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National Lumpy Skin Disease Action Plan Progress Report 14 February 2026 to April 2026

Biosecurity Animal Division

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Acknowledgement of Country

We acknowledge the Traditional Custodians of Australia and their continuing connection to land and sea, waters, environment and community. We pay our respects to the Traditional Custodians of the lands we live and work on, their culture, and their Elders past and present.

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Introduction

The National Lumpy Skin Disease (LSD) Action Plan (the Action Plan) was released on 13 October 2022 and sets out national priorities for actions to strengthen Australia's preparedness for an incursion of LSD. It was developed in partnership with governments, industries and other stakeholders. It is envisaged that the Action Plan will be implemented over a period of at least three years.

Of the 27 activities in the Action Plan, 10 have been completed, and 17 are underway and on track. This report provides an overview of each ongoing activity's status, priority and next steps. Details of completed activities are provided in Table 8 at the end of the report. A prioritisation matrix is provided below.

Table 1 Prioritisation matrix

Criteria	High priority (one or more of the following)	Medium priority (one or more of the following)	Low priority (all of the following)
Urgency	Activity is highly time critical.	Activity is less time critical.	Activity is not time critical.
Importance of project	Activity has a high impact on Australia's preparedness for LSD.	Activity has a moderate impact on Australia's preparedness for LSD.	Activity has a lower level of impact on Australia's preparedness for LSD.
Risks to program delivery if not achieved	If not achieved, activity would have a high impact on the success of the program of work or has a high level of dependencies with other activities.	If not achieved, activity would have a moderate impact on the success of the program of work or has some level of dependencies with other activities.	If not achieved, activity would have a low impact on the success of the program of work and has limited dependencies with other projects.

Note: Activities have been prioritised based on urgency and importance of the project and the risks to the success of the National LSD Action Plan program if the project is not delivered successfully.

Objective 1: International engagement

Table 2 Strengthen collaboration and engagement within the region to strategically address the risks of LSD.

Activity	Lead and key collaborators	Description	Status	Priority progress update	Next steps
1.1. Support Indonesia's LSD response	**Lead** Department of Agriculture, Fisheries and Forestry (DAFF), Department of Foreign Affairs and Trade (DFAT) **Collaborators** Meat & Livestock Australia (MLA), the Australian Centre for Disease Preparedness (ACDP), overseas partners	This activity aims to ensure Indonesia receives ongoing financial and technical support for their LSD outbreak response to help control and contain the spread of the disease in alignment with the needs identified by the Indonesian Government.	On track	**High priority** **Support for distribution of vaccines and equipment** • In January 2026, LSD was detected in Bali. The Australian Government is working with Indonesian authorities to better understand the situation and provide appropriate support. • Since 2022, the Australian Government has provided 1,435,000 LSD vaccines to the Indonesian government, as well as syringes and needles. • DAFF is worked with the Indonesian Beef Cattle Industry Association (GAPUSPINDO) to supply additional foot-and-mouth disease (FMD) and LSD vaccines for use in smallholder farmers in buffer zones around feedlots through a $169,000 grant awarded to the Australian Livestock Export Corporation Ltd (LiveCorp). All vaccines purchased in January 2026 have been distributed. This project is now complete. • In April 2025, $220,000 was provided to LiveCorp to allow for an extension of their biosecurity engagement work with the Indonesian Provincial governments. This project is nearing completion. **Laboratory capacity** • DAFF provided $1.7 million to ACDP to continue to deliver diagnostics and capacity building support to Indonesian government laboratories. The primary objective of the Regional Emerging Disease Support (REDS) program is to assist with the implementation and delivery of external quality assurance (QA) programs for LSD and FMD. The REDS program activities have been extended through to November 2026 with additional scope and funding to include activities with relevant laboratories from the Indonesian Quarantine Authority (IQA), in addition to those already included from the Indonesian Ministry of Agriculture. • The Indonesian Disease Investigation Centre (DIC) Wates is conducting LSD proficiency testing (PT) across Indonesia. In March 2025, a review of the first 12 months of the Indonesian LSD QA program (network quality control and PT) was held via virtual meeting. Attendees included ministry representatives and the REDS project manager and officer.	**Support for distribution of vaccines and equipment** • The Australian Government continues to work with Indonesian authorities on further support as requested. **Laboratory capacity** • DAFF will continue to support laboratory cooperation and capacity building for Indonesian laboratory staff through several activities such as laboratory placements, technical exchanges and participation in the REDS project. • The REDS program aims to: Assist DIC Wates with change management to ensure continuity and sustainability of the LSD external QA programs. Address opportunities for improvement in the LSD PT program, particularly those identified in the March 2025 informal review. Assist DIC Wates to prepare for Round 2 of the LSD PT program. Work with the laboratories to: – finalise documentation in preparation for accreditation of their PT programs – assist with the development of competency and training matrices – provide estimates of costs for maintenance of QA programs to

Activity	Lead and key collaborators	Description	Status	Priority progress update	Next steps
				• At the central quarantine laboratory in Jakarta's (BBUSKHIT) request, the ACDP-PT team conducted an interlaboratory comparison of LSD PCR between ACDP and four IQA laboratories. Following publication of the report to participants by the ACDP-PT provider, REDS delivered an on-line review of PT statistics. • REDS supported an informal audit of Round 1 of the LSD PT program delivered by DIC Wates. An informal audit conducted by a QA technical expert from ACDP in conjunction with audit staff from DIC Wates reviewed the implementation of the LSD PT program, identified gaps or opportunities for improvement in processes, procedures or documentation, and work towards accreditation of the PT program. • REDS assisted the Indonesian national LSD and FMD reference laboratories to deliver a 12-month review of their external quality assurance programs to the DIC network and relevant Indonesian government agency. REDS activities have included training for the national LSD and FMD reference laboratories in auditing for improvement. REDS has also supported the second annual round of proficiency testing for FMD in December 2025. • From 29 September – 3 October 2025, an expert exchange and workshop was held at BBUSKHIT. Australian LSD expert, Dr Tim Bowden with the assistance of Dr Caryll Waugh provided training in quality assurance for molecular diagnostics to six laboratories of the IQA. Post workshop virtual training was provided over several weeks in data analysis for inter-laboratory comparisons. **Technical assistance** • In 2022, DFAT provided $2.2 million for technical assistance for a range of support activities including disease surveillance and epidemiology, field services and biosecurity surveillance, emergency management and operations, support for national/sub-national project teams, monitoring and evaluation. **Other technical and advisory support** • In 2023, 10 Indonesian quarantine officers were trained through the DAFF-funded Biosecurity Training Centre at Charles Sturt University. As of April 2025, a further 120 officers have been trained in country following a train-the-trainer model. • In November 2024, DAFF awarded MLA a $300,000 grant to deliver the Indonesia Biosecurity Support Program to support industry partnerships between Australia and Indonesia, strengthening Indonesia's emergency animal disease (EAD) response capability. In 2025, DAFF provided a further $300,000 to extend this program. • $1.4 million was provided to support a collaborative project with the Food and Agriculture Organization of the United Nations (FAO) Indonesia office to deliver quarantine and EAD response and control efforts in Indonesia.	assist with advocating for adequate resourcing.

Activity	Lead and key collaborators	Description	Status	Priority progress update	Next steps
1.2. Build LSD preparedness, technical and diagnostic capability and surveillance in near neighbouring countries	**Lead** DAFF **Collaborators** Overseas partners, DFAT, Agriculture Victoria (AgVic)	This activity seeks to build on existing relationships with Papua New Guinea and Timor-Leste to improve their LSD preparedness, technical and diagnostic capability, and surveillance.	On track	**High priority** • In April 2026, personnel from Timor-Leste's veterinary laboratory participated in exchange visits to the Northern Territory's Berrimah Veterinary Laboratory for capacity building in laboratory quality management systems, disease investigation and diagnostic testing. It also provided practical exposure to laboratory workflows and surveillance activities. • DFAT has been supporting AgVic to improve laboratory capacity and disease surveillance in near neighbouring countries. A national survey has been completed in Timor-Leste with no evidence of LSD found despite extensive serological testing of at-risk animals by clinical assessment serology. In Timor-Leste, an animal health surveillance system based on a freely available mobile data gathering platform is now in use, which increases their disease surveillance capacity. Applied epidemiology training delivered by DAFF between July and October 2024 has further strengthened this capability. DAFF continues to provide ongoing epidemiological training and support where requested. In October 2025, workshops were held in Honiara, Soloman Islands, to introduce loop mediated isothermal amplification (LAMP) technology to the pacific nations. A prototype animal health surveillance reporting system using the mobile data gathering platform is being trialled by 8 local para-veterinarians. • Through ACDP, PCR test capability is now established in Timor-Leste. • PNG and Timor-Leste are part of the DAFF-funded LSD regional vaccine supply agreement (as detailed in activity 5.2.c). These countries now have access to an initial supply of quality LSD vaccines should this be required in the future, with appropriate import permit arrangements in place to facilitate vaccine transport. • In 2022, Timor-Leste's National Veterinary Diagnostic Laboratory in Dili was supported with establishment of facilities to increase the capacity to use modern molecular testing methodologies as well as a cool room for storage of sensitive materials like vaccines.	• The development of a vaccination plan for LSD for PNG, including cold chain arrangements for EAD vaccines, is being supported by DAFF. • Through the DFAT-funded PNG Biosecurity Twinning Program, DAFF is partnering with the Papua New Guinea Biosecurity Authority (PNGBA) to deliver activities to enhance preparedness for LSD and other EADs, including biosecurity risk analysis and a review of EAD response plans.
1.3. Strengthen relationships in Southeast Asia	**Lead** DAFF, DFAT **Collaborators** Relevant state and territory governments, overseas partners	This activity includes establishing an Office of the Chief Veterinary Officer presence in northern Australia, led by the Australian	On track	**High priority** • The Office of the Chief Veterinary Officer has established a presence in northern Australia, led by the ACVO. • In September 2025, officers from ACDP visited the Indonesian Central Quarantine Laboratory (BBUSKHIT) to assist with harmonising diagnostic methods for LSD through the Southeast Asia and Australia Government-to-Government Partnerships Program (SEAG2G).	• DAFF is continually seeking to build relationships in Southeast Asia, including promoting engagement around LSD and other important animal health issues. • DAFF will continue to support WOAH and the Indonesian authorities on the transboundary animal disease activities.

Activity	Lead and key collaborators	Description	Status	Priority progress update	Next steps
		Deputy Chief Veterinary Officer (Deputy ACVO).		• Throughout 2025, multiple Australian senior officials travelled to Indonesia to discuss opportunities for biosecurity collaboration and strengthen the relationship between Australia and Indonesia. From July to August 2025, the Australian Minister for Agriculture, Fisheries and Forestry travelled to Indonesia to meet with and strengthen the important relationship with her Indonesian Government counterparts. • DAFF has funded enhancements to coordination of regional transboundary animal disease control activities, including LSD, through the WOAH Sub-Regional Representation for Southeast Asia. In December 2025, a DAFF officer participated in a workshop under this project that identified priority activities for future support.	
1.4. Engage in international and regional fora	**Lead** DAFF **Collaborators** Overseas partners	This activity involves Australia's ongoing engagement and contribution to international and regional fora on LSD.	On track	**Medium priority** • In December 2025, Australia submitted its position on a revised chapter within the WOAH Terrestrial Animal Health Code looking at infection with LSD virus. These international standards are important to support safe trade of animals and animal products. DAFF undertook consultation with external stakeholders through the Have Your Say process. • In July 2025, a DAFF officer participated in the WOAH LSD Workshop for Asia and the Pacific. Regional updates were provided from participating nations, and an implementation plan for the LSD Prevention and Control Strategy for Association of Southeast Asian Nations member nations was progressed.	• Australia will provide further comments in July 2026 on a second round of consultation of the WOAH Terrestrial Animal Health Code chapter. • Consultation on WOAH International Standards occurs biannually. Further circulations of the LSD chapter are expected until it is ultimately adopted into the WOAH Terrestrial Animal Health Code. DAFF will continue to engage with Australian stakeholders throughout the consultation, and with international and regional partners. • Australian representatives regularly attend meetings of intergovernmental organisations, focused on LSD control and elimination in the Asia Pacific region.

Objective 2: Border biosecurity and trade

Table 3 Augment industry-government collaboration and communication on the border biosecurity risks of LSD to Australia and strategically address technical market access barriers.

Activity	Lead and key collaborators	Description	Status	Priority progress update	Next steps
2.1. Review import policy and LSD risk pathways	**Lead** DAFF **Collaborators** Peak industry organisations	This activity will include undertaking robust science-based risk analyses for the import of products from LSD-affected countries to ensure the risk of LSD is managed and achieves Australia's appropriate level of protection.	On track	**High priority** • DAFF continues to monitor the spread of LSD internationally and applies appropriate measures to ensure Australia's biosecurity requirements are met while facilitating safe trade. In response to the spread of LSD internationally, DAFF has reviewed import permits for products from LSD affected countries and suspended those of concern. Reviewing import policy is an ongoing priority and DAFF maintains contemporary science and risk-based import policies. In January 2026, LSD was detected in Bali. As part of active monitoring, DAFF undertook a risk assessment in response to the detection which concluded that Australia's current risk management measures remain fit-for-purpose. • In March 2025 the final report of the *Import risk review for dairy products for human consumption* (the dairy review) was released. The final report confirms that specific risk management measures are not required for LSD virus (LSDV), as evidence demonstrated that pasteurisation is effective at inactivating LSDV in milk. The department is currently implementing the recommendations of the dairy review. The transition to the new risk management measures commenced in August 2025 and will take some time while the department negotiates new health certificates with overseas government authorities. • In December 2023, DAFF published the final review of Australia's current entry requirements for LSD in fresh beef (skeletal muscle) and beef products. The final review advises that certification of country freedom from LSD to cover importation of fresh beef derived exclusively from bovine skeletal muscle from approved countries is unnecessary on biosecurity grounds. Negotiation of revised health certificates continues. • A review of the risk of entry of LSD from non-regulated pathways has been undertaken (Activity 5.1.a).	• DAFF will continue to actively manage its import policy settings with regard to the available science and nature of the biosecurity risks.
2.2. Develop a strategic approach to minimising export trade disruptions	**Lead** DAFF **Collaborators** DFAT, the Australian Livestock Exporters'	This activity will take a strategic approach to minimising disruptions to trade by analysing	On track	**High priority** • In August 2025, AgVic hosted a national workshop to explore the operational considerations and challenges of implementing zoning for trade during an EAD outbreak. The Australian Government and each jurisdiction were represented. A workshop report was provided to the Animal Health Committee (AHC) in December 2025.	• The Zoning Task Group will develop project plans to deliver priority activities. • DAFF continues to make positive progress in accordance with the identified priorities. This includes pre-emptively

Activity	Lead and key collaborators	Description	Status	Priority progress update	Next steps
	Council, LiveCorp, MLA, other industry groups, state and territory governments	which export markets and products would be affected if there is an LSD incursion in Australia.		In response, AHC established a Zoning Operationalisation Sprint Task Group. The Task Group developed a proposal to plan activities to operationalise zoning, which was endorsed by AHC in March 2026. Delivery will be led by a new Zoning Task Group. • Whilst trading partner reactions cannot be anticipated in the event of an LSD incursion, to date approximately $765 million worth of exports previously at risk could now continue without disruption. • Consultation with jurisdictions, industry and Animal Health Australia (AHA) is continuing to clarify and promote consistency in national zoning approaches to minimise disruptions to international trade in the event of an EAD. In June 2024, DAFF led a dedicated workshop for industry stakeholders, AHA and participating jurisdictions covering zoning for trade in the event of EAD outbreaks. The aim of the workshop was for the Commonwealth, state and territory governments and industry to develop a shared understanding of the concept of zoning for disease control and trade, and a common approach for the implementation of zoning following an EAD outbreak. • In consultation with industry, and state and territory governments, DAFF finalised the LSD trade preparedness strategy. This strategy identifies priorities to mitigate trade losses that could result from an outbreak of LSD. DAFF is implementing the LSD trade preparedness strategy, which included a comprehensive review of current export certification across multiple commodities to identify certificates that do not align with internationally recognised scientific standards. DAFF, in consultation with industry, has identified key priorities for engagement to pre-emptively mitigate these trade risks, and has already progressed this work with several markets. • Trade in live cattle exports was maintained to key regional export markets following temporary disruptions related to questions regarding Australia's LSD status in 2023. DAFF also published a dossier demonstrating *Australia's freedom from LSD*.	identifying certification where animal health statements could better align with science-based recommendations. • DAFF is reviewing existing EAD materials to identify gaps for preparedness. This includes the preparation of communication 'toolkits' to ease burden if these diseases are detected in Australia. • DAFF is updating the *Australia's freedom from lumpy skin disease* dossier.

Objective 3: Diagnostic capability and capacity

Table 4 Ensure that Australia's national diagnostic network provides reliable LSD testing capability and capacity.

Activity **3.1** is complete. For more information, please refer to Completed Activities.

Activity	Lead and key collaborators	Description	Status	Priority progress update	Next steps
3.2. Improve the diagnostic testing options at ACDP	**Lead** ACDP **Collaborators** DAFF	There are a range of diagnostic testing options available for LSD at ACDP. Despite this, the development of new and improved diagnostic tests is important for detecting and managing an LSD incursion in alternative ways and progressing research.	On track	**Medium priority** • Following the importation of LSDV to the ACDP, researchers developed capabilities for virus isolation and propagation of live virus in cell culture, as well as the detection of neutralising antibodies in serum samples through a virus neutralisation test. • In February 2025, a project at ACDP to assess several 'Differentiating Infected from Vaccinated Animals' (DIVA) assays to ensure emerging variant and recombinant wild-type strains of LSDV in animals can be effectively differentiated from the attenuated vaccine strain was completed. Three DIVA PCR assays were evaluated. The Haegeman assay showed the best performance, effectively identifying both vaccine and wild-type strains, including recombinant LSDV. It is recommended as a complementary test to the pan-capripoxvirus assay for LSD diagnosis. • After securing the appropriate regulatory approvals, ACDP participated in an international Capripox (inactivated) PT round for serology and molecular diagnostic workflows in July 2023 with formal participation in the program maintained annually. • In 2024, ACDP utilised its international networks to obtain a recombinant, field relevant strain of LSDV to support ongoing preparedness activities. • In 2023, a project at ACDP on LSDV whole genome sequencing database and workflow development was finalised. This gave ACDP access to robust and repeatable whole genome sequencing procedures for timely LSDV detection and characterisation. • In 2023, an immunohistochemistry (IHC) staining protocol to identify LSDV in tissues using rabbit antibodies was completed. This successfully highlighted LSDV in infected/positive control fixed tissue sections. The antibodies also successfully highlighted sheep pox and goat pox viruses in appropriate fixed samples. • A series of cell lines was also established for the production of monoclonal antibodies against the LSDV P32 antigen. One clone was identified as being better suited for immunohistochemistry (IHC). A large batch of this antibody was then prepared and affinity purified for diagnostic use. This antibody has been successfully used to highlight LSDV in infected formalin-fixed, paraffin-embedded tissue sections as part of an IHC staining protocol. It is now deployed routinely in diagnostic workflows for Capripoxviruses. This hybridoma has been sequenced and a recombinant antibody successfully expressed, purified and tested by IHC. The recombinant antibody ensures ongoing supply of this reagent should the hybridoma be lost.	• NAQS will continue to collect serological samples from feral bovids during wild animal surveys. • ACDP will continue their participation in the annual International Capripox PT rounds. • Implementation and verification of the recently released ELISA will be undertaken at ACDP to facilitate National Association of Testing Authorities (NATA) accreditation.

Activity	Lead and key collaborators	Description	Status	Priority progress update	Next steps
				• An in-situ hybridization probe was developed following detailed review of sequencing data through the ACDP. The probe was utilised successfully, with the results validated in comparison with IHC. • Commercialisation of an indirect ELISA for detection of antibodies against LSDV has progressed due to work by the ACDP. A commercial supplier has launched a new multispecies ELISA, suitable for detecting antibodies against Capripoxviruses, including LSDV, with Australia included in the initial market release. The use of imported ELISA kits testing for exposure to exotic diseases is subject to Australian Government regulatory oversight and conditions imposed by jurisdictions. • Negative samples to support the use of serological tests (ELISA) in Australian animals have been collected through NAQS.	
3.3. Explore point-of-care LSD testing	**Lead** ACDP, the Sub-Committee on Animal Health Laboratory Standards (SCAHLS) and AHC **Collaborators** DAFF and state and territory governments	This activity will explore the development and use of novel point-of-care (POC) tests to screen for potential LSD cases during an outbreak situation.	On track	**Medium priority** • The AHC POC testing task group was established in 2021 to examine national policy issues related to POC testing for both notifiable and endemic diseases. The task group comprised nominated representatives from the Commonwealth, all Australian jurisdictions, ACDP, AHA, Wildlife Health Australia (WHA), and James Cook University (JCU). In February 2025, the AHC POC testing task group completed the development of POC test guidelines and subsequently disbanded. In March 2025, AHC endorsed the guidelines which will support decision-makers to determine and approve the use of POC tests specifically for diseases and infections on the national lists of notifiable diseases of terrestrial animals and reportable diseases of aquatic animals. • DAFF engaged a consultant to support the AHC working group in 2022. A broad range of stakeholder consultation was undertaken covering technical, operational and policy issues relating to the use of POC testing in Australia for all animal diseases. Their final report, including recommendations, was submitted to AHC in January 2023. • In July 2025, the SCAHLS formed the POC testing validation task group to review and develop a POC testing validation template informed by the AHC's POC tests guidelines for use in applications. • NSW have developed capacity to undertake POC testing for LSDV in the event of an outbreak using portable PCR machines. • AgVic has developed several LAMP POC primer sets for a test directed against LSD. They have been trialled against clinical LSD samples in Shimla, India with success and the test has been further developed to increase its speed. In October 2025, there were further field trials in Palampur (northern India) against LSD with success towards validation of the testing system against field isolates. LAMP tests for LSD were trialled in Himachal Pradesh, India with assistance from Negi Veterinary School stored samples. This trial used 'best performing' primer defined on previous trips. The test worked well on tissue samples stored frozen in virus media, but not on stored blood. • In 2024, SA acquired LAMP POC testing machines and work is continuing to explore potential use in the field during EAD responses. • Queensland's (Qld) has developed a portable PCR test combined with a lateral flow device which was verified by ACDP in early 2023 and is ready for in-field trials internationally.	• The public facing AHC POC test guidelines have been sent for AHC endorsement. Further engagement with industry is planned. • AgVic's work on LAMP tests will continue for a formal validation set on stored samples in India. • On behalf of jurisdictional government and industry stakeholders, ACDP continues to undertake assessment of LSD POC diagnostics suitable for field deployment.

Objective 4: Surveillance

Table 5 Optimise government and industry investment in LSD surveillance.

Activity **4.1.a** is complete. For more information, please refer to Completed Activities.

Activity	Lead and key collaborators	Description	Status	Priority progress update	Next steps
4.1.b. Develop a wild and free-roaming bovid surveillance strategy	**Lead** State and territory governments **Collaborators** NAQS, NT Cattlemen's Association, other industry groups	This activity aims to develop a surveillance strategy to identify the locations, numbers and population dynamics of wild and free roaming bovid populations.	On track	**Medium priority** • DAFF is consolidating data on free-roaming bovids across Australia and will produce maps, tables and data files relevant for LSD surveillance and simulation modelling. • A surveillance evaluation is being undertaken by the National Veterinary Epidemiology and Surveillance Advisory Group to provide evidence for proof of disease-freedom and quantify sensitivity for early detection. The findings will be relevant to understanding the need to undertake further surveillance in wild and free-roaming bovid populations. • Wild animal surveillance for a potential LSD incursion is already part of the NAQS program. Further surveillance is undertaken by state and territory governments, including through the National Significant Disease Investigation Program. • NAQS targeted surveillance strategy includes routine LSD serology on feral bovids (cattle, buffalo, banteng). Since routine testing commenced in 2022, there have been 318 feral bovids tested from 29 surveys in the NT and WA. All tests have returned negative serological results. Exclusion testing also occurs on any bovid skin lesions and internal lesions, which are clinically suggestive of LSD. Of the 318 feral bovids tested for serological exposure to LSD, 141 animals with lesions were tested for LSDV using PCR. No PCR positives have been detected in either serology or PCR. • WHA is exploring the feasibility of developing a network to engage with feral animal managers on matters of wildlife health. Such a group may have value for this program.	• National free-roaming bovid population data outputs will be developed to support simulation modelling and surveillance activities. • Surveillance evaluation findings will be shared with Animal Health Committee by June 2026. • NAQS will continue with LSD targeted surveillance in feral bovid populations, expanding surveillance into any feral cattle that may be inhabiting national parks in Qld.
4.1.c. Review arthropod vector monitoring programs	**Lead** DAFF, state and territory governments **Collaborators** CSIRO, AHA	This activity will review Australia's current arthropod vector monitoring programs (including in near neighbouring countries) and investigate if there are opportunities or the need to	On track	**Medium priority** • In June 2025, DAFF contracted ACDP to assess if PCR assays available in jurisdictional laboratories can reliably detect LSD contaminated mosquitoes within pooled samples. If successful, this could be used as a non-invasive surveillance method to understand LSD spread in an outbreak, without mustering animals. This study design could be used to investigate the feasibility of testing for LSD virus in other vector species. Pooled sample processing and nucleic acid extraction protocols have been developed, utilising synthetic DNA templates to investigate potential PCR inhibitors and preliminary test sensitivity. Laboratory-derived Culex mosquitoes have been bred, reared and prepared in the ACDP insectary. In June 2023, AgVic commenced a project with ACDP to investigate vectors of significance for the spread of LSD in Victoria. Trial work is now complete. The draft final report has been submitted and is subject to review prior to finalisation.	• Laboratory-reared, virus-exposed mosquitoes are now available and will be used to further assess, refine and optimise the pooled mosquito surveillance testing protocols in a more biologically relevant sample context.

Activity	Lead and key collaborators	Description	Status	Priority progress update	Next steps
		adapt these programs to be relevant to LSDV surveillance.		• DAFF contracted ACDP in 2024 for the assessment of buffalo fly as a potential vector for LSD in Australia. This project aimed to gain a greater understanding of the fly's ability to transmit LSD. The project was completed in April 2025. Results showed buffalo flies can acquire LSDV and may act as short-term mechanical vectors in an Australian outbreak. These results should be interpreted cautiously as only low quantities of virus were recovered from fly mouth parts.	
4.2. Undertake training and awareness activities	**Lead** DAFF, state and territory governments	This activity seeks to develop training programs and raise awareness of the increased risk of LSD and other animal disease threats in the Australian livestock population.	On track	**Medium priority** • In June 2025, 40 Australian veterinarians and animal health officers took part in the European Commission for the Control of Foot-and-Mouth Disease (EuFMD) virtual real-time training on FMD, LSD and sheep and goat pox. This online training course is designed to improve the capability of our front-line to detect and respond to EADs. • In July and August 2025, three interactive 'refresher training' webinars were delivered to EuFMD virtual real-time training and real-time training alumni. They covered the current global situation of FMD and LSD, Australia's preparedness activities and vaccine arrangements. • In June 2025, an Innovative Surveillance Solutions workshop, attended by government, industry, and research leaders, was held in Cairns. The workshop explored emerging technologies to strengthen EAD surveillance in northern Australia. • The Northern Australia Coordination Network (NACN) was established with $4.3 million in funding to combine NT, Qld, WA and Commonwealth governments in partnership with key industries and local communities to improve surveillance and preparedness coordination in the north. NACN partners are working to deliver EAD communications, training, awareness and surveillance activities across northern Australia. In May 2025, NACN partners participated in Exercise Raintree testing their response capability to an EAD using an outbreak scenario of LSD in a herd in remote NT. Representatives from government and livestock industries from across Qld, NT and WA participated as members of the state coordination centre or the forward command post. NACN supports the Northern Australian Biosecurity Strategy Network (NABSnet) through procuring a veterinary advisor based in far north Qld to work alongside the existing NABSnet veterinary advisor, supporting private veterinarians performing significant disease investigations across northern Australia, including LSD exclusions. • Fee-for-service community animal health reporting activities occur through Indigenous Ranger groups including reporting sickness in bovids on First Nations controlled lands. • Topwatch! Public awareness material is distributed at agricultural shows, schools, producer forums and to rangers highlighting various diseases including LSD. Regular engagement with NABSnet veterinarians encourage LSD exclusion and reporting. The network provides ongoing support for veterinarians in northern Australia via newsletters, contact through the NABSnet Veterinary Adviser, online resources, subsides for significant disease investigations and exclusions, and an annual masterclass.	• From May to June 2026, 40 veterinarians and animal health personnel will take part in virtual real-time training course on EADs delivered by EuFMD and DAFF. • All jurisdictions continue to deliver engagement and awareness activities, highlighting the risk of EADs like LSD. This ensures producers and other relevant stakeholders know who to contact when they encounter unusual signs of disease. • NABSnet will continue to accept skin survey samples from private vets in the 2025-26 financial year with continued emphasis on encouraging LSD exclusion testing.

Activity	Lead and key collaborators	Description	Status	Priority progress update	Next steps
				The NABSnet northern Australia Cattle Skin Survey accepts skin survey samples, providing evidence on what causes skin lesions in cattle in northern Australia. Since 2023, there have been 128 submissions with over 231 cattle tested. All samples were negative for LSD. • In 2024, NSW Department of Primary Industries and Regional Development (NSW DPIRD) conducted an exercise to test "just in time" training modules that were developed for surveillance and tracing response staff. An NSW multi-agency exercise led by the Engineering functional area testing existing disposal planning was held with government staff participating. Since 2022, NSW DPIRD and Local Land Services have undertaken targeted surveillance and engagement in NSW saleyards, examining cattle for signs of LSD or FMD and confirmatory sampling. 856 inspections have been performed across 34 saleyards. In March 2026, NSW DPIRD released issue 11 of EAD Vet Wrap – a newsletter updating veterinary professionals with EAD preparedness activities. • In 2024, the Australian Capital Territory's (ACT) held 'Exercise Capital Standstill', an FMD exercise scenario involving multiple government directorates. This exercise was beneficial to understanding the ACT's capacity to respond to a major EAD incident. • In 2024, DAFF funded the development of an online training module based on an LSD outbreak in cattle. This was developed by Australian Veterinary Schools for veterinary students and veterinarians to support detection, investigation and reporting of EADs. • AgVic is working to raise awareness of biosecurity risks with livestock keepers and encourage best practice measures. 158 biosecurity planning workshops were held, targeting mixed farming businesses and remote areas assisting with the development of 1,664 farm biosecurity plans. 297 awareness events were held for 272,121 producers and other stakeholders. Over 3,300 enrolments in 5 eLearning modules, 3,000 views of 5 animations and 2000 listens to the 12 podcasts have supported awareness of EAD events. • SA officers hold training and awareness activities to a range of stakeholders including private veterinarians, abattoirs, livestock agents, producers, stock feed manufacturers and transporters. In 2024, officers finished distribution of glovebox skin sampling kits and training producers in remote SA. Officers continue to visit saleyards with enhanced awareness for LSD. • Qld officers conduct annual training in disease investigation procedures and techniques to increase capability and capacity for an EAD response. In 2024, a pilot disease investigation workshop was delivered to cattle industry staff, promoting EAD awareness and reporting. This is being adapted for local government. Qld conducted 12 face-to-face and virtual response readiness training courses for staff, elected officials, and emerging leaders of agricultural peak industry bodies. Qld is conducting twice yearly EAD investigation training workshops for private veterinarians in collaboration with the University of Queensland (UQ) and JCU. • In 2023, WA completed training for private practitioners including EAD awareness and sample submissions. In April 2024, WA commenced an EAD Veterinary reserve training program.	

Objective 5: Preparedness and response

Table 6 Enhance the LSD preparedness and emergency response capacity and capability of industries and governments, and clearly define roles and responsibilities.

Activities **5.1.a**, **5.2.b, 5.3** and **5.5** are complete. For more information, please refer to Completed Activities.

Activity	Lead and key collaborators	Description	Status	Priority progress update	Next steps
5.1.b. Develop epidemiological modelling systems for LSD	**Lead** DAFF **Collaborators** State and territory governments, AHC, other partners	This activity will focus on the development of systems for the epidemiological modelling of vector-transmitted disease outbreaks. The system will be used to integrate data from jurisdictional and national datasets.	On track	**High priority** • An LSD epidemiological model was developed using the Australian Animal Disease Spread (AADIS) platform to assess areas in Australia where LSD may spread and compare different control strategies, including the use of vaccination. The model and some key findings were presented to government and industry stakeholders at the National LSD Action Plan Workshop in June 2025. A report was provided to AHC in September 2025. • UQ has made technical improvements to a geospatial risk assessment model that includes a wind dispersion sub-model. The model is intended to provide an evidence-based reference on probable LSDV entry points in a potential situation where LSD had spread through PNG and Timor-Leste. A scientific manuscript describing the model has been published in *Scientific Reports*.	• DAFF is working with stakeholders to decide on how the AADIS model may be expanded to cover a greater range of control options with a focus on vaccination.
5.2.a. Develop a national LSD vaccination strategy	**Lead** AHC, AHA **Collaborators** CSIRO, Cattle Australia, the AHC Vaccine Expert Advisory Group (VEAG), other partners	This activity will establish a national LSD vaccine working group to develop a national LSD vaccination strategy, including options on how to best apply vaccination during a response and how to identify vaccinated animals.	On track	**High priority** • A Vaccine Operational Task Group (VOTG) was established under the AHC Sub-Committee for Emergency Animal Disease (SCEAD) and has developed national operational planning documentation to support the development of a national LSD vaccination strategy including standard operating procedures and a document on the visual identifiers for FMD and LSD vaccinated cattle. • In April 2026, AHC sought nominations for representatives from relevant peak industry bodies to establish a vaccination strategy steering committee and writing group. • Jurisdictions have also been developing their own policies and LSD vaccination plans which were shared through the VOTG. • DAFF has undertaken a literature review of vaccination approaches used internationally to manage LSD outbreaks, to inform how LSD vaccination may be used in Australia. • In November 2025, AHC engaged with representatives of relevant peak industry bodies to discuss next steps in development of a vaccination strategy.	• The documentation developed by the VOTG was assessed for any gaps in early 2026. SCEAD is reviewing the outcomes of this testing and will seek to provide updated documents to AHC in mid-2026. • The national LSD vaccination strategy writing group will commence work in May 2026, with a draft strategy anticipated by the end of 2026. • The findings of the literature review have been communicated with AHC members and relevant industry stakeholders and will support

Activity	Lead and key collaborators	Description	Status	Priority progress update	Next steps
					the development of a national LSD vaccination strategy. • Engagement with industry will continue throughout development of the strategy.
5.2.c. Investigate options for the timely supply of LSD vaccines	**Lead** DAFF, AHA **Collaborators** State and territory governments, peak industry organisations	This activity aims to investigate options to secure access to LSD vaccines in the event of an outbreak, including the possibility of investment in an LSD vaccine bank modelled on the Australian FMD Vaccine Bank.	On track	**High priority** • At the June 2025 National LSD Action Plan Workshop, vaccine supply arrangements, and modelling to inform vaccination planning, were presented to government and industry stakeholders. • In November 2023, DAFF presented on the Regional LSD Vaccine Supply Arrangement at the AHC Stakeholder Forum. In March 2024, DAFF presented on the same topic to government and industry stakeholders. • In October 2023, DAFF officers met with representatives from AHA to discuss the Regional LSD Vaccine Supply Arrangement and the possibility of a co-funded LSD vaccine supply arrangement for use in Australia in the event of an outbreak. • In June 2023, DAFF entered into a Regional LSD Vaccine Supply Arrangement with an international LSD vaccine manufacturer, MSD Animal Health, to supply 300,000 doses of LSD vaccines to Australia or other regional countries if required.	• DAFF will work with relevant stakeholders to enable timely supply of LSD vaccines if they should be required. A national LSD vaccination strategy is being developed (Activity 5.2.a), which will inform the potential establishment of a national LSD vaccine bank.
5.4. Prepare to manage exported livestock in transit and in preparation for export during an incursion	**Lead** DAFF **Collaborators** AHC, LiveCorp, MLA, live animal exporters	This activity involves the development of a framework for contingency plans (including preparedness, logistics, biosecurity and welfare) for Australian livestock consignments which are within the export process, including those that are loading or those that have departed but not yet arrived in their destination country.	On track	**Medium priority** • DAFF has drafted a policy framework for broader export livestock incident management procedures. These incidents include the detection of a disease such as LSD and FMD in Australia as they relate to livestock exports. • Due to some elements of the policy taking longer than expected, DAFF is continuing to work through options relating to the development of the policy. • DAFF is continuing to work with interested stakeholders to finalise operating principles for managing livestock conveyances, including the return of vessels carrying livestock to Australia and other contingency arrangements. • In December 2023, changes were made to the *Export Control (Animals) Rules 2021* to allow DAFF to require the moving or loading of livestock for export to stop in circumstances where the Director of Biosecurity reasonably suspects that an animal disease, infection or infestation is present in Australia. The changes are designed to prevent or significantly reduce the potential health and welfare impacts to livestock about to be, or in the process of being, loaded for export, and mitigate potential damage to Australia's reputation as a trusted trading nation. • In late 2023, DAFF received $8.8 million over 2 years to support the continuation of the livestock export trade, including funding to develop a national approach to manage livestock in transit and when they may need to return to Australia.	• In June 2025, the funding measure to support the development of the national approach to manage livestock in transit and when they may need to return to Australia ceased. DAFF is continuing to work through options relating to the development and implementation of the national policy. These will be presented to the Agriculture Senior Officials' Committee meeting by the end of 2026.

Objective 7: Research and innovation

Table 7 Improve Australia's LSD preparedness and response through research priorities driven by industry and government needs, and ensure new knowledge is freely accessible.

Activity **7.1** is complete. For more information, please refer to Completed Activities.

Activity	Lead and key collaborators	Description	Status	Priority progress update	Next steps
7.2. Investigate new technology LSD vaccines	**Lead** ACDP, Elizabeth Macarthur Agricultural Institute (EMAI) **Collaborators** DAFF, state and territory governments, industry, MLA	This activity will seek research interest in developing alternative vaccine technologies that can be deployed both in Australia and internationally to control the further spread of LSD.	On track	**Medium Priority** • Qld and UQ are working collaboratively to develop a prototype single-dose microencapsulated subunit vaccine for LSD with DIVA capabilities. In 2023, UQ was exploring the development of a self-amplifying RNA vaccine with DIVA capabilities in collaboration with researchers from South Korea and Thailand. • DAFF conducted an open market discovery process, seeking responses from potential vaccine manufacturers about the possible development of novel LSD and other livestock vaccines and the potential for Australian-based vaccine production capability. • Tiba Biotech made mRNA constructs effective at generating serological responses in mice-based antigens considered to be most likely to induce neutralising antibody responses against LSDV. • NSW DPIRD tested 6 vaccine constructs in rabbits and cattle at EMAI. Collaborators at the Canadian Food Inspection Agency (CFIA) Winnipeg showed virus neutralising antibodies from rabbits, cattle and sheep. Results suggest improved efficacy with antigen combinations. 1 of the antigens gave poor serological responses so won't be used in vaccines but is available for DIVA capability as it presents in infected cattle. • In 2023, NSW, Qld and Commonwealth governments through MLA, invested in a $4.95 million project to support research into messenger ribonucleic acid (mRNA) vaccines for livestock, including LSD. This project aims to deliver an mRNA LSD vaccine construct that has undergone in-vivo efficacy testing. mRNA vaccines have shown to give high serological response and protect against challenge with Border disease virus in sheep. Progress has been made on mRNA dose and formulation optimisation. NSW government invested a further $8.8 million in this program with matching funds (60:40) from the MLA Donor Company. mRNA vaccine production capacity is being developed by the University of NSW RNA Institute and built into the NSW RNA pilot facility.	• Proof of concept has been achieved overseas for mRNA vaccines against LSDV in sheep. NSW DPIRD and partners are seeking funds to increase capacity and move towards developing a data package needed for regulatory approval. • Further work is planned for assessment of additional antigens at CFIA in late 2026

Activity	Lead and key collaborators	Description	Status	Priority progress update	Next steps
				In Canada, groups of 5 sheep were vaccinated with 3 different vaccine candidates all containing multiple antigens at CFIA, Winnipeg. Sheep were challenged with sheep pox as an intradermal injection and site reaction as well as secondary skin lesions were measured. The results are supportive of an efficacious vaccine. In Germany, groups of 9 cattle were vaccinated with 4 vaccine candidates and challenged using intravenous and intramuscular routes at the Friedrich-Loeffler Institute (FLI). The trial found that cattle were not protected by the vaccine. Further work is underway to explore why the vaccine was effective in sheep but not cattle. A follow up study started in April 2026 at FLI with a vaccine construct composed of 6 antigens in different formulations.	
7.3. Develop modelling tools to support LSD preparedness and response	**Lead** DAFF, Centre of Excellence for Biosecurity Risk Analysis (CEBRA) **Collaborators** State and territory governments	This activity will seek investment in other modelling tools to hone Australia's LSD preparedness and response (in addition to epidemiological modelling tools developed under Activity 5.1.b).	On track	**Medium Priority** • Decision support tools for outbreak responses were developed in 2024, including epidemiological analyses and an epidemiological forecasting model. • A project funded by the Australian Research Data Commons on Enhancing Models for Rapid Decision-Support in EAD Outbreaks (HASTE) supporting the uptake and operationalisation of epidemiological models for decision-making during outbreak response has begun. • To strengthen national real-time modelling capabilities during an outbreak response, a stakeholder workshop was held in 2022 to identify gaps and priorities for real-time modelling activities during an outbreak response, using LSD as the test case. Outputs from the workshop has guided the development of modelling tools and workflows to support decision making during an emergency response. • The final HASTE internal workshop was held in April 2026 to review outcomes across the project and discuss on how outputs can be taken up and used beyond the lifetime of the project. This built on the program of training and simulation workshops delivered with jurisdictions that combined technical collaboration with decision-making simulation exercises.	

Completed Activities

Table 8 Completed Activities

Activity	Lead and key collaborators	Description	Completed in:
3.1. Improve national and regional LSD diagnostic capability and capacity	**Lead** ACDP, Laboratories for Emergency Animal Disease Diagnosis and Response (LEADDR) **Collaborators** DAFF	National testing capability for LSD was transferred from ACDP to all state and territory government laboratories through the existing LEADDR network. Regional testing capacity is also being supported by ACDP (Activity 1.2).	August 2025
4.1.a. Develop a national LSD surveillance strategy	**Lead** AHC, AHA **Collaborators** DAFF, CSIRO/ACDP, Australian Meat Industry Council, peak industry organisations	This activity developed a national LSD surveillance strategy that will assist with detecting an LSD incursion as early as possible.	February 2026
5.1.a. Undertake risk mapping of the likelihood of entry, establishment and spread of LSD	**Lead** DAFF **Collaborators** State and territory governments, AHC, other partners	This activity undertook risk mapping of geographical areas that may have a higher likelihood of entry, establishment and spread of LSD.	May 2023
5.2.b. Access an LSD vaccine appropriate for use within Australia	**Lead** DAFF	Commercially available LSD vaccines were evaluated to assess their suitability for emergency use in Australia.	November 2024
5.3. Review the national LSD response strategy	**Lead** AHA, AHC, DAFF, the AUSVETPLAN Technical Review Group **Collaborators** Peak industry organisations	This activity ensured the national LSD response strategy is fit-for-purpose and well aligned with the national LSD vaccination strategy.	February 2026
5.5. Investigate arthropod vector control options	**Lead** DAFF **Collaborators** State and territory governments	This activity reviewed Australia's current arthropod vector control options (including in near neighbouring countries) and investigated if there are opportunities to improve these or put in place plans to prevent the spread of disease.	August 2025
6.1 Develop a comprehensive and sustained LSD communication plan to raise awareness and understanding of	**Lead** The National Biosecurity Committee Engagement Network (NBCEN), peak industry organisations.	This activity developed a comprehensive and sustained LSD communication plan to raise awareness and understanding of the disease, risk and preparedness activities.	November 2023

the disease, risk and preparedness activities	**Collaborators** DAFF		
6.2. Develop a communication plan for use during an LSD emergency response	**Lead** NBCEN	This activity developed a communication plan that could be used during an incursion of LSD.	February 2024
7.1. Set national priorities for LSD research, engagement and communication	**Lead** DAFF, the National Animal Biosecurity Research, Development and Extension Strategy (AHA), AHC	This activity brought together industry, government and other stakeholders to identify, prioritise and undertake important LSD-related research and preparedness activities.	August 2025
8.1. Develop options for an LSD recovery strategy	**Lead** DAFF, in consultation with other Australian Government agencies as appropriate	This activity developed options for a LSD recovery strategy in consultation with other Australian Public Service agencies as appropriate, to assist in overall preparedness in the event of an LSD outbreak.	November 2023

Note: The 'Completed in' column lists the Quarterly Progress Report an activity was marked complete in and may not reflect the exact date of a project's completion.

Glossary

Table 9 Glossary

Acronym	Definition
AADIS	Australian Animal Disease Spread
ACDP	Australian Centre for Disease Preparedness
ACT	Australian Capital Territory
ACVO	Australian Chief Veterinary Officer
AgVic	Agriculture Victoria
AHA	Animal Health Australia
AHC	Animal Health Committee
AUSVETPLAN	Australian Veterinary Emergency Plan
BBUSKHIT	Balai Besar Uji Standar Karantina Hewan, Ikan Dan Tumbuhan (central quarantine laboratory in Jakarta)
CFIA	Canadian Food Inspection Agency
CSIRO	Commonwealth Scientific and Industrial Research Organisation
DAFF	Department of Agriculture, Fisheries and Forestry
DFAT	Department of Foreign Affairs and Trade
DIC	Indonesian Disease Investigation Centre
DIVA	Differentiating Infected from Vaccinated Animals
EAD	Emergency animal disease
ELISA	Enzyme-linked immunosorbent assay
EMAI	Elizabeth Macarthur Agricultural Institute
eDNA/RNA	Environmental deoxyribonucleic acid/ribonucleic acid
EuFMD	European Commission for the Control of Foot-and-Mouth Disease
FAO	Food and Agriculture Organisation of the United Nations
FLI	Friedrich-Loeffler Institute
FMD	Foot-and-mouth disease
HASTE	Enhancing rapid decision-support for emergency animal disease outbreaks.
ID	Innovative Diagnostics
IHC	Immunohistochemistry
IQA	Indonesian Quarantine Agency
JCU	James Cook University
LAMP	Loop mediated isothermal amplification
LEADDR	Laboratories for Emergency Animal Disease Diagnosis and Response
LiveCorp	Australian Livestock Export Corporation
LSD	Lumpy skin disease
LSDV	Lumpy skin disease virus
MLA	Meat & Livestock Australia
mRNA	Messenger ribonucleic acid
NABSnet	Northern Australian Biosecurity Strategy Network
NACN	Northen Australia Coordination Network

NATA	National Association of Testing Authorities
NAQS	The Department of Agriculture, Fisheries and Forestry's Northern Australian Quarantine Strategy
NBCEN	National Biosecurity Committee Engagement Network
NSW	New South Wales
NSW DPIRD	New South Wales Department of Primary Industries and Regional Development
NT	Northern Territory
NVMAG	National Vector Management Advisory Group
PCR	Polymerase chain reaction
PNG	Papua New Guinea
PNGBA	Papua New Guinea Biosecurity Authority
POC	Point-of-care
PT	Proficiency testing
QA	Quality assurance
Qld	Queensland
REDS	Regional Emerging Disease Support
SA	South Australia
SCAHLS	Sub-Committee on Animal Health Laboratory Standards
SCEAD	Sub-Committee on Emergency Animal Disease
SEAG2G	Southeast Asia and Australia Government to Government partnerships program
UQ	University of Queensland
VOTG	Vaccine Operational Task Group
WA	Western Australia
WHA	Wildlife Health Australia
WOAH	World Organisation for Animal Health