



República de Moçambique
Ministério de Agricultura

Background information on the Situation of Phytosanitary Capacity in Mozambique

Mozambique conducted a PCE(as of 2012)

Acronyms

ALPP – area of low pest prevalence
AU – African Union
CAADP – Comprehensive African agricultural development program
DNSA – Direcção Nacional de Serviços Agrários
DPAs – Direcções Provinciais de Agricultura
DSV – Departamento de Sanidade Vegetal
FAO – Food and Agriculture Organization
GDP – Growth Domestic Product
GIS – global information system
IAM – instituto de algodao de Moçambique
IAPSC/AU – Inter-African Phytosanitary council, African Union
IAS – Invasive Alien Species
INCAJU – Instituto Nacional do Caju
IPPC – International Plant Protection Convention
ISPM – International Standards for Phytosanitary Measures
Km2 – kilometre square
LMOs – Living Modified Organisms
MIC – Ministerio da Industria e Comércio
MICOA – Ministerio para Coordenação da Acção Ambiental
MINAG – Ministério da Agricultura
MISAU – Ministerio da Saude
MTC – Ministerio dos Transportes e Comunicacoes
NEPAD – New partnership for Africa’s Development
NGOs – Non-Governmental Organizations
NPPO – National Plant Protection Organization
PAAO-Plano Anual de Actividades e Orçamento
PCE – Phytosanitary Capacity Evaluation
PEDSA – Plano Estratégico para Desenvolvimento do Sector Agrario
PFA – Pest Free Area
PIFs – Posto de inspecção fitossanitario
POA-Plano Operativo Anual
PRA -Pest risk Analysis / Assessment
RECS – Regional economics communities
RPPO – Regional plant protection organization
SADC – Southern African Development Community
SGS – Sociedade Geral de superintendência
SPS – Sanitary and Phytosanitary Standards
SWOT – Strengths, Weaknesses, Opportunities, Threats
UEM – Eduardo Mondlane University
WTO – World Trade Organization

1. INTRODUCTION

1.1. Country background

Mozambique is located in the Southern Africa bordered on the East by the Mozambique Channel in the Indian Ocean with a coastline of about 2,700 Km and shares land borders in the South with South Africa and Swaziland, Malawi, Zambia and Zimbabwe in the West and with Tanzania in the North. The country has 11 provinces. The capital city, Maputo, is in the far south of the country; the second city, Beira, in the middle on the coast and the third is Nampula located in the Northeast. The country has a total population of 23,049,621 in 2011 and a population density of 28.8 inhabitants/km² and the annual population growth of 2.8% (INE, 2011).

The Republic of Mozambique has land size of 799 380 km² of which about 36 million hectares are suitable for agriculture and only 10% is utilized and 90% of which is in the small holder sector. Mozambique has 3,300,000 hectares of land that can be irrigated; of which only 14% is actually being properly exploited (TechnoServe, 2002).

Table 1 – Country background profile

| Total land area (Km2) (2011) | Total land area suitable for agriculture (ha) | Total land area under cultivation (2010) | Total population (2011) | Population density per km2 (2011) | Annual population growth (%) (2011) | Gross domestic product (2010) | Gross domestic product per capita (US\$) 2009 | Trade US\$ 2011 | Trade US\$ 2011 |
|------------------------------|---|--|-------------------------|-----------------------------------|-------------------------------------|-------------------------------|---|-----------------|-----------------|
| | | | | | | | | Export | Imports |
| 800,000 | 36.000.000 | 10% | 23,049,621 | 28.8 | 2.8% | 9.5 billion | 422.8 | 2.3 billion | 3.8 billion |

Source: INE (2011). Indicadores básicos, Moçambique; www.ine.gov.mz (date accessed, 17.12.2011)

Membership of international organizations: Mozambique is a member of the following regional/international economic integration and/or cooperation organizations: Food and Agriculture Organization of the United Nations (**FAO**); International Plant Protection Convention (**IPPC**), World Trade Organization (**WTO**); Inter African Phytosanitary Council-African Union (**IAPSC-AU**); Southern African Development Community (**SADC**), Codex Alimentarius, Biodiversity Convention (**CBD**), Basel Convention, Rotterdam Convention and Montreal Protocol. Mozambique is also a member in international and regional agreements related plant protection: International Red Locust Control Organization (**IRLCO-CSA**).

1.2. The role of Agriculture

Agriculture is a key sector for economic growth and poverty reduction in Mozambique, which accounted for 26% percent of the Gross Domestic Product (GDP) in 2010 and has been growing at over 7% annually (INE, 2010). It provides work to more than 80% of the workforce, being the main activity for 95% of the population living in rural areas. Mozambique has an enormous potential for export due to favourable agro-climatic conditions for agricultural production.

The main crops grown in the country: 1) major staple food crops, maize, cassava, rice, sorghum, beans and, groundnut and 2) cashew nut, cotton, tobacco, sugar cane, sesame, banana, citrus, chilies and other fruits and vegetables are considered the cash crops: (FAO, 2007; MINAG, 2011).

Agricultural commodities constitute one of the most important groups of exports in Mozambique, until recently it accounted for 25% of the total exports. The value of exports that are plant based accounted for US\$ 2.3 billion in 2011 (INE, 2011). The crop diversification strategy promoted by both Government and private sector led in the last years to the growth of agricultural production, being the main trading partners for plant based commodities exports to SADC countries mainly to the Republic of South Africa, European Community, Japan, China, India, USA and Middle East.

However, the importance of agricultural production in the national economy and the possibility to exploit such opportunity is seriously undermined by the country's inability to comply with sanitary and phytosanitary measures of the importing countries. Main problems can be summarized as inadequate capacity to monitor spreading of pests and diseases, carry out pest risk analysis (PRA) and conduct effective inspection to prevent introduction of the pests, conduct credible and reliable export certification, lack of quarantine infrastructure and laboratory equipment in the most important border posts and lack of surveillance unit to update regularly the national pest list to make it available to the trade partners and thus, enhancing the country agricultural exports. Export losses are already occurring due to this inability.

Furthermore, exports of Agricultural products are substantial increasing and more investments are coming to the country. With the production and export growing the NPPO will not have enough capacity to comply with sanitary and phytosanitary measures of the importing countries and the international conventions and standards requirements on phytosanitary issues and provide the relevant certification of exports. This will obviously result in an economic loss and jeopardize the ongoing investments.

The Plant Protection Department (DSV) from the Ministry of Agriculture is responsible for issuing of import permits and certificates for exports, through the phytosanitary inspection ports (PIFs), localized on the major entry/exit points. The limited number of the equipped infrastructures as well as the qualified human resources became difficult to fully exploit the country potential of agricultural products and thus the re-organization of the Plant Protection Department is pivotal to remove the bottleneck of Phytosanitary measures.

The national agricultural policy recommends that the increase of agricultural production depends largely on the crop protection, an important factor in reducing the damage caused by pests and diseases in the field and post-harvest.

To ensure the proper functioning of this important component of agricultural production, there is a need to establish a national Phytosanitary capacity building strategy in Mozambique, which aims to ensure the crop protection and increased agricultural production in Mozambique. The IPPC Secretariat (2010) defined National Phytosanitary Capacity as: *“The ability of individuals, organizations and systems of a country to perform functions effectively and sustainably in order*

to protect plants and plant products from pests and to facilitate trade, in accordance with the IPPC”.

This is achieved through individual countries applying the legislative, technical and administrative measures and through implementation of internationally standards to protect plant resources and implement effective actions to prevent the introduction and spread of pests of plants and to promote the appropriate measures for their control while facilitating the movement of people, plant products and conveyances that may carry plant pests incidentally (IPPC, 1997).

2. THE SITUATIONAL ANALYSIS

2.1. Focal Problem

The phytosanitary capacities of the Plant Protection Department (NPPO) of Mozambique are weak and in need of strengthening, as the current phytosanitary control system is not effective enough to comply with the international conventions (IPPC, WTO) and Standards for the protection of Mozambique’s plant resources and to support safe trade. An effective phytosanitary control system is necessary for sustaining public health, agricultural productivity, export opportunities and protecting the environment in Mozambique.

2.2. General Phytosanitary Capacity Status

Strengths

The following are considered as the Strengths factors for effective national phytosanitary implementation in the country:

1. Existence of favourable policies, laws and regulatory framework

The current policies, laws and regulations are favourable for the establishment and implementation of the phytosanitary mandate in Mozambique. These policies, laws and regulations are specific to human or public health and plant protection.

2. Existence of institutions for implementation of the phytosanitary mandate

Under the current phytosanitary control management system, there are several institutions that could provide the starting point in the implementation of the mandate in the country. The key institutions responsible for implementation of aspects of the phytosanitary system include the Ministries of Agriculture, Health; Trade and Industry; Research institutions, Private sector, NGOs and International Development Agencies operating in the country.

3. Availability of some trained human resources in phytosanitary management

A number of training institutions locally offer training in plant protection and related SPS management skills. Although the available skilled personnel are not enough to cover the country, it will provide strength for implementation of the phytosanitary mandate.

4. Availability of some Laboratories and Scientific Support Infrastructures

There are some laboratories and equipment in the DSV and at Provincial Directorate of Agriculture that focus on specific plant protection issues. In addition various academic and research institutions own research laboratories that can be used to undertake activities that support phytosanitary issues some of which are accredited.

5. Existence of Information, Education and Communication means

There are public and private Media that could contribute for information sharing and education on Phytosanitary issues. Favourable policies have put in place an enabling environment that could allow media coverage and freedom of speech. The existence of many public and private Electronic and Print media, and improved telecommunication services provide an excellent ways for communication, education and sharing of information on phytosanitary issues. The growing public awareness on the importance of pests and plant protection is a value added point for the phytosanitary strategy

6. Public Private Partnerships (PPP)

The Government policies in agriculture promote Public Private Partnership approach that can be used to enhance effective implementation of the present phytosanitary strategy and compliance to IPPC and phytosanitary standards.

7. Integration of Mozambique in international conventions and protocols

The integration of Mozambique in the regional and international conventions in plant protection and IPPC, WTO and related agreements for international trade can also be considered a strong point.

Weaknesses

There are a number of challenges or weaknesses that face the phytosanitary system for the effective implementation of the SPS requirements. Taking appropriate policy actions can mitigate those that are within Government control.

1. Lack of phytosanitary SPS Institutional Coordination Mechanisms

Although there is a phytosanitary issues focal point in the country, there is no formal and legally multi-sectorial coordination mechanism among the concerned sectors, especially on agricultural products (processing, packaging, transportation and storage levels).

2. Inadequate Production, Processing and Marketing Infrastructure

Much of the agricultural production is in the rural areas where there are inadequate storage and other required facilities to meet the phytosanitary measures. Therefore, there is the need for suitable infrastructure at all levels i.e. at the farm levels, processing and packaging, transporting, production, storage, marketing to comply with phytosanitary measures of trading partners based on the IPPC and WTO-SPS agreements.

3. Low Capacity of the Phytosanitary Laboratories

The existing laboratories at public, academic, research and private institutions have limited capacities in term of equipment, human resources to handle all the phytosanitary tests and analyses. In addition, most of the major laboratories are based in Maputo, and most then are not

accredited. The equipments used in laboratories are old while the new ones lack reagents and other consumables.

4. Limited skilled and trained staff on Phytosanitary issues

In general there is lack of sufficient skilled and trained human resources that can operate effectively phytosanitary policies, laws and regulations. In addition there are limited opportunities for training of the existing personnel or recruit qualified staff. On the other hand, there is appropriate training curriculum for SPS related skills in academic institutions.

5. Lack or Inadequate financial resources

There are limited funds allocated to undertake activities and programmes that ensure compliance to IPPC obligations. In addition, when the limited funds are available, they are not oriented to ensuring efficient and effective use of resources to meet the phytosanitary mandate of the NPPO. Consequently, there are no resources to recruit required personnel to conduct inspections, monitoring and surveillance activities.

6. Limited Science Based Approaches

The institutions responsible for phytosanitary issues have limited capacity to conduct pest risk assessment on scientific basis. In addition, there are weak monitoring and surveillance systems for crop and food safety.

7. Lack of control of regulated movements of agricultural produce

There is an increase in unregulated movements of agricultural products, which can contribute to an increased risk of introduction of pests and diseases of quarantine concern. In addition, there is insufficient inspection staff and inspection infrastructures to adequately manage all entry points.

8. Lack of Public Awareness system

There is low public awareness on phytosanitary issues. Therefore, the public is not aware about the importance of phytosanitary issues and plant protection in general. No specific media that could specifically focus on plant protection issues.

9. Other weaknesses are related to the following aspects: 1) Lack of pest surveillance and risk assessment system; 2) Lack of a coordinated system among the institution operating on plant protection; 3) Limited qualified human resources on phytosanitary measures; 4) Lack of national pest list and losses database; 5) Limited knowledge on agricultural best practices; 6) Weak extension services on plant protection issues; 7) Lack of phytosanitary regulation or legislation.

Opportunities

1. Availability of land and favourable agro-climatic conditions for agricultural production

2. Availability of local, regional and international markets

Mozambique's agricultural produce markets are available at the national, regional and international levels. The existence of the current markets provides an incentive for the national and international investments on agriculture and in phytosanitary infrastructure to ensure that they meet the market access requirements or risk losing their competitiveness.

3. Existence of Regional Integrations and Harmonization of Phytosanitary measures

Mozambique is a member of various regional organizations such as the Inter African Plant Protection Council, SADC. This constitutes an opportunity for Mozambique to harmonize Phytosanitary measures at the regional level. The assumption is that harmonization efforts will ensure alignment with the international phytosanitary standards and measures and that any Phytosanitary measures adopted at the regional level will not affect the national sovereignty of the country to establish its own phytosanitary measures justified based on science.

4. Membership to International Bodies

Mozambique is a member of the international bodies such as CODEX, IPPC, OIE, FAO, and WTO. Some of these bodies are willing to provide technical and financial support on SPS related programmes. Government will take advantage of existing bilateral and multilateral technical cooperation on skills development in the areas of SPS and thus, comply with phytosanitary requirements.

Threats

1. Increase on movement of people and international trade; that will increase the probability of introduction of pests and diseases of quarantine concern;

2. Regional and international competitiveness on agricultural products; Although this point can be considered as a challenge but it also threatens to the national products to access regional and international markets

3. Increasing demand for compliance on the international Standards

The lack of trained staff, laboratories and infrastructures specialized on phytosanitary issues and a non compliance of the national agricultural products to the international standards will reduce the chance of these products to access regional and international markets;

4. Harmonization of National phytosanitary measures to regional and international requirements

To ensure coherence and consistence with regional and international commitments, there is a need to have some level of equivalence or similarity on phytosanitary measures. Failure to comply with regional and international standards will restrict the access of national products to regional and international markets

3. Phytosanitary Capacity Status, by Development Focus Area (Module of the PCE Tool)

3.1. PCE MODULE 2: National phytosanitary legislation

The legal system of Mozambique is Pluralistic with a president and a Primer Minister. The developed and approved phytosanitary legislation and regulations are enacted by the president of the country. Before their promulgation, the phytosanitary legislation and regulations are first discussed and approved at MINAG level, harmonized with other stakeholders and then submitted and presented to the Minister's council (and approved as a decree). And then, the regulations

documents are published in the official bulletin of the republic and disseminated to all stakeholders.

Complementary regulations can be published in the official bulletin and disseminated to stakeholders just after 1) the approval of Minister's Council or 2) the approval at MING level.

The legislative responsibility is under the Assembly of the Republic and the Minister's Council while the ministries, provincial governments and local state organs have the executive responsibilities. The current legislation makes clear the respective roles of the minister, the head of the NPPO, the inspectors and others.

Currently there are several policy frameworks that provide context for the development of the national phytosanitary legislation such as 1) agrarian policy, 2) Green revolution strategy, 3) strategy plan for the development of agrarian sector, 4) strategy for food security and nutrition, 5) national strategy for biotechnology and 6) commercial policy.

The main gaps concerning institutional responsibilities on phytosanitary matters were listed as follows: 1) limited human resources at local level (district level), 2) withdraw of qualified technicians to other areas and 3) lack of funds.

The National Plant Protection Organization (NPPO) is represented by the Department of Plant Protection (DSV) under the National Directorate of Agrarian Services (DNSA) at the Ministry of Agriculture.

The national plant protection organization (NPPO), the National Plant Protection Authority was established in 2005 under Presidential Decree No. 35/2005 and supplement and last updated in 2007. In Mozambique, the NPPO is the only official service responsible for the operation and/or organization and management of the phytosanitary export and import regulatory system and the only to provide certification of plant, plant products and other regulated articles after verification of compliance with the phytosanitary requirements of the importing country.

The current national phytosanitary Legislation (Act and Regulations) are fully consistent with all the provisions of the Art.1 par. 1 of the revised text of the IPPC (1997) and with those of ISPM 1 sections 1.1 and 1.2. However, the definitions utilized in the Legislation and Regulations, need minor improvements to be consistent with the ones established in the IPPC Art II, and ISPM No. 5 (Glossary of phytosanitary terms) and in the SPS Annex A.

Although the legislation provide guidance for the control of all plant pests (including weeds, forestry, IAS) as well as all plant, plant products and other regulated articles (including wood packaging materials and conveyance) and cover both locally produced and imported plants, plant products and other regulated articles, it lacks on guidance of the control of LMOs and Biological Control Agents.

The legislation clearly mandates the Phytosanitary Authority to the IPPC focal point (IPPC Article VIII.2, ISPM 1 Section. 2.16) (The Head of the DSV was designated as a IPPC focal point). Also established that the NPPO is the only responsible for providing justification

concerning phytosanitary measures to other countries, if required as stated in the IPPC Article VII.2c as well as providing information, where requested, by national, regional or international organizations regarding import and export regulations in force and regarding the technical requirements for plant material and other regulated articles (IPPC Article VII.2c; ISPM 1 Section 1.5).

Although the legislation does contain a provision for stakeholder participation in phytosanitary issues it does not establish stakeholders' roles, responsibilities and rights. However, arrangements are in place to ensure stakeholder participation in NPPO matters such as organization of working and discussion groups, provision of technical advices and research.

The law, or its subsidiary legislation, establishes the minimum of median level as requirements in terms of qualifications and skills of inspectors as indicated in ISPM 20 Section 5.2.1 and ISPM 7 Section 3.1. If authorized by the NPPO, employees of other authorities (public or private, so long as there is no conflict of interest) other government services, non-governmental organizations, agencies or persons, to act on its behalf, and NPPO must maintain its responsibility and establish operational and audit procedures, for, corrective actions.

Regarding the issuance of phytosanitary certificates for export, the legislation explicitly establish that only appointed and authorized NPPO inspectors should issue phytosanitary certificates and import permits for exports and imports and also stated that:

1. The phytosanitary measures prescribed by the NPPO shall be technically justified through the pest risk analysis or based on international standards;
2. Not applied for non-regulated pests;
3. Be adopted in accordance with the international phytosanitary principles in ISPM 1.

Also establish that the public officers in charge of the issuance of phytosanitary certificates and permits shall be technically qualified and dully authorized by the NPPO.

In case of non-compliance with the prescribed phytosanitary measures, the NPPO have legal authority to refuse entry or detain, or require treatment, destruction or removal from the country of plants, plant products and other regulated articles or consignments. Equally the NPPO has legal authority to prohibit or restrict the movement of regulated pest, including those LMOs and IAS that are suspicious to be pests of plants as well as movement of biological control agents and other organisms of phytosanitary concern, claimed to be beneficial.

To enhance the compliance with the prescribed phytosanitary measures the legislation establish not only that plants, plant products and regulated articles may only be imported at official points of entry designated by the NPPO (specified Ports, Airports, Land Borders), but also that all consignments of plant, plant products or other regulated articles that arrive to the country are under phytosanitary detention until officially released by the NPPO.

The legislation does allow the NPPO to authorize the inspection of consignments of plants, plant products or other regulated articles at their final destination or in a transitional facility.

If the inspector detects a regulated pest and not listed as being associated with the commodity from the exporting country, or other organisms posing a potential phytosanitary threat, emergency actions can be immediately implemented as established in the legislation.

In case there is a need for treatment, the legislation establishes that the owner or the representative of the consignment should pay for the treatment as a condition to issue the phytosanitary certificate. The exporter's obligation and the NPPO's responsibilities are clearly indicated as to guarantee the phytosanitary security of a consignment after certification and until it actually leaves the country.

The legislation provides to the NPPO with the authority to establish and enforce the application of phytosanitary procedures necessary for the assurance of the identity and traceability to the place of origin (e.g. Pest Free Areas), of export consignments when this is required by the importing country.

Offences and Penalties

The legislation considers the following points as offences and penalties:

1. Importing or exporting plants or plant products without the proper documentation or through an unapproved port of entry;
2. Obstructing or hindering an inspector in the performance of his or her official functions or failing to comply with an inspector's instruction;
3. Providing false information to an official of the NPPO;
4. Breaking the seal on a sealed container containing plants, plant products or other regulated articles except in the presence of and authorized inspector;
5. Intentionally permitting or causing the introduction or spread of a pest;
6. Failing to safeguard the phytosanitary security of a consignment after issuance of a phytosanitary certificate;
7. If committed by inspectors or other representatives of the NPPO such as;
8. seizing plants or plant products for any reason other than that they are likely to introduce or spread a pest;
9. disclosing to any other person any information acquired in the exercise of official functions under the legislation;
10. Directly or indirectly asking for or taking any personal payment or other reward, or abstaining from doing an official action for improper reasons.

There are provisions in the phytosanitary legislation regarding the seizure of plants, plant products and regulated articles where an offence has been committed, as well as anything else that may have been used in the commission of an offence.

The provisions in the legislation for penalties are updated regularly and applied proportionally to the offence and according to a neutral economic parameter. There is a system of fixed penalties that can be imposed immediately by inspectors according to the established procedures. However the legislation does not establish a system of administrative penalties (e.g. suspension of the operators registered, or cancelling the accreditation as phytosanitary service provider).

Enabling legislation

Questions and answers regarding the current enabling legislation status:

| Question | Status |
|--|--------|
| Does the legislation grant authority to the NPPO's inspectors to enter premises, conveyances, and other places where imported commodities, regulated pests or other regulated articles may be present | Yes |
| Does the legislation grant authority to the NPPO's inspectors to inspect or test imported commodities and other regulated articles? | Yes |
| Does the legislation grant authority to the NPPO's inspectors to take and remove samples from imported commodities or other regulated articles, or from places where regulated pest may be present (including for analysis which may result in the destruction of the sample)? | Yes |
| Does the legislation grant authority to the NPPO's inspectors to detain imported consignments or other regulated articles? | Yes |
| Does the legislation grant authority to the NPPO's inspectors to treat or require treatment of imported consignments or other regulated articles including conveyances, or refuse the entry of consignments, order their reshipment or destruction? | Yes |
| Does the legislation grant authority to take emergency action? | Yes |
| Does the legislation grant authority to the NPPO's inspectors to set and collect fees for import-related activities or associated with penalties? | Yes |

Weaknesses of the Legislation

The following points were considered as the major weaknesses of the Legislation:

1. Lack of requirements for the importation of biological control agents or biological products;
2. Lack of requirements for the declaration of phytosanitary emergency and action plan;
3. Lack of mobile brigades for phytosanitary surveillance
4. Lack of a phytosanitary issues management system;
5. Lack of manual for phytosanitary inspection procedures.

In summary:

The current national phytosanitary Legislation, although it is mostly consistent with the provisions of the IPPC (1997) there is a need for an update of some of its elements including::

1. Guidelines or requirements for the importation or control of LMOs and Biological Control Agents
2. Stakeholders' roles, responsibilities and rights
3. Inspection of consignments of plants, plant products or other regulated articles at their final destination or in a transitional facility;
4. Requirements for the declaration of phytosanitary emergency and action plan;
5. Mobile brigades for phytosanitary surveillance

6. Phytosanitary issues management system;
7. Manual for phytosanitary inspection procedures

3.2. PCE MODULE 4: NPPO's mission and strategy

The organizational concepts that motivate and drive the institution include its mission, internal culture, organizational incentives as well as the widespread values and beliefs held about the role that the institution plays in society.

Although the existing mission is not linked to a set of goals and targets as well as there are no clear indicators established to measure progress, the NPPO's staff (at central and provincial levels) know what the mission of the NPPO and their roles is. However, the NPPO's mission and strategic directions are well related to the IPPC's goals.

There is no clear process through which NPPO mission is clarified and revised, but annually there is inspector's seminar to discuss and update the procedures and roles. These seminars do not really discuss the NPPO's mission and beliefs nor for understanding its stakeholders. Thus, in the future there is a need for establishing a process of clarification and revision of the NPPO's mission and goals.

There is informal process for monitoring the NPPO's external environment in order to consider potential threats and opportunities, and thus, it was thought that there is a need for establishment of a formal process and strategy for monitoring the NPPO's external environment as well as for the active involvement of other stakeholders such as MIC, MISAU, MICOA, MTC, SADC, CODEX, IPPC, IAPSC, OIE, CBD where applicable.

Due to the lack of a formal process and strategic planning, with the existing NPPO's strategic plan is not possible to identify the opportunities and constraints regarding core resource areas. Consequently, although the stakeholders are actively involved in the planning process, there are no mechanisms for input by stakeholders into the development of strategic plans. The existing strategy is not clarifying the priorities and providing the NPPO the way to assess its performance. Thus, a formal strategic plan specific to the NPPO mission and goals should be established.

The lack of a specific strategic plan to NPPO is contributing negatively on capacity-building or improved performance of the NPPO's staff, as well as for resource mobilization (human and financial resources). On the other hand, there is no system of performance indicators at NPPO level as well as a system of organizational incentives including rewards and punishments, to encourage or discourage its staff member's behaviours.

The MINAG activities and budgetary plans are updated annually, including the NPPO's mission and goals and there is a annual external audit process for monitoring the implementation of the strategic plan and budget at DNSA level that includes the NPPO's activities.

The top-level administrators (NPPO Managers) are not trained in organizational management including strategic, financial and human resource management. There have been no training

courses organized for such purpose. Also the NPPO does not provide the possibility for career advancement for the staff and only provided at MINAG level.

There is a NPPO's strategy to execute core phytosanitary activities that include the use of third parties in some NPPO's functions while maintaining the overall NPPO responsibility such as Pesticides and phytosanitary inspections regulations that have the collaboration of other institutions (private sector, Universities, research institutions, Ministry of Health, Ministry of Commerce and Environment) and their roles are clearly defined. Although there is a legal authority with clear rules and regulations for contracting and auditing third parties.

The NPPO's strategy as well as the Legislation does not establish a mechanism for the application of a cost recovery model (there is no cost recovery model).

The NPPO does not have a strategy to improve core phytosanitary activities that include sharing infrastructure, but there is for sharing information systems and there are collaborative agreements established specifying kind of information to be shared, what resources will be contributed, operational rules, users rights (mainly information sharing with the Eduardo Mondlane University through its Faculty of Agronomy and Forest Engineering), but without any compatible data sharing system.

The NPPO has no strategy to improve core phytosanitary activities that including the implementation of quality assurance systems, neither an efficient written set of operational procedures or manuals or operational procedure including internal technical audit procedures.

Weaknesses of the NPPO's mission and strategy

Weaknesses affecting the NPPO strategic planning/management performance include:

1. Lack of national strategy for plant protection;
2. Lack of a monitoring and evaluation system
3. Lack of a operating procedures manual
4. Lack of training in management and leadership at all levels
5. Lack of legal instrument of inter-institutional collaboration

3.3. PCE MODULE 4: NPPO's structure and processes

The structure of an organization is the system of relationships developed to divide and coordinate tasks among people and groups while working toward a common purpose. It involves the division of labour including roles, responsibility, and authority, as well the coordination of labour into units and inter- and intra-unit groupings.

NPPO structures

Mozambique NPPO organization structure is part of the Ministry of Agriculture. The DSV is the designated plant protection organization that includes several functions (plant quarantine, pesticide registration and control, pest management, administration). The Head of Department is

appointed to act as representative and focal point of the NPPO. The current organizational structures makes it somewhat difficult for the NPPO to achieve its mission and goals. There is a need for updating the structure of the NPPO in order to achieve its mission and goals. Although the current structure of the NPPO was based on the required institutional needs it actually does not cover all required needs and is lacking in many areas to carry out core phytosanitary activities such as: Establishment of the Surveillance program, pest diagnosis, pest eradication, import verification, exports certification, pest risk analysis, risk communication, public awareness programs, international liaison activities, staff training etc.

The NPPO is lacking in many units and processes for effective delivery of its mandate including:

1. Progressing and/or supervising PRA (PRA is conducted by DSV as whole in collaboration with other institutions);
2. Pest surveillance (surveillance is conducted by DSV as a whole in collaboration with other institutions);
3. Pest diagnostic (pest diagnostic is conducted by DSV as whole in collaboration with other institutions);
4. Import verification (this is conducted by DSV as whole)
5. Export certification activities including collection of import requirements of trade partners (This is conducted by Quarantine inspection services)
6. Internal quarantine, pest control/eradication programs, and maintenance of pest free areas (this is conducted by DSV as whole in collaboration with other institutions)
7. Unit/manager responsible to assist with managing contact with the news media and events which may impact on the general public
8. Technical audit program
9. Performance assessment of the NPPO and NPPO's staff
10. Operational manual system;

However, the following units exist but operating with difficulties due to the lack of human, financial and material resources:

1. Strategic planning/management;
2. Staff training

NPPO processes

The roles within the organization are satisfactorily defined and not flexible enough to adapt to changing needs. The decisions to adapt to changing needs are made at high levels.

The NPPO structure poorly allows for expediting the decision-making and implementation process and the decentralization system makes it difficult for the implementation process.

The NPPO structure has no linkages that could allow staff from different units to collaborate and share information easily. This is related to the lack of a system for information sharing. Despite the above mentioned, the NPPO totally implement a policy of participative management.

At the NPPO level there is no system of operational manuals covering the core activities as well as the defined procedures to develop and keep the operational manuals updated. Equally there is no internal technical audit procedure in place to check and improve the quality of the core services provided by the NPPO.

NPPO structure and processes weaknesses

1. Lack of specific units for the different technical areas (PRA Pest Surveillance and diagnostic);
2. Decentralization of phytosanitary inspection and plant quarantine to provincial level, which makes difficult the implementation of activities;
3. Lack of job description of staff member of the NPPO;
4. Lack of regular information sharing between sectors of the NPPO.

3.4. PCE MODULE 6: NPPO's resources

NPPO's resources may be a strength (sufficient) or a weakness (insufficient). They consist of financial (both operating and capital), human resources (number and skills), information resources, infrastructure, and communications technologies required for the efficient and effective functioning of the NPPO. Alternative sources of funding should strengthen the NPPO capacity.

Financial resources

The main source of funds for NPPO activities is the Government. Thus, financial resources allocated to the NPPO annually are not sufficient to fulfil its mission and goals, neither for all of its fixed and/or variable costs. It is estimated that an increase in the NPPO budget of more than 51% annually would be required.

Related to the above mentioned, the NPPO have not established its own program of finance including planning, managing and monitoring expenditure, cash flow and budget, that could ensure an accountable and auditable financial system. This fact contributes significantly on funds availability and carrying out the planned activities on time.

The main sources of funds for NPPO activities are the Government budget, which is managed at central level (MINAG) and international grants and other national resources that are used for improvement of phytosanitary services.

Human resources

The NPPO have no written job descriptions for the functions, responsibilities and specific requirements for its entire staff. On the other hands, the NPPO is marginally staffed to carry out all the required functions. However, the NPPO have direct control over the appointment of its staff, which is recruited after a selection on a competitive basis. There is no strategic plan for staff development at the NPPO level and the system for staff promotion is not based on performance and because of this reason the turnover of the NPPO's staff is rated as very low.

The training of staff for skills improvement at all levels is done at an ad hoc basis when needed and if funds are available and no plan or program is established. There is no partnership agreement between the NPPO and other NPPOs or Universities, specifically for the professional development of staff. However, at the MINAG level there is an agreement with Eduardo Mondlane University that cover many issues.

Table 2 - Proportion and average level of NPPO staff trained, to communicate and linguistic skills

| Parameter | Proportion/rate |
|---|------------------------|
| Proportion of the personnel is trained and qualified to carry out the functions of their position in the NPPO | 10 – 25% |
| Average level of communication skills | Poor |
| Average level of required linguistic skills | Basic |

Information and communication technologies resources

At the NPPO level, there are no information management resources (hardware, software, communications and technical skills) at all, to link the processes of core activities among the headquarters and regional offices. Consequently the NPPO has an unsatisfactory system (incongruous) for record keeping and information retrieval for all the core activities that should enables it to provide appropriate information to relevant parties (e.g. commodities imported or exported, number of non-compliances, pest intercepted, etc.) on request and on time.

Due to the above mentioned the NPPO does not publish a summary of phytosanitary activities (annual report) for stakeholders and thus, the level of the NPPOs capacity to inform its stakeholders at the national and international levels, of its activities and other relevant phytosanitary issues in an effective and timely manner was considered very low. The NPPO's technical staff have limited (only when the external resources are available) access to scientific and international sources of information.

Infrastructure resources

Table 3 - NPPO's infrastructure facilities capacity

| Infrastructure parameters | rate |
|--|-------------|
| headquarters building facilities | Good |
| Regional offices building facilities | Good |
| Infrastructure resources at border inspection points | Bad |
| resources for telecommunications | Very bad |
| Vehicle resources | Very bad |
| Office equipment (computer, printers, projectors) | Not so bad |
| Maintenance systems resources | Bad |
| Technical and scientific library resources | Bad |

NPPO's resources weaknesses

1. Lack of an online system of communication and information management and exchange;
2. Lack of staff training strategic plan in specific areas of infrastructure and management;
3. Lack of adequate facilities at phytosanitary inspection points and resources to open new phytosanitary inspection points at entry points;
4. Lack of regular meetings to exchange information and discuss activities carried out at the NPPO level;
5. Limited financial resources for the sustainable management of infrastructures at the NPPO level.

3.5. PCE MODULE 7: NPPO pest diagnostic and control capacity

Pest diagnostic capacity is an essential component of a NPPO capacity. Laboratories are responsible for analyzing samples or specimens to detect, identify or quantify plant pests. They also provide support for the enforcement of the phytosanitary legislation. The scientific information produced by pest diagnostic laboratories also supports policy and decision making processes related to export and import procedures, as well as pest surveillance and monitoring programs designed to the early pest outbreak detection or the establishment of pest free areas or low pest prevalence areas.

Mission and strategy

The current mandate of the pest diagnostic laboratories in the country is consistent with the NPPO's mission. However, the pest diagnostic laboratories are lacking on the following:

1. Strategic and operational plan for the pest diagnostic laboratory;
2. Procedure to review its performance;
3. Good indicators to measure the effectiveness of the Pest diagnostic program;
4. Good indicators to measure the efficacy of the Pest diagnostic program?

The following indicators could be used to measure the status of the Pest diagnostic program's relevance to the NPPO's mission:

1. Number of pest species identified per day, month and year
2. Updated list of pests
3. Number of specialists
4. Pest diagnostic specialized equipment
5. Public demand for diagnostic services

Financial management

1. The budget allocated to the NPPO laboratories is not sufficient;
2. The laboratory services are not provided based on a cost recovery policy;
3. There is no specific budget allocated to the laboratories;
4. There are no procedures at all as to allow the purchase of specialized supplies, biological kits, primers and equipment spare parts, in the case their importation is required

Quality control and assurance

Documented quality control procedures or good laboratory practices. Thus, the NPPO's pest diagnostic laboratories are not approved or accredited by national or international bodies and never have been assessed by an accredited agency, third party authority or collaborating laboratories. However, documents for quality control produces and good laboratory practices are in use in the laboratories at above-mentioned universities. Although there are no documented quality control procedures, the laboratory compares its performance/results with other pest diagnostic laboratories within country.

Staffing

The following tables show the current **pest diagnostic laboratory human resources**.

Table 4 Current pest diagnostic laboratory human resources.

| Thematic area | Doctoral equivalent | Master equivalent | Bachelor equivalent | Lower than bachelor level |
|---|---------------------|-------------------|--------------------------------|---------------------------|
| Mycology | 1 | 3 | 1 | 0 |
| Virology | 1 | 1 | | 0 |
| Nematology | 0 | 1 | 3 | |
| Weed science | 1 | 0 | 0 | 1 |
| Entomology | 3 | 3 | 5 | 0 |
| LMOs | 2 | 0 | 5 | 0 |
| BCAs | 2 | 1 | 2 | 0 |
| Plants for planting | 4 | 2 | 2 | |
| Treatments | 1 | 1 | 4 | 0 |
| Economist | 5 | 5 | 5 | 0 |
| Statisticians | 0 | 5 | 5 | 0 |
| Crop specialists | 5 | 5 | 5 | 0 |
| Technical support and administrative staff | 0 | 5 | 5 | 0 |
| Human resources for pest diagnostic parameter | | | Rate | |
| Human resources capacity in terms of qualifications and skills | | | Satisfactory | |
| Human resources in terms of numbers required to carry out its functions and activities | | | Lacking in most areas | |
| Qualified and trained staff to perform pest diagnostics and use relevant laboratory equipment, analytical methods | | | Adequate training in key areas | |
| Relevant training that staff of the laboratory have participated during the last five years | | | Regular training programs | |
| Laboratory managers are trained in management | | | No | |

Sample management: here are documented procedures for: sampling, sample delivery, intermediate storage and disposal and samples are managed in accordance with these procedures. However, the laboratory does not provide collection kits for different types of specimens and samples.

Reporting and Information Management: The pest diagnostic laboratories have a written description of their laboratory information management system. The reporting and information management system is computerized for easy access and sharing. All analysts and managers in the laboratory have access to e-mail and Internet. However, the NPPO has no email and Internet facilities.

Diagnostic methods and protocols: The methods and protocols for pest diagnostic are not documented in a form that is available to diagnosticians at the NPPO level, but there are documented protocols at Eduardo Mondlane University.

Equipment and infrastructure

Table 6 - Current situation of entomological equipment in the NPPO's laboratories

Virology equipment

Table 7 - Current situation of virology equipment in the NPPO's laboratories

Mycology and bacteriology equipment

Table 8 - Current situation of mycology and bacteriology equipment in the NPPO's laboratories

Nematology equipment

Table 9 - Current situation of nematology equipment in the NPPO's laboratories

Table 10 - General classification of the laboratory equipment

| | |
|---------------------------|--|
| Entomology | |
| Virology | |
| Mycology and bacteriology | |

There is no laboratory equipment inventory at the NPPO level because there is no system or capacity for laboratory equipment maintenance as well as the written instructions for the use and maintenance of equipment. Some of the laboratory equipment are located and exposed to uncontrolled environmental or biological stresses on the laboratory. However, there is currently adequate space for carrying out laboratory functions, secure area, with appropriate environmental controls, for receipt and storage of samples and specimens, with an uninterrupted power supply and adequate and constant water supply system.

Table 11 - NPPO pest diagnostic performance

| | |
|---|--|
| Effectiveness of the pest diagnostic service considering the NPPO's mission | |
| Set of good indicators for measuring the effectiveness of the pest diagnostic service | |

| | |
|---|--|
| Efficacy of the pest diagnostic service's | |
| Set of good indicators to measure the efficacy of the pest diagnostic service | |
| With what efficacy are the pest diagnostic service's resources utilized | |
| Has the pest diagnostic service kept its relevance over time | |

The following were indicated as indicators to measure the status or the pest diagnostic service's relevance:

1. Mitigation of pests and diseases
2. Demand of the services by public or users
3. Updated pest information in the country
4. Collection or list of identified and verified pest and diseases species
5. Accredited and audited laboratory and of reference at national and regional level

Overall and considering the current structural conditions of the laboratory equipment, the NPPO adequately fulfil its mission and the NPPO's pest diagnostic service performing is still weak.

Main weaknesses

The following were indicated as main weaknesses of the NPPO's pest diagnostic capacity:

1. Lack of protocols, manuals and laboratory procedures;
2. Lack of a phytosanitary contingency plans;
3. Lack of a system for laboratories organization;
4. Lack database and internet system facilities

3.6. PCE MODULE 8: NPPO pest surveillance and pest reporting capacity

Pest surveillance is a core activity and an essential component of the NPPO capacity. The NPPO have the obligation to perform the surveillance of growing plants, including both areas under cultivation (inter alias fields, plantations, nurseries, gardens, greenhouses and laboratories) and wild flora, and of plants and plant products in storage or in transportation, particularly with the object of reporting the occurrence, outbreak and spread of pests, and of controlling and reporting those pests.

Also the IPPC provides that “Contracting parties shall, to the best of their ability, conduct surveillance for pests and develop and maintain adequate information on pest status in order to support categorization of pests, and for the development of appropriate phytosanitary measures.” Furthermore the IPPC assigns to the NPPO the responsibility for the protection of endangered areas and the designation, maintenance and surveillance of pest free areas and areas of low pest prevalence.

Mission and strategy

Pest surveillance is a core activity and an essential component of the NPPO mission. Tasks associated with pest surveillance include sampling, collecting specimens, preservation techniques, and record keeping. However, the NPPO does not conduct pest surveillance activities in a coordinated manner. This may be associated to the lack of pest surveillance unit and written

documents establishing the mandates, functions and responsibilities of the pest surveillance service and associated to the lack of funds.

In general, the objectives of the surveillance service are not SMART:

1. Not Specific so that they are clear and easy to understand
2. Not Measurable and able to be quantified so that is possible to measure progress
3. Not Achievable and realistic given the circumstances in which they are set and the resources available
4. Not Relevant to the country's needs and to the NPPO
5. Not Time bound with realistic deadlines for achievement

On the other hand, there is no pest surveillance programme or service strategic and operational plan as well as lacking of procedures to review its performance. The fruit fly and lethal yellowing coconut disease have written procedures to measure the status of the pest surveillance program's relevance to the NPPO's mission:

1. Updated national pest and diseases list
2. Updated list of pests and diseases of quarantine concern
3. Early detection of new pests

| |
|---|
| Surveillance area |
| Is there a set of good indicators to measure the effectiveness of the pest surveillance program |
| Is there a set of good indicators to measure the efficacy of the pest surveillance program |
| Are the NPPO's pest surveillance functions centralized under a national manager |
| Does the NPPO have formal linkages with external sources (non-NPPO) of information on pest surveillance |
| Does the placement of pest surveillance activities within the NPPO structure make sense and facilitate the work |
| Is there an organizational chart of the pest surveillance service |

Pest surveillance is conducted by DSV in collaboration with other national institutions such as: IIAM, DPAs, Universities, IAM, Incaju, and private sector (sugar states, tobacco, fruit culture). In general, there is no surveillance program in the country. Thus, the NPPO's pest surveillance programs are not well developed, with compatible data systems to collect, store and report pest surveillance information. However, the surveillance responsibilities of the NPPO and other stakeholders include not only pests of quarantine concern but also regulated non-quarantine pests, regulated pests, non-regulated pests of national concern.

Documented procedures

The following information is kept by the NPPO during the surveillance:

1. Scientific name of the pest;
2. Scientific name of host, plant part affected and means of collection;
3. Date and name of collector;
4. Date and name of verifier;
5. Date and name of identifier;
6. Geographical location;

7. Computerized retrieval system for this information in use by the NPPO, only the GIS coordinates are used to specify the location of pests detected during pest surveys.

General surveillance

NPPO's operational manual for general pest surveillance, as well as the generally described procedures for specific pest species and the national database of plant pest records. There is only a general/comprehensive list of regulated quarantine pests. The only existing database corresponds to Fruit Fly database. The available pest list records have been compiled through field surveillance and literature and it's not updated due to the lack of surveillance data for the majority of crops.

Specific surveys

According to FAO ISPM No.6, (2007) Specific Surveys may be detection, delimiting or monitoring surveys and these are official surveys and should follow a plan that is approved by the NPPO. The only specific surveys being conducted in the country and approved by the NPPO are surveys for the detection and monitor for fruit fly, *Bactrocera invadens*, lethal yellowing coconut disease and for migratory pests (bird, *Quelea quelea* red locust, *Nomadacris septemfasciata* and armyworm, *Spodoptera exempta*). The surveillance for migratory pests follows a rigid and regular established plan. Specific surveys have been conducted in the following crops: Cassava, *Manihot esculenta*, Coconut, *Cocos nucifera*, Mango, *Mangifera indica*, Tomato, *Lycopersicon esculenta*, Brassica, *Brassica oleracea*, Cashewnut, *Anacardium occidentale*, Citrus, *Citrus spp* and Banana, *Musa spp*.

The specific surveys based on procedures described in an operational manual are for the fruit fly, *B. invadens* and lethal yellowing coconut disease. There are no procedures described in specific manuals for other specific surveys. Consequently the performance, efficiency, efficacy and relevance of these plans are not periodically evaluated.

Staffing

Human resources of the pest surveillance in terms of numbers and qualifications, capacity and performance: Human resources of the pest surveillance in terms of numbers and qualifications

Table 14 – pest surveillance capacity status

| | |
|--|--|
| Current NPPO's pest surveillance human resources capacity in terms of members | |
| Current NPPO's pest surveillance human resources capacity in terms of qualifications and skills | |
| Capacity of human resources to carry out the activities according to the NPPO's requirements for pest surveillance | |
| Proportion of the staff assigned to carry out pest surveillance specifically trained to do so | |
| Frequency of training programs for staff involved in pest surveillance | |
| Is the pest surveillance manager trained in management | |
| Other resources (vehicles, traps, lures, samplers, GPS, etc.) | |

| | |
|---|--|
| required to operate the pest surveillance program | |
| How effective is the pest surveillance service considering the NPPO's mission | |
| With what efficacy are the pest surveillance service's resources utilized | |
| Has the pest surveillance service kept its relevance over time | |
| How well is the NPPO's pest surveillance service performing | |

Priority weaknesses

The most critical weaknesses indicated that affect the performance of the NPPO's pest surveillance services were:

1. Lack of a specific unit for pest surveillance
2. Lack of resources (financial, human and material)
3. Lack of regular training of personnel in matters of pest surveillance
4. Lack of pest database
5. Lack of coordination between the various stakeholders involved in pest surveillance

3.7. PCE MODULE 9: Pest eradication capacity

The ISPM No. 5 (2009, *Glossary of phytosanitary terms*) defined pest eradication as the application of phytosanitary measures to eliminate a pest from an area.

The eradication process involves the establishment of a management team followed by the conduct of the eradication programme, which should, where possible, follow an established plan. Three main activities are included in the programme:

1. Surveillance: to fully investigate the distribution of the pest;
2. Containment: to prevent the spread of the pest;
3. Treatment: to eradicate the pest when it is found.

Direction and coordination should be provided by a management authority (normally the NPPO), ensuring that criteria are established to determine when eradication has been achieved and that appropriate documentation and process controls exist to provide sufficient confidence in the results (ISPM No. 9, 1998, *Guidelines for pest eradication programmes*).

3.8 PCE MODULE 10: Phytosanitary import regulatory system

The Import regulatory system is an essential component of the NPPO capacity for pest exclusion. ISPM 20 describes the structure and operation of a phytosanitary import regulatory system and the rights, obligations and responsibilities, which should be considered in establishing, operating and revising the system. The objective of a phytosanitary import regulatory system is to prevent the introduction of quarantine pests (ISPM 11) or limit the entry of regulated non-quarantine pests with imported commodities (ISPM 21) and other regulated articles.

It may include measures concerning consignments in transit as established by ISPM 25, the importation and release of Biological Control Agents (CA) as per ISPM 3, the importation of LMOs and IAS (ISPM 11) or the introduction of pest through containers and wood packing materials (ISPM 15). An import regulatory system should consist of two components: a regulatory framework of phytosanitary legislation, regulations and procedures; and an official service, the NPPO, responsible for operation or oversight of the system.

The legal framework should include: legal authority for the NPPO to carry out its duties; measures with which imported commodities should comply; other measures (including prohibitions) concerning imported commodities and other regulated articles; and actions that may be taken when incidents of non-compliance or incidents requiring emergency action are detected. In operating an import regulatory system, the NPPO has a number of responsibilities:

1. Surveillance (ISPM 6);
2. Inspection (ISPM 27);
3. Disinfestations or disinfection;
4. Conducting of pest risk analysis (ISPM 2, ISPM 11 and ISPM 21);
5. Training and development of staff
6. The NPPO resources are responsible to carry out these responsibilities and functions.

NPPO role

The NPPO is the sole official service responsible for the operation and/or organization and management of the phytosanitary import regulatory system. However, there are other public or private services or agencies cooperating with the NPPO in the phytosanitary control of imported commodities such as INTERTEC and SGS (quality control); Customs, Port and Airport authorities, Public health Veterinary services, Migration, fumigation enterprises, Police authorities. Their responsibilities, functions and roles are clearly specified. There are also procedures to facilitate cooperation, information sharing and joint clearance activities with other relevant public or private services or agencies as appropriate

Rights, obligations and responsibilities

The current import regulatory system is in conformity:

1. With the rights, obligations and responsibilities arising from relevant international treaties, conventions or agreements;
2. Especially with basic and operational principles as established by ISPM 1(2006, *Phytosanitary principles for the protection of plants and the application of phytosanitary measures in international trade*)
3. With national legislation and policies
4. Harmonized at the regional level

Regulatory framework

Currently status: the NPPO have the authority and procedures to require import phytosanitary measures, to imported plants, plant products and other regulated articles including means of conveyance, wood packaging materials. The import regulatory system use transparent and defined procedures with specified time frames for the implementation of regulations, including their entry into force.

The import regulatory system procedures or regulations specify that:

1. Phytosanitary measures cannot be applied to non regulated pests;
2. Plant or plant products destined for consumption cannot be regulated as regulated non-quarantine pests;
3. However, the import regulatory system does not specify that the list of regulated pest shall be made publicly available and kept updated

Table 17 – Measures taken by the NPPO in accordance with import regulatory system

| Measures | NPPO position |
|---|---------------|
| Import permits | Yes |
| Limitations on the points of entry | Yes |
| The requirement that importer notify in advance the arrival of consignments | No |
| Audit of procedures in the exporting country | No |
| Pre-clearance | No |

The import regulatory system does not cover consignments in transit and does not allow the NPPO to adopt technically justified measures as indicated in ISPM 25 (2006, *Consignments in transit*). Equally it does not include provisions for action to be taken in the case of non-compliance or for emergency action as specified in ISPM 13 (2001, *Guidelines for the notification of non-compliance and emergency action*). However, it includes provisions for revision of regulations and documentation.

Organization and management

There is no national manager responsible for the operation and/or oversight of the import regulatory system. Equally there is no written job descriptions for the import regulatory staff to carry out its function effectively and in accordance relevant ISPMs as well as there is no an organizational chart linking the elements of the import regulatory system.

Currently, the NPPO have no procedures in place for timely communication to relevant personnel and to the importers (within the country) and the NPPO of the exporting country, concerning changes in:

1. Import phytosanitary requirements
2. Pest status and geographical distribution
3. Operational procedures

Documented procedures

Currently, there is no management system for the development, maintenance and revision of the import regulatory system and the phytosanitary regulations at the NPPO level. There also no written procedure for making available and keeping updated lists of regulated pests, as per ISPM 19 (2003, *Guidelines on lists of regulated pests*).

Regarding if the NPPO have documented procedures and work instructions to cover key aspects of the compliance check of imports the following is the current status (Table 17).

Table 18 – Status of documented procedures and instructions at the NPPO level

| Key aspects of the compliance | Documented procedures and work instructions |
|--------------------------------------|--|
| Documentary checks | No |
| Consignment identity checks | No |
| Phytosanitary inspection | No |
| Sampling | No |
| Testing | No |
| Instances of non-compliance | No |
| Action in case of non compliance | Yes |
| Emergency actions | Yes |

There are equally no written procedures for reporting the interception, instances of non-compliance and emergency actions. However, there are written procedures to promptly notify concerned exporting countries about any changes in the phytosanitary regulations or emergency or provisional measures that change the entry procedures.

In other hand there are no written procedures for the authorization under NPPO’s control and responsibility, of organizations, agencies or persons to act on its behalf for certain defined functions as well o review cases of non-compliance and emergency action. Also there are no mechanisms for the dissemination of the phytosanitary regulations, electronically.

Table 19 - status of the NPPO in keeping records of all the actions, results and decisions concerning the regulation of imports is as follows:

| Key aspects of keeping records | Status |
|--|---------------|
| Non-compliance and emergency actions | Yes |
| Consignments with specific end-uses | Yes |
| Consignments subject to post-entry quarantine or treatments | Yes |
| Consignments requiring follow up action (including trace back) | No |
| Other records as necessary to manage the import regulatory traceability system | No |

The NPPO have in place review mechanisms for its import regulatory system, including:
Monitoring the effectiveness of phytosanitary measures:

1. Modifying the phytosanitary legislation, regulation and procedures
2. And there is no internal audit of the NPPO activities and authorized organizations or persons

Staffing

Table 20 presents the current staff of the import regulatory system human resources. The current human resources capacity in terms of numbers of staff is rated as insufficient, while in terms of qualifications and skills it was rated as not enough.

Current staff of the import regulatory system human resources

The inspection regulatory system personnel receive adequate training to ensure competency in their areas of responsibilities. There planned annual training for all inspectors. But there is no training program for export inspection regulatory system’s managers

Equipment

At the NPPO level, there are insufficient equipment and transport as well as office and inspection facilities available for the NPPO’s inspection regulatory system, while the availability of equipment for communication and computers and tailored software are totally insufficient.

Table 21 - Performance of the import regulatory system staff

| Question | Status |
|--|---------------|
| How effective is the import regulatory system in consideration of the NPPO's mission | Ineffective |
| With what efficacy are the import regulatory system’s resources utilized | High |
| Has the import regulatory system kept its relevance over time | High |
| How well is the NPPO’s import regulatory system performing | Intermediate |

Weaknesses

The following aspects were pointed as most critical weaknesses that affect the NPPO's import regulatory system’s performance:

1. Lack of written procedures for import regulatory systems
2. Lack of formal structure to guide the phytosanitary inspection services
3. Lack of an effective system of internal communication and between the NPPO with the NPPO of other countries;
4. Lack of equipment and infrastructure at various levels;
5. Lack of qualified human resources

3.9. PCE MODULE 11: Pest risk analysis

Pest Risk Analysis is defined as “the process of evaluating biological or other scientific and economic evidence to determine whether an organism is a pest, whether it should be regulated, and the strength of any phytosanitary measures to be taken against it” (ISPM No. 5, 2009, *Glossary of phytosanitary terms*).

Pest risk assessment (for quarantine pests) is defined as: Evaluation of the probability of the introduction and spread of a pest and the magnitude of the associated potential economic consequences (ISPM No. 5, 2009, *Glossary of phytosanitary terms*)

The national phytosanitary legislation specifies that the NPPO is responsible for conducting pest risk analysis as stated in IPPC IV.2f and VII.2g, and ISPM No.2. Also the legislation specifies that the phytosanitary measures prescribed by the NPPO shall be technically justified through pest risk analysis or based on international standards.

However, in the NPPO there is no Pest risk analysis and/or pest risk assessment specialized unit to cover all pest risk analysis activities.

3.10. PCE MODULE 12: Pest free areas, places and sites, low pest prevalence areas

The ISPM No. 4 (1995, *requirements for the establishment of pest free areas*) defined a pest free area in the following terms: "pest free area" is: "an area in which a specific pest does not occur as demonstrated by scientific evidence and in which, where appropriate, this condition is being officially maintained". In the same ISPM, IPPC stated that the establishment and use of pest free areas (PFAs) and pest free places of production and pest free production sites is a risk management option for phytosanitary certification of plants and plant products and other regulated articles exported from the PFA or to support the scientific justification for phytosanitary measures taken by an importing country for protection of an endangered PFA. Furthermore IPPC assign to the NPPO the responsibility for the protection of endangered areas and the designation, maintenance and surveillance of pest free areas and areas of low pest prevalence.

In Mozambique, the NPPO is responsible for the protection of endangered areas and the designation, maintenance and surveillance of pest free areas and areas of low pest prevalence in as stated in the IPPC IV.2.e and ISPM 1, ISMP 4, 8, 10 and 22. Also the national phytosanitary legislation provides for the determination and identification of PFA and Areas of Low Pest Prevalence (ALPP).

3.11. PCE MODULE 13: Export, re-export and transit certification

Export certification is an essential component and a core activity of the NPPO. Under IPPC Article V it is established that, contracting parties should exercise due diligence in operating an export certification system and ensuring the accuracy of the information and additional declarations contained in phytosanitary certificates.

1. ISPM 7 - export certification system (1997): describes the components of a national system for the issuance of phytosanitary certificates for export.
2. ISPM 12 - Guidelines for phytosanitary certificates (2001): describes principles and guidelines for the preparation and issue of phytosanitary certificates.
3. ISPM 23 - Guidelines for inspection (2005): describes the procedures for the inspection of consignments of plants and plant products and other regulated articles at import and export.
4. ISPM 25 – Consignments in Transit (2006): describes procedures to identify, assess and manage phytosanitary risks associated with consignments of regulated articles, which pass through a country of transit are technically justified and necessary to prevent the introduction into and/or spread of pests within the transit country.

Mission and strategy

The mandate of the export certification program and/or activities is consistent with the NPPO's mission. The objectives of the export certification program follow the principles of SMART:

1. Specific so that they are clear and easy to understand
2. Measurable and able to be quantified so that is possible to measure progress
3. Achievable and realistic given the circumstances in which they are set and the resources available
4. Relevant to NPPO's mission and strategy
5. Time bound with realistic deadlines for achievement

However, there is no strategic and operational plan for the export certification activities as well as there are no procedures to review its performance.

Enabling legislation

The NPPO the only authority by legislative or administrative means responsible for control and issuance of phytosanitary certificates in the country. And the NPPO have the authority to refuse the issuance of the phytosanitary certificate for the export of consignments which do not meet an importing country's requirements.

The current legislation complies with the model phytosanitary and re-export certificates as described in the annex of the revised text of the IPPC (1997). The legislation allows the NPPO to charge fees for the services provided by the export certification program. However, these fees are not charged on a cost recovery basis and not regularly updated.

Organizational structure, competences and culture

There is no national manager responsible for the export certification system. Equally the structure is lacking in written job descriptions for export certification staff to carry out its function effectively and in accordance with the International Standards. Additionally the structure is also lacking in an organizational chart of the export certification program.

However, the current NPPO's structure has linkages with the relevant stakeholders to get support and improve the quality of the export certification program (example, fumigation companies for treatment of consignments), which are approved/accredited by the NPPO.

There are also no procedures in place for communication to relevant personnel and to industry (within the country) concerning changes in:

1. Importing country phytosanitary requirements;
2. Pest status and geographical distribution;
3. Operational procedures;

Documented procedures

There is no management system that ensures that all requirements, (certification, legislative and technical requirements), are satisfied for each certificate issued. Equally there is no operational manual for that could guide the NPPO's export certification.

The NPPO has no computerized retrieval system to maintain up-to-date information on the import requirements of importing countries. This information is provided by the NPPO of importing country on request.

Table 22 - Status of documented procedures and work instructions at NPPO level to cover the key aspects of the certification system:

| Aspects of the certification system | Status |
|---|---------------|
| Control over issuance (manual or electronic) | No |
| Identification of issuing officers | Yes |
| Inclusion of additional declarations | Yes |
| Completion of the treatment section of the certificates | Yes |
| Certified alterations | Yes |
| Completion of phytosanitary certificates | Yes |
| Signature and delivery of phytosanitary certificates | Yes |
| Procedures for working with industry | No |
| Sampling, inspection and verification procedures | No |
| Security over official seals/marks | No |
| Consignment identification, trace ability, and security | No |
| Record keeping | No |

A copy of each phytosanitary certificate is retained (hard copy and/or electronic version) at inspection services for purposes of validation and trace back. For each phytosanitary certificate the records kept as appropriate on:

1. Any inspection, testing, treatment or other verification which was conducted on a consignment basis;
2. The names of the personnel who undertook these tasks
3. The date on which the activity was undertaken
4. The results obtained
5. Any sample taken

But, this information is not stored in a computerized retrieval system. Unfortunately, if required by the imported country, the consignments and their certification are not traceable through all stages of production, handling and transport to the point of export. There also no procedures to ensure the phytosanitary security and the consignment's integrity, after the certification until export. However, there is a system for liaising effectively with the importing countries NPPO's to discuss phytosanitary requirements.

All phytosanitary and re-export certificates are only issued by the NPPO and in accordance with the model certificates in the IPPC and following the principle of good practices for certification's issuance as established in ISPM 12.

Staffing

Table 23 shows the current status of staff of the exporting and importing system. The current human resources capacity in terms of qualifications and skills is rated as weak, while in terms of numbers, it was rated as insufficient.

Table 23 - Current status of staff of the exporting and importing system

All inspectors are regularly (annually) trained on inspection procedures, but none of the staff have been specifically trained to carry out export certification.

Equipment

Table 24 - shows the current status of equipment of the exporting and importing system

| Equipment issue | Rating |
|--|-------------------|
| Sufficiency of the equipment, materials and transport used in the NPPO's export certification program | insufficient |
| Adequacy of communications in the NPPO's export certification program | insufficient |
| Quality of office and inspection facilities in the NPPO's export certification program | insufficient |
| Availability and quality of computers and tailored software in the NPPO's export certification program | Very insufficient |

NPPO export certification performance

Table 25 - Current status of performance of export certification staff.

| Performance issue/question | Rating/status |
|---|----------------------|
| How effective is the export certification service considering the NPPO's mission | intermediate |
| Is there a set of good indicators to measure the effectiveness of the export certification service? | No |
| With what efficacy are the export certification's resources utilized? | Good |
| Is there a set of good indicators to measure the efficacy of the certification service? | No |
| Has the export certification service kept its relevance over time? | Good |
| How well is the NPPO's export certification service performing? | Weak |

The following were considered as indicators that could be used to measure the status or the export certification services relevance:

1. Quantity of notifications received per year;
2. External audit results;
3. Increase of volume of national products in international markets;
4. Access of new markets by national products

NPPO export certification weaknesses

The following aspects were identified as the most critical weaknesses for NPPO's export certification performance:

1. Lack of program or system for exporters registration at NPPO;
2. Lack system of communication with importing countries;
3. Lack of certification skills;
4. Inappropriate infrastructure and equipment;
5. Lack of qualified and trained human resources to conduct effectively certification services.

Phytosanitary emergency response capacity

The laboratories are not adequately equipped with resources to respond to a pest outbreak, because of lack of resources (financial, equipment and personnel). There are no phytosanitary contingency plans to guide the NPPO's response in case of a pest outbreak is made according to the situation.

The national phytosanitary legislation does not specify what can be considered as a phytosanitary emergency situation. It also does not specify the competent authority that can declare an emergency phytosanitary situation (usually this is the responsibility of the NPPO).

The legislation establishes the obligation of other government agencies to collaborate with the NPPO under a phytosanitary emergency situation.

The legislation does not allow the NPPO for destruction of plants that may not be infested but that have been exposed to the pest infestation, in buffer zones surrounding the infested plants. The national phytosanitary legislation does not contain provisions for economic compensation to the owners affected by eradication procedures.

There is no establishment of Phytosanitary Emergency Fund to be solely utilized to manage a phytosanitary emergency.

Annex - Summary of phytosanitary weaknesses

| Strategic area | Major weaknesses |
|--|--|
| National phytosanitary legislation | <ul style="list-style-type: none"> • Lack of requirements for the importation of biological control agents or biological products; • Lack of requirements for the declaration of phytosanitary emergency and action plan; • Lack of mobile brigades for phytosanitary surveillance • Lack of a Phytosanitary issues management system; • Lack of manual for phytosanitary inspection procedures. |
| NPPO resources (human, financial and infrastructure) | <ul style="list-style-type: none"> • Lack of an online system of communication and information management and exchange; • Lack of staff training strategic plan in specific areas of infrastructure and management; • Lack of adequate facilities at phytosanitary inspection points and resources to open new phytosanitary inspection points at entry points; • Lack of regular meetings to exchange information and discuss activities carried out at the NPPO level; • Limited financial resources for the sustainable management of infrastructures at the NPPO level. |
| Training of phytosanitary personnel | <ul style="list-style-type: none"> • Lack or inadequate qualified and trained personnel at all levels |
| Infrastructure resources | <ul style="list-style-type: none"> • Lack of specific units for the different technical areas (PRA Pest Surveillance and diagnostic); • Decentralization of phytosanitary inspection and plant quarantine to provincial level, which makes difficult the implementation of activities; • Lack of job description of staff member of the NPPO; • Lack of regular information sharing between sectors of the NPPO |
| Pest diagnostic and control And Pest surveillance | <ul style="list-style-type: none"> • Lack of protocols, manuals and laboratory procedures; • Lack of a phytosanitary contingency plans; • Lack of a system for laboratories organization; • Lack database and internet system facilities |
| Pest risk analysis and/or pest risk assessment | <ul style="list-style-type: none"> • Lack of pest risk unit • Lack of program for pest risk analysis • Lack of coordinated PRA activities |
| Emergency action plan | <ul style="list-style-type: none"> • Lack of emergency action plan |
| Phytosanitary import regulatory system | <ul style="list-style-type: none"> • Lack of written procedures for import regulatory systems • Lack of formal structure to guide the phytosanitary inspection services • Lack of an effective system of internal communication and between the NPPO with the NPPO of other countries; • Lack of equipment and infrastructure at various levels; • Lack of qualified human resources |
| Export, re-export and transit certification | <ul style="list-style-type: none"> • Lack of program or system for exporters registration at NPPO; • Lack system of communication with importing countries; • Lack of certification seals; • Inappropriate infrastructure and equipment; • Lack of qualified and trained human resources to conduct effectively certification services |
| Documented procedures | <ul style="list-style-type: none"> • Lack of documented procedures for most of phytosanitary services |