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## TECHNICAL SUPPORT FOR IMPROVED FOOD SECURITY THROUGH CAPACITY DEVELOPMENT FOR LIVESTOCK TRADE AND THE CONTROL OF LIVESTOCK DISEASES IN SOUTH SUDAN

November 2024

SDGs:



Country: South Sudan

Project Code: TCP/SSD/3901

FAO Contribution: USD 500 000

Duration: 15 June 2022-14 June 2024

Contact Info: FAO Representation in South Sudan  
FAO-South-Sudan@fao.org

### Implementing Partner

Ministry of Livestock and Fisheries (MLF).

### Beneficiaries

Vulnerable pastoral and agropastoral groups affected by widespread livestock diseases and climate change events.

### Country Programming Framework (CPF) Outputs

South Sudan Country Programming Framework (2023–2025).

Comprehensive Agriculture Master Plan (CAMP: 2015-2040): Food and nutrition security

United Nations Sustainable Development Cooperation Framework (UNSDCF) 2023-2025. Strategic Priority 2: Sustainable Economic Growth and Diversification.



### BACKGROUND

In South Sudan, livestock is a major contributor to food and nutrition security, with more than 65 per cent of the population relying on it for their livelihoods. The livestock sector has been severely affected by flooding since 2019. According to a recent Food and Agriculture Organization of the United Nations (FAO) assessment, the 2021 floods affected an estimated 10.1 million animals in different states, resulting in 795 000 animal deaths, especially small ruminants (sheep and goats) which are typically owned by poorer and more vulnerable households. The worst affected states were Unity, Jonglei and Upper Nile where 13.7 percent, 10.7 percent, and 7.6 percent of affected animals died respectively. In addition, the floods created conditions conducive to the outbreak of animal diseases, including zoonotic diseases (which can affect both animals and humans) such as Rift Valley Fever. For example, in the Greater Bahr El Ghazal region, increased cases of lumpy skin disease (LSD), haemorrhagic septicaemia (HS) and contagious bovine pleuropneumonia (CBPP) in cattle, pest of small ruminants (PPR) and footrot in small ruminants were reported. As a result, and due to animal deaths and reduced livestock production and productivity, the floods affected livelihoods, food security and nutrition.

The capacity for disease surveillance, early detection, reporting and response to animal diseases remains a serious challenge. In this context, this project aimed to assist and support the Ministry of Livestock and Fisheries (MLF) in operationalizing a sustainable strategy for the Central Veterinary Laboratory (CVL). In order to contribute to improved animal production, productivity, market access and food safety, the project supported the CVL with laboratory equipment and training to enhance early detection and control of animal diseases. The project also supported the establishment of functional cold chain infrastructure and vaccine centres, as well as training and workshops on operationalization, early warning and detection, reporting, and disease control and management.

### IMPACT

The expected impact of the project was to contribute to improving the productivity, efficiency, and competitiveness of the livestock sector through capacity-building activities and training in early warning, detection, and surveillance of animal diseases, as well as animal disease control measures and vaccination programmes. The project was expected to help protect vulnerable pastoral and agropastoral groups affected by widespread livestock diseases, climate change events, and livestock related shocks and stressors from hunger, malnutrition and poverty.

The project's contributions resonated across multiple levels, from national priorities outlined in the CPF to SDGs 1, 2, 12, 15, and 16, underscoring its importance for progress towards sustainable and healthy livestock production, the reduction of food insecurity, and the resulting positive socioeconomic development.

### ACHIEVEMENT OF RESULTS

The project design responded to the needs and context at the time of its preparation and its future perspective, while its achievements are the result of the implementation of the activities included in its workplan, with results being achieved under most of the expected outputs. As stated above, the project was designed to address the need to support the capacity building of the livestock sector institutions to deliver services and respond to future livestock-related shocks and stressors, with the aim of creating opportunities, improving access to markets and reducing food and nutrition insecurity. Throughout the project, and with the aim of improving policy and strategy development in the livestock sector institutions, the MLF was supported in organizing national coordination meetings, livestock conferences and participation in regional and international meetings.

Through these activities, the public and the livestock community were educated on the important contribution of livestock to the economic development of South Sudan. The capacity of laboratory operations at the CVL and its satellite laboratories was strengthened. Supported by the results of a One Health project, the laboratory system was reorganized and improved through targeted training and laboratory assessments. Sample collection and testing from cattle camps in the field were strengthened, resulting in the collection and testing of approximately 2 500 being collected and tested, with results reported to livestock owners and local authorities at the source of the samples according to protocols established by the MLF.

Training on the FAO Laboratory Mapping Tool was provided to livestock institution staff, and a physical inventory was carried out at the CVL to identify existing laboratory equipment and gaps. During field disease investigation missions, state veterinary officers, district officers and non-governmental organization (NGO) staff, were trained in proper sample collection and transport methods, which helped to improve the quality and quantity of samples collected and transported from the field to the laboratory. The project also supported the CVL to initiate the mapping of the sample collection and transport network, which will lead to the establishment of a sample transport system with real-time tracking to improve timeliness and quality upon arrival at the diagnostic laboratory.

The solar vaccine cold chain network was strengthened in nine locations to facilitate the vaccination of animals against priority animal diseases. As a result, animals were vaccinated against haemorrhagic septicaemia, contagious bovine pleuropneumonia, black quarter and anthrax in cattle, pest of small ruminants, contagious caprine pleuropneumonia, sheep and goat pox in sheep and goats, rabies in dogs and donkeys, and Newcastle disease in poultry.

Surveillance reporting was improved through the procurement of 13 electronic tablets; a new disease specific surveillance and reporting software was recommended and training of staff to use the tablets for data collection will be organized once the software is received.

In addition, 30 MLF staff received capacity building, support and virtual training on One Health, avian influenza, small ruminant pests and sheep and goat pox.



## IMPLEMENTATION OF WORK PLAN AND BUDGET

The project made significant progress in the field collection of animal samples during disease alert outbreaks and investigations in various locations. Sampling was carried out by laboratory technicians, government field veterinary officers and community animal health workers in states and districts. The project provided transport and field allowances to those involved in sampling. However, because sampling was only carried out during outbreaks and there were some delays in the procurement of laboratory test kits, the target number of samples was not achieved and the postvaccination surveillance could not be carried out.

Other constraints included delays in responding to outbreaks due to late travel to the field, late transport of samples and slow testing of samples, which hampered early intervention efforts.

## FOLLOW-UP FOR GOVERNMENT ATTENTION

While the project achieved its overall objective, there is still work to be done to fully achieve the expected longer-term impact on improving the capacity for disease surveillance and reporting in the livestock sector. The National Livestock Conference aimed to educate the public on the important contribution of livestock to the economic development of South Sudan, but follow-up activities to disseminate and implement the recommendations and resolutions of the conference are still ongoing and additional funding is needed to carry out these activities. Overall, the project reduced livestock mortality by about 0.5 percent. However, further challenges remain in implementing the recommendations and more resources and efforts are needed to improve laboratory systems and equipment, sample collection and staff training. The development, enactment and enforcement of livestock sector laws and policies are critical to reducing livestock related conflicts and investing more resources in the agriculture and livestock sector, is also particularly important for the development of the livestock sector.



## SUSTAINABILITY

### 1. Capacity development

The project built capacity through training activities, workshops and awareness meetings on the importance of the agriculture and livestock sector in improving market access, socioeconomic development as well food security and nutrition. The results of implemented activities such as the South Sudan National Livestock Conference on Transformation and Commercialization, the development of the Livestock Development Policy Implementation Strategic Plan, the drafting of the Strategic Plan for the Elimination of Dog-Mediated Human Rabies and the skills gained during the training in laboratory and surveillance activities, will be used beyond the project period.

### 2. Gender equality

Gender equality was specifically targeted in the project's interventions and, as such, it was taken into account in all activities during its implementation. Efforts were made to ensure equal mobilization of participants and proportional representation of women and men in interventions, training and development activities, as well as participation in the South Sudan National Livestock Conference and national coordination meetings.



### 3. Environmental sustainability

The project, which had a direct focus on environmental sustainability and environmentally friendly management of livestock related shocks and stressors, respected FAO's environmental and social standards in all its activities and focused its interventions on raising awareness among stakeholders through training and workshops, including discussion of the causes and effects of climate change on livestock production activities and ways to reduce its impact.

### 4. Human Rights-based Approach (HRBA) – in particular Right to Food and Decent Work

The project supported human rights by promoting the participation of men and women without discrimination, respecting human dignity, and supporting the most affected and vulnerable within the livestock sector community. Through the implementation of the project activities, policies and strategies developed by the MLF and stakeholders were positively advocated for the improvement of working conditions in rural areas.

### 5. Technological sustainability

The project significantly improved local knowledge and practices in disease surveillance and reporting technology and laboratory techniques. As a result of the training and workshops, project beneficiaries improved their technical expertise and capacity to continue implementing project activities on their own.

### 6. Economic sustainability

The project aimed to contribute to the economic development and sustainability of the livestock sector. The project's support for attending and organizing livestock conferences and participating in national, regional and international meetings raised awareness and improved resource mobilization.

## ACHIEVEMENT OF RESULTS - LOGICAL FRAMEWORK

<b>Expected Impact</b>	<b>Vulnerable pastoral and agropastoral groups affected by widespread livestock diseases and other climate change conditions are protected against hunger, malnutrition and destitution</b>		
<b>Outcome</b>	Increased capacity of the livestock sector institutions to deliver services and respond to future livestock related shocks and stressors		
	<b>Indicator</b>	Reduce malnutrition.	
	<b>Baseline</b>	4 percent.	
	<b>End Target</b>	5 percent reduction.	
	<b>Comments and follow-up action to be taken</b>	<p>The project supported the MLF in fulfilling its core mandates, roles and responsibilities, including policy and strategy development and coordination with national, regional and international organizations and stakeholders. To strengthen the capacity of livestock sector institutions, the MLF was supported in organizing national coordination meetings and livestock conferences. The MLF was also supported to participate in regional and international meetings and conferences. The organization of a national livestock conference in Juba from 1 to 3 September 2023 was funded to review the current situation of cattle raiding and migration related conflict in South Sudan, explore solutions to address cattle raiding and migration related conflict, and exchange views on strategies to transform the livestock sector towards greater commercialization. Conflict related to cattle raiding negatively impacts the MLF's capacity to deliver services and respond to future livestock-related shocks and stressors. It also leads to unregulated movement of animals and the spread of diseases with a transboundary dimension. The National Livestock Conference aimed to educate the public on the important contribution of livestock to the economic development of South Sudan. The conference also shared experiences from countries in the East African region. Follow-up activities to disseminate and implement the recommendations and resolutions of the conference are ongoing, but additional funding is needed to carry out these activities.</p> <p>The project also supported the dissemination of information on livestock disease control and climate change issues. Livestock production and productivity increased, resulting in higher livestock offtake and sales.</p>	
<b>Output 1</b>	Laboratory diagnostic capacity enhanced to support the control of livestock diseases and facilitate trade in animals		
	<b>Indicators</b>	<b>Target</b>	<b>Achieved</b>
	Number of veterinary laboratory diagnostic tests conducted per year.	5 000 tests per year.	Partially
<b>Baseline</b>	2 000 tests per year.		
<b>Comments</b>	<p>The capacity of laboratory activities in the CVL and satellite laboratories was improved. With the contribution and achievements of a One Health project, the laboratory system was reorganized and improved through training and assessment of the laboratories. Sample collection from cattle camps in the field and testing of samples improved and around 2 500 samples were collected and tested. Inadequate funding, infrastructure and lack of trained staff remain the main challenges to the development of the laboratory system. To improve sample collection, more funding is needed to provide satellite laboratories with reagents for laboratory equipment and to train field staff to take an active role in sample collection and testing.</p>		
<b>Activity 1.1</b>	Collect field level animal samples		
	<b>Achieved</b>	Partially	
	<b>Comments</b>	<p>Samples collected from animals in the field during disease alert investigations in various locations were submitted to the CVL in Juba. Sampling was carried out by laboratory technicians, government field veterinary officers, and community animal health workers in states and counties. The project provided transport and field allowances to those involved in sample collection. As sampling was only carried out during outbreaks and there were some delays in the procurement of laboratory test kits, the target number of samples was not achieved. Sampling for postvaccination surveillance could not be carried out due to lack of test kits. Part of the funding for this activity was also used to assess and equip minilabs in Rumbek, Wau and Kapoeta. Funding from this project also supported the transport of samples for testing at the CVL in Juba. This project facilitated the travel of CVL laboratory technicians to field sites to supervise sample collection.</p>	

Activity 1.2	Provide laboratory sampling and testing kits	
	Achieved	Partially
	Comments	The procurement of laboratory test kits and sampling equipment was delayed. However, the CVL and satellite laboratories in Rumbek, Wau and Kapoeta were provided with equipment from existing FAO stocks, and the project supported the transport of this equipment to the satellite laboratories.
Activity 1.3	Testing of laboratory samples collected from the field	
	Achieved	Yes
	Comments	Laboratory staff at the CVL performed the diagnostic tests on samples collected from all field sites. Approximately 2 500 samples were tested, and the results were reported to livestock owners and local authorities at the source of the samples, according to protocols established by the MLF. Serological sampling to assess the effectiveness of the vaccination campaign could not be carried out due to a lack of laboratory test kits. Other constraints included delays in responding to outbreaks due to late travel to the field, late transport of samples and slow testing of samples, which hampered early intervention efforts. In addition, intermittent and late payment of salaries to government laboratory staff reduced their motivation to conduct tests and release results promptly.
Activity 1.4	Training of field veterinary workers in the sample collection and transportation for testing in the laboratory	
	Achieved	Partially
	Comments	A laboratory specialist was recruited by FAO at a relatively late stage of project implementation. The laboratory specialist set priorities and started organizing the laboratory system in the CVL and establishing satellite laboratories in field sites. Training of staff on the FAO laboratory mapping tool and assessment of laboratories using the tool were among the priority activities undertaken. A physical inventory was carried out at the CVL to identify existing laboratory equipment and gaps. During field disease investigation missions, state veterinary officers, district officers, and NGO staff working in the districts were trained in proper sample collection and transport methods. This training will help improve the quality and quantity of samples collected and transported from the field to the laboratory. FAO supported the CVL to initiate the mapping of the sample collection and transport network. This will lead to the establishment of a sample transport system with real-time tracking to improve timely delivery and quality upon arrival at the diagnostic laboratory. Work will continue with separate funding from the Global Health Security (GHS) Programme South Sudan (OSRO/SSD/040/USA).

<b>Output 2</b>	Livestock assets of agropastoral and pastoral households safeguarded																																																																							
	Indicators	Target	Achieved																																																																					
	Livestock mortality rates reduced.	7 percent.	Partially																																																																					
<b>Baseline</b>	8 percent																																																																							
<b>Comments</b>	<p>Livestock stakeholders, including MLF, identified raiding as one of the main causes of livestock loss. It was also seen as a major cause of the spread of livestock diseases. The MLF and the Technical Committee on Livestock and Fisheries of the Transitional National Legislative Assembly, in collaboration with FAO, the United Nations Mission in South Sudan (UNMISS), World Food Programme (WFP), United Nations Development Programme (UNDP) and United Nations Educational, Scientific and Cultural Organization (UNESCO), organized a national conference on livestock transformation and marketing. The conference was attended by the Vice-Chairperson and the chairperson of the economic cluster, national, state ministers and governors from the ten states, UNMISS, UNDP, WFP, UNICEF, UNESCO, NGOs, and international non-governmental organization (INGO) representatives and civil society organizations; other participants came from the East African region.</p> <p>The main objectives of the conference were to review the current situation of cattle raiding and migration-related conflicts in South Sudan, explore solutions to address cattle raiding and migration-related conflicts, and exchange views on strategies to transform the livestock sector towards greater commercialization. Experiences from countries in the East African region were also discussed. Project funds were also used to follow up on the dissemination and implementation of the conference recommendations and resolutions in the different states and counties of South Sudan.</p> <p>The project supported rabies control activities, including dog vaccination and rabies awareness activities. It also supported the organization of International Rabies Day commemorations in Juba in 2022 and in Aweil, Northern Bahr el Ghazal State.</p> <p>Overall, the project reduced livestock mortality by about 0.5 percent (the main confounding factor was widespread flooding across the country, which led to animal disease outbreaks and mortality). However, further challenges remain in implementing the recommendations and resolutions of the meeting. More resources and efforts are needed to implement the meeting recommendations and resolutions. The development, enactment, and enforcement of livestock sector laws and policies are critical to reducing livestock-related conflicts, as recommended by the meeting. Investing more resources in the agriculture and livestock sector, as outlined in the Maputo Declaration, is also particularly important for the development of the livestock sector.</p>																																																																							
<b>Activity 2.1</b>	Vaccinate animals against priority animal diseases																																																																							
	Achieved	Partially																																																																						
	Comments	<p>The solar vaccine cold chain network was strengthened in nine locations to facilitate the vaccination of animals against priority animal diseases. These included vaccination against haemorrhagic septicaemia, contagious bovine pleuropneumonia, black quarter and anthrax in cattle, pest of small ruminants, contagious caprine pleuropneumonia, sheep and goat pox in sheep and goats, rabies in dogs and donkeys, and Newcastle disease in poultry. Insufficient funds to purchase vaccines and frontline funding for field activities were the main challenges to achieving the project's objectives.</p> <p><i>Table 1: Animal vaccination counts across eight counties with solar refrigerator implementation (2023 – 2024)</i></p> <table border="1"> <thead> <tr> <th>County</th> <th>Cattle</th> <th>Goats</th> <th>Sheep</th> <th>Poultry</th> <th>Dogs</th> <th>Donkeys</th> </tr> </thead> <tbody> <tr> <td>Kapoeta South</td> <td>92 548</td> <td>170 878</td> <td>261 693</td> <td>0</td> <td>14</td> <td>0</td> </tr> <tr> <td>Kapoeta East</td> <td>298 333</td> <td>1 689 958</td> <td>257 863</td> <td>0</td> <td>14</td> <td>0</td> </tr> <tr> <td>Bor</td> <td>53 977</td> <td>13 578</td> <td>7 700</td> <td>300</td> <td>394</td> <td>6</td> </tr> <tr> <td>Ayod</td> <td>9 356</td> <td>0</td> <td>9 152</td> <td>0</td> <td>0</td> <td>0</td> </tr> <tr> <td>Torit</td> <td>16 275</td> <td>11 196</td> <td>7 769</td> <td>3 049</td> <td>0</td> <td>0</td> </tr> <tr> <td>Aweil Centre/East/ North</td> <td>355 720</td> <td>44 480</td> <td>32 519</td> <td>5 200</td> <td>1 657</td> <td>364</td> </tr> <tr> <td>Maban</td> <td>127 500</td> <td>115 695</td> <td>197 920</td> <td>17 878</td> <td>0</td> <td>0</td> </tr> <tr> <td>Gorgial East</td> <td>174 516</td> <td>68 349</td> <td>53 687</td> <td>0</td> <td>0</td> <td>0</td> </tr> <tr> <td>Gogrial West</td> <td>244 989</td> <td>220 079</td> <td>134 156</td> <td>0</td> <td>0</td> <td>0</td> </tr> </tbody> </table>		County	Cattle	Goats	Sheep	Poultry	Dogs	Donkeys	Kapoeta South	92 548	170 878	261 693	0	14	0	Kapoeta East	298 333	1 689 958	257 863	0	14	0	Bor	53 977	13 578	7 700	300	394	6	Ayod	9 356	0	9 152	0	0	0	Torit	16 275	11 196	7 769	3 049	0	0	Aweil Centre/East/ North	355 720	44 480	32 519	5 200	1 657	364	Maban	127 500	115 695	197 920	17 878	0	0	Gorgial East	174 516	68 349	53 687	0	0	0	Gogrial West	244 989	220 079	134 156	0	0
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Output 3	Capacity to control livestock diseases through vaccination developed		
	Indicators	Target	Achieved
	- Number of solar powered fridges installed in the field locations. - Number of field staff trained in vaccines and cold chain management.	- 144 - 80	- Yes - No
Baseline	- 135 - 40		
Comments	<p>Five refrigerators were purchased under this project and another five were purchased with funds from other projects: "Livelihood Response to Mitigate the Impact of Drought or Food Security and Livelihoods (OSRO/INT/1040/GER)" and "Building Resilient Livelihoods to Threats and Crises in South Sudan (OSRO/SSD/211/NOR)". Ten new fridges were installed and fifteen existing fridges were repaired and maintained by FAO technical staff. The project was able to install 10 new solar powered refrigerators, increasing the number of field sites to 142 against a target of 144.</p> <p>Project funds were also used to develop a rabies control strategy.</p> <p>The project supported government staff on field missions to investigate reports of outbreak suspicions and to carry out disease control activities on haemorrhagic septicaemia, anthrax, contagious bovine pleuropneumonia, rabies and East Coast fever in Kuajok, Gogrial, Tonj. Yei, Wau, Raja, Mundri, Nimule, Ikotos, Aweil, Makalal and Nasir. Vaccination, treatment and awareness raising through radio programmes and community dialogue meetings on the control of these diseases were carried out in the affected areas.</p>		
Activity 3.1	Provision of solar fridges and cold chain equipment		
	Achieved	Yes	
Activity 3.1	Comments	FAO procured and distributed five new solar vaccine refrigerators to the high-density livestock gap areas in Aweil and Warrap districts. Four other refrigerators, ice packs, vaccine carriers and cold boxes procured through other projects were distributed locally using the project funds.	
	Activity 3.2	Distribution, installation and maintenance of solar direct fridges in field locations	
Achieved		Yes	
Activity 3.2	Comments	FAO cold chain technical staff travelled to the field sites in Maban, Kuajok, Pibor, Awerial, Marial Lou, Torit, Bor, Aweil and Renk to install new refrigerators and repair and maintain the existing ones. Project funds were used to pay for the transport and travel of FAO technical staff to the various sites.	
	Activity 3.3	Training field staff in vaccines and cold chain management	
Achieved		No	
Activity 3.3	Comments	The training could not take place because the cold chain technical expert left FAO. The other existing refrigeration specialists were busy repairing, maintaining and installing refrigerators in the field. The project could not find a local trainer for this activity. The training is still necessary and important and will be carried out when more funding is available.	



<b>Output 4</b>	Capacity in disease surveillance and timely reporting increased																						
	Indicators	Target	Achieved																				
	Number of disease investigation reports received in a year.	50 reports.	Yes																				
<b>Baseline</b>	30 reports																						
<b>Comments</b>	<p>Surveillance reporting improved and the target was met. A total of 13 electronic tablets was procured; however, new disease-specific software was recommended for installation on the tablets. Installation and training of staff to use the tablets to collect surveillance data will be organized once the software is received from the FAO Emergency Centre for Transboundary Animal Diseases (ECTAD) Regional Office.</p> <p>The project supported a national annual coordination meeting from 28 to 30 March 2023 to deliberate on the coordination of livestock service delivery and discuss livestock sector policies and strategies with national, state and non-governmental organizations working in the sector. Discussions at the workshop included the coordination of surveillance and disease reporting and the One Health approach. The meeting was also used as a forum to disseminate the recommendations and resolutions of the Livestock Conference to the participants from the state ministries of livestock and fisheries and NGOs attending the meeting. The workshop recommended the mobilization of funds to hold annual livestock coordination meetings to improve coordination among livestock sector stakeholders. The meeting was attended by 45 participants (30 male and 15 female) from the 10 states, three administrative areas and both national and international NGOs working in the livestock sector in South Sudan.</p> <p>The project also provided funding for internet services at the CVL to support the monitoring and laboratory activities of the Ministry of Livestock and Fisheries.</p> <p style="text-align: center;"><i>Table 1: Overview of disease outbreaks, alerts and infodemics</i></p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Year</th> <th>2024</th> <th>2023</th> <th>2022</th> <th>Total</th> </tr> </thead> <tbody> <tr> <td>Reports and alerts</td> <td>47</td> <td>72</td> <td>80</td> <td>199</td> </tr> <tr> <td>Infodemic/media scanning</td> <td>10</td> <td>4</td> <td>0</td> <td>14</td> </tr> <tr> <td>Total</td> <td>57</td> <td>76</td> <td>80</td> <td>213</td> </tr> </tbody> </table> <p>Anthrax was the most reported disease in Warrap, followed by Northern Bahr el Ghazal and Western Bahr el Ghazal states. Transboundary diseases such as East Coast fever and trypanosomiasis were highly reported in Eastern Equatoria, Central Equatoria, Western Equatoria and Lakes States (Wulu County). Haemorrhagic septicaemia, contagious bovine pneumonia, black quarter, foot and mouth disease and pest of small ruminants were highly reported in Unity State, Upper Nile State, Jonglei State (difficult to reach areas) due to flooding and lack of livestock partners. Rabies was reported in Northern Bahr el Ghazal, Eastern Equatoria State (Lafon, Kapoeta) and Western Bahr el Ghazal State. Hydatid cyst and Cysticercus bovis were highly reported in Kapoeta and Pibor, while viral haemorrhagic fever was reported in Western Equatoria State, Western Bahr el Ghazal and Upper Nile State (Mathiang-Dajo). African swine fever was reported in Magwi and Nimule in Eastern Equatoria State. Lumpy skin disease was reported in Warrap, Northern Bahr el Ghazal, Western Bahr el Ghazal, Unity States and Greater Pibor Administrative Area. Rumours of Guinea worm in wildlife were reported in Warrap State (Tonj North) and Eastern Equatoria (Lafon County).</p> <p>Out of the 213 reported cases of the disease (see table above), only 26 cases were attended, and control measures were put in place. Most of the others turned out to be false alarms and calls for veterinary services by livestock owners.</p> <p>In 2022, out of 80 cases reported, 10 were investigated and control measures were taken.</p> <p>In 2023, 13 out of 76 cases were investigated and control measures were taken.</p> <p>In 2024, out of 57 cases, only six cases were investigated and control measures were taken.</p>			Year	2024	2023	2022	Total	Reports and alerts	47	72	80	199	Infodemic/media scanning	10	4	0	14	Total	57	76	80	213
	Year	2024	2023	2022	Total																		
Reports and alerts	47	72	80	199																			
Infodemic/media scanning	10	4	0	14																			
Total	57	76	80	213																			
<b>Activity 4.1</b>	<p>Provision of kobo collect tablets for disease outbreak reporting</p> <p><b>Achieved</b> Yes</p> <p><b>Comments</b> The electronic tablets were procured, but the installation of the software and training on how to use the equipment was delayed. A new software, District Health Information Software2 (DHIS2), an open source web based platform commonly used as a health management information system, has been recommended by the ECTAD Regional Office. FAO South Sudan is in the process of procuring this software to install and train users.</p>																						

Activity 4.2	Training field staff in the collection of surveillance information using electronic equipment	
	Achieved	No
	Comments	Training on the use of the surveillance equipment was delayed. A new software, DHIS2, specifically for disease data collection was recommended by the ECTAD Regional Office, instead of the Kobo collect software. DHIS2 offers a more flexible and scalable solution, supporting offline data entry and integrating different data sources. It is widely used in public health systems and can improve animal disease surveillance and response through better data interoperability. FAO South Sudan is working with ECTAD to procure the software and train surveillance staff.
Activity 4.3	Support the Ministry of Livestock and Fisheries to access virtual workshops and trainings, and obligations to submit reports to OI	
	Achieved	Yes
	Comments	<p>A total of 30 MLF staff (two female and 28 male) were supported and benefited from virtual training on One Health, avian influenza, pest of small ruminants and sheep and goat pox.</p> <p>The project supported the MLF and the livestock sector with international, regional and national travel to conduct meetings and conferences as follows:</p> <ul style="list-style-type: none"> <li>– The Chief Veterinary Officer and delegate of the World Organisation for Animal Health (WOAH) (formerly the Office International des Epizooties [OIE]), South Sudan, was sponsored to attend the Global Conference on Emergency Management and the 91st Session of the General Assembly in Paris, France, in May 2024 and April 2023, respectively. The 91st Forum discussions were dialogue, knowledge sharing and collective exploration of emerging futures, highlighting challenges and opportunities in our rapidly evolving world.</li> <li>– Three staff members from the Directorate of Veterinary Services were sponsored to attend the WOAHA annual regional meeting in Botswana in February 2023: pest of small ruminants Global Eradication Programme, One Health Approach, elimination of dog associated human rabies by 2030.</li> <li>– Participation in the FAO Regional Ministerial Conference in Morocco was supported by the MLF Minister. Resilient agrifood systems and rural transformation were the main topics discussed at the conference.</li> <li>– The Minister was also sponsored to attend the FAO annual meeting at FAO headquarters in Rome. The 43rd FAO Conference included the election of the General Directorate and Committees. A review of the state of food and agriculture was conducted, and the reports of various committees were reviewed and approved.</li> </ul> <p>Three government representatives from national and state ministries of livestock were sponsored to attend a transboundary One Health meeting in Gulu, Uganda, from 5 to 7 June 2023 to discuss transboundary cooperation and coordination in disease control between South Sudan and Uganda. The main purpose of this coordination meeting was to discuss transboundary cooperation and coordination in disease control, and scaling up the capacity for effective surveillance, prevention and risk reduction of public health threats in South Sudan and Uganda. Participants identified priority diseases of concern and existing gaps in the Uganda-South Sudan transboundary surveillance and response zone. They developed a joint action plan and a way forward for transboundary surveillance and response.</p>

**Partnerships and Outreach**

For more information, please contact: [Reporting@fao.org](mailto:Reporting@fao.org)

**Food and Agriculture Organization of the United Nations**

Viale delle Terme di Caracalla

00153 Rome, Italy