 75% WP	Metribuzin 643 g7kg+	Herbicida	III	WP	Agrifocus, Lda	2016.08.30	Registered
538	Falcon Gold 96% EC	S - Metolacloro 960 g/l	Herbicida	III	EC	Prime Moçambique, Lda	2015.11.30	Registered
774	Falcovos 100% EC	Diclorvos 1000 g/l	Insecticida	I	EC	Export Marketing CO, Lda	2015.03.30	Registered

EXISTING PESTICIDES IN MOZAMBIQUE								
773	Falfume 57% FT	Aluminium Phosphide 570 g/kg	Insecticida	I	FT	Export Marketing CO, Lda	2015.03.30	Registered
1292	Farmatole 750 WG	Isoflutole 750 g/kg	Herbicida	III	WG	Afrigrow Moçambique, Lda	2017.06.30	Registered
686	Fastac 10% EC	Alfa-Cypermethrin 100 g/l	Insecticida	II	EC	Agrolândia, Lda	2016.03.02	Registered
1228	Febutatin Oxide 55% SC	Febutatin Oxide 550g/l	Insecticida	II	SC	Afrigrow Moçambique, Lda	2017.04.30	Registered
1150	Fencure 20% EC	Fenvarelato 200 g/l	Insecticida	II	EC	Curechem Moçambique, Lda	2017.02.29	Registered
857	Fendona 5% WP	Alfa-cipermetrina 50 g/kg	Insecticida	III	WP	Agrolândia, Lda	2016.03.02	Registered
738	Fendona 6% SC	Alfa-cipermetrina 60 g/l	Insecticida	III	SC	Agrolândia, Lda	2016.03.02	Registered
440	Fenvarelate 20% EC	Fenvarelate 200 g/l	Insecticida	II	EC	Sapec S.A.	2015.03.30	Registered
544	Ficam 80% WP	Bendiocarbe 800 g/kg	Insecticida	II	WP	Moz Vector Control	2015.08.30	Registered
821	Fighter 20% EC	Fenvarelate 200 g/l	Insecticida	II	EC	Export Marketing CO, Lda	2015.03.30	Registered
368	Finale 0,002% RB	Brodifacume 0,02 g/kg	Rodenticida	I	RB	Sapec S.A.	2015.03.30	Registered
944	Finale Rat And Mouse Grain Bait	Difethilone 0,025 g/kg	Rodenticida	II	RB	Moz Vector Control	2015.11.30	Registered
969	Finale Rat And Mouse Pellets	Difethilone 0,025 g/kg	Rodenticida	II	RB	Moz Vector Control	2015.11.30	Registered
943	Finale Rat And Mouse Wax Bait	Difethilone 0,025 g/kg	Rodenticida	II	RB	Moz Vector Control	2015.11.30	Registered
1017	Finepic 70% WG	Imazapic 700 g/kg	Herbicida	III	WG	Agrifocus, Lda	2016.07.31	Registered
907	Fiprogel 2,15% PC	Fipronil 21.5 g/kg	Insecticida	III	PC	Agrifocus, Lda	2016.08.30	Registered
492	Fitanol 80% EC	Óleo de Verão 800 g/l	Insecticida	III	EC	Sapec S.A.	2015.03.30	Registered
739	Flint 50% WG	Trifloxystrobin 500 g/kg	Fungicida	III	WG	Agrolândia, lda	2016.03.02	Registered
1090	Flosatex 41% SL	Glifosate 410 g/l	Herbicida	III	SL	Contabill (Moç.), Lda	2015.08.30	Registered
892	Fluomet 50% SC	Fluometuron 500 g/l	Herbicida	III	SC	Agrifocus, Lda	2016.08.30	Registered
193	Focus Ultra 2% EC	Cicloxidim 20 g/l	Herbicida	III	EC	Agrolândia, Lda	2016.03.02	Registered
329	Folicur 25% EW	Tebuconazole 250 g/kg	Fungicida	III	EW	Agrolândia, lda	2015.11.30	Registered

EXISTING PESTICIDES IN MOZAMBIQUE								
1191	Fortana bio 2% DP	Piretrum 20 g7l	Insecticida	III	DP	Agro Global, lda	2017.02.29	Registered
728	Fortis K 5% EC	Lambda-cyhalotrin 50 g/l	Insecticida	II	EC	Agrifocus, Lda	2015.04.30	Registered
701	FrontierOptima 72% EC	S-Dimethenamol 720 g/l	Herbicida	II	EC	Agrolândia, Lda	2016.03.02	Registered
1172	Fumate 56% FT	Aluminium Phosphide 560 g/kg	Insecticida	I	FT	Curechem Moçambique, Lda	2017.02.29	Registered
996	Furnace 75% WG	Halosulfuron-Methyl 750 g/kg	Herbicida	III	WG	Agrifocus, Lda	2016.03.31	Registered
648	Fusilade Forte 150 EC	Fluazifop-p-butil 150 g/l	Herbicida	III	EC	Prime Moçambique, Lda	2015.11.30	Registered
1168	Fusion Super 12,5% EC	Fluazifop-p-butyl 125 g/l	Herbicida	III	EC	Curechem Moçambique, Lda	2017.02.29	Registered
405	Garlon 48% EC	Triclopyr 480 g/l	Herbicida	III	EC	Afrigrow Moçambique, Lda	2016.11.30	Registered
316	Gaucho 70 WS	Imidacloroprid 700 g/kg	Insecticida	II	WS	Agroquímicos, Lda	2014.12.31	Registered
1114	GF-120 NF	Spinosad 0,24 g/l	Insecticida	III		Timber Land, Lda	2016.03.02	Registered
1031	Glicel 41% SL	Glyphosate 410 g/l	Herbicida	III	SL	TECAP, LDA	2016.09.30	Registered
1305	Glycot 36% SL	Glifosato 360 g/l	Herbicida	III	SL	Chanral Mozambique, Lda	2017.06.30	Registered
1243	Glypho-Cure 41% SL	Glyphosate 410 g/l	Herbicida	III	SL	Curechem Moçambique, Lda	2017.03.30	Registered
430	Goliath Gel 0,05% RB	Fipronil 0,005 g/kg	Insecticida	III	RB	Agrolândia, Lda	2016.03.02	Registered
1181	Gramozat 20% SL	Paraquato 200 g7l	Herbicida	II	SL	Agro Global, lda	2017.02.29	Registered
734	Green Muscle 40% SU	Metarhizium anisopliae IMI 330189, 2x10 esporos/litro	Insecticida	III		Agrifocus, Lda	2016.04.30	Registered
958	Grenade 50% SC	Acetocloro 178,6 g/+	Herbicida	III	SC	Agrifocus, Lda	2015.11.30	Registered
958	Grenade 50% SC	Atrazine 160,7 g/l+	Herbicida	III	SC	Agrifocus, Lda	2015.11.30	Registered
958	Grenade 50% SC	Dichlormid 22,3 g/l+	Herbicida	III	SC	Agrifocus, Lda	2015.11.30	Registered
958	Grenade 50% SC	Terbuthylazine 160,7 g/l +	Herbicida	III	SC	Agrifocus, Lda	2015.11.30	Registered

EXISTING PESTICIDES IN MOZAMBIQUE								
688	Griselesf	Bacillus Sphaericus Cepa 2364 - 0,5%	Agente Biológico	III		Biochem, lda	2016.08.30	Registered
1248	Halosulfur-Cure 75% WG	Halosulfuron 750 g/kg	Herbicida	III	WG	Curechem Moçambique, Lda	2017.03.30	Registered
803	Halt 5% WP	Bacillus Thuringiensis Serovar Kurstaki 5x10/mg	Insecticida	III	WP	Agrifocus, Lda	2016.11.30	Registered
792	Hatchet 10% SL	Imazipyr 100 g/l	Herbicida	III	SL	Agrifocus, Lda	2016.08.30	Registered
473	Herbofital 40% SL	MCPA 400 g/l	Herbicida	III	SL	Sapec S.A.	2015.03.30	Registered
502	Heteren 25% Ec	Oxidiazão 250 g/l	Herbicida	III	EC	Sapec S.A.	2015.03.30	Registered
1246	Hexa-Cure 24% EC	Hexazinone 240 g/l	Herbicida	III	EC	Curechem Moçambique, Lda	2017.03.30	Registered
471	Hicobre 50% WP	Hidróxido de cobre 500 g/kg	Fungicida	III	WP	Sapec S.A.	2015.03.30	Registered
908	Hydragel 2,15% PC	Hydramethylnon 21,5 g/kg	Insecticida	III	PC	Agrifocus, Lda	2016.08.30	Registered
987	Hygrobuff 4	Alkylaryl Polioxietileno Glicol +	Adjuvante	III		Soluções Rurais, lda	2017.02.29	Registered
987	Hygrobuff 4	Ester Fosfórico 85 g/l+	Adjuvante	III		Soluções Rurais, lda	2017.02.29	Registered
987	Hygrobuff 4	Sistema Tampão de ácidos orgânicos 497 g/l	Adjuvante	III		Soluções Rurais, lda	2017.02.29	Registered
1218	ICA-Prochloraz 45% EC	Prochloraz 450 g7l	Fungicida	III	Ec	Afrigrow Moçambique, Lda	2017.04.30	Registered
787	Icon 10% CS	Lambda-cyhalotrina 100 g/l	Insecticida	II	EC	Agrifocus, Lda	2016.03.30	Registered
121	icon 10%WP	Lambda-cialotrina 100 g/kg	Insecticida	II	WP	Agrifocus, Lda	2016.08.30	Registered
592	Icon 2,5% CS	Lambda-Cialotrina 25 g/l	Insecticida	II	CS	Agrifocus, Lda	2016.08.30	Registered
120	Icon 2,5% EC	Lambda-Cialotrina 25 g/l	Insecticida	II	EC	Agrifocus, Lda	2016.08.30	Registered
1030	Imidacel 20% SL	Imidacloprid 200 g/l	Insecticida	II	SL	TECAP, LDA	2016.09.30	Registered
1160	Imidacure 20% SL	Imidacloprid 200 g7l	Insecticida	III	SL	Curechem Moçambique, Lda	2017.02.29	Registered
906	Imidagel 2,15% PC	Imidacloprid 21,5 g/kg	Insecticida	III	PC	Agrifocus, Lda	2016.08.30	Registered

EXISTING PESTICIDES IN MOZAMBIQUE								
1215	Imposter 75% WP	Metribuzin 643 g/lkg	Herbicida	III	WP	Afrigrow Moçambique, Lda	2017.02.29	Registered
1085	Imutruzine 48% SC	Metribuzin 480 g/l	Herbicida	III	SC	Contabill (Moç.), Lda	2017.06.30	Registered
1232	Iniconazol 5% SC	Iniconazole 50 gkg	Regulador de crescimento	III	WP	Afrigrow Moçambique, Lda	2'017.06.30	Registered
1118	Insectido 5% EC	Lambda-Cyhalothrin 50 g/l	Insecticida	II	EC	Neoquímica, lda	2016.03.31	Registered
1211	Iprodione 25,5% SC	Iprodione 255 g/l	Fungicida	III	SC	Afrigrow Moçambique, Lda	2017.04.30	Registered
464	Judo 5% EC	Lambda-cialotrina 50 g/l	Insecticida	II	EC	Sapec S.A.	2015.03.30	Registered
475	Judo forte 16,5% EC	Lambda-cialotrina 15 g/l +	Insecticida	II	EC	Sapec S.A.	2015.03.30	Registered
475	Judo forte 16,5% EC	Profenofos 150 g/l+	Insecticida	II	EC	Sapec S.A.	2015.03.30	Registered
476	Judo TOP 41,5% EC	Dimetoato 400 g/l+	Insecticida	II	EC	Sapec S.A.	2015.03.30	Registered
476	Judo TOP 41,5% EC	Lambda-cialotrina 15 g/l +	Insecticida	II	EC	Sapec S.A.	2015.03.30	Registered
1183	Kalach 70% WG	Glifosato 700 g/kg	Herbicida	III	WG	Agrifocus, Lda	2016.11.30	Registered
668	Karate 5% CS	Lambda-cialotrina 50 g/l	Insecticida	II	CS	Prime Moçambique, Lda	2015.11.30	Registered
804	kembuf 25% SL	Acido Fosforico 250 g/l	Agente tampão	III	SL	Agrifocus, Lda	2016.08.30	Registered
1132	King Insectos Rastejantes	Permetrina 2,5 g/kg +	Insecticida	III		Agro Global, lda	2016.09.30	Registered
1132	King Insectos Rastejantes	Piretrina 1 g/kg+	Insecticida	III		Agro Global, lda	2016.09.30	Registered
1131	King Insectos Voadores	Butoxido de Piperonilo 3,3 g/kg+	Insecticida	III		Agro Global, lda	2016.09.30	Registered
1131	King Insectos Voadores	d-alletrina 0,82 g/kg+	Insecticida	III		Agro Global, lda	2016.09.30	Registered
1131	King Insectos Voadores	Permetrina 0,4 g/kg+	Insecticida	III		Agro Global, lda	2016.09.30	Registered
500	K-O Tab	Deltametrina 250 g/kg	Insecticida	III		Moz Vector Control	2015.11.30	Registered
815	K-O Tab 1-2-3	Deltametrina 250 g/kg	Insecticida	III		Moz Vector Control	2015.11.30	Registered
730	Kocide 2000 53,8% WG	Hidróxido de Cobre 538 g/kg	Fung./Bactericida	III	WG	Agrifocus, Lda	2015.04.30	Registered
737	K-Othrine 25% WG	Deltametrina 250 g/kg	Insecticida	III	WG	Moz Vector Control	2015.11.30	Registered

EXISTING PESTICIDES IN MOZAMBIQUE								
360	Kumulus DF 80% WG	Enxofre 800 g/kg	Fungicida	III	WG	Agrolândia, Lda	2016.03.02	Registered
785	Laduma 100% GR	Bromacil 760 g/kg+	Herbicida	II	GR	Agrifocus, Lda	2016.07.31	Registered
785	Laduma 100% GR	Tebuthiuron 240 g/kg +	Herbicida	II	GR	Agrifocus, Lda	2016.07.31	Registered
1269	LambdaCure 5% EC	Lambda-Cyhalothrin 50 g/l	Insecticida	II	EC	Curechem Moçambique, Lda	2017.03.30	Registered
1306	Lamdacot 25% EC	Lamba Cyhalothrin 250 g/l	Insecticida	II	EC	Chanral Mozambique, Lda	2017.06.30	Registered
950	Larvadex 1% DP	Cyromazine 10 g/kg	Insecticida	III	DP	Agrifocus, Lda	2015.03.30	Registered
163	Larvin 37,5% SC	Tiodicarbe 375 g/l	Insecticida	I	SC	Agrolândia, Lda	2015.11.30	Registered
846	Lava 80% WG	Tebuthiuron 800 g/kg	Herbicida	II	WG	Agrifocus, Lda	2015.04.30	Registered
1294	Leili Prosynergist 66% SC	Crosynergist 660 g7l	Adjuvante	III	SC	Afrigrow Moçambique, Lda	2017.06.30	Registered
1109	Magistral L 20% PF	Tiabendazole 200 g/kg	Fungicida	III	EC	Bedson Moçambique, Lda	2016.09.30	Registered
1116	Magistral L 5% EC	Tiabendazole 50 g/l	Fungicida	III	EC	Bedson Moçambique, Lda	2016.09.30	Registered
975	Majestic 50% EC	Pirimifos Methyl 500 g/l	Insect./Acaricida	III	EC	Agrifocus, Lda	2015.11.30	Registered
1123	Majestic super 2% DP	Permetrin 3 g/kg+	Insecticida	III	DP	Agrifocus, Lda	2016.04.30	Registered
1123	Majestic super 2% DP	Pirimfos methyl 16 g/kg+	Insecticida	III	DP	Agrifocus, Lda	2016.04.30	Registered
974	Majestic Ultra 50% EC	Permetrina 100 g/l+	Insecticida	III	EC	Agrifocus, Lda	2015.11.30	Registered
974	Majestic Ultra 50% EC	Pirimifos Methyl 400 g/l+	Insecticida	III	EC	Agrifocus, Lda	2015.11.30	Registered
505	Malatiol 80% EC	Malatião 750 g/l +	Insecticida	II	EC	Sapec S.A.	2015.03.30	Registered
505	Malatiol 80% EC	Óleo de Verão 50 g/l	Insecticida	II	EC	Sapec S.A.	2015.03.30	Registered
621	Mamba 360 SL	Glifosato 360 g/l	Herbicida	III	SL	Afrigrow Moçambique, Lda	2016.11.30	Registered
1076	Mamba MX 48% SL	Glifosato 480 g/l	Herbicida	III	SL	Afrigrow Moçambique, Lda	2017.06.30	Registered
457	Mancopec 80% WP	Mancozebe 800 g/kg	Fungicida	III	WP	Sapec S.A.	2015.03.30	Registered

EXISTING PESTICIDES IN MOZAMBIQUE								
823	Mascot 72% WP	Mancozeb 640 g/kg+	Fungicida	III	WP	Export Marketing CO, Lda	2015.03.30	Registered
823	Mascot 72% WP	Metalaxyl 80 g/kg+	Fungicida	III	WP	Export Marketing CO, Lda	2015.03.30	Registered
867	Mata Bicheiras 2,03% AE	Clorpirifos 7,1 g/l +	Carracicida	III	AE	TECAP, LDA	2015.11.30	Registered
867	Mata Bicheiras 2,03% AE	Dilclorvos 11,5% g/l+	Carracicida	III	AE	TECAP, LDA	2015.11.30	Registered
867	Mata Bicheiras 2,03% AE	Violeta Genciana 1,7 g/l+	Carracicida	III	AE	TECAP, LDA	2015.11.30	Registered
970	Maxforce Ant Bait Granules	Hydramethylnon 10 g/kg	Insecticida	III	RB	Moz Vector Control	2015.11.30	Registered
940	Maxforce Gel	Hydamethylnon 21.5 g/kg	Insecticida	III		Moz Vector Control	2015.11.30	Registered
945	Maxforce IC	Imidacloprid 21,5 g/kg	Insecticida	III		Moz Vector Control	2015.11.30	Registered
1110	Maxforce Quantum	Imidacloprid 0,3 g/kg	Insecticida	III		Neoquímica, lda	2016.03.31	Registered
1143	Mazole 80% WP	Mancozeb 800 g/kg	Fungicida	III	WP	Contabill (Moç.), Lda	2017.06.30	Registered
1265	MCPA 400 SL	MCPA 400 g/l	Herbicida	III	SL	Curechem Moçambique, Lda	2017.03.30	Registered
1107	Medi Soft	Diethyltoluamide 130 g/lg	Repelente	III		Líder, lda	2015.10.30	Registered
477	Megatop 50,5% WP	Cimoxanil 40 g/kg +	Fungicida	III	WP	Sapec S.A.	2015.03.30	Registered
477	Megatop 50,5% WP	Mancozebe 465 g/kg+	Fungicida	III	WP	Sapec S.A.	2015.03.30	Registered
682	Meltatox 40% EC	Dodemorph 400 g/l	Fungicida	III	EC	Agrolândia, Lda	2016.03.02	Registered
361	Mesurol 80 WP	Metiocarbe 800 g/kg	Insent/Molu.	II	WP	Agrolândia, Lda	2015.11.30	Registered
646	Mesurol Super Snail Pellets 1.5% RB	Metaldeido 10 g/kg +	Insecticida	II	RB	Agrolândia, Lda	2015.11.30	Registered
646	Mesurol Super Snail Pellets 1.5% RB	Metiocarb 5 g/kg+	Insecticida	II	RB	Agrolândia, Lda	2015.11.30	Registered
466	Metacidine 40% WP	Metidatião 400 g/kg	Insecticida	I	WP	Sapec S.A.	2015.03.30	Registered
1152	Metalochlor 960 EC	Metalochlor 960 g/l	Herbicida	III	EC	Curechem Moçambique, Lda	2017.02.29	Registered
1136	Metaman FAE PM 72% WP	Mancozeb 640 g/kg+	Fungicida	III	WP	Agro Global, lda	2016.09.30	Registered
1136	Metaman FAE PM 72% WP	Metalaxyl 80 g/kg+	Fungicida	III	WP	Agro Global, lda	2016.09.30	Registered

EXISTING PESTICIDES IN MOZAMBIQUE								
1198	Methomex 90% SP	Metomil 900 g/kg	Insecticida	I	SP	Afrigrow Moçambique, Lda	2017.02.29	Registered
986	Metrad 75% WG	Diuron 400 g/kg+	Herbicida	III	WG	Agrifocus, Lda	2016.03.31	Registered
986	Metrad 75% WG	Metribuzin 360 g/kg+	Herbicida	III	WG	Agrifocus, Lda	2016.03.31	Registered
1165	Metribuzin 48,5 g7l	Metribuzin 485 g/l	Herbicida	III	EC	Curechem Moçambique, Lda	2017.02.29	Registered
1091	Metridonol 25% EC	Triadimenol 250 g/l	Fungicida	II	EC	Contabill (Moç.), Lda	2015.09.30	Registered
503	Metry 70% WP	Metribuzina 700 g/kg	Herbicida	III	WP	Sapec S.A.	2015.03.30	Registered
1084	Midaclordan 20% SL	Imidacloprid 200 g/l	Insecticida	II	SL	Contabill (Moç.), Lda	2015.09.30	Registered
661	Milbitraz 12,5% EC	Amitraz	Insect./Carracicida	II	EC	Sogrep, Lda	2015.11.30	Registered
1001	Milbitraz TR 23,75 WP	Amitraz 237,5 g/kg	carracicida	III	WP	Sogrep, Lda	2016.04.30	Registered
64	Milraz 76% WP	Propineb 700 g/kg +	Fungicida	III	WP	Agrolândia, Lda	2015.11.30	Registered
64	Milraz 76% WP	Urzate 60 g/l+	Fungicida	III	WP	Agrolândia, Lda	2015.11.30	Registered
1088	Milsulf 80% WP	Enxofre 800 g/kg	Acaricida/Fungicida	III	WP	Agrifocus, Lda	2015.08.30	Registered
1101	Milthane Super 80% WP	Mancozeb 800 g/kg	Fungicida	III	WP	Twiga Chemicals Indust.Moz. lda	2015.10.30	Registered
1171	Mitekill 20% EC	Amitraz 200 g7l	Insecticida/Acaricida	II	EC	Curechem Moçambique, Lda	2017.02.29	Registered
998	Mocap 15% GR	Etoprofos 150 g/kg	Nameticida	II	GR	Agrolândia, lda	2015.11.30	Registered
1033	Molinato 72,7% EC	Molinato 727 g/l	Herbicida	II	EC	Agrifocus, Lda	2016.11.30	Registered
784	Monceren GT 390 FS	Imidacloprid 233 g/l+	Insect./Fungicida	III	FS	Agrolândia, Lda	2015.11.30	Registered
784	Monceren GT 390 FS	Pencicurão 50 g/l+	Insect./Fungicida	III	FS	Agrolândia, Lda	2015.11.30	Registered
784	Monceren GT 390 FS	Tirame 107 g/l+	Insect./Fungicida	III	FS	Agrolândia, Lda	2015.11.30	Registered
1151	Monocrotophos 40% EC	Monocrotophos 400 g/l	Insecticida	I	EC	Curechem Moçambique, Lda	2017.02.29	Registered
454	Monopec 40% SL	Monocrotofos 400 g/l	Insecticida	I	SL	Sapec S.A.	2015.03.30	Registered
456	Montana 36% SL	Glifosato 360 g/l	Herbicida	III	SL	Sapec S.A.	2015.03.30	Registered
1046	Moz Abamec Plus 18% EC	Abamectin 180 g/l	Insecticida	II	EC	Afrigrow Moçambique, Lda	2016.11.30	Registered

EXISTING PESTICIDES IN MOZAMBIQUE								
1064	Moz Acephate 75% EC	Acephate 750 g/l	Insecticida	III	SP	Afrigrow Moçambique, Lda	2016.11.30	Registered
1058	Moz Acetochlor 70% EC	Acetochlor 700 g/l	Herbicida	III	EC	Afrigrow Moçambique, Lda	2016.11.30	Registered
1069	Moz Acetochlor 90% EC	Acetochlor 900 g/l	Herbicida	III	EC	Afrigrow Moçambique, Lda	2016.11.30	Registered
1054	Moz Aluminium Phosphide Pellets	Aluminium Phosphide 560 g/kg	Insecticida	I		Afrigrow Moçambique, Lda	2016.11.30	Registered
1071	Moz Aluminium Phosphide Tablets	Aluminium Phosphide 570 g/kg	Insecticida	I		Afrigrow Moçambique, Lda	2016.11.30	Registered
1052	Moz Ametryn 50 SC	Ametryn 500 g/l	Herbicida	III	SC	Afrigrow Moçambique, Lda	2016.11.30	Registered
1048	Moz Cartap 50%b SP	Cartape 500 g/kg	Insecticida	II	SP	Afrigrow Moçambique, Lda	2016.11.30	Registered
1045	Moz Controller	Cymozanil 60 g/kg+	Fungicida	III	WP	Afrigrow Moçambique, Lda	2016.11.30	Registered
1045	Moz Controller	Mancozeb 700 g/kg+	Fungicida	III	WP	Afrigrow Moçambique, Lda	2016.11.30	Registered
1230	Moz Copper Oxychloride 85% WP	Oxycloreto de Cobre 850 g/kg	Fungicida	III	WP	Afrigrow Moçambique, Lda	2017.04.30	Registered
1050	Moz Cyromazine 75% WP	Cyromazine 750 g/kg	Insecticida	III	WP	Afrigrow Moçambique, Lda	2016.11.30	Registered
1073	Moz Delta-M-Longacting 50 WP	Deltamethrin 500 g/kg	Insecticida	II	WP	Afrigrow Moçambique, Lda	2016.11.30	Registered
1051	Moz Deltamterina 25% EC	Deltametrina 250 g/l	Insecticida	II	EC	Afrigrow Moçambique, Lda	2016.11.30	Registered
1062	Moz Difenoconazole 25% EC	Difenoconazole 250 g7l	Fungicida	III	EC	Afrigrow Moçambique, Lda	2017.02.29	Registered
1061	Moz Diuron 80% SC	Diuron 800 g/l	Herbicida	III	SC	Afrigrow Moçambique, Lda	2016.11.30	Registered
1056	Moz Fenamiphos 400 SC	Fenamiphos 400 g/l	Insecticida	I	SC	Afrigrow Moçambique, Lda	2016.11.30	Registered
1059	Moz Fenthion 50% EC	Fenthion 500 g/l	Insecticida	II	EC	Afrigrow Moçambique, Lda	2016.11.30	Registered

EXISTING PESTICIDES IN MOZAMBIQUE								
1049	MozFluazifop-P-Butyl 125 EC	Fluazifop-P 125 g/l	Herbicida	III	EC	Afrigrow Moçambique, Lda	2016.11.30	Registered
1217	Moz Hexaconazole7,5% EC	Hexaconazole 75 g/l	Fungicida	III	EC	Afrigrow Moçambique, Lda	2017.04.30	Registered
1068	Moz Hexazinone 24% SL	Hexazinone 240 g/l	Herbicida	III	SL	Afrigrow Moçambique, Lda	2016.11.30	Registered
1070	Moz imidacloprid 35% SC	Imidacloprid 350 g/l	Insectcida	II	SC	Afrigrow Moçambique, Lda	2017.02.29	Registered
1053	Moz Kleen 36% WP	Glyphosate 360 g/l	Herbicida	III	WP	Afrigrow Moçambique, Lda	2016.11.30	Registered
1044	Moz Lambda--C-Longacting 10% WP	Lambda-Cyhalothrin 100 g/kg	Insecticida	II	WP	Afrigrow Moçambique, Lda	2016.11.30	Registered
1067	Moz Lambda-Cyhalothrin 5% EC	lambda-Cyhalothrin 50 g/l	Insecticida	II	EC	Afrigrow Moçambique, Lda	2016.11.30	Registered
1047	Moz Metolachlor 96% EC	Metolachlor 960 g/l	Herbicida	III	EC	Afrigrow Moçambique, Lda	2017.02.29	Registered
1066	Moz Metribuzin 48% SC	Metribuzin 480 g/l	Herbicida	III	SC	Afrigrow Moçambique, Lda	2016.11.30	Registered
1060	Moz MSMA 72% SL	MSMA 720 g/l	Herbicida	III	SL	Afrigrow Moçambique, Lda	2016.11.30	Registered
1063	Moz Paraquat 20% SL	Paraquat 200 g/l	Herbicida	II	SL	Afrigrow Moçambique, Lda	2016.11.30	Registered
1219	Moz Propanil 36% EC	Propanil 360 g/l	Herbicida	III	EC	Afrigrow Moçambique, Lda	2017.04.30	Registered
1057	Moz Tebuconazole 25% EC	Tebuconazole 250 g/l	Fungicida	III	EC	Afrigrow Moçambique, Lda	2016.11.30	Registered
1065	Moz Terbufos 15% GR	Terbufos 150 g/kg	Insecticida	I	GR	Afrigrow Moçambique, Lda	2016.11.30	Registered
1055	Moz Tornado 0,01% BB	Difacoum 0,1 g/kg	Rodenticida	II	BB	Afrigrow Moçambique, Lda	2016.11.30	Registered
1264	MSMQA-Cure 72% EC	MSMA 720 g/l	Herbicida	III	EC	Curechem Moçambique, Lda	2017.03.30	Registered
1147	Mycoguard 72% SC	Chlorothalonil 720 g/l	Fungicida	III	SC	Agrifocus, lda	2016.07.31	Registered

EXISTING PESTICIDES IN MOZAMBIQUE								
955	Navigator 25% EC	Difenaconazole 250 g/l	Fungicida	III	EC	Agrifocus, Lda	2015.04.30	Registered
1124	Ndzow 1,13% DP	Deltametrina 1.3 g/kg+	Insecticida	III	DP	Agrifocus, Lda	2016.04.30	Registered
1124	Ndzow 1,13% DP	Fenitrotião 10 g/kg+	Insecticida	III	DP	Agrifocus, Lda	2016.04.30	Registered
1087	Neltylxyl 72% WP	Metalayl 80g/kg+	Fungicida	III	WP	Contabill (Moç.), Lda	2017.06.30	Registered
1087	Neltylxyl 72% WP	Mancozeb 640 g/kg+	Fungicida	III	WP	Contabill (Moç.), Lda	2017.06.30	Registered
387	Nemacur 10% GR	Fenamifos 100 g/kg	Nematicida	I	GR	Agrolândia, Lda	2015.11.30	Registered
483	Nemacur 40% EC	Fenamifos 400 g/l	Nematicida	I	EC	Agrolândia, Lda	2015.11.30	Registered
951	Neporex 2% WG	Cyromazine 20 g/kg	Insecticida	III	WG	Agrifocus, Lda	2015.04.30	Registered
1130	Nimbus 80% WG	Enxofre 800 g/kg	Fungicida	III	WG	Agro Global, lda	2016.09.30	Registered
861	Nokalt Pulverização 12,5% EC	Amitraz 125 g/l	Carracicida	III	EC	TECAP, LDA	2015.09.30	Registered
882	Nordox 86% WG	Óxido Cuproso 860 g/kg	Fung./Bactericida	III	WG	Agrolândia, Lda	2016.03.02	Registered
1261	NP 9-90% SL	Nonephenol 900 g/l	Molhante	III	SL	Curechem Moçambique, Lda	2017.03.30	Registered
984	Nuvam 100% EC	Diclorvos 1000 g/l	Insecticida	I	EC	Agrolândia, Lda	2016.03.02	Registered
985	Nuvam Profi 12,4% AE	Diclorvos 124 g/l	Insecticida	II	AE	Agrolândia, Lda	2016.03.31	Registered
984	Nuvan 100% EC	Dichlorvos 1000 g/l	Insecticida	I	EC	Agroquímicos, Lda	2016.03.30	Registered
985	Nuvan Profi 12,4% AE	Dichlorvos 124 g/l	Insecticida	II	AE	Agroquímicos, Lda	2016.03.31	Registered
1193	Oleofix 70% EO	Óleo de verão 700 g/l	Insecticida	III	EO	Agro Global, lda	2017.02.29	Registered
469	Orizerba 36% EC	Propanil 360 g/l	Herbicida	III	EC	Sapec S.A.	2015.03.30	Registered
485	Ortiva 25% SC	Azoxistrobin 250 g/l	Fungicida	III	SC	Prime Moçambique, Lda	2015.11.30	Registered
1185	Oxadate 31% SL	Oxamil 310 g/l	Nematicida	I	SL	Agrifocus, Lda	2016.11.30	Registered
1267	Oxycure 85% WP	Copper Oxycloreto 850 g/kg	Fungicida	III	WP	Curechem Moçambique, Lda	2017.03.30	Registered
978	Padlock 25% SC	Quinclorac 250 g/l	Herbicida	III	SC	Agrifocus, Lda	2016.03.31	Registered
999	Pali 25% WG	Deltametrina 250 g/kg	Insecticida	III	WG	Agrifocus, Lda	2016.01.31	Registered

EXISTING PESTICIDES IN MOZAMBIQUE								
1081	Pali 5% WP	Deltamethrin 50 g/kg	Insecticida	II	WP	Agrifocus, Lda	2015.05.31	Registered
1207	Pantera 4% EC	Quizalofop-P-tefury40 g7l	Herbicida	II	EC	Agrifocus, Lda	2017.02.29	Registered
401	Paracide 7% EC	Alphamethrin 70 g/l	Carracicida	II	EC	Agrifocus, Lda	2015.04.30	Registered
1303	Paracot 20% SL	Paraquat 200 g/l	Herbicida	II	SL	Chanral Mozambique, Lda	2017.06.30	Registered
1262	Para-Cure 20% SL	Paraquat 200 g/l	Herbicida	III	SL	Curechem Moçambique, Lda	2017.03.30	Registered
458	Paraxone 20% SL	Paraquato 200 g/l	Herbicida	II	SL	Sapec S.A.	2015.03.30	Registered
540	Patron 75% WP	Cyromazine 750 g/kg	Insecticida	III	WP	Prime Moçambique, Lda	2016.04.30	Registered
721	Peaceful Sleep Mosquito Rpellent Stick	Diethyltoluamide 11,90 g/kg	Repelente	III		Amazon Marketing, Lda	2017.06.30	Registered
720	Peacegul Sleep Mosquito Repellent	Diethyltoluamide 22.5 g/kg	Repelente	III		Amazon Marketing, Lda	2017.06.30	Registered
1263	Pendimentalina 50% EC	Pendimantalina 500 g/l	Herbicida	III	EC	Curechem Moçambique, Lda	2017.03.30	Registered
829	Permise 20% SC	Imidacloprid 200 g/l	Insecticida	II	SC	Moz Vector Control	2015.11.30	Registered
581	Phosgard 56% FT	Fosforeto de alumínio 560 g/kg	Insecticida	I	FT	Agro Global, lda	2015.11.30	Registered
1226	Picloram 24% SL	Picloram 240 g/l	Herbicida	III	SL	Afrigrow Moçambique, Lda	2017.04.30	Registered
192	Pix 0,5% SL	Mepiquat Chloride 50 g/l	Reg. De crescimento	III	SL	Agrolândia, Lda	2016.03.02	Registered
743	PL Plus	Paecilomyces lilacinus strain 251, 2x10 esporos/litro	Nematicida	III		Agrifocus, Lda	2016.04.30	Registered
1133	Policar MZ 80% WP	Mancozeb 800 g/kg	Fungicida	III	WP	Agro Global, lda	2016.09.30	Registered
304	Poliram Combi 80% WP	Metiram 800 g/kg	Fungicida	III	WP	Agrolândia, Lda	2016.03.02	Registered
254	Polo 50% SC	Diafentiuron 500 g/l	Insecticida	II	SC	Prime Moçambique, Lda	2016.04.30	Registered
465	Poney 75% SP	Acefato 750 g/kg	Insecticida	III	SP	Sapec S.A.	2015.03.30	Registered
814	Pourcide NF 11.1% PO	Alphamethrin 5,6 g/l +	Carracicida	II	PO	Agrifocus, Lda	2014.12.31	Registered

EXISTING PESTICIDES IN MOZAMBIQUE								
814	Pourcide NF 11.1% PO	Cypermethrin 11,1 g/l +	Carracicida	II	PO	Agrifocus, Lda	2014.12.31	Registered
814	Pourcide NF 11.1% PO	Piperonyl Butoxide 75 g/l +	Carracicida	II	PO	Agrifocus, Lda	2014.12.31	Registered
814	Pourcide NF 11.1% PO	Tetrachlorvinphos 20,4 g/l+	Carracicida	II	PO	Agrifocus, Lda	2014.12.31	Registered
1225	Priclopyr 48% EC	Triclopyr 480 g7l	Herbicida	III	EC	Afrigrow Moçambique, Lda	2017.02.29	Registered
1225	Proclopyr 485 G/l	Triclopyr 480 g/l	Herbicida	III	EC	Afrigrow Moçambique, Lda	2017.02.29	Registered
1223	Profenofos 50% EC	Profenofos 500 g/l	Insecticida	II	EC	Afrigrow Moçambique, Lda	2017.04.30	Registered
1166	Proper 10% EC	Propaquizafop 100 g/l	Herbicida	III	EC	Curechem Moçambique, Lda	2017.02.29	Registered
702	Protect 20%SL	Imidacloprid 200 g/l	Insecticida	II	SL	Agrifocus, Lda	2016.11.30	Registered
1224	Pyriproxyfen 10% EC	Pyriproxyfen 100 g7l	Insecticida	III	EC	Afrigrow Moçambique, Lda	2017.04.30	Registered
1129	Quickphos 57% FT	Aluminium Phosphide 570 g/kg	Insecticida	I	FT	Agro Global, lda	2016.09.30	Registered
939	Racumin Paste	Coumatetralyn 0,37 g/kg	Rodenticida	III	PC	Moz Vector Control	2015.11.30	Registered
941	Racumin Tracking Powder	Coumatetralyn 7,5 g/kg	Rodenticida	II	DP	Moz Vector Control	2015.11.30	Registered
1077	Rainbow 2,5% OD	Penoxsulam 25 g/l	Herbicida	III	OD	Afrigrow Moçambique, Lda	2014.12.31	Registered
719	Ratex Pellts	Difethilote 0,25 G7kg	Rondenticida	I		Amazon Marketing, Lda	2017.06.30	Registered
1167	Ratikill 80% AB	Zin phosphide 800 g7kg	Rodenticida	I	AB	Curechem Moçambique, Lda	2017.02.29	Registered
822	Ratil 80% AB	Zinc Phosphide 800 g/kg	Fungicida	I	AB	Export Marketing CO, Lda	2015.03.30	Registered
1135	Raudo 36% SL	Glyphosate 360 g/l	Herbicida	III	SL	Agro Global, lda	2016.09.30	Registered
1291	Rebel 500 WG	Chlorimuron - Ethyl 500 g/kg	Herbicida	III	WG	Afrigrow Moçambique, Lda	2017.06.30	Registered
383	Regent 20% SC	Fipronil 200 g/l	Insecticida	II	SC	Agrolândia, Lda	2016.03.02	Registered
968	Responsar Hot Fog	Cyfluthrin 2,2 g/l	Insecticida	II	UL	Moz Vector Control	2015.11.30	Registered

EXISTING PESTICIDES IN MOZAMBIQUE								
924	Revival 10% WP	Lambda-cyhalothrin 10 g/kg	Insecticida	II	WP	Agrifocus, Lda	2014.12.31	Registered
923	Revival 2,5% EC	Lambda-Cyhalothrin 25 g/l	Insecticida	II	EC	Agrifocus, Lda	2014.12.31	Registered
546	Ridomil Gold 68% WP	Mancozebe 640 g/kg +	Fungicida	III	EC	Syngenta, Agro Services	2014.11.30	Registered
546	Ridomil Gold 68% WP	Metalaxil 40 g/kg+	Fungicida	III	EC	Syngenta, Agro Services	2014.12.31	Registered
844	Ridomil Gold MZ 68 WG	Mancozeb 640 g/kg+	Fungicida	III	WG	Prime Moçambique, Lda	2015.11.30	Registered
844	Ridomil Gold MZ 68 WG	Metalaxyl-M 40 g/kg+	Fungicida	III	WG	Prime Moçambique, Lda	2015.11.30	Registered
463	Rikki 20% SL	Metomil 200 g/l	Insecticida	I	SL	Sapec S.A.	2015.03.30	Registered
1212	Ripen-IT 48% SL	Ethephon 480 g/l	Regulador de crescimento	III	SL	Afrigrow Moçambique, Lda	2017.04.30	Registered
835	Rodex Bait Blocks	Brodifacoum 0,05 g/kg	Rodenticida	III	RB	Moz Vector Control	2015.11.30	Registered
836	Rodex Grain Bait	Brodifacoum 0,05 g/kg	Rodenticida	I	RB	Moz Vector Control	2015.11.30	Registered
837	Rodex Profissional Líquid Concentrate	Brodifacoum 2,5 g/kg	Rodenticida	I	CB	Moz Vector Control	2015.11.30	Registered
834	Rodex Rat & Mouse Pellets	Brodifacoum 0,05 g/kg	Rodenticida	III	RB	Moz Vector Control	2016.03.02	Registered
98	Ronstar 25% EC	Oxadiazão 250 g/l	Herbicida	III	EC	Agrolândia, Lda	2015.11.30	Registered
891	Rubi 5% WP	Alphacypermetrin 50 g/kg	Insecticida	III	WP	Agrifocus, Lda	2016.01.31	Registered
1296	Samaritan 30% SC	Sulcotrione 300 g/l	Herbicida	III	SC	Afrigrow Moçambique, Lda	2017.06.30	Registered
507	Sanial 6% EC	Alfa-cipermetrina 60 g/l	Insecticida	III	EC	Sapec S.A.	2015.03.30	Registered
542	Score 25% EC	Difenoconazol 250 g/l+	Fungicida	III	EC	Prime Moçambique, Lda	2015.11.30	Registered
1106	Scutum 0,3% GR	Fipronil 3 g/kg	Insecticida	III	GR	Agrifocus, Lda	2016.09.30	Registered
153	Selecron 50% EC	Profenofos 500 g/l	Insecticida	II	EC	Syngenta, Agro Services	2014.12.31	Registered
543	Servian 75% WG	Halosulfurão 750 g/kg	Herbicida	III	WG	Syngenta, Agro Services	2014.12.31	Registered
509	Seter 48% EC	Alocloro 480 g/l	Herbicida	III	EC	Sapec S.A.	2015.03.30	Registered

EXISTING PESTICIDES IN MOZAMBIQUE								
736	Shumba Super 1,13% DP	Deltametrina 1,3 g/kg+	Insecticida	III	WP	Savon Trading, Lda	2016.07.31	Registered
736	Shumba Super 1,13% DP	Fenitrotião 10 g/kg+	Insecticida	III	WP	Savon Trading, Lda	2016.07.31	Registered
1199	Sniper 58.5% SL	Metamidofos 585 g/l	Insecticida	I	SL	Afrigrow Moçambique, Lda	2016.11.30	Registered
988	Sporekill 120 SL	Didecildimetil Cloreto de Amónio 120 g/l	Fung./bact./Desinfetante	III	SL	Soluções Rurais, lda	2017.02.29	Registered
619	Sprint 900 EC	Acetolachlor 900 g/l	Insecticida	II	EC	Afrigrow Moçambique, Lda	2017.02.29	Registered
1128	Stam 35% SC	Propanil 350 g7l	Herbicida	III	SC	Agro Global, lda	2016.09.30	Registered
976	Starmax 72% WP	Metsulfuron-Methyl 120 g/kg+	Herbicida	III	WP	Agrifocus, Lda	2016.03.31	Registered
976	Starmax 72% WP	Tribenuron-Methyl 600 g/kg+	Herbicida	III	WP	Agrifocus, Lda	2016.03.31	Registered
796	Steward 30% WG	Indoxacarb 300 g/kg	Insecticida	III	WG	Agrifocus, Lda	2016.08.30	Registered
983	Stoprat 0,005% BB	Brodifacoum 0,05 g/kg	Rodenticida	III	BB	Agrifocus, Lda	2015.08.30	Registered
585	Stroby 50% WG	Kresoxim-Metilo 500 g/kg	Fungicida	III	WG	Agrolândia, Lda	2016.03.02	Registered
1099	Sunstar 72% WP	Metalaxyl 80 g/kg+	Fungicida	III	WP	Twiga Chemicals Indust.Moz. lda	2015.09.30	Registered
757	Supa - Kill Granular And Mouse Bait	Brodifacoum 0,05g/l	Rodenticida	I	RB	Agro Global, lda	2015.11.30	Registered
758	Supa -Kill Rat And Mouse Blocks	Brodifacoum 0,05g/l	Rodenticida	I	RB	Agro Global, lda	2015.11.30	Registered
793	Supa-Kill Líquid Rat and Mouse Bait	Brodifacoum 0,75 g/kl	Rodenticida	I	RB	Agro Global, lda	2015.11.30	Registered
824	Super 10% EC	Cipermetrina 100 g/l	Fungicida	II	EC	Export Marketing CO, Lda	2015.03.30	Registered
634	Super Guard 505 EC	Pirimifos metilo 400 g/l +	Insecticida	III	EC	Agrolândia, Lda	2016.03.02	Registered
629	Super Guard Dust 2% DP	Permetrina 4 g/kg +	Insecticida	III	DP	Agrolândia, Lda	2016.03.02	Registered
629	Super Guard Dust 2% DP	Pirimifos metilo 16 g/kg+	Insecticida	III	DP	Agrolândia, Lda	2016.03.02	Registered
1210	Supergato 00,005%	Bromadiolona 0,005%	Rodenticida	I	BB	Amazon Marketing, Lda	2017.06.30	Registered
811	Supona 30% EC	Chlorfenvinphos 300 g/l	Carracicida	I	EC	Sogrep, Lda	2015.11.30	Registered
1161	Sword 33% EC	Pendimentalina 330 g/l	Herbicida	III	EC	Curechem Moçambique, Lda	2017.02.29	Registered

EXISTING PESTICIDES IN MOZAMBIQUE								
800	Tabard Aerosol	Diethyltoluamude 150 g/kg	Repelente	III	AE	Agrifocus, Lda	2016.08.30	Registered
805	Tabard Citronella Candle	Óleo de Citronela	Repelente	III	FK	Agrifocus, Lda	2016.08.30	Registered
799	Tabard Loção	Diethyltoluamude 195 g/kg	Repelente	III	PC	Agrifocus, Lda	2016.08.30	Registered
798	Tabard Stick	Diethyltoluamude 350 g/kg	Repelente	III	XX	Agrifocus, Lda	2016.08.30	Registered
850	Tanga 5% WP	Deltamethrin 50 g/kg	Insecticida	II	WP	Agrifocus, Lda	2015.04.30	Registered
1094	Tankopa 75% WP	Oxicloreto de cobre 750 g/kg	Fungicida	III	WP	Twiga Chemicals Indust.Moz. lda	2016.07.31	Registered
1157	Tebuconazole 20% EC	Tebuconazole 250 g7l	Herbicida	III	EC	Curechem Moçambique, Lda	2017.02.29	Registered
953	Tebucure 250 EW	Tebuconazole 250 g/l	Fungicida	III	EW	Soluções Rurais, lda	2017.02.29	Registered
370	Tebusan 50% SC	Tebutiurão 500 g/l	Herbicida	III	SC	Afrigrow Moçambique, Lda	2016.11.30	Registered
1037	Temephos 50% EC	Temephos 500 g/l	Insecticida	III	EC	Fumilar, Lda	2016.11.30	Registered
946	Tempo Fumigador	Cyfluthrin 1 g/kg+	Insecticida	II	AE	Moz Vector Control	2015.11.30	Registered
946	Tempo Fumigador	Transfluthrin 0,4 g/kg+	Insecticida	II	AE	Moz Vector Control	2015.11.30	Registered
946	Tempo Fumigador	Triflumuron 2,5 g/kg+	Insecticida	II	AE	Moz Vector Control	2015.11.30	Registered
584	Thiara 25 WG	Thiamethoxan 250 g/kg	Insecticida	III	WG	Agrifocus, Lda	2015.10.30	Registered
852	Thunder 14,5% O-TEQ	Beta-Ciflutrina 45 g/l+	Insecticida	II	OD	Agrolândia, Lda	2015.11.30	Registered
852	Thunder 14,5% O-TEQ	Imidaclopride 100 g/l+	Insecticida	II	OD	Agrolândia, Lda	2015.11.30	Registered
756	Tick Grease 0,025 % GS	Cypermethrin 0,25 g/kg	Insecticida	III	GS	Sogrep, Lda	2015.03.30	Registered
847	Tobralin 36% EC	Butralin 360 g/l	Herbicida	III	EC	Agrifocus, Lda	2015.05.31	Registered
735	Tocaia 80% WP	Bendiocarbe 800 g/kg	Insecticida	II	WP	Agrifocus, Lda	2015.09.30	Registered
1260	Tolla 96% EC	Matolaclor 960 g/l	Herbicida	III	EC	Agrifocus, Lda	2017.06.30	Registered
1290	Topper 12,5% EC	Flumeralin 125 g/l	Herbicida	III	EC	Agrifocus, Lda	2017.06.30	Registered
1231	Tornado 400 SL	MCPA 400 g/l	Herbicida	III	SL	Afrigrow Moçambique, Lda	2017.02.29	Registered
790	Tracer 48% SC	Spinosad 480 g/l	Insecticida	III	SC	Agrifocus, Lda	2016.08.30	Registered

EXISTING PESTICIDES IN MOZAMBIQUE								
1026	Tricel 48% EC	Chlorpirifos 480 g/l	Insecticida	II	EC	TECAP, LDA	2016.09.30	Registered
1252	Trichlor-Cure 48% EC	Trichlopyr 480 g/l	Herbicida	III	EC	Curechem Moçambique, Lda	2017.03.30	Registered
744	Tricho Plus	Esporos de trichodema harzianum, 2x10 esporos/litro	Fungicida	III		Agrifocus, Lda	2016.04.30	Registered
873	Tricky 30% SC	Sulcotrione 300 g/l	Herbicida	III	SC	Agrifocus, Lda	2015.11.30	Registered
640	Triclon 48% EC	Triclopyr 480 g/l	Herbicida	II	EC	Agrifocus, Lda	2016.08.30	Registered
1192	Triger 5% EC	Lambda-Cyhalothrin 50 g/l	Insecticida	II	EC	Agro Global, lda	2017.02.29	Registered
1100	Twiga Amine 72% EC	2,4 amine 720 g/l	Herbicida	III	EC	Twiga Chemicals Indust.Moz. lda	2015.09.30	Registered
1096	Twiga Primetyl 50% EC	Pirimifos metyl 500 g/l	Insecticida	III	EC	Twiga Chemicals Indust.Moz. lda	2015,10,30	Registered
1097	Twigaphos 48% EC	Chlorpyriphos 480 g/l	Insecticida	II	EC	Twiga Chemicals Indust.Moz. lda	2015.08.30	Registered
1103	Twigasate 48% SL	Glifosate 480 g/l	Herbicida	III	SL	Twiga Chemicals Indust.Moz. lda	2015.09.30	Registered
1095	Twigathoate 40% EC	Dimethoate 400 g/l	Insecticida	II	EC	Twiga Chemicals Indust.Moz. lda	2015.11.30	Registered
1232	Uniconazole 5% SC	Uniconazole 50 g/l	Regulador de cerscimento	III	SC	Afrigrow Moçambique, Lda	2017.06.30	Registered
883	Vectron 20% WP	Etofenpron 200 g/kg	Insecticida	III	WP	Proserv, Lda	2016.04.30	Registered
1122	Vega 25% WG	Thiamethoxam 250 g/kg	Insecticida	III	WG	Agrifocus, Lda	2016.04.30	Registered
1108	Vega 35% FS	Thiamethoxam 350 g/kg	Insecticida	III	FS	Agrifocus, Lda	2016.03.02	Registered
1092	Vega Top 42% WS	Difenoconazole 20 g/kg+	Insect./Fungicida	III	WS	Agrifocus, Lda	2015.04.30	Registered
1092	Vega Top 42% WS	Metalaxyl 200 g/kg+	Insect./Fungicida	III	WS	Agrifocus, Lda	2015.04.30	Registered
1092	Vega Top 42% WS	Thiamethoxan 200 g/kg+	Insect./Fungicida	III	WS	Agrifocus, Lda	2015.04.30	Registered
1221	Ventum 80% WP	Mancozeb 800 g/kg	Fungicida	III	WP	Afrigrow Moçambique, Lda	2017.02.29	Registered
1115	Vet Fume B	Formaldehyde 370 g/l	Desifectante/ Insect.	I		Immuno-Vet Services Moçambique, Lda	2015.12.31	Registered
1169	Viper 10% EC	Cipermetrina 100 g7l	Insecticida	II	EC	Curechem Moçambique, Lda	2017.02.29	Registered

EXISTING PESTICIDES IN MOZAMBIQUE								
1170	Viper 20% EC	Cipermetrina 200 g7l	Insecticida	II	EC	Curechem Moçambique, Lda	2017.02.29	Registered
715	Volamiphos 40% EC	Fenamifos 400 g/l	Insecticida	I	EC	Agrifocus, Lda	2016.11.30	Registered
705	Volamitraz 12,5% EC	Amitraz 125 g/l	Acar./Carr.	II	EC	Agrifocus, Lda	2016,11,30	Registered
570	Volcano 2,4 D 72% SL	2,4-D dimethylamine 720 g/l	Herbicida	II	SL	Agrifocus, Lda	2016.08.30	Registered
607	Volcano 90 SL	Nonyphenol 900 g/l	Molhante	III	SL	Agrifocus, Lda	2016.08.30	Registered
677	Volcano Acepphate 75% SP	Acephate 750 g/kg	Insecticida	III	SP	Agrifocus, Lda	2016.08.30	Registered
606	Volcano Acetochlor 90% EC	Acetochloro 900 g/l	Herbicida	III	EC	Agrifocus, Lda	2016.08.30	Registered
666	Volcano alachlor 48% EC	Alacloro 480 g/l	Herbicida	III	EC	Agrifocus, Lda	2016.08.30	Registered
644	Volcano Aldicarb 15% GR	Aldicarb 150 g/kg	Insecticida	I	GR	Agrifocus, Lda	2016.10.30	Registered
664	Volcano Aluminium Phosphide 57% FT	Fosforeto de Aluminio 570 g7kg	Insecticida	I	FT	Agrifocus, Lda	2016.08.30	Registered
528	Volcano Ametryn 500 SC	Ametrina 500 g/l	Herbicida	III	SC	Agrifocus, Lda	2016.07.31	Registered
864	Volcano Ametryn 75% WG	Ametryn 750 g/kg	Herbicida	III	WG	Agrifocus, Lda	2015.09.30	Registered
531	Volcano Atrazina 500 SC	Atrazina 500 g/l	Herbicida	III	SC	Agrifocus, Lda	2016.07.31	Registered
687	Volcano Bromacil 50% SC	Bromacil 500 g/l	Herbicida	II	SC	Agrifocus, Lda	2016.07.31	Registered
788	Volcano Bundu 50% SC	Bromacil 250g/l+	Herbicida	II	SC	Agrifocus, Lda	2016.07.31	Registered
788	Volcano Bundu 50% SC	Tebuthiuron 250 g/l+	Herbicida	II	SC	Agrifocus, Lda	2016.07.30	Registered
678	Volcano Caldera 75% WP	Chlorimuron 107g/kg +	Herbicida	III	WP	Agrifocus, Lda	2016.08.30	Registered
678	Volcano Caldera 75% WP	Metribuzin 643g/g+	Herbicida	III	WP	Agrifocus, Lda	2016.08.30	Registered
684	Volcano Chlorothalonil 50% SL	Chlorothanil 500 g/l	Fungicida	III	SL	Agrifocus, Lda	2016.07.31	Registered
533	Volcano Chlorpyrifos 480 EC	Clorpirifos 480 g/l	Insecticida	II	EC	Agrifocus, Lda	2016.07.31	Registered
636	Volcano Copper Oxychloride	Oxicloreto de cobre 850 g/kg	Fungicida	III	WP	Agrifocus, Lda	2016.08.30	Registered
663	Volcano Crater MX 70% WP	Mancozeb 100 g/kg+	Fungicida	III	WP	Agrifocus, Lda	2016.08.30	Registered

EXISTING PESTICIDES IN MOZAMBIQUE								
663	Volcano Crater MX 70% WP	Metalaxyl 600 g/kg+	Fungicida	III	WP	Agrifocus, Lda	2016.08.30	Registered
875	Volcano Crater MX 72% WP	Mancozeb 640 g/kg +	Fungicida	III	WP	Agrifocus, Lda	2016.08.30	Registered
875	Volcano Crater MX 72% WP	Metalaxyl 720 g/kg+	Fungicida	III	WP	Agrifocus, Lda	2016.08.30	Registered
763	Volcano Crusader 50% EC	Chlorpyrifos 480 g/l +	Insecticida	II	EC	Agrifocus, Lda	2015.11.22	Registered
763	Volcano Crusader 50% EC	Chlorpyrifos-Methyl 20 g/l+	Insecticida	II	EC	Agrifocus, Lda	2015.11.22	Registered
598	Volcano Cypermethrin 20% EC	Cipermetrina 200 g/l	Insecticida	II	EC	Agrifocus, Lda	2016.08.30	Registered
694	Volcano Cyromazine 75% WP	Cyromazine 750 g/kg	Insecticida	II	WP	Agrifocus, Lda	2016.08.30	Registered
772	Volcano Demeter 50% WP	Benomyl 500 g/kg	Fungicida	III	WP	Agrifocus, Lda	2016.07.31	Registered
617	Volcano Dimetoato 40% EC	Dimetoato 400 g/l	Insecticida	II	EC	Agrifocus, Lda	2016.08.30	Registered
532	Volcano Diurão 800 SC	Diurão 800 g/l	Herbicida	III	SC	Agrifocus, Lda	2016.07.31	Registered
849	Volcano Diuron 80% WG	Diuron 800 g/kg	Herbicida	III	WG	Agrifocus, Lda	2015.04.30	Registered
605	Volcano Endosulfão 35% EC	Endosulfão 350 g/l	Insecticida	I	EC	Agrifocus, Lda	2015.07.30	Registered
680	Volcano Ethephon 48% SL	Ethephon 480 g/l	Re.de Cres.	III	SL	Agrifocus, Lda	2016.07.31	Registered
604	Volcano Glyphosate 360 SC	glifosato 360 g/l	Herbicida	III	SC	Agrifocus, Lda	2016.08.30	Registered
698	Volcano Glyphosate 50% WG	Glyphosate 500 g/kg	Herbicida	II	WG	Agrifocus, Lda	2016.11.30	Registered
529	Volcano Hexazinão 240 SL	Hexazinão 240 g/l	Herbicida	III	SL	Agrifocus, Lda	2015.05.31	Registered
856	Volcano Hexazinone 75% WG	Hexazinone 750 g/kg	Herbicida	III	WG	Agrifocus, Lda	2015.03.30	Registered
925	Volcano Limpopo 20% GG	Tebuthiuron 200 g/kg	Herbicida	III	GG	Agrifocus, Lda	2016.11.30	Registered
534	Volcano mancozeb 800 WP	Mancozeb 800 g/kg	Fungicida	III	WP	Agrifocus, Lda	2016.08.30	Registered
597	Volcano MCPA 40% SL	MCPA 400 g/l	Herbicida	III	SL	Agrifocus, Lda	2016.08.30	Registered
848	Volcano MCPA 70% WG	MCPA 700 g/kg	Herbicida	III	WG	Agrifocus, Lda	2015.04.30	Registered
652	Volcano Metolachloro 960 EC	Metolachloro 960 g/l	Herbicida	III	EC	Agrifocus, Lda	2016.08.30	Registered

EXISTING PESTICIDES IN MOZAMBIQUE								
853	Volcano Metribuzin 70% WG	Metribuzin 700 g/kg	Herbicida	III	WG	Agrifocus, Lda	2015.03.30	Registered
527	Volcano Metribuzina 48% SC	Metribuzina 480 g/l	Herbicida	III	SC	Agrifocus, Lda	2016.08.30	Registered
526	Volcano MSMA 72% SL	MSMA 720 g/l	Herbicida	II	SL	Agrifocus, Lda	2016.08.30	Registered
600	Volcano Pendimentalina 50% EC	Pendimentalina 500 g/l	Herbicida	III	EC	Agrifocus, Lda	2016.11.30	Registered
927	Volcano Profenofos 50% EC	Profenofos 500 g/l	Insecticida	II	EC	Agrifocus, Lda	2015.03.30	Registered
651	Volcano Propanil 36% EC	Propanil 360 g/l	Herbicida	III	EC	Agrifocus, Lda	2016.08.30	Registered
608	Volcano Richter 5% SC	Hexaconazol 50 g/l	Fungicida	III	SC	Agrifocus, Lda	2016.08.30	Registered
530	Volcano Thebuthiuron 50% SC	Thebuthiuron 500 g/L	Herbicida	II	SC	Agrifocus, Lda	2016.08.30	Registered
678	Volcsno caldera 755 WP	Metribuzin 643 g/kg+	Herbicida	III	WP	Agrifocus, Lda	2016.08.30	Registered
705	Volimitraz 12.5% EC	Amitraz 125 g/l	Insect./Acaricida	II	EC	Agrifocus, Lda	2016.11.30	Registered
995	Volley 15% EC	Fluazifop-butyl 150 g/l	Herbicida	III	EC	Agrifocus, Lda	2016.03.31	Registered
639	Volmet 58,5% SL	Metamidofos 585 g/l	Insecticida	I	SL	Agrifocus, Lda	2016.08.30	Registered
801	Volmetra 50% SC	Ametrina 250 g/l+	Herbicida	III	SC	Agrifocus, Lda	2016.08.30	Registered
801	Volmetra 50% SC	Atrazina 259 g7l	Herbicida	III	SC	Agrifocus, Lda	2016.08.30	Registered
887	Volomyl 20% SL	Methomyl 200 g/l	Insecticida	I	SL	Agrifocus, lda	2016.03.31	Registered
977	Voloxynil 22,5% EC	Bromoxynil Actonoate 225 g/l	Herbicida	II	EC	Agrifocus, Lda	2015.11.30	Registered
1182	Voloxypyr 20% EC	Fluroxypyr 200 g/l	Herbicida	III	EC	Agrifocus, Lda	2016.11.30	Registered
764	Volquato 20% SL	Paraquato 200 g/l	Herbicida	II	SL	Agrifocus, Lda	2016.10.30	Registered
717	Volteb 25% EW	Tebuconazole 250 g/kg	Fungicida	III	EW	Agrifocus, Lda	2016.11.30	Registered
704	Voltraid 25% EC	Triadimenol 250 g/l	Fungicida	III	EC	Agrifocus, Lda	2016.08.30	Registered
802	Voltrif 48% EC	Triflumuron 480 g/l	Herbicida	III	EC	Agrifocus, Lda	2016.08.30	Registered
1105	Volxyl 24% EC	Oxyfluorfen 240 g/l	Herbicida	III	EC	Agrifocus, Lda	2016.09.30	Registered
810	Vydate 31% SL	Oxamyl 310 g/l	Insecticida/Nematicida	I	SL	Agrifocus, Lda	2017.02.29	Registered

EXISTING PESTICIDES IN MOZAMBIQUE								
1234	Warrior 485 EC	Clomazine 480 g/l	Herbicida	II	EC	Afrigrow Moçambique, Lda	2017.02.29	Registered
1102	Xanthom 55 EC	Hexaconazole 50 g/l	Fungicida	III	EC	Twiga Chemicals Indust.Moz. Lda	2015.08.30	Registered
818	Zakanaka K 6% EC	Lambda-Cyhalothrin 60 g/l	Insecticida	II	EC	Agrifocus, Lda	2016.11.30	Registered
726	Zakanaka PRO 64,8% EC	Lambda-Cialothrin 48 g/l +	Insecticida	II	EC	Agrifocus, Lda	2015.08.30	Registered
726	Zakanaka PRO 64,8% EC	Profenofos 600 g/l+	Insecticida	II	EC	Agrifocus, Lda	2015.08.30	Registered
820	Zakanaka Top 10% EC	Acetamiprid 40 g/l+	Insecticida	II	EC	Agrifocus, Lda	2016.11.30	Registered
820	Zakanaka Top 10% EC	Lambda-Cyhalothrin 60 g/l+	Insecticida	II	EC	Agrifocus, Lda	2016.11.30	Registered
819	Zakanaka Topro 68.8% EC	Acetamiprid 600 g/l+	Insecticida	II	EC	Agrifocus, Lda	2014.12.31	Registered
819	Zakanaka Topro 68.8% EC	Lambda cyhalothrin 48 g/l+	Insecticida	II	EC	Agrifocus, Lda	2014.12.31	Registered
819	Zakanaka Topro 68.8% EC	Profenofos 40 g/l+	Insecticida	II	EC	Agrifocus, Lda	2014.12.31	Registered
452	Zipper 20% EC	Cipermetrina 200 g/l	Insecticida	II	EC	Sapec S.A.	2015.03.30	Registered
478	Zipper Super 28% EC	Cipermetrina 30 g/l +	Insecticida	I	EC	Sapec S.A.	2015.03.30	Registered
478	Zipper Super 28% EC	Monocrotofos 250 g/l+	Insecticida	I	EC	Sapec S.A.	2015.03.30	Registered
479	Zipper Top 43% EC	Cipermetrina 30 g/l +	Insecticida	II	EC	Sapec S.A.	2015.03.30	Registered
479	Zipper Top 43% EC	Dimetoato 400 g/l+	Insecticida	II	EC	Sapec S.A.	2015.03.30	Registered
449	Zipper-Dip 15% EC	Cipermetrina 150 g/l	Carr./Mosq.	II	EC	Sapec S.A.	2015.03.30	Registered

3. National endeavors to phase out HHPs

3.1 Projects/programs and campaigns to phase out HHPs

Phasing out HHPs in Mozambique depends largely on developing sustaining institutional cooperation and articulation between the Ministries of Health, Ministry of Agriculture and Food Security, Ministry of Land and Rural Development and Ministry of Trade and Industry and academia to ensure that: Different impacts of HHPs in human health as well as the environment are addressed; awareness raising about HHPs is conducted among stakeholders; an updated inventory of existing HHPs is conducted, including monitoring, mapping and evaluating the specific areas where the pesticides are mostly used in the country; environmental-training is

conducted in the field; and assessments are carried outabout HHPs programs and if policies are in place. A comprehensive database on pesticides used are not available; however, provincial officers in the subsector referred to Cypermenthrin, Mancozeb, Cobox and Teodan, all under Class III (least toxic), as the main pesticides in use. These are also the pesticides mostly acquired and distributed by the public sector. Many of the pesticides in use in the country are highly hazardous in terms of acute toxicity, chronic health risk and /or environmental contamination.

Addressing the serious problems caused by HHPs in Mozambique

The Integrated Persistent Organic Pollutant and Waste Management project funded by GEF - SGP small grant program: Ongoing Pilot Cassava and Conservation farming, implemented by Africa Foundation for Sustainable Development (AFSD), directly addresses the serious problems caused by hazardous pesticide use and risky practices. The activities explore aspects of inadequate management of pesticides throughout the lifecycle (import and regulation to distribution, use and disposal of waste and empty containers); however they barely address safer alternatives based on Integrated Pest Management (IPM).

The objectives of the project, conducted in collaboration with SDAE[8] Namaacha, are:

1. Engage government agencies, the agriculture sector,academia,NGOs, health sector and others CSO working on environmental issues;
2. Raise awareness on POPs and short actions to reduce risks, with training of smallholder farmer associations;
3. Train the trainers' programs;
4. Develop the communities' communications strategy on POPs;
5. Identify potential alternatives for pest management for selected priority POPs and trial the most feasible,with a preference for non-chemical methods;
6. Share lessons and develop reccommentions for follow–up;
7. Develop an organic food production and consumption value chain;
8. Update data of any new POPs/ HHPs used by the smallholder farmer; and
9. Create POPs /CSO Network.

The project implementers are sharing projects findings with all relevant stakeholders such as policy makers and donors; however, there is a need to share widely all project findings to the Education Ministry[9], all pesticides agencies suppliers,and international chemical convections, as well as to liaise with country trade organizations, supermarkets and the International

[8]ServiçosDistritais das ActividadesEconómicas

[9] The aim is to promote a joint curriculum program that includes aspects linked to chemicals and waste management.

Organization of Standards (ISO) to promote ecological/organic pest management uptake by Mozambique growers of export crops.

Tackling HHPs in Mozambique

The country strategy for establishing a nation-wide programs and projects on HHPs follow under the country National Plan and instituion framework policy. It is recommended to rely on some of the strategic partners such as private companies and NGOs to successfully implement the programes on HHPs. Experienced Civil Society Organizations (NGOs, established and trained farmers' associations, etc) can be actively and systematically involved in the process to successfully implement the strategy.

Nr	**Areas of intervation**	**Recommendedintervations**
1	Strategic aspects	▪ Create a Country HHPs Action Plan; ▪ Promote IPM nationwide to reduce the reliance on pesticides; ▪ Promote the design and implementation of monitoring plans that reduce pesticides use,improve pesticide use,selection use,storage and disposal and create awareness with regards to health impacts and impacts on the envirnonment.
2	Operational Aspects	▪ Create a nationwide HHPs research center /laboratory; ▪ Promote the use of precautionary measures such as the use of protective clothing and proper equipment,cleaning of spray equipment,washing after completing spraying activites and observing re-entry points, observation of expiration dates and disposal of containers in an environmentally acceptable manner, and proper storage of the remaining old pesticides and containers; ▪ Rational application of chemical fertilisers; ▪ Promote bio-agriculture, using natural manure,tobbaco, Moringa, Margonza,and chilli as both possible pesticides on targeted species,as well as fertilizer.
3	Education and Capacity Building	▪ Conduct awareness-raising and sensitization campains on the rational application methods and IPM practices, selection of the most appropriate pesticides for a specific crop,when and how much to spray in order to reduce health and economic damage, and when to repeat spraying; ▪ Promote safe and sustainable alternative to HHPs; ▪ Find financial resources and establish mechanisms; ▪ Conduct information exchange.

3.2 Main challenges in the process of campaigning for the phasing out of HHPs

Recent experience has shown that there are few NGOs and private companies that have their own strong farming units, with well-trained and capable personnel, including those with the necessary knowledge and skills to deal with pesticides. Field observations indicate that although farmers are aware that pesticides are poisonous to their health, their responses show that pesticides are major occupational health and environmental risks. In particular, some pesticides are often sold in non-standard containers without proper instructions,effective protective clothing and equipment is seldom available (even where it exists it is not used), on-farm storage sites are highly hazardous (sun and rain exposure), and empty pesticide containers are washed in local water bodies and the containers re-used for other purposes. Conversations with farmers revealed limited knowledge and lack of application of safety practices. Moreover, medical staff at rural clinics or hospitals are not well trained to recognize and adequately treat pesticides poisoning, and antidotes are not systematically available in rural and in some remote communities and urban areas. Mozambique should ensure the following measures in order to address HHPs problems:

- Promoting safe and sustainable alternative to HHPs;
- Put in place effective iInformation ixchange programs ;
- Rational application of chemical pesticides and fertilisers;
- Put in place nation-wide HHPs research center /laboratory;

3.3 Recommendations and projects ideas that support the national HHPs phase out

Main Area of intervention	**Action Required**
IPM (Integrated Pest Management) mainstreaming	Mainstreaming IPM within key components ▪ Production and commercialization of smallholder agriculture products ▪ Make it a pratical element affecting all aspects of extension and training
Increased use and reliance on chemical pesticides	▪ Promote adoption of IPM pratices through farmer education and training ▪ Develop strategies to move farmers away from pesticides-dependent pest control practices and promote use of **biological** control
Change current pest management pratices	▪ Allocate adequate resources to implement National Plant Protection Policy ▪ Increase IPM awareness amongst policy makers and farming community

	▪ Abolish free distribution of pesticides to farmers and promote saferalternatives to pesticides
Enforcement of the legistation	▪ Strengthen institutional capacity (to the extent needed) and effectively monitor compliance with pesticide legislation
IPM research and extension	▪ Strengthen IPM research at MASA/ relevant research institutions ▪ Strengthen collaboration between MITADER /MASA for field implementation of IPM ▪ Involve NGOs and communities in promoting IPM activities ▪ Implement participatory approaches in IPM for farmers to learn,test,select and implement IPM options to reduce losses due to pests and diseases
Environmental effects of HHPs use	▪ Create public awareness of use of HHPs through awareness campaigns ▪ Regular assessment of HHPs residues in irrigated agricultural production systems and in harvested produce ▪ Monitring of HHPs poisoning in the farming and rural communities
Increase in vector populations and of vector borne diseases such as malaria	▪ Colloaborate with other IPM/IVM programs in the region ▪ Establish strong collaboration between other malaria regional and nationwide progams projects ▪ Establish regular vector surveillance
Monitoring	▪ Participatory monitoing system that provides early warning on pest/ diseases status ▪ Measure the impact of the economic losses,collect data ofthe main pest species

4. National IPM policy framework that supports ecosystem approaches as alternatives to synthetic pesticides

4.1 National IPM policy framework

Mozambique has enacted good pesticide legislation; Decree 6/2009 of 31 March 2009 (Pesticides Management Regulation).The objective of the Regulation is to ensure that all processes that involve working with or handling pesticides are not performed to the detriment of the public, animal and environmental health. The Regulation applies to the registration, production, donation, trading, importation, exportation, packing, storage, transport, handling, use and elimination of pesticides and adjuvants, by individual or collective persons, for agricultural, livestock, forestry, public health protection, domestic and other purposes. Among other aspects, the Regulation identifies the institutions involved in pesticide management, sets up bodies with the responsibility of performing specific tasks in the area (such as the (i) Technical Assessment

Committee for Pesticides Registration and the (ii) Technical Advisory Committee for Agrochemicals). An additional legal instrument mentioned in the IPM is the Environmental Quality Standards and Effluents Emissions Regulation approved by the Council of Ministers in May 2004 (Decree 18/2004). This Regulation aims to control and maintain the level of concentration of pollutants at an admissible level. Despite all the regulation and policy, Mozambique is still vulnerable to agro-chemicals hazards due to poor institutional constraints such as weak coordination, control and monitoring; lacking health and education systems; and dependency on external funding.

4.2 National organic agriculture policy framework

Mozambique does not have any integrated pest management or any organic production policy. Partial IPM is indirectly referred when encouragement using other pest control such as biological control methods. This situation carries the potential to be an open door for farmers and other operators in the agroecologic market. Agricultural policy in Mozambqiue focuses on executing the country's poverty reduction plan (PARPA II)[10]; expanding access to factors of production, particularly for women, with greater emphasis on adequate technologies and quality inputs; enhancing the capacity for surveillance and control of plant and animal pests and diseases; and improving and making better use of water for agricultural purposes. The three main agriculture strategies are the green revolution (2007), the food production action plan (Plano de Accao da Producao Agricola, PAPA, 2008-2011) and the Strategic Plan for Development of the Agricultural Sector (Plano Estrategico de Desenvolvimento do Sector Agrario, PEDSA, 2009-2019)[11].

The green revolution strategy and action plan to increase agricultural productivity are believed to have led the increased investment in the sector, enhancing domestic production of main food staples, and market integration between regions and agricultural value chains, which reduces the country's reliance on imported food commodities. However, the approach being followed is mostly against the approach of organic farming.

4.3 Policy frameworks that support the manufacture, import, distribution and use of bio-pesticides

In the absence of a national organic agriculture policy framework, there is a significant factor can be expected to work as a constraint in the adoption of IPM pratices, which is the attitude that pesticides are so-called "efficient and rapid medicines" that provide fast and effective cures for all problems affecting crops. Therefore, success of any support towards the manufacture, import, distribution and use of bio-pesticides strategy depends only on the ability of the strategic partners (private companies or NGOs), together with government, extension service and farmers

[10]https://www.imf.org/external/pubs/ft/scr/2011/cr11132.pdf

[11]https://www.slideshare.net/ClemenceNhliziyo/a-review-of-agricultural-policy-practice-in-mozambique

to fulfill their commitments in these areas. This requires considerable investment in training, awareness-raising, and capacity-building in several topics related tobio-pesticides and implementation.

5. National Implementation of crops-specific, pest-specific alternatives to HHPs

Bio-pesticides control involves the use of biological agents and predators to control pests and diseases. This is successfully used in crops like cassava and involves conservation or optimization of the impact of living agents that already exist in the ecosystem. Natural predators are: parasitoids, nematodes, fungus, bacteria, viruses, etc. The use of these natural predators to maintain the population density of pests at a lower level than would occur in their absence is a common method under biological control or, simply, bio-control. The inherent genetically resistant plant can protect itself against pests or diseases without resorting to pesticides. Findings of the AFSD Cassava and Organic Farm Project encourage the cooperative spirit and a system transformation: "Any activity or productivity done only by an individual is not sustainable on its own; it is necessary, above all, to have a good organization of the production and of the social environment where this individual is inserted". In order to have an effective transformation of the agricultural system, farmers should have the right to food sovereignty, which consists of an effective right to a healthy and environment-friendly food/diet.[12]This means to have control of the natural resources; in particular, the land, water, seeds, and electricity, which are public assets and rights. To prioritize biodiversity protection requires a determined action, taking into consideration that hundreds of living species are lost or contaminated on a daily basis as a result of the current production model, consumption and misuse of pesticides and agrochemicals and other chemicals; it means access to information; planning and provision of services that meet the local demand of producers and the communities; decentralization and capacity-building in the communities for greater responsiveness to farmers and rural operators relative to food and public health services; creation of urban vegetable garden markets; and creation of ecological or organic consumption groups and cooperatives.

5.1 National IPM implementations

Mozambiquehas developed and implemented the Agriculture and Natural Landscape Management (ANRLMP) in two provinces (Nampula and Zambezia) in March 2016, project – P149620[13]. Additionally, it has implemented the Smallholders Irrigated Agriculture and Access Market Projectin April 2018 (IRRIGA)[14].The ANRLMP was focused on minimizing the negative effects of pesticides, use of low pesticides and promotion of the adoption of Integrated Pest Management (IPM) recognized as the best approach. The IRRIGA uses IPM approach and was

[12]FOOD%20SAFETY%20OR%20SOVEREIGNTY%2029102018%20(1).pdf

[13]/Plano%20de%20Gestão%20Integrada%20de%20Pesticidas.pdf

[14]file:///F:/IRRIGA_PMP_-Final-for-Disclosure.pdf

designed to focus on smalllholder irrigated agriculture development and market access, and targets provinces of Manica,Sofala and Zambezia.

5.2 National organic agriculture implementation

The government of Mozambique, jointly with the African Development Bank and other key development partners, launched an ambitious, high level Roadmap for a Green Economy. This Roadmap for a Green Economy established the objective of becoming an inclusive, middle income country by 2030, based on protection, restoration and rational use of natural capital and its ecosystem services to guarantee development that is sustainable and inclusive. Mozambique already promotes greengrowth in some critical areas and new ideas have been encouraged in support of sustainable, long-term development.

To enable green growth it will be necessary to: establish strong regulatory standards; set inception incentives that are conducive to green economy activity and that remove barriers to green growth; prioritize public spending and investments in areas that stimulate and incentivize sustainability in economic sectors; use taxes and market-based tools to stimulate green innovations and investments; and invest in capacity-building, awareness, training and national education system programs.

The objectives of national organic agriculture implementation should look on the following[15]:

a. Strengthening of national, regional, and international environmental governance;
b. Establishment of the foundation of a green economy, including a green growth agenda in national development priorities;
c. Identification of concrete policy actions to advance agreen economy agenda as it pursues the objectives of poverty reduction; and
d. Integrate the green economy approach into planning and budgeting as well as into national accounts.

5.3 Practices based on indigenous knowledge that are being used to replace HHPs

Farmers have effective indigiounous knowledge that protect pests. Different forms of intercropping and /or use of indigenous remedies made from local plants are often adopted with the sole purpose of keeping pests and/or increasing soil fertility. Today the traditional farming system is dominated by poor technology and low productivity that resulted from the sol

[15]https://www.afdb.org/fileadmin/uploads/afdb/Documents/Generic-Documents/Transition_Towards_Green_Growth_in_Mozambique_-_Policy_Review_and_Recommendations_for_Action.pdf

dependency on the use of fertilisers & pesticides and a lack of knowledge in relation to their harmful properties to public health.

Farmers and extension workers should work hand in hand to develop a better understanding of traditional knowledge and, where it proves to be effective, actively promote it. There is a belief that chemicals are more efficient than any other cultural practices that could be adopted. However, farmers in Namaacha prefer crop rotation in summer (e.g maize) and winter crops (horticulture and a number of beans), and intercropping (cereals, vegetables and legumes) as being efficient in controlling some pests, especially insects and fungus. The ongoing Casssava and Organic project via the AFSD - GEF small grant is expected to replicate this in large scale within the country.[16]

A specific set of interventions should be embraced to reverse agrochemicals dependency. Suggestions are made in this research on how best to implement indigenous knowledge, such as the use of bio-pesticides. Bio-pesticides are a type of biological pest control product in which the sole or principal component is a micro-organism that can function as pesticide. The micro-organism could be a fungus, virus, bacterium, mycoplasma or rickettsia.

The microbial active agent might be a pathogen of an invertebrate pest such as an insect or could be active against another microorganism such as toxin-producing fungi that contaminate grain, pulses and other products. In general, bio-pesticides are considered advantageous over conventional chemical pesticides because they are generally much less toxic to humans and other mammals than other types of pesticides. They also have less impact on wildlife and the environment. Conventional pesticides can be substituted by bio-pesticides, and this is becoming increasingly necessary because many conventional pesticides are being withdrawn or banned because of their adverse side effects. Bio-pesticides are effective in very small quantities and often decompose quickly, thereby resulting in lower exposures and largely avoiding the pollution problems caused by conventional pesticides. They are beneficial due to their very low toxicity, although in same cases allergies could occur.

Bio-pesticides, when used as component of Integrated Pest Management (IPM) programmes, can greatly decrease the use of conventional pesticides, while crops yields remain high.

Bio-pesticides are formulated and applied like conventional pesticides. Some bio-pesticides show great promise for controlling pests and associated problems for which there is no conventional remedy.[17]

[16]/FOOD%20SAFETY%20OR%20SOVEREIGNTY%2029102018%20(1).pdf
[17]https://www.aatf-africa.org/wp-content/uploads/2018/11/Microbial-biopesticides.pdf

Mozambique should develop regulatory systems and a registration framework for bio-pesticides in order that may be used effectively and safely, especially as part of IPM programmes. Systems should ensure that:

- Registered bio-pesticides are in place on the market and made available for use;
- Bio-pesticides that are demonstrated to be safe and effective for intended use may be registered;
- Bio-pesticides are used correctly and safely;
- Registration of bio-pesticides may be re-evaluated if new data becomes available;
- Registration procedures take into account the lower inherent toxicity of bio-pesticides, but recognize special risks like allergenicity and genotoxicity;
- Registration procedures to adopt a national authority for bio-pesticides follow a harmonized regional approach so that evaluation of and application for registration might utilize data from equivalent pesticides in other countries in the region and reduce testing requirements (fast tracking); and
- International and regional trade in biopesticides is facilitated.

5.4 Implementation of national agroecology initiatives

Promoting conservation farming is about ensuring sustainable human wellbeing on the basis of policies and measures that protect the ecological, social and economic environment. Existing development models worldwide have been shown to be destructive to the environment, while failing to eliminate poverty, raise living standards or ensure prosperity. In order to have an effective transformation of the agricultural system, farmers should have the right to ***food sovereignty***[18] and system transformation. A conservation farming model implies an all-embracing "holistic approach" to economic development, maximizing synergies between economic, social and environmental objectives, and minimizing conflicts and contradictions among the parties involved. For Mozambique, the priority is to improve human security, maintain an adequate food and water supply, provide access to health services and deliver broad-based economic prosperity, making good use of its natural resources. Promoting conservation farming means addressing existing and emerging development challenges in a manner that neither depletes the country natural capital nor leaves economies and livelihoods more vulnerable to climate change and other environmental, social and economic risks; in tune with the global need to address challenges of resource efficiency, reduce pollution and seek paths to sustainable growth. As the country/global population increases, it is imperative to practice agroecology farming, and sustainable development models become more urgent and will play an important role in meeting this global challenge.

[18]FOOD%20SAFETY%20OR%20SOVEREIGNTY%2029102018%20(1).pdf

Local NGOs participate and implement conservation farming and climate resilience with local community participation projects funded by the GEF-Small Grants Program. The Integrated Waste Management and POPs project, The Cassava Conservation Production and Value Chain Pilot Project, is amongst others that are focusing on the organic or conservation production. It's a cooperative based on community partnership between the commercial entity and a local producers. This model is designed for greater involvement of the community members of the Organic Cassava and Horticultural and Value Chain, creating greater incentives and a sense of ownership and responsibility. The cooperative model aims for greater partnership with farmers, and the impact on the local economy includes direct benefits for about 500 people, as well as land conservation.

Mahelane Organic Cooperative farmer selling vegetables

5.5 Organizations that implement and support agroecological initiatives in the country

Organization	**Responsible**	**Projecttype**
Quinta IRINI	Marisa Esculudes	Vegetable, Pesecultura,Fungecultura
AssociacaoMulheres do Zimpeto	Isabel Marcos	Horticultural - ESSOR

AssociacaoDjanlane	LizeteMagaia	Horticultural
AssociacaoSamora Machel	Daniel Matusse	Horticultural
Slow Food Movement International	Marisa Esculudes	Horticultural
Associacao dos Agricultores de Mahelane	Samuel Guilundo	Horticultural - Africa Foundation https://www.youtube.com/watch?v=i0qUghKGPn0&t=452s
Associacao dos Agricultores de Namaacha (Mafuiane)	SDAE	Horticultural-Africa Foundation https://www.youtube.com/watch?v=LxBuHz457E0&t=339s

5.6 Main national challenges in agroecological implementation in Mozambique

Conservation farming benefits include increased organic matter, improved water retention, improved soil fertility, reduced soil erosion, reduced weed infestation, increased crop productivity and others. This research revealed different conservation pratices, experiences of stakeholders, and opportunities and challenges of developing it. Through practical experience in communities, reviewing databases, and agriculture institutional consultations, we learned that permanent planting basins, maize, vegetables and cassava are the most promoted methods amongst smallfarmers for minimizing soil tillage, maximizing soil cover and supplementing conservation practice, respectively. Continuous tillage through ploughing and ridging, monocropping, burning of crop residues and inadequate nutrient application changed farming systems gradually. Results from the field demonstrated that famers have only allocated less that 10% of their land to conservation production. This indicates that demonstration farmers have not shifted or “transformed” enough, inspite of conservation benefits over non-conservation farming plots. The main reason for continuing to use ridging cultivation was that farmers learned it from older generations. The existing national policy framework in agriculture does not have any agroecological production strategy. Partial IPM is indirectly referred to when encouraging farmers to use other pest control methods such as biological methods. The absence of a national policy framework on organic agriculture is a constraint to the adoption of IPM and agroecology. There is a need for considerable investment in training and capacity-building on bio-pesticides. Stakeholders and smallfarmers have different technical understanding of conservation farming. Some countries have extension guidelines on conservation farming specifically for agroecology (for example, Zambia (CFU, 2007)), but such guidelines are non-existent in Mozambique. Most of the smallfarmers and stakeholders (suppliers) do not have systematic research protocols to obtain empirical results as shown on the field.

5.7 Institutional extension capacity

There is a need to build the capacity of the extension workers in conservation farming, and share experiences and knowledge about conservation farming in the region. This will enable building the capacity of most NGOs and government representatives of Mozambique in better understading the dynamics of conservation farming. Most of NGOs rely on reading conservation

farming materials shared and found on the internet. Most of these materials are in English and reflect a different reality than what occurs on the ground. The national NGOs working on conservancy need to work hand by hand with other stakeholders such as academia, funders and other NGOs in the same field. They also need frequent training and to be updated on the new situation or innovations taking place at certain place and time. The trainings held in Mozambique by experts from abroad should be done in coordination with local experts and communities for sustainability purposes.

5.8 Break-even point of conservation farming

Research findings indicate that farmers are still resistant to changes in adopting conservation farming over the period of 3 years. Farmers are used to "instant" or "quick" technology of improved seed and chemical fertilizer, herbicides and other products that yield immediate results. Any technology that takes a relatively longer period of time to yield results would be regarded as a waste of time and resources.

5.9 Lack of clear guidelines for specific conservation farming

From the stakeholders' meetings and survey results, it was clear that most of the stakeholders do not have clear guidelines for promoting conservation farming practices as regards to suitability to agro-ecology. Conservation farming cannot be considered as a blueprint techonology to be promoted as a "one-size-fits-all" approach. Farmers should use both the old ridge approach and planting basins depending on the topography and soil characteristic of the areas.

6.0 Recommendations and project ideas emerging from the challenges

The paper reveals that several NGOs, associations and the private sector are promoting conservation farming in Mozambqiue. As such there is an urgent need to synergize efforts in conservation farming development and advocate for radical change of the **transformation system**. The deficiency of information persists despite some adaptive research on conservation farming. Adaptive research is needed to develop and practice appropriate measures for the various farm andagro-ecological[19] conditions:

a. Institutional extensiontraining and capacity-building;
b. Training and capacity-building of the farmers on permaculture production;
c. Development of clear guidelines for specific conservation / permaculture farming;
d. Development /production of natural pesticides and fertilizer based on organic material;
e. Ensuring the process of certification delivery. For instance: When a smallholder farmer is training on organic production, s/he should be qualified with the certification that he/she has been trained;

[19]The-Environmental-and-Civilization-Crisis-and-the-Permaculture-Alternative

f. Promotion of awareness programs (regional, country “Road Show” talks and project movies relared to toxics);
g. Development of women/ youth commercial start-ups (community selling points) for bringing bio-pesticides to market;
h. Creation of a bio-pesticides/pesticides shop in the communities (responsible unit for: spraying, fertilizer application in the farms, collection of empty container and return to the main supplier). This will promote jobs and generate income business to youths while protecting heath and the environment; and
i. Mainstream media as one of the main tools to raise awareness (radio, news outlets and magazines and television) in conservation programmes.

More specifically, training on conservation farming, targeting lead farmers, women, youth, extension workers, vendors, health services and other relevant stakeholders, should be developed and implemented:

1. Learning –by-doing training programs
2. Focus group discussions – This should take into account the different groups of interest. Women, in particular, have to be in a specific focus group where they will pose specific isues related to conservation farming fearlessly.
3. Demonstration projects
4. Educational material
5. Youth education

Furthermore, training should be conducted in the use of ecological practices targeting lead farmers, extension workers, local leaders, women, youth, extension workers, vendors, health services and other relevant stakeholders:

1. Agro-ecological systems selection
2. Understanding the agro-ecological label and its administration
3. Agro-ecological preparation
4. Mixing and using agro-ecological fertilizers
5. Agro–ecological storage
6. Agro-container disposal
7. Management of obsolete residues
8. Toxicity, human protection and first aids
9. Development of the seed bank
10. Training on data collection process related to carbon emissions
11. Creation of database on different types of agro-pesticides used
12. Set-up of bio-pesticide venders/pesticides shop and its standard and operation procedure,

ANNEXES

Annex 1 : IPEN HHPs project activities

Phase	**Expected Outputs**	**Primary work location**	**Indicative time for completion**
Review of the relevant documentation: HHPs Project	Listing of the documentation reviewed Potential lessons learned for next phases	Off-site, Maputo	**4 days** **December**
Field assessment, appraisal, first consultations with stakeholders (*incl. affected communities*)+ Field assessment & preparation of draft final reports	Issues notes and minutes of meetings with various stakeholders including consultations with Namacha communities. See also various outputs of HHPs *Scope of the Assignment*	On-site, Maputo	**January**
Further field assessment and submission for review f odraft final reports	**Draft Reports**HHPS	On-site, Maputo	**January**
Incorporate first feedback from Workshop MASA, MITADER and MISAU final report writing	**Deliverable:** Submission of **draft final**	Maputo	**January**

Annex 2: List of consultation meetings with relevant stakeholders and partners

Nr	Name	Institution	Position
1	Delfina Pedro	MASA (Ministry of Agriculture and Food Security)	Technical Chief and Manager
2	SidonioCotage	MITADER (Ministry of Land,and Rural Development)	POPsFocal Point
3	Albertina Chiale	MISAU (Ministry of Health) DDT	Technical Manager
4	CustodioTembe	District Government	Chefe do Posto
5	Antonio Buque	District Government of Mahelane	Chefe da Localidade
6	David Pelembe	SDAE(NamaachaProvincial Directorate of Agriculture in Namaacha	Technical Expert Agrarian Technician/Agricultural Services Department in Namaacha
7	SuzeteDança	Government Administrative office	Community Leader
8	Antonio Magaia	Syngetna	CRO Mozambique
9	Antonio Vasconcelos	Agrifocus	Technical Manager
10	Rosa Magaia	Local Market Community Market	Community Vendor
11	KhalidCassam	FAO	FAO pesticides specialist in charge of coordinating the warehouse[20]
12	Samson Cuamba	Mitader	Rottherdam Convention
13	Paulo Artur	ComOrganico	Organic Farming Associate
14	Samuel Guilundo	Farming Association	Farmer

[20]http://www.fao.org/in-action/fao-collection-sites-help-rid-mozambique-of-dangerous-pesticides/en/

Annex 3:Community engaged in AgroEcological Biopesticides production

Ongoing : Organic farm Project

Preparation of the biopesticides by the communitiesladies

Fertilizing process

Selling process

Cabbage seed bank process

Tomatoes and white cabbages infested with pest

white cabbages infested withpest

Tomatoes and Pesticides

Moringa tree for fertilizers

Conservation process

Annex 4 : Organic Cooperative Cassava Project

Cassava Planting process

Proccessing cassava

Processed Cassava flour : Value Chain

Annex 5 : Community engaged in Agro- Ecological

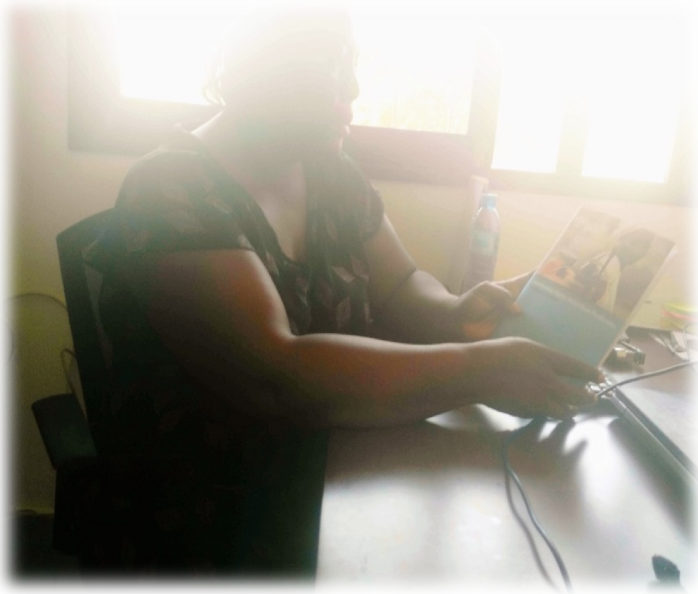
Field Activities

Pesticides and Obsolete container storage site in the farm

Contaminated areas (plastic empty containers , top Roopp (Asbestos)


SidonioContage: shown and explaning the Incinerator functionality

Greenhouse Lab



Khalid Cassam explaining the FAO HHPs project process engagement

Annex 6 : Chemicals and Waste Mamangenent NGOs network

Workshop December 2018

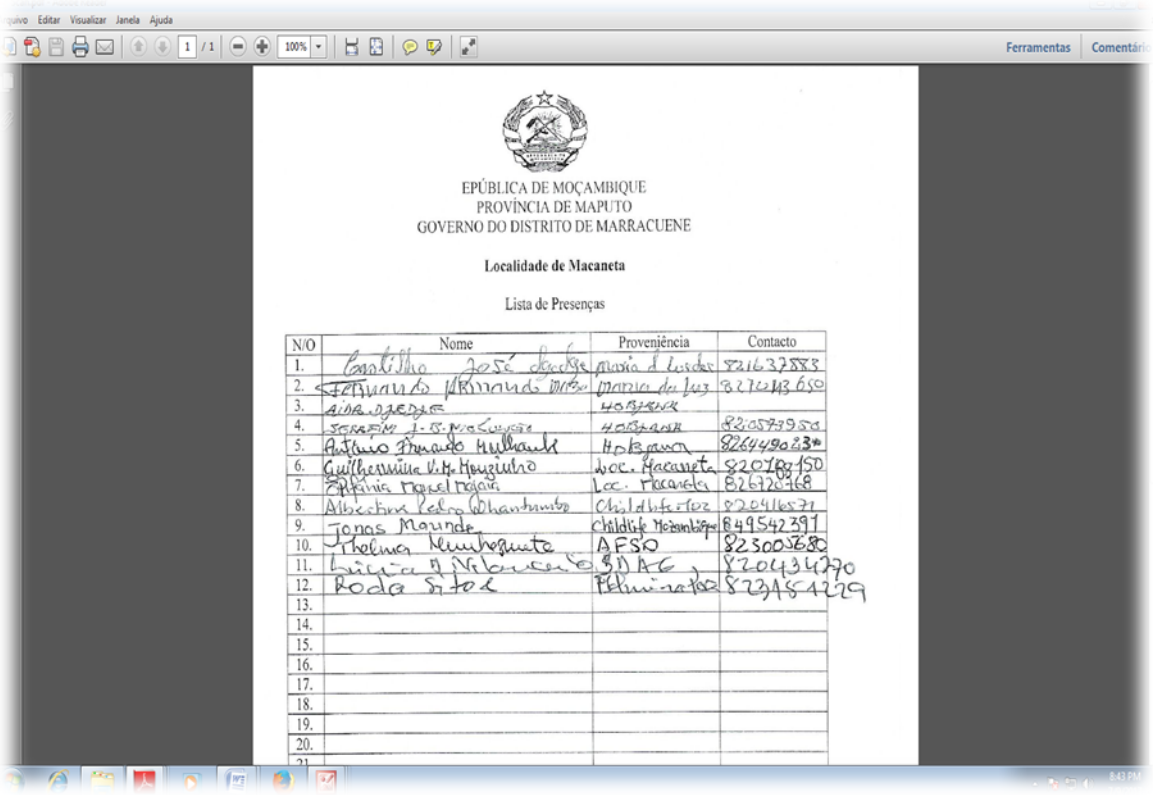
Annex 7: DDT : Malaria Control Campaign in Maputo (Matola) and Dondo (Beira)in 2014[21]

[21] The malaria control campaign was jointly coordinated by Mitader, Malaria programme and the Ministry of Agriculture. The supervision consisted of verifying the validity of the DDT stored, checking the containers, the protective equipment, checking how the mixtures are made and the spraying process.

8. ACTIONS

	WHAT	START	STATUS	WHO	DUE
1	Data collection communities site visit	December	Done	TM	December
2	Desktop research	December	Done	TM	December
3	Meeting with relevant Stakeholders	December - January	Done	AFSD /Mitader/Masa / MISAU	January
4	Agro-Chemicals providers consultation meeting	January	Done	TM , Lucia SDAE	December/ January
5	Workshop with NGOs involved in Chemicals and Waste Management	December	Done	AFSD/ SGP Small Grant/ MITADER	December
6	Collect the chemicals list from the communities	December	Done	TM / Samuel Guilundo	December
7	Local horticulture and organic products providersconsulation meeting	January	Done	Marisa Esculudes	January
8	Progress meeting with Mitader – DDT site visits and all contaminated areas	January	In Progress	TM / Sidonio(MITADER)	January
9	Develop and submit the final report	January		TM	January
10	DDT research	January	Ongoing work	AFSD / MITADER	Ongoing

9. Maneta Site



EPÚBLICA DE MOÇAMBIQUE
PROVÍNCIA DE MAPUTO
GOVERNO DO DISTRITO DE MARRACUENE

Localidade de Macaneta

Lista de Presenças

N/O	Nome	Proveniência	Contacto
1.			
2.			
3.			
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10. Site Namaacha

1	Elena Uqueio	ASSOCIACAO DE CHANGALANE
2	Luis Alberto Muianga	
3	Zacarias Banze	
4	Ernesto Salvador	
5	LangaSuleimane	
6	Jose Mucumbuza	
7	Bila Candido	
8	Cecilia Samuel Machael	
9	Esmeralda Jose Cuambe	

10	Salomao Machava	ASSOCICAO DE MAHELANE
11	Carlos Muave	
12	Justino Vieira	
13	Uamusse	
14	Paulo Mondlane	
15	Celeste Chirindza	
16	Virginia Massingue	ASSOCIACAO DE MICHANGULENE
17	HelioMuchanga	
18	Isabel Tumbo	
19	Estencionista 1	CHANGALENE
20	Estencionista 2	VILA SEDE