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STRENGTHENING THE REGIONAL PREPAREDNESS AGAINST LUMPY SKIN DISEASE IN CENTRAL ASIA

December 2023

SDGs:



Countries: Kyrgyzstan, Tajikistan and Uzbekistan

Project Code: TCP/SEC/3801

FAO Contribution: USD 500 000

Duration: 11 March 2021 – 31 December 2023

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Implementing Partners

State Inspection for Veterinary and Phytosanitary Safety of the Government of Kyrgyzstan, Committee of Food Security of the Government of Tajikistan, State Veterinary Committee of Uzbekistan.

Beneficiaries

Veterinary services, cattle farmers, traders.

Country Programming Framework (CPF) Outputs

Kyrgyzstan CPF 2018 – 2022 – Priority 1: Coherent and gender-sensitive agricultural, food security and nutrition, social protection and rural development policies and programmes.

Tajikistan CPF 2019 – 2021 – Priority 3: Sustainable agricultural productivity and competitiveness.

Uzbekistan CPF 2021 – 2025 – Priority 2: Sustainable, climate-responsible and resilient development.



BACKGROUND

Lumpy skin disease (LSD) is a vector-borne transboundary animal disease of bovines that causes severe economic losses to the cattle sector as a result of mortality, the decrease in milk production, severe damage to hides and trade restrictions. Originally restricted to Africa, around a decade ago LSD began to spread throughout the Middle East and into Türkiye, the Balkans, the Caucasus, the Russian Federation and Kazakhstan. More recently, the disease has emerged in East and South Asia, affecting some of the largest bovine producers in the world, such as China, India or Bangladesh. The risk of an imminent incursion into neighbouring and as yet unaffected countries is very high, particularly for those sharing borders and (both formal and informal) trade routes. This is the case for Central Asia, where countries such as Kyrgyzstan and Uzbekistan – which share borders with Kazakhstan – and Tajikistan have begun to plan vaccinations to prevent LSD incursions.

In Central Asia, cattle are the most important livestock species and are key to rural areas. The spread of LSD would have a dramatic effect upon rural livelihoods, which remain highly dependent on cattle. The combined cattle population across the four countries is more than 15 million heads. Milk production, either for subsistence or income, is of particular concern.

The effect at national level would also be devastating, as the presence of the disease comes with strict trade restrictions. It is therefore essential to intervene in the six months prior to the onset of warm temperatures and the beginning of the vector season, when the risk of introduction of the disease becomes particularly high. Disease prevention and control is most challenging in these settings due to the lower levels of disease awareness among the rural communities, poor compliance with livestock-related regulations (reporting, movement control, certifications, vaccination, etc.) and the lack of animal identification and traceability.

With the exception of Kazakhstan, Central Asian countries have not been exposed to the disease, which implies that (i) the level of awareness among stakeholders along the value chain is low, (ii) technical knowledge of the disease (laboratory diagnosis and epidemiology) among veterinary services is low and (iii) no contingency or surveillance plans are in place.

In this context, the objective of the project was to raise the awareness among veterinary services and the other stakeholders concerned (cattle farmers and traders, in particular) and provide them with training on issues related to the prevention, early detection and control of LSD.

FAO has significant experience of assisting countries against LSD (and other transboundary animal diseases). Two previous projects – one for the Balkans and another focusing on Eastern Europe – led to the development of a series of technical guidelines, manuals, training programmes and awareness materials (leaflets, posters and videos) targeting veterinarians, livestock owners and traders, as well as other actors along the value chain.

In addition, in collaboration with the World Organisation for Animal Health (WOAH), FAO established the Central Asia Animal Health Network (CAAHN) in November 2019. Activities within the present project, particularly those requiring regional coordination, were implemented within the framework of this network.

IMPACT

The project made significant advances in the detection, prevention and response to LSD. This was achieved by increasing awareness, addressing knowledge gaps, laboratory training and diagnostic support, as well as simulation exercises.

At a broader level, by focusing on a transboundary animal disease with a potentially huge economic impact on cattle production, rural community livelihoods, trade and other economic implications, the project contributed mostly to Sustainable Development Goals 1 (“No poverty”) and 2 (“Zero hunger”), with an indirect impact upon a number of other SDGs.

ACHIEVEMENT OF RESULTS

Veterinary services and other stakeholders, such as farmers and cattle traders, saw their awareness raised significantly on the impact of LSD. Prevention, detection and response was covered in depth, targeting first responders and central-level veterinary officers.

Laboratory capacities to detect LSD are in place in certain laboratories in Kyrgyzstan and Uzbekistan, but to a lesser extent in Tajikistan.

First responders, in particular field-level and private veterinarians, were trained on how to detect, prevent and – in the case of an outbreak – respond to an outbreak of LSD. Capacity-building on how to effectively carry out stamping-out was delivered through virtual learning courses, while laboratory staff were trained extensively on a range of diagnostic methods and on how to interpret results.

In addition, up-to-date learning material was developed, translated into the relevant languages and distributed to key stakeholders.

IMPLEMENTATION OF WORK PLAN AND BUDGET

All activities were implemented within the planned budget. While most activities were delivered on time, some activities relating to laboratory training and support with diagnostic reagents were delayed due to the time required to complete internal procedures.

FOLLOW-UP FOR GOVERNMENT ATTENTION

Countries varied in their capacity to provide preventive vaccination, and to detect and respond to LSD. Tajikistan had the most significant gaps of the three countries in terms of the detection of LSD due to the unavailability of diagnostic reagents to confirm LSD in a laboratory setting. Close follow-up is needed to ensure that national-level capacities meet the required standards once the project implementation comes to a close.

SUSTAINABILITY

1. Capacity development

Strengthened relationships with veterinary services, including private veterinarians, will increase capacities at country level in terms of prevention and responding to disease outbreaks. The relationships built during the project will help to establish trust, which is fundamental for the transparency required in the reporting of disease to the international community, in particularly the WOA.

2. Gender equality

While the project featured no specific gender component, female participation at the training events organized was always encouraged.

3. Technological sustainability

Virtual learning and Excel-based tools (OutCost) were used during the project. The Virtual learning courses varied in success in the region and highlighted the need for virtual learning courses in the relevant national language.

The project contributed greatly to increasing local knowledge on LSD and sharing good practices on how to detect and respond to the disease. A range of Standard Operating Procedures (SOPs) were developed to supplement the response actions of both state and private veterinarians.

Improved detection of LSD will continue for some time due to the awareness raised and the strengthening of laboratory capacity. However, if human resource and budget limitations persist, there is a risk that detection capacities will return to their previous level.

4. Economic sustainability

Given that the technical materials developed were shared with the relevant stakeholders in their own languages, there are no further costs for their development. Diagnostic materials will be depleted over time on account of their use, while countries will need to purchase new reagents. The vaccines needed in case of a LSD outbreak will need to be purchased by the countries, however not all of these have a vaccine reserve or sufficient funds to rapidly procure vaccines.



DOCUMENTS AND OUTREACH PRODUCTS

- ❑ Galon, N. and Abdiev, A. 2021. *LSD Management Assessment Mission – Kyrgyzstan*. Mission Report.
- ❑ Galon, N. 2021. *LSD Management Assessment Mission – Tajikistan*. Mission Report.
- ❑ Galon, N. 2021. *LSD Management Assessment Mission – Uzbekistan*. Mission Report.
- ❑ Galon, N. 2021. *LSD Vaccines and Vaccination*. Two Power Point presentations (one each in English and Russian).
- ❑ Abdullayev, I. and Gourlaouen, M. 2022. *FAO Laboratory Mapping Tool – Assessing Veterinary Laboratories’ Capacities – Global Assessment Report of Veterinary Laboratories – Uzbekistan Veterinary Laboratory Network*. Mission Report.

- ❑ **Pavlenko, A.** 2022. *VLC course report: LSD preparedness course.*
- ❑ 2022. *LSD Training materials.* Six power point presentations in Russian, Uzbek and Kyrgyz.
- ❑ **Hovari, M.** 2022. *Facilitator Manual for LSD Exercise – Kyrgyzstan.*
- ❑ **Hovari, M.** 2022. *Facilitator Manual for LSD Exercise – Tajikistan.*
- ❑ **Hovari, M.** 2022. *Facilitator Manual for LSD Exercise – Uzbekistan.*
- ❑ **Ciaravino, G. and Casal, J.** 2023. *Services related to the cost estimation of the potential direct cost of a lumpy skin disease incursion in three Central Asian countries using OutCost.*
- ❑ **Djadjovski, I.** 2023. *Laboratory training on lumpy skin disease diagnosis.* Mission Report.
- ❑ **Hovari, M.** 2023. *Report on LSD Simulation Exercises – Kyrgyzstan.*
- ❑ **Hovari, M.** 2023. *Report on LSD Simulation Exercise – Uzbekistan.*
- ❑ **Hovari, M.** 2023. *Report on LSD Simulation Exercise – Tajikistan.*
- ❑ **Hovari, M.** 2023. *VLC course report: Stamping out (English).*
- ❑ **Nurtazina, G.** 2023. *VLC course report: Stamping out (Russian).*



Outreach material

- ❑ Over 400 Russian-speaking vets participate in virtual lumpy skin disease preparedness training.
- ❑ 5 May 2022.
<https://www.fao.org/europe/news/detail/Over-400-Russian-speaking-vets-participate-in-virtual-lumpy-skin-disease-preparedness-training/en>.
- ❑ Preventing possible outbreak of cattle diseases. 4 November 2022.
<https://www.fao.org/countryprofiles/news-archive/detail-news/en/c/1637990/>.
- ❑ LSD Laboratory training. May 2023
 - <http://uzdaily.uz/ru/post/77154>
 - <https://uz24.uz/ru/articles/fao-05-05-2023>
 - <https://uza.uz/posts/480247>
 - <http://uzdaily.uz/uz/post/8107>
 - https://uza.uz/uz/posts/fao-ozbekistonda-ilgor-tazhribalar-zhoriy-etmoqda_480512
 - <https://evu.uz/uz/novosti/fao-vnedryaet-v-uzbekistane-peredovoj-opyt-po-diagnostike-nodulyarnogo-dermatita.html>
 - <https://uza.uz/posts/480512>
- ❑ Veterinarians take virtual training to fight transboundary animal diseases. 20 June 2023.
<https://www.fao.org/europe/news/detail/veterinarians-take-virtual-training-to-fight-transboundary-animal-diseases/en>.
- ❑ FAO trains Kyrgyz veterinarians to combat lumpy skin disease in cattle. 22 June 2023.
<https://www.fao.org/countryprofiles/news-archive/detail-news/en/c/1642807/>.
- ❑ LSD Simulation exercise in Kyrgyzstan. June 2023
 - https://www.vb.kg/doc/430560_fao_povyshaet_gotovnost_kr_dlia_borby_s_opasnoy_boleznu_do_mashnego_skota.html
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 - https://pressrelease.akipress.org/unews/un_post:35277/?from=pressrel&place=search&sth=3af6495dfbecd514519073ab51719e9d
 - <https://agro.kg/ru/news/30755/>
 - <https://knews.kg/2023/06/21/veterinary-kyrgyzstana-gotovyatsya-k-vozmozhnoj-vspyshke-opasnogo-zabolevaniya-kr/>.

ACHIEVEMENT OF RESULTS - LOGICAL FRAMEWORK

Expected Impact	Improved and protected livelihoods against lumpy skin disease (LSD) in Central Asia		
Outcome	Effective preparedness, prevention, detection and response in the event of a LSD incursion		
	Indicator	Veterinary services and other relevant stakeholders (cattle farmers, traders) are more aware and better prepared for the prevention, early detection and rapid control of an outbreak of LSD.	
	Baseline	Some countries are more advanced than others in terms of preparedness plans, trained personnel and the awareness levels of stakeholders.	
	End Target	Veterinary services and other relevant stakeholders (cattle farmers, traders) are made aware and trained on issues related to the prevention, early detection and control of LSD.	
	Comments and follow-up action to be taken	Veterinary services and other stakeholders such as private veterinarians were made aware of the impact of LSD. Prevention, detection and response was covered in depth, targeting first responders and central-level veterinary officers. However, outreach to cattle farmers remains incomplete.	
Output 1	Enhanced legal, regulatory preparedness framework for LSD developed at national level. As a result, countries will have LSD national contingency plans, surveillance strategy and a vaccination strategy that will be validated through simulation exercises		
	Indicators	Target	Achieved
	Strategic documents for the control of LSD (in particularly contingency plans, but also surveillance, vaccination and awareness strategies) are assessed, developed, adopted and tested (through simulation exercises).	Strategic documents for the control of LSD are developed and adopted, namely contingency plans and strategies for surveillance, vaccination and awareness.	Yes
Baseline	Some countries are more than advanced others and have regulatory documents and strategies for LSD, while others have none.		
Comments	<p>In Tajikistan, LSD is legally considered an exotic disease. There is no legal background on reporting, while no budget is allocated to targeted surveillance or vaccination activities. Despite the project's efforts, and although the disease may be recognized at field level through farmer reporting, awareness remains low. One of main gaps detected was the lack of laboratory capacity to confirm LSD. This was addressed under the project (Activity 2.1). There is no preventive vaccination in Tajikistan against LSD in cattle. While there are procedures on how to control LSD, if detected, no contingency plan was developed under the project due to the absence of a legal background for the prevention, detection or response to LSD. Due to the nature of cattle production, if the disease is detected in time, and derogations are applied to mobilize resources and funds, control of LSD may be achieved. However, in the case of a large and undetected spread of the disease in the country, the control of LSD and mass emergency vaccination will represent a challenge.</p>		
	<p>In Kyrgyzstan, LSD is notifiable and must therefore be reported if found. There is no dedicated state budget allocated for surveillance, vaccination or compensation for the disease, and surveillance is based on farmer reporting (passive surveillance). Laboratory capacities to detect LSD are in place in certain laboratories. Preventive vaccination is carried out in perceived high-risk areas, albeit with limited coverage. A contingency plan has been drafted but not finalized. Procedures on how to respond in case of a LSD outbreak are present and emergency vaccination overall is understood.</p> <p>In Uzbekistan, LSD is a notifiable disease, and a budget is allocated for certain activities, such as surveillance and vaccination. As in Kyrgyzstan, surveillance is based on farmer reporting. Laboratory capacities to detect LSD are in place. Preventive vaccination in cattle is carried out in high-risk areas. A contingency plan is available and response procedures for emergency vaccination are clear.</p>		

Activity 1.1	Strengths and weaknesses of the national veterinary and diagnostic services in terms of LSD management are assessed, i.e. from capacities to organigram, competence and functions. Within this task, existing legal powers and strategy documents are assessed, improved and developed as needed (in line with international standards), such as contingency and national control plans, vaccination strategies, etc.	
	Achieved	Yes
Activity 1.1	Comments	LSD management assessment missions were carried out in each country to map the capacities of the veterinary services with respect to LSD detection, prevention and response. The missions were delivered in Kyrgyzstan from 20 to 27 June 2021, in Uzbekistan from 28 June to 2 July 2021 and in Tajikistan from 23 to 29 October 2021. Beyond the assessment missions, the FAO Laboratory Mapping Tool was used for six laboratories in Kyrgyzstan (from February to March 2021) and nine laboratories in Uzbekistan (from 5 to 17 June 2022). Kyrgyzstan and Tajikistan received support via consumables to support vaccination.
	The risk of entry, spread and establishment of LSD is assessed and surveillance and vaccination strategies are drafted or reviewed accordingly. This is carried out through country-level training workshops on risk assessment with relevant stakeholders (i.e. government officials, private veterinarians, farmers/farmer associations and intermediaries)	
Activity 1.2	Achieved	Yes
	Comments	The risk related to the entry, spread and establishment of LSD, along with the surveillance and vaccination strategies, were assessed during the missions carried out under Activity 1.1.
Activity 1.3	Workshop on vaccination. This includes a one-day country-level training and advice on how to perform the following tasks: (i) selection of the correct vaccine product; (ii) the evaluation, recording and reporting of side reactions after vaccination; (iii) writing technical specifications for vaccine procurement and conducting tenders; (iv) specifications on quality assurance control of vaccines (potency, purity, safety, immunity, etc.); and (v) cold storage and delivery of large numbers of vaccines in case of an outbreak	
	Achieved	Yes
Activity 1.3	Comments	A "Virtual Vaccine and Vaccination Training" was held on 4 October 2021 and attended by participants from Tajikistan, Kyrgyzstan and Uzbekistan (21, 50 and 52 participants, respectively).
	Simulation exercises on LSD are organized to ensure appropriate emergency preparedness. Country-level desktop simulation exercises involving all relevant government agencies are organized to test the different components of the contingency plan in realistic outbreak scenarios (one per country)	
Activity 1.4	Achieved	Yes
	Comments	Two-day simulation exercises were organized in each country combining field work (drills) and desktop work, in the presence of state veterinarians from central, regional and local levels. Objectives and scenarios were based on the outcomes of the assessment missions and country-level response structures. SOPs were handed out for biosecurity entry and exit, clinical examination, sampling and outbreak investigation. Exercises focused on detection and response (including the organization of emergency vaccination) and were held on 26 and 27 October 2022 in Kyrgyzstan, 2 and 3 November 2022 in Tajikistan and 14 and 15 December 2022 in Uzbekistan. Three additional simulation exercises were carried out in June 2023 in Kyrgyzstan (see Activity 3.3 for details). Countries varied in their capacity to prevent (ongoing preventive vaccination), detect (surveillance) and respond (capacity to carry out emergency vaccination) to LSD. At the time of the exercise, Tajikistan had the most significant gaps of the three countries in terms of the detection of LSD due to the unavailability of diagnostic reagents to confirm LSD in a laboratory setting.
Activity 1.5	A cost-benefit analysis on different LSD outbreak control options is performed, including feasibility of different or non-stamping-out policies, vaccination strategies, disposal of culled animals, compensation options, disease surveillance, etc.	
	Achieved	Yes
Activity 1.5	Comments	The main purpose of this activity was to estimate the cost of hypothetical introductions of LSD in the three target countries using the Outbreak Costing Tool for ruminants (OutCosT-RUM), an existing Excel-based tool based on a deterministic model. Based on the results, livestock owners would assume the main part of the total cost of the disease (between 69 and 75 percent, depending on the country), mainly due to the cost of the disease and relevant treatments.

Output 2	National veterinary service personnel trained in LSD detection, prevention and control		
	Indicators	Target	Achieved
	First responders within the relevant institutions (i.e. field veterinarians, laboratory diagnosticians) are more aware and better prepared to prevent, detect and control LSD at farm level.	First responders are better prepared to prevent, detect and control LSD at farm level.	Yes
Baseline	Gaps in operational resources and knowledge related to the prevention, detection and control of LSD on farms.		
Comments	First responders, specifically field-level official veterinarians and private veterinarians, were trained on how to detect, prevent and – in the case of an outbreak – respond to an outbreak of LSD. Misconceptions on the epidemiology and control of LSD were clarified during one-day training events as well as during a LSD virtual learning course. Beyond LSD, capacity-building on how to effectively carry out stamping-out was delivered through virtual learning courses. Finally, laboratory staff were trained extensively on a range of diagnostic methods and on how to interpret results.		
Activity 2.1	Laboratory training activities are organized at national level based on the results of the assessment under Activity 1.1. The training will cover the performance of diagnostic methods for LSD antigen and antibody detection. The local laboratories must have the necessary equipment for this purpose. The National Reference Laboratories in all countries will be supplied with diagnostic reagents, as well as kits to be used in suspected outbreaks/cases. The accuracy of test results will be confirmed through participation in interlaboratory proficiency trials		
	Achieved	Yes	
	Comments	The one-week long LSD laboratory training sessions were organized in each country with the aim of improving participants' capacity in the following areas: sample selection, sample packaging and transport, technical skills and knowledge on manual extraction of nucleic acids, performing and implementing validated Real-Time PCR (qPCR) assays, use of serology in LSD diagnosis, laboratory diagnostic workflows and interpretation of test results from different assays. The training sessions were held from 10 to 14 April 2023 training in Bishkek, Kyrgyzstan from 24 to 28 April 2023 in Dushanbe, Tajikistan and from 1 to 5 May 2023 training in Tashkent, Uzbekistan. In addition, to the training provided, each country received a limited number of diagnostic consumables required to perform the different tests.	
Activity 2.2	Epidemiology training activities. One-day training workshops will be conducted in each country (combined with the assessment mission under Activity 1.1) to increase skills and enhance the knowledge of epidemiologists from veterinary services. The workshops will cover LSD epidemiology, surveillance, disease recognition, outbreak investigation, sampling and shipping, control operations, etc. The workshops will be planned to involve active participation of the veterinary services in order to (i) present the national legislation on emergency actions and vaccination against LSD; (ii) exchange ideas on risk analysis; (iii) identify the existing prevention and control gaps, as well as the actions/activities needed to stop LSD spread in the country/region		
	Achieved	Yes	
	Comments	While increasing epidemiological knowledge and the exchange of ideas on the risk of LSD was covered under the assessment missions carried out under Activity 1.1, LSD training workshops were delivered prior to each simulation exercise in an attempt to increase awareness of LSD and knowledge of its epidemiology. The training focused on clinical signs, sampling and epidemiology and outbreak investigation. The training events were held on 25 October 2022 in Kyrgyzstan, 1 November 2022 in Tajikistan, 13 December 2022 in Uzbekistan, with a further event held on 5 June 2023 in Kyrgyzstan. The latter training targeted private veterinarians, while the sessions in the other three countries were aimed at state veterinarians.	
Activity 2.3	Training of field veterinarians on LSD. An online training will take place. A training of trainers (TOT) will follow the following format in each country: one two-day training of 10 core trainers from at-risk regions/oblasts, followed by replicated one-day training sessions led by the core trainers in at-risk regions/oblasts with 20 people each		
	Achieved	Partially	
	Comments	A four-week virtual LSD preparedness course was organized in April and May 2022 under the FAO Virtual Learning Centre in the Russian language and involving Russian-speaking countries. 400 participants were nominated. While the online training was completed, it was not possible to deliver the ToT component of this activity. To ensure better preparedness for other transboundary ruminant diseases, the translation of the sheep and goat pox virtual learning course was also delivered under this activity.	
Activity 2.4	Training on stamping-out and carcass disposal operations		
	Achieved	Yes	
	Comments	A virtual learning training course on stamping-out was developed by the Virtual Learning Centre utilizing previously developed materials and with the addition of further modules. Two virtual learning courses were delivered under the project, one in English from November to December 2022 and one in Russian from May to June 2023.	

Output 3	LSD detection and prevention among all stakeholder levels created		
	Indicators	Target	Achieved
	First responders within the relevant institutions (i.e. farmers and farm workers) are more aware and better prepared to prevent, detect and control LSD at farm level.	First responders are better prepared to prevent, detect and control LSD at farm level.	Yes
Baseline	Gaps in operational resources and knowledge related to the prevention, detection and control of LSD on farms.		
Comments	First responders, specifically field-level official veterinarians and private veterinarians, were trained on how to detect, prevent and – in the case of an outbreak – respond to LSD. Up-to-date learning material was developed, translated into the relevant languages and distributed to key stakeholders.		
Activity 3.1	Developing an awareness strategy document, both for peacetime and in case of an outbreak, targeting the most relevant stakeholders (private and public veterinarians, academia/veterinary students, farmers, butchers, intermediaries, slaughterhouse personnel, etc.). The strategy will include the communication methods (newspapers, flyers, posters, television, radio, social media posts, etc.) and the frequency of dissemination		
	Achieved	Yes	
	Comments	Awareness strategies were discussed and developed during the assessment missions under Activity 1.1.	
Activity 3.2	Developing and adapting awareness and technical materials to meet different stakeholder needs. These are also translated into local languages and disseminated. - Relevant ongoing events that bring together farmers, veterinarians and other relevant stakeholders will be selected for talks and the distribution of awareness materials. - National NGOs and farmer associations will be engaged to facilitate the dissemination of awareness materials; - Social media will also be utilized to raise awareness		
	Achieved	Yes	
	Comments	With the assistance of national project consultant, national farmers' associations were informed about awareness-raising materials. The FAO Guidelines for livestock vaccination campaigns are being translated into Kyrgyz and Tajik languages and will be made available on the FAO documents website (https://www.fao.org/documents/card/en?details=cc3038en).	
Activity 3.3	Farmer Field Schools and ToT events to provide training to farmers on the prevention and management of vector-borne diseases, e.g. practices to limit vector breeding sites, understanding local vector management practices and discussing feasible repellent options		
	Achieved	Yes	
	Comments	Due to the limited time availability and the significant time needed to prepare and implement Farmer Field Schools (FFS), the ToT and FFS events were replaced with a series of one-day simulation exercises targeting private veterinarians in Kyrgyzstan. The exercises were held between 6 and 8 June 2023 and attended by 63 private veterinarians. The topics covered included detection of LSD, sampling and sample submission and field-level vaccination.	
Activity 3.4	Develop and incorporate LSD materials into the curricula of veterinary faculties for students, post-graduate professionals and continuous professional development courses		
	Achieved	Partially	
	Comments	LSD training materials were developed in Power Point format on the following topics: general overview of LSD, clinical signs and pathology, laboratory diagnosis, epidemiology and outbreak investigation, surveillance and control and eradication. The materials and presentations were translated into Russian, Uzbek and Kyrgyz and shared with the relevant veterinary schools. However, the inclusion of the new learning material in graduate and post-graduate studies is not assured and requires follow-up.	
Activity 3.5	Raising awareness in Turkmenistan		
	Achieved	Yes	
	Comments	During the expert mission that took place in the week of 20 November 2023, a verbal awareness-raising activity took place with livestock owners close to Ashgabat. This included short explanations about the disease, its vectors and the importance of vaccination and vector control as preventive measures.	

Output 4	Regional coordination of LSD prevention and control strengthened		
	Indicators	Target	Achieved
	Countries in the region coordinate their efforts within the project and beyond and communicate regularly in terms of prevention, detection and control of LSD.	Countries begin to share information on a regular basis on their LSD status and efforts.	Yes
Baseline	Communication is at a good level among certain countries, but is less strong among others.		
Comments	While no LSD outbreaks were reported during the duration of the project, Tajikistan informed FAO and other participating countries during the closing workshop that they had detected LSD and were planning to report this to the WOAHP.		
Activity 4.1	Inception workshop to support project coordination and cooperation on LSD prevention and control in the region. In addition, cooperation between national veterinary services will be encouraged in order to (i) coordinate the implementation of prevention and control actions, e.g. vaccination programmes, movement control, etc.; (ii) present the results of LSD-related activities and provide updates on the disease situation and (iii) provide a forum for discussion and exchange of ideas. The two-day workshop will take place at the beginning of the project and will be attended by country representatives and FAO staff		
	Achieved	Yes	
	Comments	The inception workshop was held on 17 March 2021.	
Activity 4.2	Final workshop to (i) present project results to donors and international institutions; (ii) discuss potential follow-up to the project, if needed; (iii) coordinate the implementation of prevention and control actions, e.g. vaccination programmes, movement control, etc.; (iv) present the results of LSD-related activities and provide updates on the disease situation; and (v) provide a forum for discussions and exchange of ideas. The two-day workshop will take place at the end of the project and will be attended by donors and international agencies, country representatives, international consultants and FAO staff. The meeting will be organized back-to-back with the CAAHN annual meeting		
	Achieved	Yes	
	Comments	The closing workshop was due to be organized virtually on 25 August 2023, with all three countries represented. The event will feature presentations on activities delivered under the project and the current LSD situation in the three target countries.	

Partnerships and Outreach

For more information, please contact: Reporting@fao.org

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