



Food and Agriculture  
Organization of the  
United Nations



# Support Towards the Operationalization of the SADC Regional Agricultural Policy (STOSAR) bulletin



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# FOREWORD

## Message from Patrice Talla, FAO Sub-regional Coordinator for Southern Africa



Dear Reader,

A very warm welcome to this inaugural issue of the STOSAR project quarterly bulletin that documents the great strides the project 'Support towards operationalization of the SADC Regional Agricultural Policy (STOSAR)' has made in enhancing access to information on agricultural production and improving market access for agricultural products and commodities from the Southern African Development Community (SADC) region.

I commend the project team that has persevered in implementing this project against a backdrop of increasing threats of emerging transboundary plant pests and

animal diseases, coupled with the impact of the COVID-19 pandemic, whose effects we continue to experience to this day.

This edition compiles significant project achievements accumulated from the collaboration between FAO, the SADC Secretariat, all 16 SADC Member State host governments, and six Centres of Excellence from the region, all made possible through the generous funding of the European Union (EU).

The Food and Agriculture Organization of the United Nations (FAO) stands proud that the STOSAR project has made its mark by producing Southern Africa's first-ever online Agricultural Information Management System (AIMS). The setting up of an integrated agricultural and food security information system seeks to strengthen the SADC's regional database, streamline resource allocation, promote exchanges between systems, and communicate clearer, consolidated messages to stakeholders. It also aims at improving market transparency and detecting emerging problems that might warrant the attention of policymakers. In addition, the capacities of Member States are to be enhanced and linked to the regional system. This setup will allow authorised users to enter and update agricultural information and statistical data to generate dashboards, country profiles, and other reports.



In this edition, one can read about the project's contribution to the publication of the SADC regional plant health strategies in the sustainable management of fall armyworm, tomato leaf miner, Oriental fruit flies, maize lethal necrosis disease, and banana Fusarium wilt Tropical Race 4.

You can also access the SADC AIMS strategy and the SADC regional animal health strategies for peste des petits ruminants, foot and mouth disease and highly pathogenic avian influenza in the respective resources sections of this bulletin. To cater for Francophone and Lusophone countries in the SADC Region, all documents have been translated into English, French and Portuguese.

The human-interest stories featured in this publication were collected from the various SADC Member States and clearly demonstrate the project's impact on the lives of ordinary farmers and agricultural extension workers whilst growing economies through increased export earnings. These make a strong case for consolidated action, capacity development and coordinated regional responses by all stakeholders in tackling emerging transboundary plant pests and animal diseases.

I urge you to read through this bulletin to get an appreciation of how FAO, in collaboration with our partners, is implementing the SADC Regional Agricultural Policy to transform the agricultural export potential of the region through the STOSAR Project.

*I believe you will find it informative and valuable.*

*Enjoy reading!*



## Message from Domingos Gove, Director, SADC Food, Agriculture and Natural Resources (FANR)

Dear Readers,

The Southern African Region is fundamentally agro-based, a strong foundation that forms the basis for regional integration and sustained economic and social development.

For many years now, the Southern African Development Community (SADC) has been working closely with the Food and Agriculture Organization on the United Nations (FAO) Sub-Regional Office for Southern Africa. In this instance, for the STOSAR project to come into being, leading us to the project achievements that we are celebrating now, we are guided by a five-year Memorandum of Understanding (MOU) signed in September 2020.

I applaud the milestones that FAO and SADC Member States have achieved so far in the project to facilitate and support the implementation of the SADC Regional Agricultural Policy (RAP) that addresses agricultural information management systems and transboundary animal and crop pests and diseases.

As you will appreciate, a considerable amount of work has been done to stimulate agribusiness by enhancing access to regional and international markets for plant and animal products and commodities from the region, clearly illustrating the impact of a coordinated SADC regional response. Tanzania is an excellent case in point that is now exporting avocados to South Africa and India and is hopeful to soon access the market in China as a culmination of this project.

Hence, the articles and stories compiled here are aimed at serving as a measure of progress, illustrating the impact of current work and lessons learned during the implementation of the STOSAR project, and finding ways of continuously improving the sustainability and outcomes of this project.

As you will read, the SADC Secretariat now proudly houses a high-end server that connects to all Member States to generate strategic agricultural information in real-time, which will enable end-users to make informed decisions for policy development, emergency preparedness, and planning purposes.

I want to thank FAO and SADC Member States for their efficient implementation of the project, the European Union for financially supporting the implementation of the SADC RAP, and all the stakeholders involved for their unwavering commitment to ensuring the quality delivery of the STOSAR Project.

*I hope you enjoy reading this bulletin as much as I have.*



## Message from the Ambassador of the European Union to the Republic of Botswana and the Southern African Development Community (SADC), His Excellency Jan Sadek.

### EU Support towards Operationalization of the SADC Regional Agricultural Policy.

Dear Readers,

Food security and sustainable agriculture are major areas of commitment and engagement for the EU. Through the European Development Fund (EDF 11), the EU provided EUR 9 million to support the operationalization of the SADC regional agricultural policy (RAP). The RAP programme is helping the Southern African region to address long-term food security challenges. The RAP focuses on increasing food production; helping the poorest to have economic access to food; fighting under-nutrition and preventing and managing food crises.

The project has been running for four (4) years to date and we continue to note tremendous progress made in the areas of information and its management systems and the control of animal diseases and plant pests.

The capacity of SADC institutions to be able to collect and analyse real-time agricultural data has been improved through targeted training of key personnel in member states. The regional approach adopted in this project will help to standardize procedures for information management and sharing, help with food security communication and, hence rationalize decision-making with respect to managing food production.

Good coordination of the technical committees in the region has strengthened the management strategies for the targeted animal diseases and plant pests that often negatively affect the trade in animal and plant products. This project is making significant contributions to the capacity of SADC Member States for the containment and eradication of transboundary animal and plant diseases. For example, the project has contributed to the expeditious response to the multiple outbreaks of African swine fever (ASF) in some provinces of South Africa. Another noteworthy achievement is the ability to respond successfully to emerging crop pests, namely the African Migratory Locust, the Desert Locust in eastern Tanzania and the Brown Locust in parts of southern Namibia and South Africa.

The project is already having an impact on trade as demonstrated in the support provided to Tanzania to secure access to the Indian and South African export markets for avocados by facilitating surveillance, pest risk analysis, and the development of a pest list for the commodity.



Evidently, there are lessons to be learnt from this project, not least of which is its collaborative approach and the role that the Centres of Excellence contracted by FAO have had in the achievements realized so far. We should document these lessons to benefit our future interventions.

The EU remains committed to supporting interventions to improve the performance of the agriculture sector which will, in turn, contribute positively to food security, poverty reduction, economic growth, industrialization and social and political stability in the region.

The Green Transformation priority of the new EU cooperation with Sub-Saharan Africa (2021-2027) intends specifically to support the transition towards more resilient and sustainable Agri-food systems, including more affordable and healthier diets.

The support towards higher resilience to food security challenges is much more pertinent now following the Russian invasion of Ukraine. The continuation of the conflict will undoubtedly have significant impacts on the availability and access to fertilizer, and food commodities like wheat and maize; most countries in the SADC region depend on imports of these crucial items from the conflict area.

The project has demonstrated that through the cooperative approach between the EU, FAO and SADC, it is possible to bring change, address poverty and food security challenges and advance the implementation of the SADC Regional Agriculture Policy.

*I hope you enjoy reading the bulletin.*



## Brief Project Overview by Elma Zanamwe

### STOSAR Project Coordinator

The programme “Support Towards Operationalization of the SADC Regional Agricultural Policy” (STOSAR) has been financed by the European Union (EU) to the tune of EUR 9 million. The STOSAR has three components, two of which are implemented by FAO, that is: enhancing information on agricultural production, sustainability and competitiveness for evidence-based decision-making;

and improving access to markets through implementing plant and animal pests and diseases control strategies at the regional level.

Through this strategic partnership, FAO and the SADC Secretariat are working together to strengthen regional cooperation in addressing transboundary pests and diseases and reducing their negative effects on food security and trade. Accessing more lucrative external markets requires sound management of sanitary and phytosanitary risks, along with credible certification processes compliant with international standards; and to be competitive, in terms of quality, price, and regularity of supply.

This inaugural issue of the Bulletin showcases the project’s achievements. A publication of the FAO Subregional Office for Southern Africa, it provides a snapshot of information collected from FAO and other partners’ sources. It also captures recent and upcoming events being organized by FAO and its partners.

Equipped with the skills acquired from the project’s extensive training programme that was adapted from face-to-face to digital due to COVID-19 restrictions, and consisted of multiple capacity-building workshops, online courses, and webinars on topical issues, SADC countries are better able to respond to emerging disease threats. Through the Project countries benefited from technical assistance provided by six centres of excellence (CoE) in the region; the French agricultural research and international cooperation organization (CIRAD), the Universities of Pretoria and Stellenbosch in South Africa, the Agricultural Research Council of South Africa, the Centre for Agriculture and Bioscience International (CABI), and Eduardo Mondlane University in Mozambique.

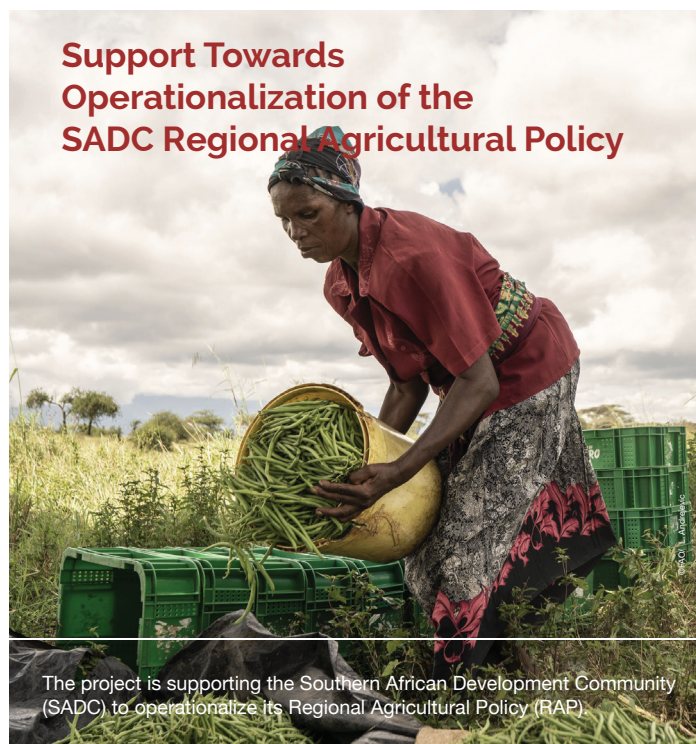
Some project highlights include; the establishment of the Regional Agricultural Information Management System (AIMS) comprised of 12 interdisciplinary modules and provides stakeholders access to timely and reliable agricultural data. This was complemented by the equipping and installation of a high-end computer server at SADC Headquarters linked to desktop computers across all Member States. Also supported was the procurement of equipment and reagents for surveillance and laboratory diagnosis, and the development of regional and national management strategies/ action plans for identified priority plant pests and animal diseases. The details of key achievements can be found under each project component.

Despite the uncertainties brought on by COVID-19, the project team has made good progress in achieving major milestones. My sincere appreciation goes to Patrice Talla, the FAO Sub-Regional Coordinator for Southern Africa, for his invaluable guidance and support. His excellent oversight has been instrumental in keeping the project team focused, motivated, and striving to deliver high-quality results. Appreciation and thanks also go to Mathew Abang, assisted by Zibusiso Sibanda, for leading the plant health component of the Project; Stuart Tippins for leading the AIMS component, supported by Aboubacar Daman and Fadi Mujahid; Berhanu Bedane for overseeing the animal health component, supported by myself, doubling up as the animal health expert and the Regional Coordinator for the STOSAR Project.

I would also like to express my gratitude for the support from the communications team, Sibusisiwe Ndlovu and Enrique Antón. A special thanks to the Project operations support provided by Louis Muhgirwa and Nhamo Mukute, and the administrative support by Rutendo Tinarwo and Priscilla Bukhwele.

As a final point, the support received from FAO Country Offices in the region, and all our partners; the SADC Secretariat, EU, CoE, and national STOSAR project focal points in the 16 SADC countries is highly valued.

*Thank you for taking the time to read this Bulletin.*



## Support Towards Operationalization of the SADC Regional Agricultural Policy

The project is supporting the Southern African Development Community (SADC) to operationalize its Regional Agricultural Policy (RAP).

<p><b>3 PROJECT COMPONENTS /</b></p>	<p><b>SADC REGION /</b></p> <p>Population: 345 million Countries: 16 Member States Land area: 556,781 km<sup>2</sup></p> <p><b>Livestock resources</b> FAOSTAT, 2016. (in millions)</p> <ul style="list-style-type: none"> <li>• Poultry: 419.8</li> <li>• Cattle: 74.9</li> <li>• Goats: 56.5</li> <li>• Sheep: 37.1</li> <li>• Pigs: 15.1</li> <li>• Equine: 1.9</li> </ul>
<p><b>i AGRICULTURAL INFORMATION MANAGEMENT SYSTEMS (AIMS)</b></p>	<p><b>PARTNERS /</b></p> <ul style="list-style-type: none"> <li>• SADC Secretariat</li> <li>• Governments of the SADC Member States through Ministries of Agriculture (MoA)</li> <li>• National Statistics Offices (NSO)</li> <li>• The World Organization for Animal Health (OIE)</li> <li>• FAO/WHO Codex Alimentarius Commission</li> <li>• European Commission for Control of Foot and Mouth Disease (EUFMD)</li> <li>• Regional International Academic and Research institutions</li> <li>• Inter-Africa Phytosanitary Council (IAPSC)</li> </ul>
<p><b>🌿 PLANT HEALTH</b></p> <p>Five transboundary plant pests and diseases</p> <ul style="list-style-type: none"> <li>• Tuta absoluta</li> <li>• Fall armyworm</li> <li>• Fruit fly</li> <li>• Maize Lethal Necrotic</li> <li>• Banana Fusarium (Foc TR4)</li> </ul>	<p><b>🐾 ANIMAL HEALTH</b></p> <p>Three transboundary animal diseases</p> <ul style="list-style-type: none"> <li>• Foot-and-mouth disease</li> <li>• Peste des petits ruminants</li> <li>• Highly Pathogenic Avian Influenza</li> </ul>

**STOSAR**

Agricultural information systems and market access



# ACKNOWLEDGEMENTS

This inaugural edition of the Support towards the Operationalization of the SADC Regional Agricultural Policy (STOSAR) Bulletin has been made possible through the contributions of all key project stakeholders and partners. This process was led and coordinated by the Food and Agriculture Organization of the United Nations (FAO) STOSAR Regional Project Coordinator, Elma Zanamwe, with the support of the Communications Specialist, Sibusisiwe Ndlovu. Key contributions were received from the STOSAR Project team, Zibusiso Sibanda (Plant Health Specialist); Fadi Mujahid (STOSAR Systems Developer); Aboubacar Daman (STOSAR Information Systems Specialist); and Enrique Anton (STOSAR Creative and Graphic Designer). Overall technical guidance for the publication has been provided by Mathew Abang (Plant Production and Protection Officer, FAOSFS), Berhanu Bedane (Animal Production Health Officer, FAOSFS), and Stuart Tippins (Information Technology Officer, FAOSFE).

Also acknowledged are the contributions from the six Centres of Excellence - the French agricultural research and international cooperation organization (CIRAD), the Universities of Pretoria and Stellenbosch in South Africa, the Agricultural Research Council of South Africa, the Centre for Agriculture and Bioscience International (CABI), and Eduardo Mondlane University in Mozambique); SADC Counterparts, Domingos Gove (SADC Director, FANR), Duncan Samikwa (Senior Programme Officer), Esaiah Tjelele (Programme Officer, Crops), Gaolathe Thobokwe (Programme Officer, Livestock), Alphonci Muradza (Information Systems Officer), Deepchandsingh Jagai (Senior Officer Statistics and Research), Ruth Zarafenosa (Research and Statistics Officer) and Michael Ernest (Information and Communication Technology Officer); and the Donor for the project, the European Union, H.E Ambassador Jan Sadek, and Tebogo Matlhare (Programme Officer).

The STOSAR Project also acknowledges the articles and photographs submitted by STOSAR focal persons from the SADC Member States. Namely, articles from Mushobozi Baitani (FAO STOSAR National Focal Point in Tanzania) and Abisay Coy, Ministry of Agriculture National AIMS focal (Tanzania); Kewaone Ntshonga (FAO Botswana); Nhamo Mudada (Ministry of Agriculture, Zimbabwe); Laura Hamusute (FAO Zambia); Phillipus Tobias (FAO Namibia). The team also acknowledges images used in this publication from Hyacine Kacou Amondji (FAO DRC), Solomon Motlatsi Molatela (Lesotho); Farzana Omar (Mozambique); Thabani Siziba Ministry of Agriculture (Zimbabwe); Koly Rasoamanana (FAO Comoros, Mauritius, Madagascar and Seychelles); Marcio Almeida (FAO Mozambique), Edward Mushota (Ministry of Agriculture Zambia), and Stewart Chikomola (FAO Malawi).

Access to resources for the animal health component was kindly shared with the STOSAR Project for capacity building and awareness-raising by Nadia Rumich of the European Commission for the Control of Foot-and-Mouth Disease (EuFMD).

# RECENT EVENTS

## Agricultural information management system (AIMS)

1

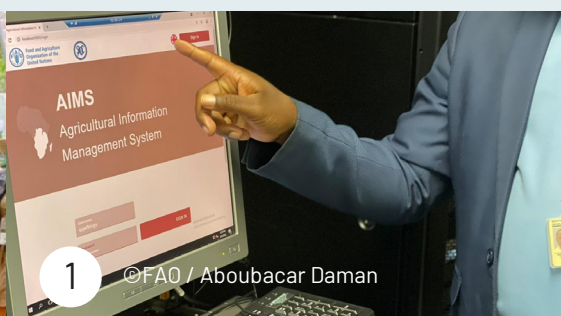
Following the installation and configuration of the high-end Computer Server at the SADC Headquarters, a **successful trial run for FAO technical leads of the AIMS** which has been developed by the STOSAR Project was done. This was to ensure the system performs at its optimum, generating timely agricultural data for strategic policymaking at regional level. Quality assurance through user acceptance testing was carried out to validate the system.

2

**Training on data collection, processing and validation is being rolled out.** The national workshops are attended by stakeholders from various government departments and institutions to ensure harmonization and standardization of data collection tools. All Member States received two desktops. This is to ensure infrastructure for setting up a functional AIMS at national level is in place.

3

**The STOSAR project was on display at the Zimbabwe International Trade Fair (ZITF),** where the Honourable Minister of Lands, Agriculture, Fisheries, Water and Rural Development, Dr Anxious Masuka, visited the exhibition. The Minister commended the STOSAR AIMS saying, "the AIMS will help with early detection of transboundary plant pests and animal diseases, and to determine their spatial distribution which will guide decision-makers on how best to manage outbreaks by generating information in real-time."



# Animal health

1

Did you know that both domestic and some wild animal species are susceptible to foot and mouth disease and zoonoses such as Rift valley fever and brucellosis?

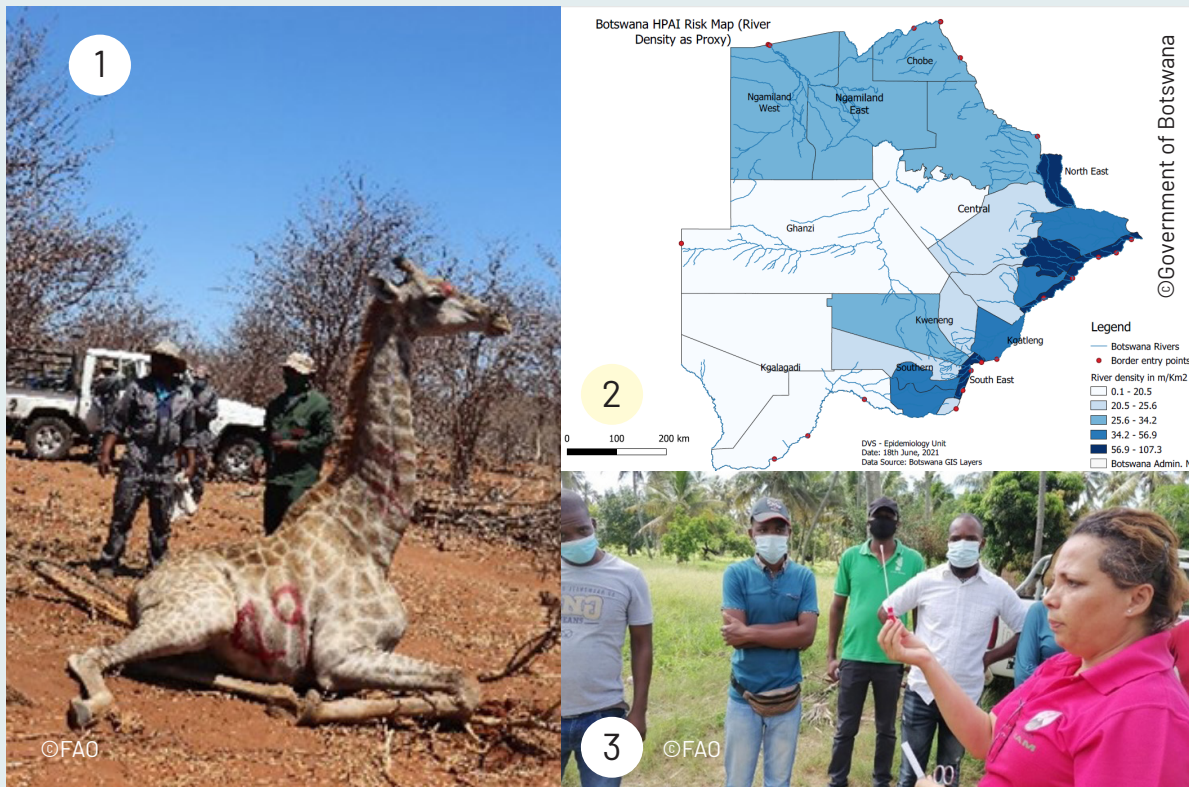
The STOSAR project in Botswana is working with the Department of Wildlife to tackle these diseases. Surveillance of cloven-hoofed wildlife species in Ngami Land and Chobe District including giraffe, buffalo and antelopes. The sampling of backyard chickens for avian influenza was also done.

2

The STOSAR project is capacitating SADC Member States to develop disease risk maps through a series of regional trainings on risk analysis and mapping in partnership with CIRAD. The risk maps help identify disease risk hotspots and will be used to develop national surveillance strategies. This ultimately optimizes the use of resources and improves the effectiveness of control measures being implemented.

3

FAO in Mozambique is supporting the Ministry of Agriculture to carry out surveillance and vaccination campaigns of goats and other small livestock for peste des petits ruminants (PPR). The support is through the provision of laboratory and surveillance equipment, reagents and consumables acquired by the project, along with, trainings on disease recognition and field sampling, and logistics.





## Plant health

1

In partnership with the Centre for Agriculture and Bioscience International (CABI), the STOSAR project is supporting the NPPOs of several SADC Member States to develop national plant pest management strategies for fall armyworm, tomato leaf miner, Oriental fruit flies, banana Fusarium wilt Tropical Race 4, and maize lethal necrosis disease. Implementation of the strategies will strengthen plant pest management in Member States.

2

In Lesotho, the STOSAR project is working with the Ministry of Agriculture to support local farmers to conduct surveillance by installing pheromone traps to tackle tomato leafminer, a challenging plant pest. This will contribute towards improved productivity to boost access to markets.

3

In the Democratic Republic of Congo the STOSAR project, working in collaboration with the Ministry of Agriculture has equipped extension workers and farmers with skills in the identification and surveillance of plant pests and animal diseases. This helps to manage emerging pests and diseases that reduce crop yields for farmers annually.



# Agricultural information management system (AIMS) component

## AIMS team



**Stuart Tippins**  
Technical Lead Information Technology



**Fadi Mujahid**  
System Developer



**Aboubacar Daman**  
Information Systems Specialist

Agriculture plays a central and strategic role in the development of the SADC as it is key to its economic growth. Monitoring the performance of the sector is highly dependent on a consistent and reliable data reporting mechanism easily accessible to stakeholders.

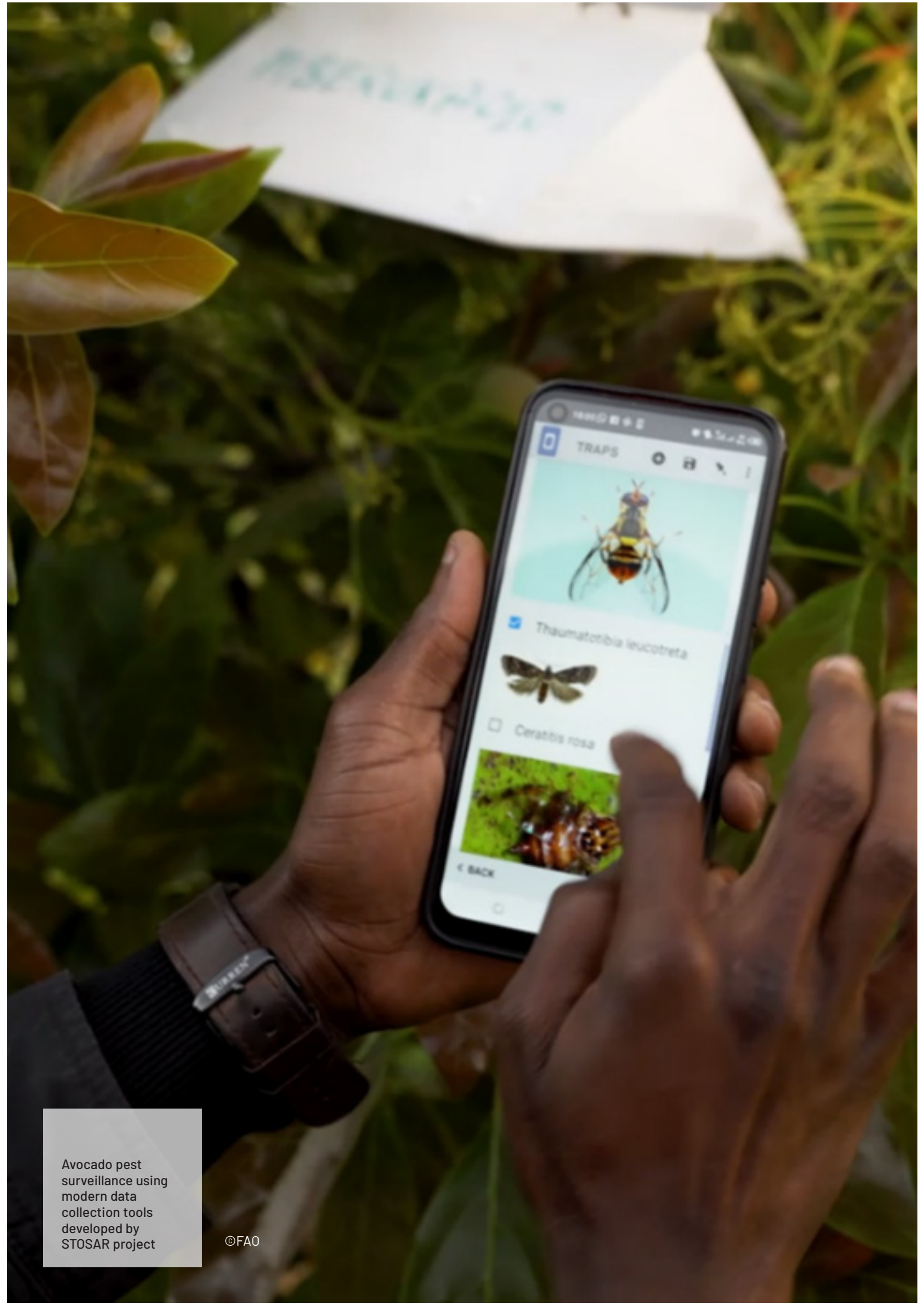
The development of the SADC Agricultural Information Management System (AIMS), is the result of a partnership between FAO, the SADC Secretariat and its 16 Member States, and the EU.

The AIMS is an integrated and multilingual system providing decision-makers with access to reliable and timely data on which to base policies, resource allocations, and emergency interventions. In addition, the AIMS provides the information needed for tracking progress made towards attainment of the food and nutrition security goals stipulated in key development policies such as the Regional Indicative Strategic Development Plan (RISDP), the Dar-es-Salaam Declaration on Agriculture and Food Security, relevant SADC protocols and commitments, and the RAP and Comprehensive Africa Agriculture Development Programme (CAADP).

Once the SADC AIMS is fully established and implemented at regional and national levels it will replace/upgrade the existing fragmented data collection practices, facilitate the timely exchange of reliable statistical data and information, and improve communication between key stakeholders.

Currently, the data content for the SADC AIMS, which can be expanded as required, covers a range of thematic areas, including; information on crop and livestock production, livestock numbers, populations vulnerable to food insecurity, national requirements for staple commodities, trade markers, animal diseases, plant pests and diseases, fisheries and aquaculture, forestry, national budgets, macro-economic and other socio-economic data.

The system allows authorized end-users to enter and update agricultural information and statistical data, and to generate analytical tables, country profile reports, graphics and maps over vertical and horizontal comparisons. Since the sources of data are primarily the Member States, the AIMS ultimately seeks to streamline and standardize reporting of relevant agricultural data to meet international reporting obligations. As a source of credible information, the AIMS potentially expands opportunities for regional trade in animals, and plant and animal products and is a progressive step toward improved access to international markets.



Avocado pest surveillance using modern data collection tools developed by STOSAR project

©FAO

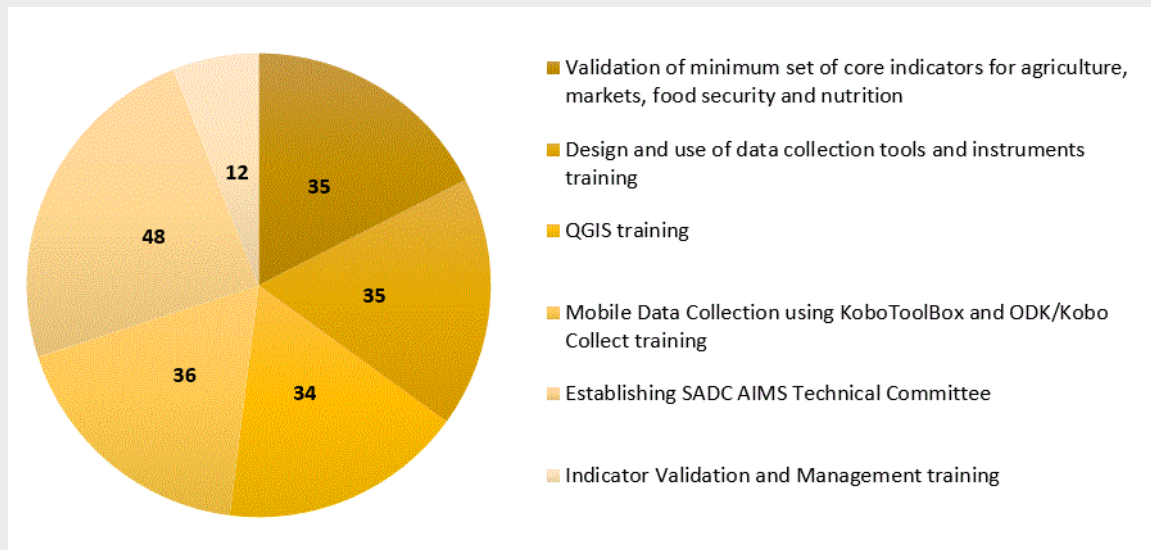


## SUMMARY OF KEY ACHIEVEMENTS

A synopsis of key achievements on the AIMS component and some best practices shared by the Member States can be found below.

- SADC Agricultural Information Management System (AIMS) Strategy developed and validated
- Manual of concepts for the set of core indicators developed and validated
- Harmonized data collection tools and instruments developed
- Functional and Technical Requirements for AIMS identified and documented
- Regional SADC Agricultural Information Management System (AIMS) with 12 modules, (Crops, Livestock, Aquaculture and fisheries, Forestry, Agricultural inputs, Socioeconomic, Land cover, National Accounts, Public Finance, Trade Quantity, Production value/price, Animal and Plant Health) developed
- Assessment of data and information needs at the national level were conducted in all MS
- SADC AIMS Server procured, installed and configured
- 32 desktops procured (2 per MS)
- Systems requirements for Early Warning System developed
- Systems requirements for Public Facing Website developed
- Quality assurance testing of SADC AIMS conducted, system validated by users, and User acceptance testing documentation produced
- AIMS System Administration, Maintenance and Installation Training material developed.

## Number of AIMS participants at regional workshops



## ARTICLE

### Strengthening Agricultural Information Management Systems (AIMS) for decision support in the SADC Region

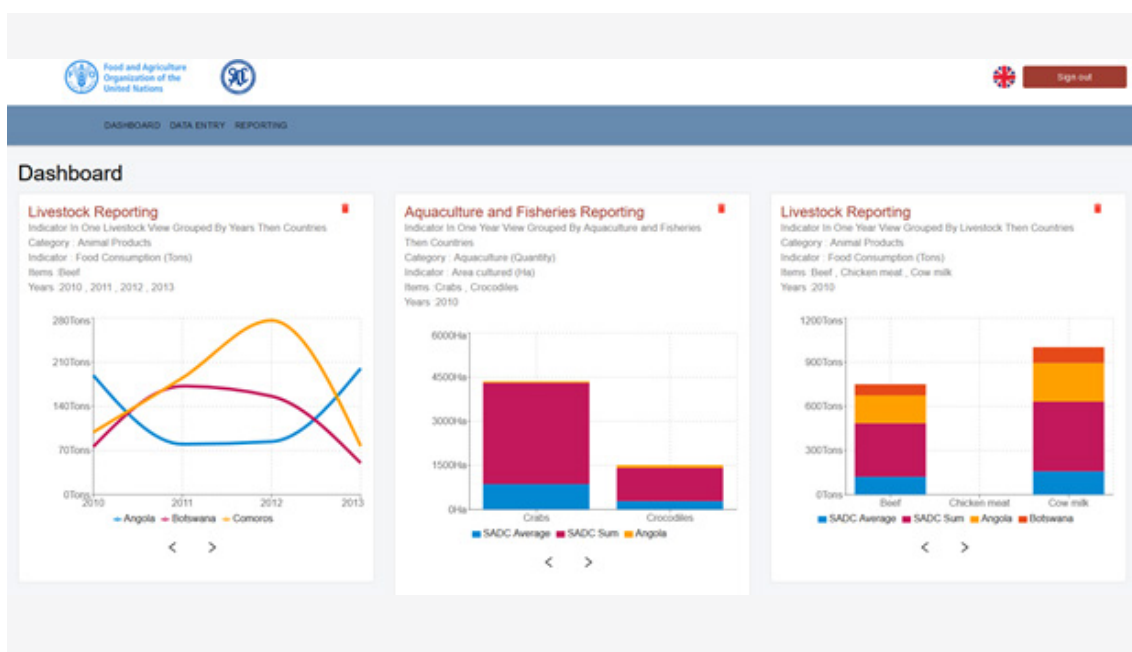
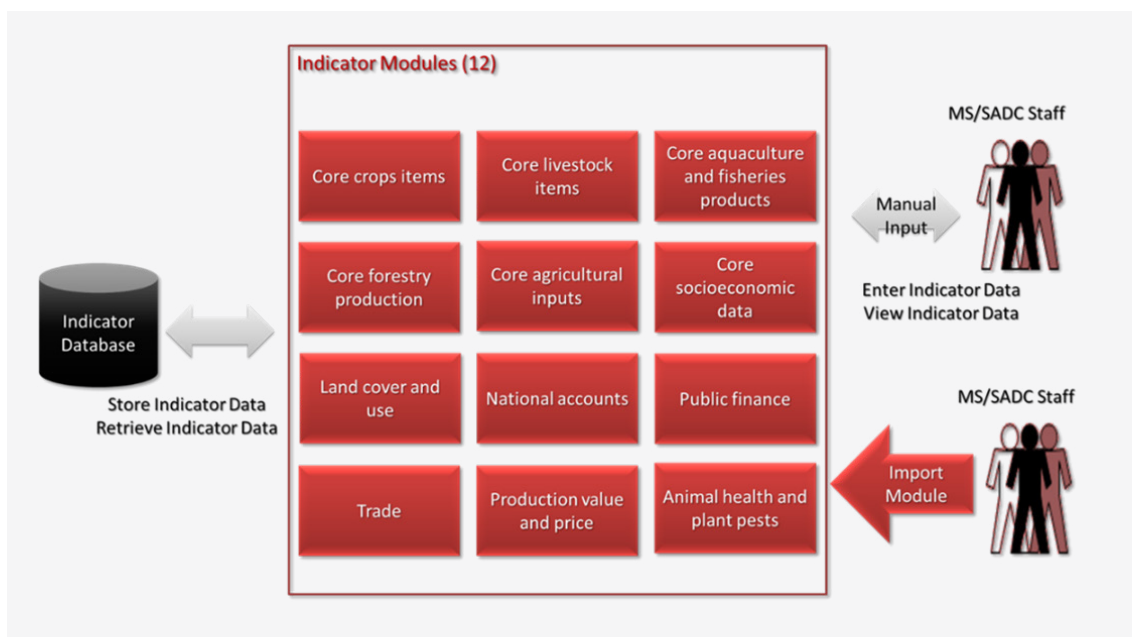
Effective agricultural information management systems and standardized data collection tools are essential in providing decision-makers with access to reliable and timely information on which to base policies, streamline resource allocation, and manage emergencies affecting producers and other value chain players in times of threats and crises. Through a long-standing strategic partnership to promote food security information systems, the SADC Secretariat, EU and FAO are working together to develop an integrated agricultural and food security information system and to advance the use of harmonized tools to strengthen the regional database. This directly contributes to SADC's main development objective of revitalizing agriculture, natural resources growth, increasing food security, and promoting rural development and regional integration.

Through the project 'Support Towards the Operationalization of the SADC Regional Agricultural Policy' (STOSAR), FAO is supporting the establishment of SADC's regional agricultural information management system (AIMS). The AIMS is an integrated and multilingual web-based application designed to facilitate the collection, analysis, dissemination, and archiving of information from various regional and national information systems. Once fully operational, the system will be adopted by the SADC Member States (MS) and is expected to gradually replace/consolidate the fragmented data collection practices (digital and paper-based), hosted across various ministries and or institutions of some MS.

In creating the AIMS platform, a minimum set of core indicators was identified through multiple consultative meetings with representatives from all 16 SADC Member States. The system is composed of 12 data entry modules covering twelve agricultural thematic areas linked to the minimum set of core indicators approved and validated by SADC member states.

The main functionalities of AIMS are:

- **Agriculture Data Entry.** The data entry functionality is designed to be flexible on one end, and easy to use on the other. The optimal design idea that was built through the design thinking process, was an Excel-like user interface with table grids to enter data in cells and navigate through them smoothly. The decision to use this design was widely welcomed by stakeholders as it achieves all design requirements, in addition to user familiarity which reduces the learning curve.
- **Data analytics and report generation.** AIMS has an embedded data analytics engine designed specifically to analyze information received from the Member States and make the information available to each stakeholder based on their needs. The data reporting user interface has a unique design that combines powerful features with intuitive usability.
- **Insightful dashboards.** Dashboard reporting is a visual representation of the key indicators of interest combined on one screen. Using reports selected from different modules and different screens, dashboard visuals provide an at-a-glance view to further enhance the reporting system user experience.



The Project has acquired and installed a Computer Server to host the AIMS at SADC headquarters and desktops for all 16 MS to ensure infrastructure for integrating AIMS at the national level is in place. In addition, FAO built the capacities of MS to use QGIS, and KoBo Collect software for data analysis, retrieval, visualization, and creation of maps. An AIMS Strategy and standardized data capture forms were developed and an AIMS technical committee (ATC) was set up.

Through the AIMS platform, the technical committee, and by using the equipment, knowledge and skills developed through the project, MS will be able to carry out activities, such as data entry and real-time report generation. Equally, decision-makers and other stakeholders will have access to timely and reliable data.

# SUCCESS STORY

## Generating Real-time, Reliable Agricultural Data

### STOSAR promotes use of digital data tools in solving farmers' challenges.

In solving any type of problem, historical information is key. It helps define the nature of the problem which then leads to sound practical solutions. Poor quality data and inadequate capacity to analyze it has always hindered the decision-making process. This is particularly true in dealing with challenges farmers face daily. For example, imagine tackling a problem related to the spread of a newly introduced disease, be it of animal or plant origin; the routine order of events would be to send experts to collect information on the location and the number of affected households (livestock mortality, or crop and income losses). In the absence of digital tools, this information is recorded on standard paper questionnaires making it time-consuming and expensive.

Plant pests, such as locusts, are extremely mobile and can spread in no time. Similarly, some animal diseases, such as Rift Valley fever, can spread quickly through vectors. By the time, experts collect data, enter it into computers, analyze it, and report on it to decision-makers, the disease landscape is no longer the same and collected information is redundant. In addition, the budget estimates for the response actions would be inadequate.

The implementation of STOSAR in Tanzania included, among other things, the rolling out of digital tools for data collection and analysis. Regional trainings on the use of smartphone apps and web portals for data collection and real-time reporting using ODK and the Kobo Toolbox were conducted. Ministry officials were also trained in heat mapping of disease spread and risk using Quantum GIS. The knowledge and skills gained were immediately put to use by digitizing paper-based questionnaires, setting up a mobile data collection system, and managing the data collection exercise, reducing time for data collection and entry, and increasing the overall accuracy of datasets.

Soon after the STOSAR-supported ODK training in 2021, officials from the Tanzania Plant Health and Pesticides Authority (TPHPA) developed digital tools for monitoring pests and diseases in avocado orchards. The tools were tailored to increase availability and access to quality real-time data helping Tanzania fulfil its obligations to trading partners in sharing quality data on pest infestation to obtain market access.

On deploying the digital tools, the TPHPA now receives information on trap catches for insect pests of economic importance, infestation levels of diseases and images of newly introduced pests for early warning purposes, countrywide and in real-time. The system helped provide evidence of low infestation of pests of quarantine importance to South Africa and India, which subsequently led to the aforementioned countries allowing imports of avocados from Tanzania. This is because they deemed the data reliable.

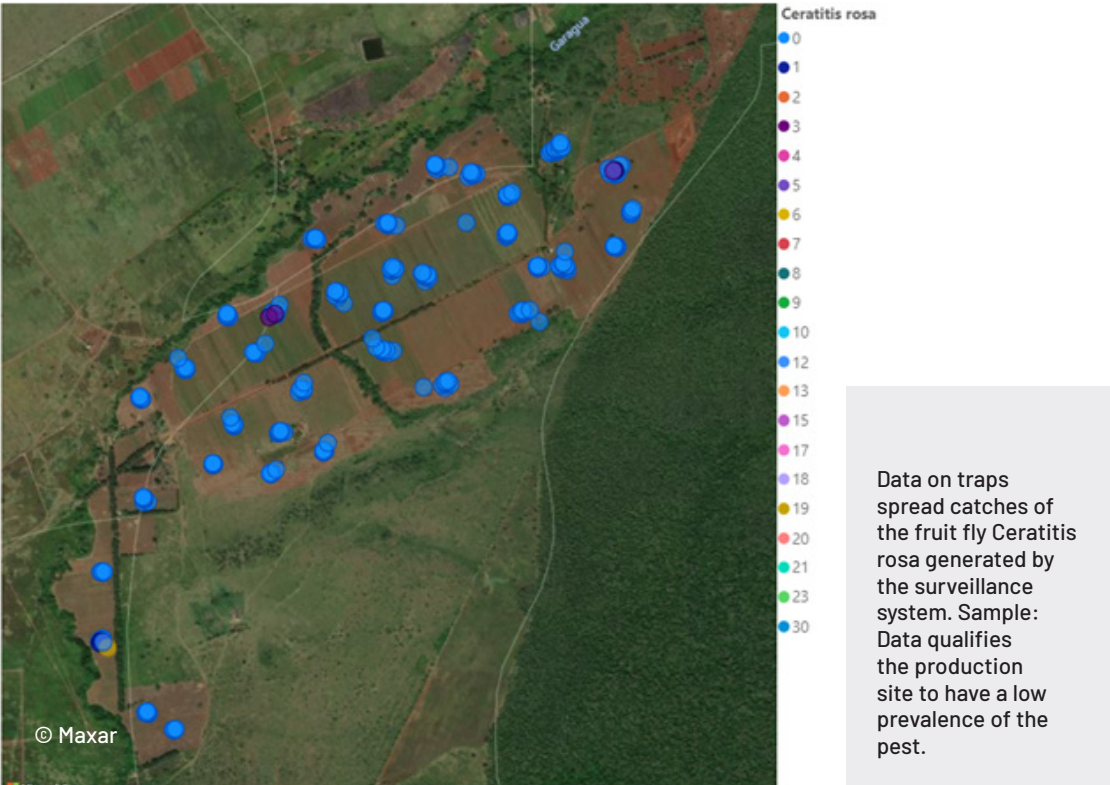
For livestock, the STOSAR project trained veterinary officers to develop the Livestock Quarantine Pests Surveillance System that monitors the occurrence of foot-and-mouth



disease (FMD), peste des petits ruminants (PPR), highly pathogenic avian influenza (HPAI), and the African swine fever (ASF). This data on the risk and spread of PPR was used to develop a risk-based surveillance plan, which, in turn, informed the requirements for the PPR vaccination campaign which was supported by the project. The information received helped to determine the appropriate number of vaccine vials to order and identified the risk hotspots based on the real-time data collected. About 3 million animals were vaccinated during the campaign.

As a result of the knowledge and skills gained from the STOSAR project, Tanzania continues to strengthen its national agriculture information management system (AIMS). The Ministry of Agriculture (MoA) intends to upgrade its Agriculture Trade and Market Information System by adding features that enhance data quality and improve evidence-based decision-making options for both the policy makers and its trading partners. A senior ICT Officer from the MoA, Mr Abisay Coy, said, “The STOSAR has revolutionized how we handle our agricultural data and statistics. We have reaped great benefits and intend to carry them forward with the same spirit”.

Tanzania is now positioned to make effective use of the SADC regional AIMS developed by the project and to identify opportunities and share the same with other SADC member countries.



## Useful AIMS resources

### AIMS Regional strategy documents

/ [SADC AIMS Regional Strategy](#)

/ [AIMS Minimum Set of Core Standards](#)

### Node.Js

/ Tutorials: [w3schools.com](#); [tutorialspoint.com](#)

/ Introduction: [nodejs.dev](#)

### React Js

/ Tutorials: [reactjs.org](#) ; [w3schools.com](#) ; [tutorialspoint.com](#)

### MySQL

/ Tutorials: [tutorialspoint.com](#) ; [w3schools.com](#)

### Sequelize

/ Tutorials: [zetcode.com](#) ; [Sequelize.org](#) ; [medium.com](#)

### React Datasheet

/ [GitHub.com](#) ; [CodeSandbox.io](#) ; [react-datasheet-grid.netlify.app](#)

### Recharts

/ [GitHub.com](#) ; [CodeSandbox.io](#) ; [recharts.org](#)

### Redux

/ [GitHub.com](#) ; [medium.com](#)

### Json Webtoken

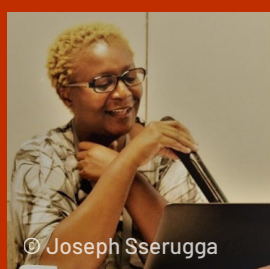
/ [npmjs.com](#) ; [GitHub.com](#) ; [jwt.io](#)

# Animal health component

## Animal health team



**Berhanu Bedane**  
Technical Lead Animal Health



**Elma Zanamwe**  
STOSAR Regional Coordinator and Animal Health Officer

Livestock plays a crucial role in livelihoods and national economies in the SADC region. The main driver for the rapid growth of this sub-sector is the increasing population, which is expected to double by the year 2055. Added to that is the urbanization and improved income and growing middle class, which is shifting increasingly towards consuming nutrient-dense food of animal origin. Should the current trend continue, the consumption of animal-source food will triple by the year 2050. Hence, sustainable development of the livestock sector is key to ensuring food security and nutrition in Southern Africa.

Although livestock production offers the region an opportunity for accelerated economic growth, there are, however varying degrees of development and commercialization of the different national livestock industries. This is partly reflected in the inconsistent application of international sanitary standards, and export market access by SADC Member States.

The STOSAR project is addressing the challenges constraining access to markets and trade, through innovative and effective management of animal diseases and food safety risks, by capacitating veterinarians, producers and value chain operators.

In addition, the project is strengthening regional coordination and inter-sectoral collaboration by creating information-sharing platforms/forums for private and non-governmental sectors to work together closely with governments to strengthen producer and value chain organizations. This in turn helps to improve compliance with sanitary requirements as the project continues to support governments to create the appropriate enabling policy and regulatory environment and frameworks. The active engagement, participation and financial support of the private sector are critical and cannot be understated, as they also contribute to the sustainability of the results of the project.







A young herd boy milks a goat in the early morning



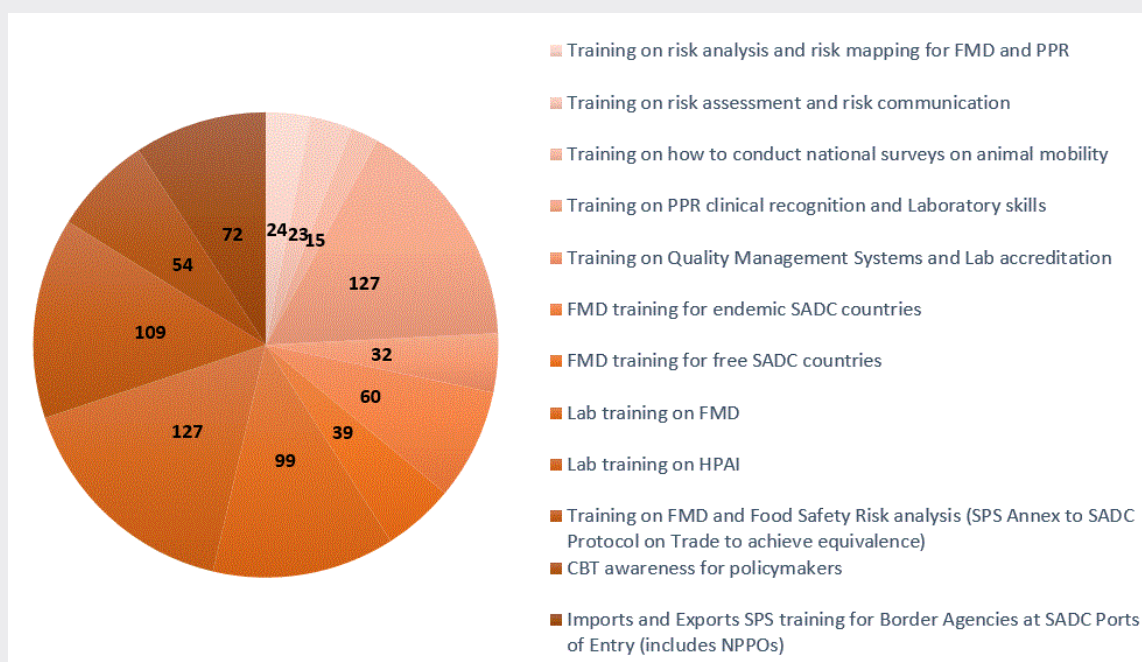


## SUMMARY OF KEY ACHIEVEMENTS

A summary of key achievements on the Animal health component and some human-interest stories shared by the Member States is below.

- Regional management strategies for FMD, PPR, and HPAI developed and validated
- A review of national and regional disease management strategies in the SADC region was carried out
- National control strategies/ implementation plans for priority diseases produced
- Harmonized regional surveillance and diagnostic protocols/SOPs for TADs developed
- 5 SADC Livestock Technical Committee meetings supported
- 3rd SADC Regional FMD roadmap meeting supported
- 2nd SADC Regional PPR Global Eradication Programme consultative meeting supported
- Commodity-based trade (CBT) application situation analysis for SADC region conducted
- CBT guidelines and related best practices disseminated
- Veterinary laboratories capacitated with laboratory and surveillance equipment, reagents and consumables
- Animal Disease Report for 2018 and 2019 drafted and submitted to the SADC EIS subcommittee for incorporation into the respective SADC Animal Health Yearbooks
- National risk maps for FMD, PPR, and HPAI developed by the SADC Member States
- Field sample confirmatory diagnosis supported
- Online training platform, training manuals, instructional videos, fact sheets, publications, templates, and handouts produced
- Policy brief on key SPS issues and recommendations to address constraints hampering the efficient movement of agricultural products (both plant and animal) at SADC regional ports of entry/exit drafted
- National trainings for veterinary officers, para-professionals and farmers supported

## Number of Animal Health participants at regional workshops





## ARTICLE

### Strengthening capacities of SADC Member States to high impact animal diseases

The livestock sub-sector of the Southern African Development Community (SADC) region is growing faster than most components of the agricultural economy. The main drivers are rapid population growth, urbanization, and the increased consumption of animal-source foods due to improved income and a growing middle class.

In recent years, novel foot and mouth disease (FMD) serotypes, and other emerging transboundary animal diseases (TADs) which include African swine fever, peste des petits ruminants (PPR) and highly pathogenic Avian Influenza (HPAI) have threatened the food security and safety of the 16 countries in the Southern Africa region. These diseases are responsible for significant livestock production losses and constrain socio-economic growth. In addition, the lack of appropriate policy and regulatory frameworks undermines compliance with sanitary requirements thereby limiting trade opportunities and access to regional and international markets. Apart from a handful of countries that enjoy access to lucrative beef export markets, most SADC Member States have not yet been able to unlock the full potential of their livestock resources.

Through the project, 'Support towards Operationalization of the SADC Regional Agricultural Policy' (STOSAR), FAO, in partnership with the SADC Secretariat and the European Union, is working to strengthen regional cooperation in addressing transboundary animal diseases, and reduce their negative effects on food security, nutrition and trade. Managing high impact transboundary animal diseases is complex, and can rapidly exhaust the capacities of countries for containment and eradication. It, therefore, requires a collective effort, coupled with innovative approaches, to manage animal disease and food safety risks that compromise food security and international trade. Development and adoption of harmonized standards and validated procedures adapted to the region's context are also necessary.



PCR machine for diagnosis of transboundary animal diseases.

Successful management of animal diseases depends largely on a regional approach, where countries with enhanced capacity work together in a coordinated manner. The STOSAR project embarked on strengthening the capacity of managing high impact animal diseases in three main areas. The first component is the development of regional strategies to manage FMD, PPR, and HPAI. The SADC Livestock Technical Committee (LTC) validated the strategies in November 2021, and final approval by the SADC Ministers responsible for agriculture and food security will ensure the adoption and domestication of the regional strategies. SADC



member states are also receiving technical support to develop national risk-based strategic plans and control programmes for these diseases.

The second main area of capacity development is the provision of key laboratory equipment, diagnostic kits, consumables and an assortment of laboratory reagents. The equipment has improved the quality and efficiency of laboratory diagnosis and enhanced field surveillance for priority animal diseases. For example, the national laboratory of Madagascar received a real-time reverse transcription-polymerase chain reaction (real-time RT-PCR) machine. Mr Donatien Ratenony, the Director of the Presidential Projects coordination unit said, “Acquiring this PCR equipment and reagents from the STOSAR project is very important to Madagascar. This equipment will enable the early diagnosis of viral infections and assist us to quickly institute control measures which will facilitate the export of animal products.”

The third and final area of capacity enhancement conducted by the STOSAR project is the training of field and laboratory experts in the recognition, diagnosis and control of major TADs. In partnership with two regional centres of excellence, the French Agricultural Research Centre for International Development (CIRAD), and the University of Pretoria, multiple training courses have been developed and delivered to benefit the SADC Member States.

Courses ranged from disease outbreak investigation, to risk mapping methodologies, clinical and laboratory detection of diseases, quality management systems and laboratory accreditation. Other training included food-safety risk analysis, contingency planning, and the design of risk-based surveillance protocols. The risk-mapping workshop introduced participants to the use of Q-GIS and disease risk maps based on animal demographics, movements and other variables. The project also developed and disseminated awareness materials, including a guide promoting Commodity Based Trade (CBT). This was presented to policy-makers from the SADC Member States. All in all, about 1 100 participants have been trained since January 2020.

Regarding the support provided to the SADC Member States through the STOSAR project, the Subregional Office for Southern Africa’s Animal Production and Health Officer, Berhanu Bedane, said, “The project has significantly contributed to the region’s livestock development programme by strengthening the capacities of Member States to better manage emerging animal health threats.” He also added, “FAO remains committed to addressing challenges that constrain the performance of the sector and, improving the management of transboundary animal diseases creates opportunities for regional trade in animals and animal products and is a progressive step towards accessing lucrative international markets”.

Working closely with the SADC Secretariat and its Member States, the STOSAR project continues to make a significant contribution toward the realization of SADC’s Regional Agricultural Policy (RAP) through the implementation of regional agricultural priorities, strengthening regional integration, and enhancing trade in plant and animal products and commodities.





# SUCCESS STORY

## Safeguarding livelihoods amid an outbreak

STOSAR project makes a difference in the lives of cattle farmers in the Zambezi region.

Conrad Lifatila, a small-scale livestock farmer in the Zambezi region of Namibia, never thought that his cattle would survive to see this day after the dreadful foot and mouth disease (FMD) engulfed the area. His cattle were getting thinner by the day as grazing became an almost impossible task due to the inflammation and sores in their mouths and on their feet.

“I thought they would all die because they were in such a terrible state, which gave me sleepless nights,” said Conrad. Desperate for ways to try to save his cattle, Conrad resorted to using a homemade remedy of bicarbonate of soda solution to wash the infected lesions on his cattle. Farmers in the area believe bicarbonate of soda has anti-inflammatory and antiseptic properties which aids in wound healing.

The local State Veterinary Office (SVO) and its staff swiftly moved into action during the peak of the FMD outbreak in the region working hard to normalize the situation. “Once we detected the outbreak, all hands were immediately on deck to contain the spread of this disease, which causes lameness, reduced milk production, and some mortalities in cattle,” said Michael Tiyeho, a State Veterinarian based in the region.



© FAO/ Philipus Tobias

“Our testing capacity has greatly improved. We were quick to identify the new FMD strain and contain its spread with the right vaccine”.

Michael Tiyeho  
State veterinarian.





"We are grateful for the laboratory skills training facilitated by the STOSAR that benefitted 47 laboratory personnel from the DVS in the Ministry of Livestock and Fisheries. In addition to this, the department also received diagnostic laboratory and surveillance equipment, reagents and consumables. To maintain the progress achieved so far, we will need more technical help in future".

Dr Paul Fandamu.

Laboratory equipment for disease diagnosis procured by the STOSAR project.





Michael attributes the improved detection and response to the FMD outbreaks in the region to the capacity development of veterinarians operating in the Northern Communal Areas, a high-risk zone for transboundary animal diseases.

The new FMD strain is the 'O' serotype that causes high infection rates amongst livestock in the region and can affect pigs and dairy cattle. The strain is believed to have originated from a neighbouring country as a result of the illegal movement of cattle by communities living along the borders of the two countries in search of good grazing.

“The STOSAR project has made a difference in the management of transboundary animal diseases in our region, and we are very grateful for the support,” Michael concluded.

Through this intervention, Conrad's herd of cattle received timely FMD treatment and have since fully recovered from the disease. The animals are now thriving. “Thanks to the STOSAR project, my livestock, which is my source of livelihood, did not succumb to the FMD outbreak and I was fortunate not to lose any animals. My herd of cattle is now flourishing,” he added with a smile.

## SUCCESS STORY

### Laboratory Diagnostic Skills Training: Game Changer for Animal Disease Management in Zambia

**Early disease diagnosis helps Zambia scale-up control of infectious animal diseases.**

Lack of capacity was a significant setback for the Zambian Ministry of Livestock and Fisheries, which is supposed to be the first line of defence for detecting and controlling the emergence of infectious transboundary animal diseases in the country.

Being under-resourced laboratory and field veterinary personnel could not carry out active surveillance in areas with endemic animal diseases as they lacked the necessary laboratory equipment and skills. Thanks to funding from the European Union (EU), the project, ‘Support Towards Operationalization of Regional Agricultural Policy (STOSAR) being implemented by FAO in collaboration with the Government of Zambia, has transformed this situation.

“The correct diagnosis in the lab is needed to confirm if a disease is present or absent in a sample. Not knowing what methods to use to make a correct diagnosis for animal diseases by laboratory personnel was a challenge and contributed to the spread of transboundary diseases here,” said Dr Paul Fandamu, the national focal point for the animal health component of the STOSAR Project at the Department of Veterinary Services (DVS).



“We are grateful for the laboratory skills training facilitated by the STOSAR that benefitted 47 laboratory personnel from the DVS in the Ministry of Livestock and Fisheries. In addition to this, the department also received diagnostic laboratory and surveillance equipment, reagents and consumables. To maintain the progress achieved so far, we will need more technical help in future,” Fandamu added.

Through STOSAR’s intervention, laboratory personnel from Zambia’s Department of Veterinary Services can now diagnose foot and mouth disease (FMD), Peste des petits ruminants (PPR) and monitor occurrences of highly pathogenic avian influenza (HPAI).

The early detection and diagnosis of transboundary animal diseases through active and passive surveillance has helped Zambia scale up efforts to control the spread of infectious transboundary animal diseases.



## Useful animal health resources

### Regional Animal Health Strategies

- / SADC foot-and-mouth disease (FMD) [strategy](#)
- / SADC One Health Influenza [strategy](#)
- / SADC Pest des petits ruminants (PPR) [strategy](#)

### Posters \*

- / FMD. Recognizing the disease [poster](#)
- / FMD. Disease spread [poster](#)
- / What is FMD and how to react [poster](#)
- / PPR - Pest des petits ruminants [poster](#)
- / Protocol for using LFDs in FMD diagnosis with viral inactivation [poster](#)
- / RVF. Rift Valley Fever [poster](#)

### Videos \*

- / What you need to know about FMD [video](#)
- / FMD clinical examination [video](#)
- / FMD. Probang sample collection [video](#)
- / FMD. Collecting diagnosis samples [video](#)
- / Biosecurity measures when visiting premises suspected of FMD [video](#)
- / Biosecurity when a farmer knows about FMD (Swahili) [video](#)

### EuFMD lesion library \*

- / [eufmdlearning.works](http://eufmdlearning.works)

### EuFMD Open access courses \*

- / [eufmdlearning.works](http://eufmdlearning.works)
- / [Veterinary para-professionals training](#)

### EuFMD Flickr / Gallery \*

- / [EuFMD flickr](#)

### EuFMD Podcasts \*

- / [EuFMD podcasts](#)

### FAO editable posters and leaflets

- / [link](#)

\*Resources were kindly shared with the STOSAR Project for capacity building and awareness-raising by the European Commission for the Control of Foot-and-Mouth Disease (EuFMD).

# Plant health component

## Plant health team



© Mathew Abang  
**Mathew Abang**  
Technical Lead Plant Health



© Zibusiso Sibanda  
**Zibusiso Sibanda**  
Plant Health Specialist

FAO estimates that between 20 and 40 per cent of global crop yields are reduced each year due to the damage caused by plant pests and diseases.

Once a pest becomes established, it is almost impossible to eradicate and is expensive to manage. Hence, effective control and management of transboundary plant pests of economic importance can be achieved through the development and implementation of harmonized pest management strategies that are aligned with regional and international agreements.

Plant health plays a critical role in the improvement of food security and trade in food and agro-products. Crop pests, such as tomato leafminer (*Tuta absoluta*), Oriental fruit fly, maize lethal necrosis disease, fall armyworm, banana Fusarium wilt (Foc TR4) and cassava virus diseases pose a real threat to the food security of countries in the SADC region. These pests and diseases have a negative economic impact, reducing productivity, decreasing trade opportunities, and worsening post-harvest losses. In addition, there is the continuous risk of outbreaks of emerging pests and

diseases such as the African Migratory Locust currently affecting various countries in the region, compounding the food insecurity of Member States.

The plant health component of the STOSAR Project supports SADC Member States in solving phytosanitary issues, increasing productivity and exports, and preventing the entry and spread of pests of economic importance. These actions will benefit the Governments of Member States, farmers' associations, individual farmers and consumers, including other players along the agro-processing value chain.







Support to local farmers to conduct surveillance by installing pheromone traps to tackle tomato leafminer.

© FAO



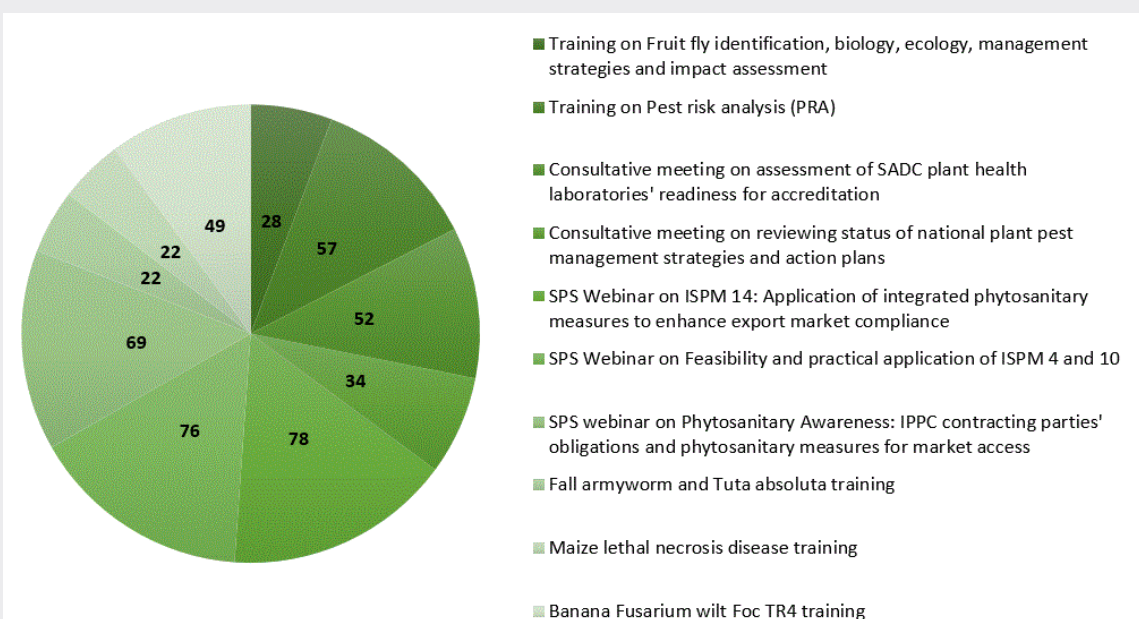


## SUMMARY OF KEY ACHIEVEMENTS

A synopsis of key achievements and some human interest stories shared by the Member States can be found below.

- Regional pest management strategies for fall armyworm, tomato leaf miner, Oriental fruit flies, banana Fusarium wilt Tropical Race 4 (Foc TR4), and maize lethal necrosis disease (MLND) developed and validated
- Six (6) SADC PPTC meetings and preparatory meetings for the Commission of Phytosanitary Measures (CPM) Session supported
- Alternative IPM options for plant pests and diseases in the SADC region reviewed
- Protocols for collection, labelling, packaging and shipment of specimens for identification of plant pests and diseases, and surveillance tools developed
- Technical guidance provided for pest list development, and national pest lists for eight SADC Member States for priority tradeable commodities developed
- Online training platform, training manuals, instructional videos, fact sheets, policy briefs, templates, and handouts produced
- National pest management strategies including general IPM strategies for priority pests and diseases in line with the regional plant health strategy and the IPPC and ISPMs produced
- Tanzania secured the Indian and South African export market for Avocados by conducting surveillance, documenting a virtual tour of avocado orchards, carrying out PRA and developing a pest list. Tour was a requirement to access market.
- Field sample identification and confirmation supported
- MS access to and use of CABI PRA Tool, Crop Protection Compendium, Invasive Species Compendium, and Horizon Scanning Tool facilitated
- SPS webinars videos produced
- Guide to Phytosanitary Procedures for SADC region produced
- National trainings for NPPOs supported
- Review report for status of national and regional pest management strategies in the SADC region produced

### Number of Plant Health participants at regional workshops





# SUCCESS STORY

## Tanzania: Supporting Avocado Producers to Meet South Africa's Export Standards

Achieving key milestones, one giant step at a time.

For over 10 years, Tanzania has tried to gain access to the avocado market in South Africa. The country is well-positioned to export produce to South Africa, especially during the months of December to February. During this period, there is a significant drop in the availability of the locally grown Hass and Fuerte varieties. However, the problem of fruit flies, more specifically, the menacing *Bactrocera dorsalis*, and the more recent challenges with the false codling moth created a barrier to this opportunity.

Fast forward to 2021, Tanzania now has avocado market access to South Africa. By leveraging on the technical and financial support from the STOSAR Project, FAO supported the country through its National Plant Protection Organization, the Tanzania Plant Health and Pesticides Authority, helping them to meet international standards for production and export through conducting surveillance by the use of appropriate pest traps and digital tools to monitor the pests, carrying out pest risk analysis, and developing a pest list. Additionally, False codling moth mating disruption operations were carried out in avocado orchards owned by establishments identified as potential exporters to South Africa. An audit of packhouses was also performed to ensure a complete systems approach to pest management is adhered to by exporters.

All approved orchards and packhouses were registered and provided with a traceability code.



Fruit fly traps in an avocado orchard



Avocado fruit being packaged for export in Tanzania



Due to movement restrictions imposed in response to the COVID-19 pandemic, South African authorities could not travel to Tanzania to conduct an in-person audit. A virtual audit was done through a portal with similar features to YouTube.

After a thorough audit, South African authorities were satisfied with the food safety (Codex) and phytosanitary measures (ISPMs) in place. They notably praised the surveillance system in place and the deployment of digital technology to help facilitate phytosanitary issues.

On the 16th of November 2021, Mr Jan Hendrick Venter, the Director for Plant Health at the Department of Agriculture, Land Reform and Rural Development (DALRRD) in South Africa issued an official letter granting Tanzania access to their avocado market.

FAO applauds the concerted effort by all partners that have led to this remarkable achievement. It remains committed to supporting the NPPO to maintain its export status.

## SUCCESS STORY

### **Chobe farmers put a stop to informal seed imports to tackle transboundary plant pests and diseases**

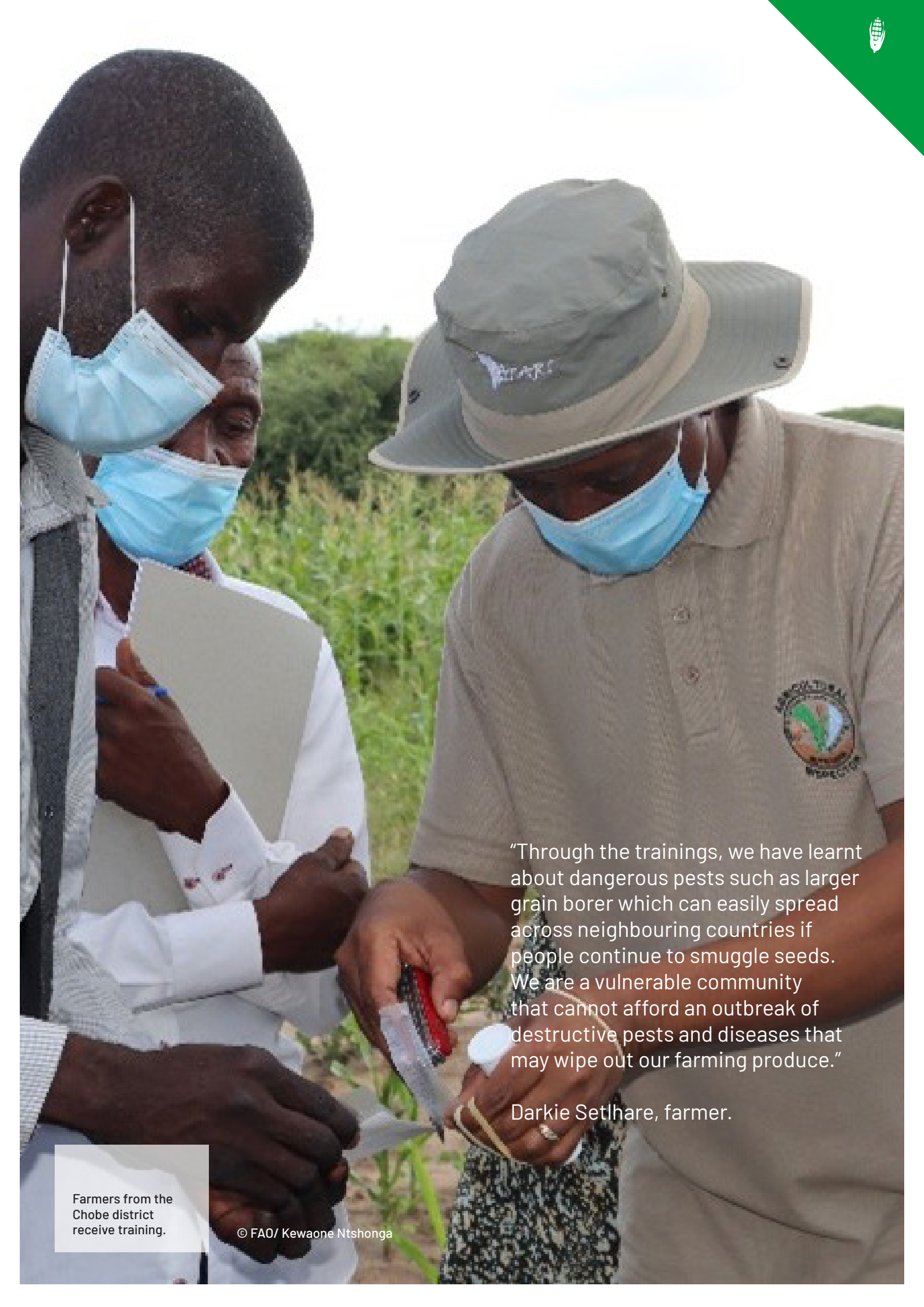
The Chobe River's fertile soils and abundant waters have proven to be the umbilical cord that supports the livelihoods of subsistence and commercial farmers along the Chobe enclave.

The Chobe enclave is renowned for being home to teeming herds of wildlife, and one would least expect to find any agricultural activity along the riverbank. Nestled in North-Western Botswana, the Chobe District is bordered by three countries: Namibia, Zambia, and Zimbabwe.

Human cross border movement is inevitable. The exchange of seeds, seedlings, and other agricultural produce between communities settled along the river has contributed to the spread of plant pests and diseases, resulting in reduced harvests.

To safeguard its biosecurity and meet its phytosanitary requirements, the Botswana Ministry of Agricultural Development (MOA) and Food Security in partnership with the Food Agriculture Organization of the United Nations (FAO) are tackling transboundary pests and disease through the European Union (EU) funded 'Support Towards the Operationalization of the SADC Regional Policy'(STOSAR) Project.

Farmers nestled in the Chobe Enclave have benefitted from a series of trainings being rolled out by the STOSAR Project, highlighting the dangers of bringing in seeds from neighbouring countries through informal channels in pursuit of cheaper seed varieties.

A photograph showing three men in a field. One man in the foreground is wearing a grey polo shirt, a grey bucket hat, and a blue surgical mask. He is holding a red-handled knife and a small white object. Two other men, one in a white shirt and one in a grey shirt, are looking at him. They are all wearing blue surgical masks. The background is a field of green crops under a bright sky.

"Through the trainings, we have learnt about dangerous pests such as larger grain borer which can easily spread across neighbouring countries if people continue to smuggle seeds. We are a vulnerable community that cannot afford an outbreak of destructive pests and diseases that may wipe out our farming produce."

Darkie Sethlare, farmer.

Farmers from the Chobe district receive training.

© FAO/ Kewaone Ntshonga





“Through the trainings, we have learnt about dangerous pests such as larger grain borer which can easily spread across neighbouring countries if people continue to smuggle seeds. We are a vulnerable community that cannot afford an outbreak of destructive pests and diseases that may wipe out our farming produce,” said Darkie Setlhare, who farms along the Chobe River.

“Our proximity to the river does not allow us to use synthetic pesticides as this endangers the health of the ecosystem. Therefore, it is important that we prevent any possible introduction and spread of pests and diseases by following proper import procedures,” said Setlhare.

Through the STOSAR Project, farmers have undergone training on the importance of transboundary plant pests and diseases such as maize lethal necrosis disease, banana Fusarium Wilt and the Larger Grain Borer that have proved to be a thorn in the flesh for farmers in other parts of the continent by destroying harvests.

“The project has helped the country to remain vigilant and to manage the spread of plant pests and guard against the entry, and establishment of new transboundary pests”, said Lesedi Modo, Assistant FAO Representative for Programmes in Botswana. She added, “It supported surveillance activities, development of national pest management strategies for tomato leaf miner, maize lethal necrosis, banana Fusarium wilt and oriental fruit fly, and validation of the fall armyworm strategy”. Lesedi concluded by saying, “The strategies will facilitate the sustainable control of these pests and FAO will support the Ministry of Agriculture to implement the strategies”.

Farmers in the Chobe Enclave expressed gratitude for efforts by FAO and the MoA to sensitize them on the dangers of smuggling seeds and seedlings from neighbouring countries without following the proper phytosanitary procedures.

## ARTICLE

### Biosecurity of plants critical for Zimbabwe’s economic development

The STOSAR project has contributed to solving phytosanitary issues in Zimbabwe to increase productivity and exports and prevent the entry and spread of pests of economic importance through the capacity building of officials from Zimbabwe’s National Plant Protection Organization.

Once such training was held on Pest Risk Analysis (PRA) targeting plant health inspectors from around the country. This training was rolled out by Nhamo Mudada, an official from the Plant Quarantine Services Institute under the Ministry of Lands, Agriculture, Fisheries, Water and Rural Development.

“These trainings that have been extended to our local plant health officials have increased awareness and understanding on the importance of protecting our plant resources from pests.



Staff can now fulfil their mandate to protect plant biosecurity which contributes positively to the Government of Zimbabwe's Vision 2020," said Mudada.

The STOSAR project, collaborating with the Centre for Agriculture and Bioscience International (CABI), provided Pest Risk Analysis (PRA) tools and rich resources for course participants to tap into.

Georgina Kudakwashe, the Principal Plant Health Inspector in charge of the Plant Import and Export Office at Mazowe Plant Quarantine Station, was one of the beneficiaries of this training.

"The training organized by FAO was beneficial to plant health inspectors, like me, and I can now confidently conduct PRA within the shortest period, unlike before," she said. "Following the training, I was given additional responsibilities at one of the biggest plant quarantine stations in Zimbabwe. Equipped with this new knowledge, I have also managed to train four other plant health inspectors who can now capably conduct PRA exercises", declared Georgina.

"The protection of plant resources from exotic plant pests is essential to the economic development of our country. We hope to achieve this by effectively managing plant pests and diseases occurring in Zimbabwe and by instituting appropriate biosecurity and phytosanitary measures," concluded Georgina.



© Nhamo Mudada

Plant health inspectors from Zimbabwe receive Pest Risk Analysis training.

## Useful plant health resources

### Regional Animal Health Strategies

/ [English](#)

/ [French](#)

/ [Portuguese](#)

### CABI on-line tools

/ Crop protection compendium [cabi.org](http://cabi.org)

/ Invasive species compendium [cabi.org](http://cabi.org)

/ Horizon scanning tool [cabi.org](http://cabi.org)

/ Pest risk analysis tool [cabi.org](http://cabi.org)

### IPPC calendar

/ Calendar of events for [2022](#)

### Stellenbosch University banana fusarium wilt training platform

/ [link](#)

# Communications STOSAR

## Communications team



**Sibusisiwe Ndlovu**  
Communications specialist



**Enrique Antón**  
Creative and graphic designer

STOSAR Project Communications has a critical function to ensure that the project is visible for reporting project progress and impact whilst also developing outreach materials to various counterparts at regional and Member State levels.

The Comms Team has played a critical role in ensuring that the brand guidelines for our stakeholders, the European Union (EU), the Southern Africa Development Community (SADC), SADC Government Member States, Centres of Excellence, and FAO are adhered to and maintained to the highest standards.



# SUMMARY OF KEY COMMUNICATIONS ACHIEVEMENTS

## Newspaper articles

The mass media has been proactively engaged in raising the STOSAR project and donor profile in newspaper publications with a broad reach. Leveraging good media relations, an opinion piece by the Project Coordinator was published in Zimbabwe's leading newspapers, where the FAO Subregional Office is based.

- [Sustainable agricultural information management system tops SADC project](#)
- [FAO seeks to unlock and boost farmers' access to markets](#)
- [FAO promotes access to reliable agricultural information](#)
- [SADC poised to boost agriculture](#)

## FAO website articles

FAO website articles have been published to showcase STOSAR's regional activities and achievements in the following pieces.

- [FAO strengthens the management capacities of SADC Member States for high impact animal diseases](#)
- [Tackling transboundary animal diseases to enhance access to export markets in southern Africa](#)
- [FAO and SADC facilitate the Development of National Pest Management Strategies through the EU-funded STOSAR Project](#)

## Flickr account

The STOSAR Project has a vibrant [Flickr account](#) with a selection of photos of various project activities. The STOSAR Flickr account also includes an image library containing images of key transboundary animal and plant pests and diseases that have been documented in the region for reference purposes.

## STOSAR banners

The STOSAR X-frame project banners were developed for each of the three components and one generic banner. These approved designs can be viewed and accessed [here](#).

## Fact sheet

An A5 STOSAR project fact sheet was developed and can be downloaded for further dissemination [here](#).

## Video clips

The Communications Team is supporting some SADC Member States, including Mauritius and Botswana, to develop video clips on STOSAR supported interventions.

## Twitter

Twitter is a strategic tool for disseminating project information and enhancing the visibility of the project whilst tagging key stakeholders and partners. The [@FAOAfricaSFS](#) Twitter handle is currently being used to share project tweets.

You can also follow the #STOSAR hashtag for project updates on the platform. Social media graphics have been developed with EU, SADC and FAO logos to enhance project visibility.

## Visibility material

A communications and visibility budget was availed to each SADC Member State through the STOSAR project. Some visibility materials developed so far include banners, IEC materials, flyers, stickers, branded stationery, caps, golf and khaki shirts used at the STOSAR exhibition during the Zimbabwe International Trade Fair (ZITF). With regards to IEC material development, Member States that include Botswana, South Africa and Tanzania among others, developed outreach material in vernacular languages targeting local farmers.

Food and Agriculture Organization of the United Nations

## STOSAR - Support Towards the Operationalization of the SADC Regional Agricultural Policy Project

The EU-funded STOSAR project is supporting the Southern African Development Community (SADC) to operationalize its Regional Agricultural Policy (RAP). The Food and Agriculture Organization of the United Nations (FAO) is overseeing implementation of two components of the SADC RAP whose goal is to improve agricultural production, productivity, competitiveness, food and nutrition security, and agro-industry development. This is to be achieved through two result areas:

- enhancing information on agricultural production, sustainability and competitiveness for evidence-based decision-making, and
- improving access to markets through implementation of plant and animal pest and disease control strategies at the regional level.

Through the intervention, FAO seeks to develop the long-term capacities of Member States and SADC Secretariat by strengthening the management of agricultural information systems, and improving the control of five emerging plant pests and three high-impact transboundary animal diseases. Establishing a harmonized regional agricultural and food security information system (AIMS) in SADC will facilitate collection, analysis, and dissemination of comparable agricultural information and statistical data, further enhancing compatibility of the various information systems of Member States.

Agricultural information systems and market access  
FAO EDF 11 Project GCP/SFS/004/EC

### BENEFICIARIES /

Member States of the Southern African Development Community (SADC) namely: Angola, Botswana, Lesotho, Madagascar, Malawi, Mauritius, Mozambique, Namibia, Seychelles, South Africa, United Republic of Tanzania, Zambia, Zimbabwe.

### PARTNERS /

SADC Secretariat, Governments of the SADC Member States through MoA, National Statistics Organization (NSO), The World Health Organization (WHO) Codex Alimentarius Commission, European Commission for Control of International Diseases (EU/CFMD), International Academic and Research Institutions, and Inter-Africa Phytosanitary Council (IAPSC)

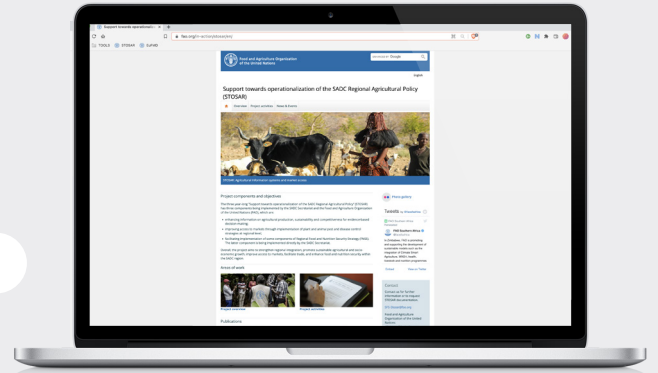
### SADC REGION /

Population: 345 million  
Countries: 16  
Land area: 556 791 km<sup>2</sup>

### Implementing entities

FAO, Agricultural Research Council South Africa, Citrus, Eastern Cape, Mozambique University, Universities and Research Institutions, and South African Council (IAPSC)

Donor: European Union  
Funds: EUR 42 million  
Starts: December 2018  
Ends: August 2022



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3<sup>rd</sup> ANNUAL REPORT  
August 2020 / July 2021  
GCP/SFS/004/EC - STOSAR

Components 1 & 2  
Agricultural Information Management Systems & Access to Markets

4<sup>th</sup> ANNUAL REPORT  
DECEMBER 2019 / NOVEMBER 2020  
GCP/SFS/004/EC - STOSAR

Components 1 & 2  
Agricultural Information Management Systems & Access to Markets

5<sup>th</sup> PROGRESS REPORT  
DECEMBER 2020 / MAY 2021  
GCP/SFS/004/EC - STOSAR

Components 1 & 2  
Agricultural Information Management Systems & Access to Markets

3

Food and Agriculture Organization of the United Nations

## Support Towards Operationalization of the SADC Regional Agricultural Policy

is supporting the Southern African Development Community to operationalize its Regional Agricultural Policy (RAP).

### PROJECT COMPONENTS /

- CULTURAL INFORMATION MANAGEMENT SYSTEMS (AIMS)
- TRANSBOUNDARY PESTS AND DISEASES
- AGRICULTURAL INFORMATION SYSTEMS AND MARKET ACCESS

### SADC REGION /

Population: 345 million  
Countries: 16 Member States  
Land area: 556,791 km<sup>2</sup>

### Livestock resources FAOSTAT, 2016. (in millions)

- Poultry: 419.8
- Cattle: 74.9
- Goats: 58.5
- Sheep: 37.1
- Pigs: 15.1
- Equine: 1.9

### PARTNERS /

- SADC Secretariat
- Governments of the SADC Member States through Ministries of Agriculture (MoA)
- National Statistics Offices (NSO)
- The World Organization for Animal Health (OIE)
- FAO/WHO Codex Alimentarius Commission
- European Commission for Control of Foot and Mouth Disease (EU/CFMD)
- Regional International Academic and Research Institutions
- Inter-Africa Phytosanitary Council (IAPSC)

### Plant health

Strengthening capacity of the Southern African Development Community (SADC) Member States to:

- Improve yields of plants and plant products
- Increase access of plant products to export markets
- Improve control of transboundary plant pests and diseases

STOSAR Agricultural information systems and market access  
SFS-Stosar@fao.org  
Visit our website [www.fao.org/in-action/stosar](http://www.fao.org/in-action/stosar)

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1. Stosar leaflet
2. STOSAR website
3. Examples of reports
4. Examples of banners

# UPCOMING EVENTS

## **13-16 June**

CIRAD Webinar Part II: Designing surveillance and control strategies based on risk maps .

## **15-17 June**

Power BI training to strengthen capacities of SADC Member States to synthesize information on SADC AIMS dashboard for better visualization, quick decisions, and evidence-based decision making

## **16 June**

Webinar of the quality management system

**More information available at**

<https://www.fao.org/in-action/stosar/news-and-events/news/en/>



# BRAINTEASERS

Win **STOSAR branded merchandise** by successfully solving the crossword and sudoku puzzles below.

Our lucky winners will be the first three correct entries to be submitted via email for each puzzle!

Submit your entries to

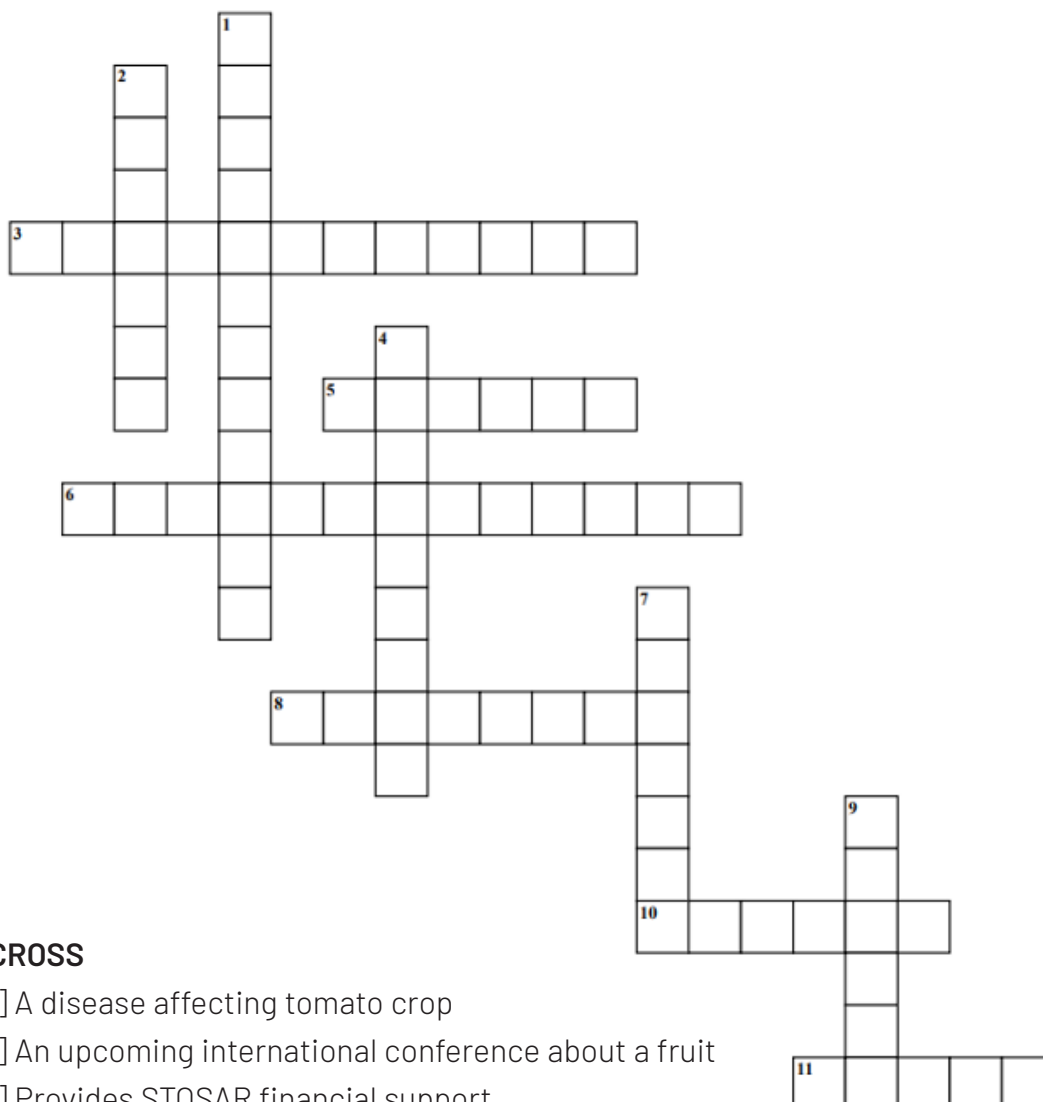
[Sibusisiwe.Ndlovu@fao.org](mailto:Sibusisiwe.Ndlovu@fao.org) and cc to [Elma.Zanamwe@fao.org](mailto:Elma.Zanamwe@fao.org)

**Good luck!**

## SUDOKU

5	4	3		1	
					4
	5		4		
4	1			6	
	3	5	1	4	6
	6			3	5

# CROSSWORD



## ACROSS

- [3] A disease affecting tomato crop
- [5] An upcoming international conference about a fruit
- [6] Provides STOSAR financial support
- [8] Affected by Highly Pathogenic Avian Influenza
- [10] Equipment installed at the SADC HQ under AIMS recently
- [11] An initial symptom of PPR

## DOWN

- [1] A transboundary plant pest
- [2] Number of SADC Member States
- [4] A nut affected by an emerging pest
- [7] A symptom of Foot and Mouth Disease
- [9] The number of AIMS Modules

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FAO EDF 11 Project GCP/SFS/004/EC

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## Agricultural information & market access for all

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### Project objective

The overall objective of this action is to accelerate progress towards implementation of SADC regional integration, which focuses on: i. enhancing information on agricultural production, sustainability and competitiveness for evidence-based decision-making; and, ii. improving access to markets through implementation of plant and animal pest and disease control strategies at the regional level.

### Beneficiaries

Member States of the Southern African Development Community (SADC), namely: Angola, Botswana, Comoros, Democratic Republic of Congo, Eswatini, Lesotho, Madagascar, Malawi, Mauritius, Mozambique, Namibia, Seychelles, South Africa, United Republic of Tanzania, Zambia, Zimbabwe.

**STO  
SAR** Support towards  
the operationalization  
of the SADC Regional  
Agricultural Policy Project

Food and Agriculture Organization of the United Nations (FAO)  
Subregional office for Southern Africa  
STOSAR Project (SADC RAP - EDF 11)

Ministry of Agriculture  
Plot 4701, Mmaraka Road, P O Box 54,  
Gaborone, BOTSWANA.

[sfs-stosar@fao.org](mailto:sfs-stosar@fao.org)

[www.fao.org/in-action/stosar](http://www.fao.org/in-action/stosar)

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