

SYNTHESIS REPORT

**Assessment of Cross-Border trade costs associated with SPS requirements
for soybean and maize at Chirundu One Stop Border Post between Zambia and
Zimbabwe**

ACRONYMS

ASYCUDA	Automated System for Customs Data and Management
COMESA	Common Market for Eastern and Southern Africa
C-MRF	COMESA Mutual Recognition Framework
CODEX	Codex Alimentarius Commission
GMO	Genetically Modified Organism
IPPC	International Plant Protection Convention
NPPO	National Plant Protection Organisation
OSBP	One Stop Border Post
REC	Regional Economic Community
SPS	Sanitary and Phytosanitary
STDF	Standards and Trade Development Facility
STR	Simplified Trade Regime
TBT	Technical Barriers to Trade
TFA	Trade Facilitation Agreement
WTO	World Trade Organization
ZamAce	Zambia Agricultural Commodity Exchange

Executive Summary

Regional integration within The Common Market for Eastern and Southern Africa (COMESA), other regional economic communities and the African continent as a whole, aims to increase intra-regional trade as a driver of economic growth and development. However, sanitary and phytosanitary (SPS) and other technical measures are hindering trade to such an extent that it becomes uneconomical to trade with neighbouring countries. Meeting the requirements of SPS measures certainly incurs a cost to traders. Finding ways to reduce the negative impact on trade from SPS and other technical measures has thus become a focus of trade facilitation efforts, as laid out in the WTO's Trade Facilitation Agreement (TFA).

In 2016, the COMESA Secretariat commenced a project to address this issue. The project was titled "Breaking Barriers, Facilitating Trade" and was funded by the Standards and Trade Development Facility (STDF). One of its three results was increased understanding of the costs and benefits of SPS measures. To this end, an assessment of the costs of SPS measures and their implementation in Zambia and Zimbabwe was made at the Chirundu one stop border post in August, 2017. This focussed on trade in maize and maize products as well as soya beans and soya bean products. Findings of this assessment were presented at a stakeholder workshop during June, 2018. Regulators from the two countries met to discuss the opportunities for reducing costs.

Maize is a staple food both in Zambia and Zimbabwe, and is a major input into animal feed in Zambia. It is produced by subsistence, small commercial and large commercial farmers in Zimbabwe and in Zambia, smallholder farmers dominate production although the share of the output by commercial farmers. Zimbabwe is a significant producer of soya bean with both the commercial and smallholder farmers playing a significant role in production. Zambia also produces substantial amounts of soya bean with both the large commercial farmers and smallholder farmers.

The assessment found GMO contamination in maize and soya beans is a matter of concern in both Zambia and Zimbabwe. In Zambia aflatoxin levels in maize are generally lower than the 10ppb national maximum level while they have been reported to be above 20ppb maximum limit for maize meal intended for human consumption and as high as 1391ppb in some instances in Zimbabwe. Fumonisin contamination in maize is an issue in both countries.

The costs of the actual SPS regulatory measures could not be established during the baseline assessment other than those for the regulatory documents. Most of the SPS-related costs in this assessment were incurred behind-the-border organising the necessary documents for cross-border movement of maize and soybean. Factors other than the administration/implementation of SPS measures were mainly responsible for delays at the border. Trade-facilitation initiatives have not been efficient in reducing costs of SPS measures.

Recommendations made by the assessment include conducting coordinated and joint inspections which are also risk-based; making available trade requirements as well as the various documents to traders via an electronic single window or a trade portal; awareness raising of SPS regulatory requirements among traders, particularly the small-scale traders; harmonisation of SPS procedures at the border; prioritisation of adoption of the COMESA Mutual Recognition Framework (CMR-F) and ensuring minimal down time on the Automated System for Customs Data and Management (ASYCUDA).

1. Introduction

1.1 The Breaking Barriers, Facilitating Trade Project

Regional integration within COMESA, other regional economic communities and the African continent as a whole, aims to increase intra-regional trade as a driver of economic growth and development. The need for regional integration is apparent, as many COMESA countries import far more from outside the bloc than from within, including agricultural products.

There are several possible reasons why this is the case, but one hypothesis is that SPS (Box 1) and other technical measures are hindering trade to such an extent that it becomes uneconomical to trade with neighbouring countries.

Box 1. WTO SPS Agreement's Definition of an SPS Measure

Any measure applied:

- (a) to protect animal or plant life or health within the territory of the Member from risks arising from the entry, establishment or spread of pests, diseases, disease-carrying organisms or disease-causing organisms;
- (b) to protect human or animal life or health within the territory of the Member from risks arising from additives, contaminants, toxins or disease-causing organisms in foods, beverages or feedstuffs;
- (c) to protect human life or health within the territory of the Member from risks arising from diseases carried by animals, plants or products thereof, or from the entry, establishment or spread of pests;
- (d) to prevent or limit other damage within the territory of the Member from the entry, establishment or spread of pests.

Sanitary or phytosanitary measures include all relevant laws, decrees, regulations, requirements and procedures including, *inter alia*, end product criteria; processes and production methods; testing, inspection, certification and approval procedures; quarantine treatments including relevant requirements associated with the transport of animals or plants, or with the materials necessary for their survival during transport; provisions on relevant statistical methods, sampling procedures and methods of risk assessment; and packaging and labelling requirements directly related to food safety.

Meeting the requirements of SPS measures certainly incurs a cost to traders, and this is recognised in the WTO SPS Agreement, which the COMESA SPS Regulations reflect. However, to minimise this restriction to trade, the agreements require that the measures are transparent, non-discriminatory, and cause the least disruption to trade necessary to achieve the country's objectives in applying the measures (Box 2).

Box 2. Requirements of SPS measures (as in the WTO SPS Agreement)

1. Consistent with international standards set by the three international standards-setting bodies-the Codex Alimentarius Commission, the International Organization for Animal Health and the International Plant Protection Convention (IPPC)
2. Based on scientific principles and evidence
3. Harmonized internationally to the extent possible
4. Transparent
5. Only as restrictive as absolutely necessary to achieve the appropriate level of protection required
6. Non-discriminatory
7. Appropriate to the conditions in the importing and exporting countries

Finding ways to reduce the negative impact on trade from SPS and other technical measures has thus become a focus of trade facilitation efforts, as laid out in the WTO's Trade Facilitation Agreement (TFA) which came into force in 2017. While stating that nothing in the agreement

diminishes the rights and obligations of countries under the SPS Agreement, the TFA emphasises that ways should be found of reducing the cost of SPS and other border measures, as long as the measures still provide the appropriate level of protection.

In 2016 The Common Market for Eastern and Southern Africa (COMESA) Secretariat commenced a project to address this issue. The project was titled “Breaking Barriers, Facilitating Trade” and was funded by the Standards and Trade Development Facility (STDF), with the overall goal of increasing intra-COMESA trade in agri-food products for improved food security.

The specific objective of the project was to reduce trading costs associated with SPS measures for selected commodities on selected trade routes in COMESA, to be achieved through three results/outputs.

1. Increased understanding of the costs and benefits of SPS measures. Under this output the project examined the costs of SPS measures for selected commodities and at selected borders. The aim was to identify where implementation of SPS measures could be improved, to reduce their costs and hindrance to trade.
2. Improved understanding and formulation of SPS measures. SPS measures are designed to provide the “appropriate level of protection” against identified risks. A basis for this is thus an assessment of the risks, and selection of the appropriate risk management methods. The project aimed to ensure that the SPS measures required in relation to the selected trade routes and commodities were scientifically justifiable.
3. Simplified and coordinated implementation of SPS measures. For the selected case studies, the project aimed to improve the efficiency with which SPS measures are applied at the border, such as through involving staff of the relevant agencies in the implementation of the one-stop border posts and single window operations.

1.2 Methodology

This report is a synthesis of the work undertaken in Zambia and Zimbabwe, which focussed on trade between the two countries in soya bean and soya bean products as well as and maize and maize products. This report is based on information from the following project outputs and activities, but also draws from related work and documents as appropriate.

Border assessment.

An assessment of the costs of SPS measures and their implementation was made at the Chirundu One Stop Border Post (OSBP) border in August, 2017. Full details of the study and the methods are in the report “**Assessment of Cross-Border trade costs associated with SPS requirements for soybean and maize at Chirundu One Stop Border Post between Zambia and Zimbabwe**”. The methodology involved the administration of questionnaires at the border. The questionnaire was developed by consultants, and refined through interviews with relevant stakeholders including traders (of the specific commodities in the study), transporters, clearing agents and border point regulatory officers. The questionnaire consisted of a Template and Guidelines for assessing SPS procedure/processes behind the border and at the border, and the related trading costs. The questionnaire was administered on selected individual stakeholders and aimed to determine the actual SPS related costs incurred by the

trader from the point of export until it reached the importer. Key informants on SPS related costs and procedures at the borders were the traders themselves as well as clearing agents who were familiar with processes at the border. As far as possible the views of traders and clearing agents on the costs at the border were solicited.

A total of 98 consignments made up of, (1) fifty-two (52) consignments of maize, (2) 35 consignments of soya meal/cake and (3) 11 consignments of soya beans were sampled during the study. Data was collected through observation and face to face interviews with transporters, clearing agencies and traders using a questionnaire developed by COMESA. All traders that were involved in the assessment were commercial companies and there were no small-scale traders in the sample. Key informant interviews with regulatory authorities were also conducted to map out the process flows and establish regulatory requirements for import and export of the commodities which were the subject of the assessment.

Border assessment validation.

Findings from the assessment were discussed at a stakeholder validation workshop held from 18 to 22 June 2018 at the Zambian side of Chirundu OSBP. The major limitation to the study was the fact that some information could not be obtained during the baseline assessment and validation workshop and had to be sourced from other literature. Thus, some of the information in the report is not specific to the actual assessment at Chirundu.

2. Background Information

2.1 Maize and Maize Products

According to Nleya et al. (2018), maize is a staple food in Zimbabwe and makes up about 70% of the diet. Maize is produced by three main categories of farmers;

- about 1.53 million (m) subsistence farmers with an output of 475kg/household and overall accounting for 50% of national maize output,
- small commercial farmers who make up about 8% of all producers and contributing about 27% of output, and
- large commercial farmers who make up about 1% of the producers and are responsible for 23% of production (USAID, 2011).

Processing capacity exists however only about 50% of this capacity is currently in use. Zimbabwe is a net importer of maize (75%), the bulk of which originates from Zambia. Production has been largely affected by the unavailability of finance and uncertainty around issues of land tenure Furthermore, the tendency of the Grain Marketing Board to set prices that are higher than market prices distorts the markets.

Similarly, maize is a staple food and a major input into animal feed in Zambia. It makes up about 62% of the total Zambian diet with per capita consumption estimated at 120 kg per person. Smallholder farmers dominate production although the share of the output by commercial farmers is. Zambia generally produces a surplus, and together with South Africa, Zambia is a major exporter of maize in the region. It is also among the largest producers of maize seed in Africa, exporting about 25,000 tons in 2015. The market for maize seed is Zambia itself and several countries in East and Southern Africa.

The Zambian maize industry is characterised by a small number of traders, small informal local mills that serve the rural areas and commercial processing in the major urban centres.

The Zambia Agricultural Commodity Exchange (ZamAce), a commodities exchange, also plays a crucial role in the marketing of maize. The Food Reserve Agency is also an important player. Most maize produced in Zambia is used for human consumption, as animal feed and, processed for industrial use and bio-fuels.

2.2 Soya bean and Soya bean Products

Zimbabwe is a significant producer of soya bean with both the commercial and smallholder farmers playing a significant role in production. Commercial farmers make up 65% of production. Yields are low compared to other regions of the world – commercial farmers yield about 1.8 t/ha while smallholders hardly reach 1t/ha. In the smallholder sector, this can be as low as 0.5t/ha. Inputs are available but not widely used partly because of lack of credit. The demand for soyabean cake and oil in 2010 was 125,000 metric tons and 165,000 metric tons respectively. Zimbabwe's soyabean cake imports are quite substantial.

Challenges affecting soya bean are poor agronomic practices, poor application of research, lack of free trade in soya bean, lack of credit, poor transport infrastructure, Zimbabwe's non-GMO policy, the fact that nationally soya beans are not a priority crop and land tenure issues.

Zambia produces substantial amounts of soya bean. In 2017 Zambia is said to have produced some 350000 metric tonnes of GMO-free soyabeans. The last decade has seen a rapid expansion in the production of soya bean driven by demand for vegetable oil and livestock feed as well as soya bean as food. This demand is expected to grow with increasing urbanisation. The per capita consumption of soya bean oil is about 1.2 kg, however, government subsidies for competing crops such as maize have reduced incentives for smallholder farmers to grow soya.

The crop is produced by both the large commercial farmers and smallholder farmers. The larger commercial producers dominate production and account for about 80% of national production (Meyer et al., 2018). Smallholder farmers are however also taking up the crop. Soyabeans are traded in both formal and informal markets. A small soya bean crushing industry exists.

Although production is expanding, it is not without its challenges. A 2011 TechnoServe study found that the crop is "marginally attractive" for commercial farmers due to high costs of production, poor transport infrastructure and uncertain export policy. Neither is it attractive for smallholder farmers as they do not have access to inputs, expertise and a market.

Implementation of SPS measures in both countries is coordinated by the National SPS Committees made up of competent authorities, other government and quasi government entities, the private sector, farmers' unions and academia among others. The effectiveness of these committees was not assessed.

In Zimbabwe, the following are the competent authorities for the implementation of SPS measures:

1. Ministry of Lands, Agriculture and Rural Resettlement is the national notification authority

2. The National Plant Protection Organisation implements measures that ensure plant life and health and is the enquiry point for plant health
3. Livestock and Veterinary Services is the enquiry point for animal health. It implements measures that ensure the safety of the soya cake meal and maize if they are to be used as animal feed
4. The Ministry of Health and Child Care implements measures that ensure safety of soya beans and maize for human consumption
5. National Biotechnology Authority of Zimbabwe implements measures that ensure biosafety.

The responsible competent authorities in Zambia are:

1. Ministry of Commerce, Trade & Industry which is the national notification on trade issues
2. The National Plant Protection Organisation responsible for implementing measures relating to plant health. The NPPO is also the enquiry point for plant health issues
3. The Department Livestock and Veterinary Services which implements measures that ensure the safety of the soya cake meal and maize if they are to be used as animal feed
4. The Ministry of Health (Port Health) which implements measures that ensure safety of soyabeans and maize for human consumption. It is also the enquiry point for food safety
5. National Biosafety Authority responsible for the implementation of measures that ensure biosafety

3 Key Findings and Conclusions

3.1 Key findings

- GMO contamination in maize and soya beans is a matter of concern in both Zambia and Zimbabwe.

In Zambia aflatoxin levels in maize are generally lower than the 10ppb national maximum level (Plunkett, 2016). The situation in Zimbabwe appears to be different. A study by Nleya et al (2018) found that aflatoxin contamination levels of aflatoxin in 35% of samples collected from food and feed companies were above the 20ppb maximum limit for maize meal intended for human consumption. In one of the samples of maize contamination levels were as high as 1391ppb.

Fumonisin contamination in maize is an issue in both countries. Studies undertaken in Zimbabwe have reported high levels of fumonisin in maize (Misihairabgwi et al., 2019). The maximum limit in food intended for human consumption in Zimbabwe is 1000ppb (Nleya et al., 2018), which is higher than the Codex limit of 4000ppb. Contamination levels well above the national limit have been found in maize samples analysed with the levels ranging from 36,000 to 159,000ppb in Zimbabwe. Fumonisin in maize is considered more problematic than aflatoxin in Zambia (Plunkett, 2016). The Codex limit for is 4000ppb in raw maize grain and 2000ppb in maize flour and maize meal (General Standard for Contaminants and Toxins in Food and Feed, CXS 193-1995).

- Although the aflatoxin and fumonisin¹ maximum limits in Zambia and Zimbabwe are stricter than those set by Codex, they can be deemed justified considering the rather high levels of contamination of documented contamination and the frequency of contamination in the two countries.
- The costs of the actual SPS regulatory measures could not be established during the baseline assessment other than those for the regulatory documents as indicated in Figure 1 below.

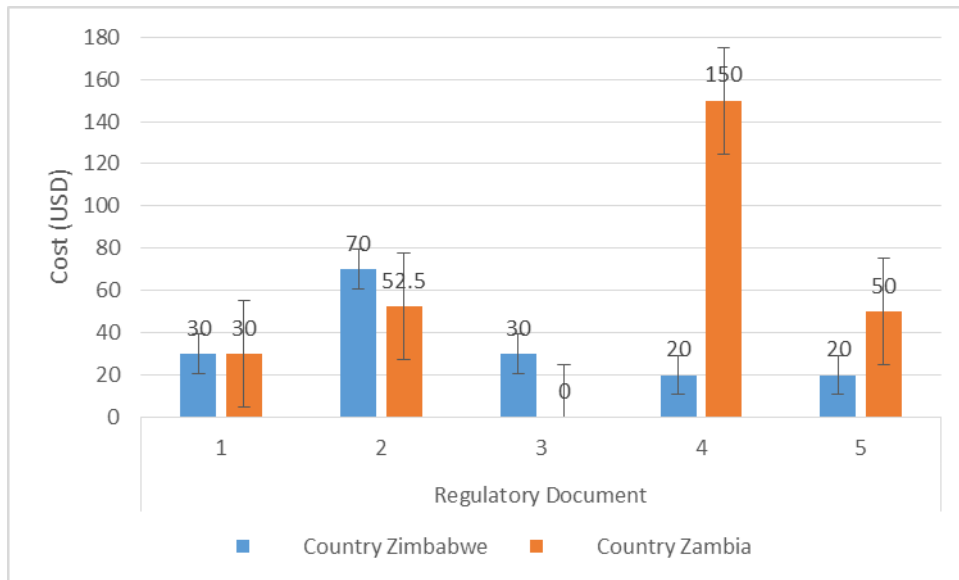


Figure 1 Cost of regulatory documents

Notes: For Zimbabwe; 1 = goods import permit, 2 = plant import permit, 3 = biosafety import permit, 4 = Veterinary import permit and 5 = Ministry of Health Inspections. For Zambia; 1 = phytosanitary certificate, 2 = export permit, 3 = GMO free certificate, 4 = inspection, and 5 = plant import permit. A value of 0 indicates that the regulatory document is issued free of charge.

The costs of documents vary between the two countries but clearly are more expensive in Zimbabwe than in Zambia. The largest variance is the cost of inspections which is 75% more in Zambia than in Zimbabwe.

- The validation workshop found that there are awareness gaps on SPS regulations among small scale traders that need attention. A qualitative assessment by Plunkett (2016) also shows medium to high levels of awareness of aflatoxins as a food safety and trade issue by private sector operators in Zambia.
- In addition to the costs of complying with SPS requirements, other costs incurred by cross-border traders (SPS/TBT fees and time taken to obtain certification, administrative costs, documentation checks at the border/time taken, sampling and testing costs at the border and other costs) were examined.

The SPS/TBT fees and time taken to obtain certification could not be established. However, the cost of travel in search of various documents and behind the border approvals were established. It costs more to travel in search of documents and approvals behind the border

in Zimbabwe than in Zambia. In Zambia, the costs range from USD3 to USD15 while it costs from USD10 to USD200 to travel in Zimbabwe in search of documents and approvals.

No costs related to administrative procedures were reported. However, traders experienced delays at the border resulting from other administrative issues such as the ban on maize imports by Zimbabwe because border officials were not clear on some aspects of the ban leading to considerable delays.

The time taken to process documents varies between the two countries and amongst the type of documents. In Zimbabwe, it takes three to seven days to process documents while the process takes one to two days in Zambia. On average, it takes seven days for Zimbabwe to process a goods import permit; five days for biosafety permit and Ministry of Health inspections, and three days for the plant import permit. In Zambia, three days on average are taken for processing a goods import permit, plant import permit and one day on average for Ministry of Health inspections.

No sampling/testing costs were incurred at the border as such procedures were not undertaken.

None of the traders incurred storage costs at the border as no product was offloaded for laboratory tests. Similarly, no costs resulting from duplication of effort were reported. There are no laboratory testing facilities at the border, and as a result none of the sampled consignments were rejected. All traders paid amounts ranging from USD20 to USD30 per consignment for services of clearing agents. These charges may however not be related to SPS procedures but other border-related services.

- Most of the SPS-related costs in this assessment were incurred behind-the-border organising the necessary documents for cross-border movement of maize and soybean. Delays at the border are attributed to factors other than the administration/implementation of SPS measures. It was also reported that most delays are attributed to the lack of administrative documents such as export schedule in the case of Zambia by traders. During this exercise there were no cases of bribery reported. Finally, in the absence of any women traders exporting or importing maize and soybeans during the period of this study, the impact on small traders and women of the costs could not be determined.
- A number of trade-facilitating initiatives have been put in place to facilitate the flow of goods and services in the COMESA region. These include the COMESA Simplified Trade Regime (STR), One Stop Border Posts (OSBPs) and Mutual Recognition of aflatoxin certificates of analysis (COMESA). An analysis of their impact on efficiency and costs of SPS measures is presented below.

Simplified Trade Regime.

The COMESA STR was introduced in 2007 and became operational in 2010 (UNCTAD, 2019). The Democratic Republic of Congo, Malawi and Zambia as well as Zimbabwe are the only four countries in southern Africa, that together with six more countries in east Africa that have “taken steps to implement the COMESA STR.

Under the STR, traders carrying goods included in a pre-negotiated list of products, including soya beans, groundnuts and soya pieces, and worth up to US\$2,000 can clear them with little paperwork, using a Simplified Customs Document and a Simplified Certificate of Rules of Origin available directly at border posts and without the involvement of clearing agents. The STR is generally accompanied by the deployment of Trade Information Desk Officers at border posts to assist traders in clearing their goods and to sensitise them on how to benefit from this instrument (COMESA, Pers com).

A study by the United Nations Conference on Trade and Development (UNCTAD) found that processing fees have been reduced to US\$1 (UNCTAD, 2019). Nonetheless, import and export permits are still required for some animal and agricultural goods under the COMESA STR (UNCTAD, 2019). Such goods are also not exempt from border requirements on immigration and SPS measures. The UNCTAD (2019) study found that the cost of exporting rice from Malawi to Zambia through Mwami/Mchinji border under the STR notably reduced the transaction cost, in the absence of a sample of small scale producers moving Soyabeans and maize through the Chirundu OSBP, the impact of the STR on the SPS costs could not be determined.

The UNCTAD report also highlights that the STR is not used much both in Malawi and Zambia. Traders indicated that information and guidance on the STR is often unavailable and at times the necessary forms may also be unavailable at the border, impacting effective use and implementation of the STR. No evidence supporting the efficiency improvements specifically around SPS requirements from the introduction of STR was found other than the reduction of other transaction costs.

One Stop Border Posts.

One-stop border posts are one other trade facilitation tool designed to reduce the time and cost involved in moving goods across borders through coordinated border management (UNCTAD, 2019). Generally, OSBP have not performed as they should have and have not improved efficiency of SPS measures (COMESA). Chirundu OSBP has been operational for the last 10 or so years however, operations at this OSBP are not optimal. From the attached flow diagram (Annex I) the duplication of inspections and documentation by both Zambian and Zimbabwean officials at the border despite the border management committees needs attention., There is room for improved coordination between SPS and other authorities on both sides of the border and to review, streamline and harmonise the document requirements on both sides of the border. Competent authorities responsible for SPS issues have the mandate and responsibility to ensure that regulations are complied with without restricting legitimate trade. Inspections are but one of the tools available to the authorities to ensure compliance with relevant laws and regulations. There is no evidence that the competent authorities have moved away from the traditional end-product inspection. A preventative risk-based SPS approach to inspections such that high risk products are targeted at the border has not yet been introduced.

Mutual Recognition of aflatoxin certificates of analysis.

In December 2015, COMESA launched the COMESA Mutual Recognition Framework (C-MRF), which was developed by the COMESA Secretariat in partnership with several member states including Zambia and Zimbabwe. The purpose of the C-MRF is to eliminate the need for multiple, expensive testing and certification of commodities by the both

exporting and the importing country traders, and provide for the equivalence of analytical results for aflatoxin and the recognition of certificates of analysis of participating countries. Despite this forward-looking initiative, an agreement on the mutual recognition of aflatoxin certificates of analysis is not yet in force. This was confirmed during the validation workshop.

4. Recommendations

In view of the above, the following recommendations are made:

- Regulatory authorities should conduct coordinated and joint inspections which are also risk-based, targeting high risk produce and traders who have a history of non-compliance with SPS requirements. However, risk-based inspections generally require some sort of database of previous inspections and the outcomes of those inspections from which high-risk traders can be identified. Inspection data should thus be documented and captured in a database.
- Trade requirements as well as the various documents, the costs involved, method of payment the time lag between lodging an application and acquiring the necessary document, treatment requirements (such as fumigation for pests) should be made available to traders via an electronic single window or a trade portal in simple easy to follow language to create a more predictable trading environment for all traders in particular informal and small scale trader along the lines of the information portal on Kenya's Ministry of Agriculture, Livestock, Fisheries and Irrigation's website page which details all the procedures and requirements for exports and imports of agricultural products.
- SPS authorities should raise awareness of SPS regulatory requirements among traders, particularly the small-scale traders.
- The two countries should harmonise SPS procedures at the border to reduce the time that consignments spend at the border. Although there is coordinated border management in place, it is not adequately addressing SPS issues. There should be better coordination between the Zambian and Zimbabwean authorities and the formation of a joint SPS sub-committee under the joint border committee could be a start. Chirundu One Stop Border Post needs to operate 24 hours to reduce congestion of transit cargo. The Trade and Customs Committee should be approached in this regard.
- Adoption of the CMR-F should be prioritised to remove the trade barriers experienced by traders prioritising the most staple foods frequently traded by small scale traders to create further predictability.
- There is a need to ensure that there is minimal down time on the Automated System for Customs Data and Management (ASYCUDA) system to reduce demurrage costs and to minimize the use of manual clearance system. This should be taken up with the Trade and Customs Committee.

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