

Director's Message



It gives me immense pleasure to present the third issue of **FMD-रक्षक**. This edition highlights the Institute's recent scientific activities, diagnostic services, capacity-building initiatives, and important national and global developments related to Foot-and-Mouth Disease (FMD). The newsletter continues to serve as a platform for sharing timely information and strengthening collaboration among researchers, veterinarians, policymakers, and other stakeholders

engaged in FMD prevention and control.

During May-June 2026, FMDV serotype O continued to be the predominant serotype detected in India, with laboratory-confirmed cases reported from multiple states, reaffirming the need for sustained surveillance, timely diagnosis, systematic vaccination, and post-vaccination monitoring. Internationally, the continued expansion of the exotic FMDV serotype SAT-1 into East Asia, extending up to Mongolia, and into Europe has further reinforced the importance of preparedness, contingency planning, strengthened laboratory capacity, and regional cooperation. ICAR-NIFMD remains committed to supporting the nation through scientific research, quality diagnostics, capacity building, and evidence-based policy support to strengthen India's preparedness against both endemic and emerging FMD threats.

The evolving global epidemiological situation also highlights the importance of continued investment in research, innovation, and collaborative One Health approaches for safeguarding livestock health and protecting rural livelihoods. I am confident that the collective efforts of scientists, veterinarians, policymakers, and livestock keepers will further strengthen India's preparedness and accelerate progress towards sustainable FMD control.

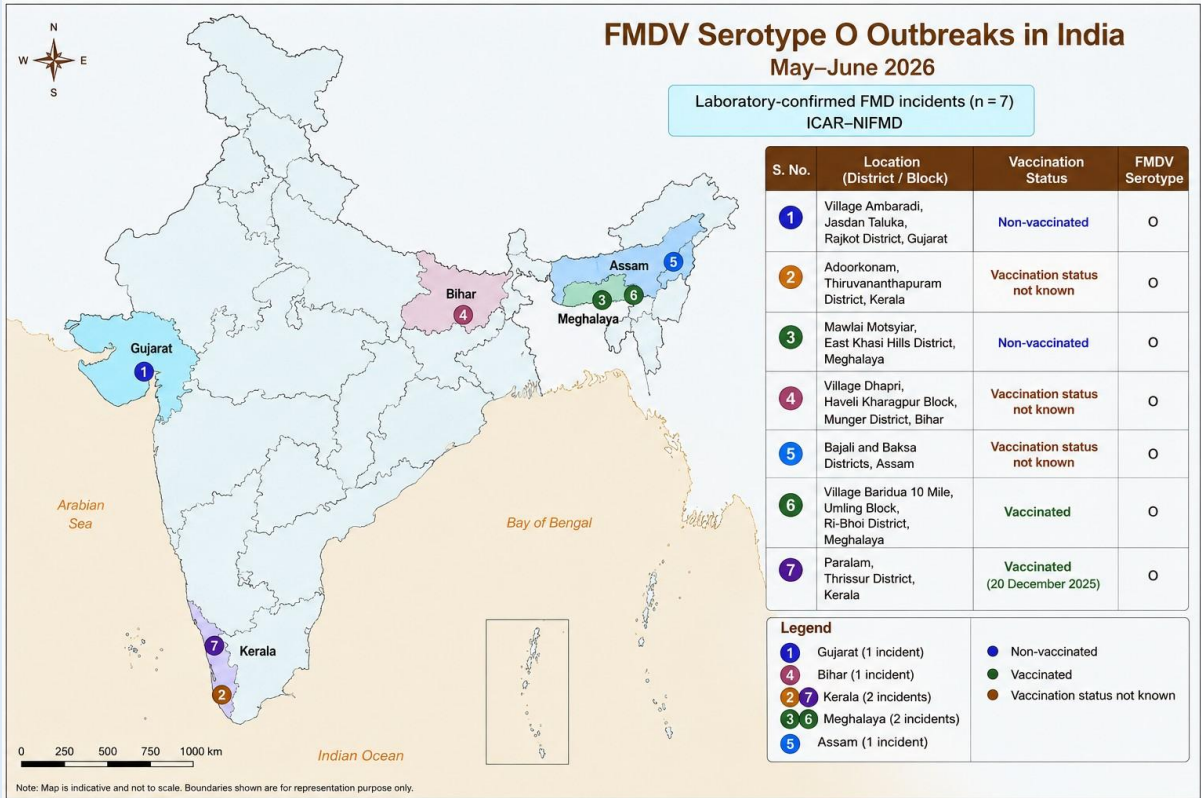
I express my sincere gratitude to Dr M L Jat, Hon'ble Secretary, DARE & DG, ICAR; Dr R Bhatta, DDG (AS), ICAR; and Dr D Hemadri, ADG (AH), ICAR, for their continued guidance and encouragement in advancing the Institute's mandate and strengthening national FMD control efforts.



Dr R. P. Singh

FMD Incidences in India

During May-June 2026, ICAR–National Institute on Foot-and-Mouth Disease (ICAR–NIFMD) confirmed the circulation of Foot-and-Mouth Disease virus (FMDV) serotype O in five states of India, indicating sustained endemic activity across geographically diverse cattle populations. A total of seven laboratory-confirmed FMD incidents were recorded from Gujarat, Kerala, Meghalaya, Bihar, and Assam.



The figure shows the FMD outbreaks reported from different locations in India during May–June 2026, showing the vaccination status of affected animals and the FMDV serotype detected. Serotype O was detected in all the reported outbreaks.

The earliest confirmations during the period were obtained from Village Ambaradi in Rajkot District, Gujarat, and Adoorkonam in Thiruvananthapuram District, Kerala, where samples collected during May 2026 were confirmed as FMDV serotype O. During June 2026, additional confirmations were obtained from Mawlai Motsiyar (East Khasi Hills District) and Baridua 10 Mile (Ri-Bhoi District) in Meghalaya, Village Dhapri in Munger District, Bihar, Bajali and Baksa Districts in Assam, and Paralam in Thrissur District, Kerala.

All submitted samples were diagnosed as FMDV serotype O using serotyping ELISA followed by confirmatory RT-mPCR. The exclusive detection of serotype O is consistent with its continued predominance in India and supports existing epidemiological evidence that serotype O remains responsible for the majority of FMD outbreaks in the country. The geographically dispersed distribution of FMDV highlights the endemic nature of FMD in India and reinforces the importance of sustained surveillance, rapid laboratory diagnosis, timely outbreak reporting, systematic vaccination under the LHDCP, and post-vaccination monitoring to support effective disease control.

Global FMD Scenario

May-June 2026 witnessed a dynamic global FMD situation, with both endemic and newly emerging outbreaks reported across multiple regions. Of particular significance was the continued international spread of FMDV serotype SAT-1 beyond its traditional sub-Saharan African range, resulting in outbreaks in Europe, the Middle East, and East Asia.

Simultaneously, outbreaks caused by serotypes O and A continued to affect several countries, underscoring the need for sustained global surveillance, rapid reporting, and strengthened preparedness to mitigate transboundary spread.

KEY EPIDEMIOLOGICAL INSIGHTS

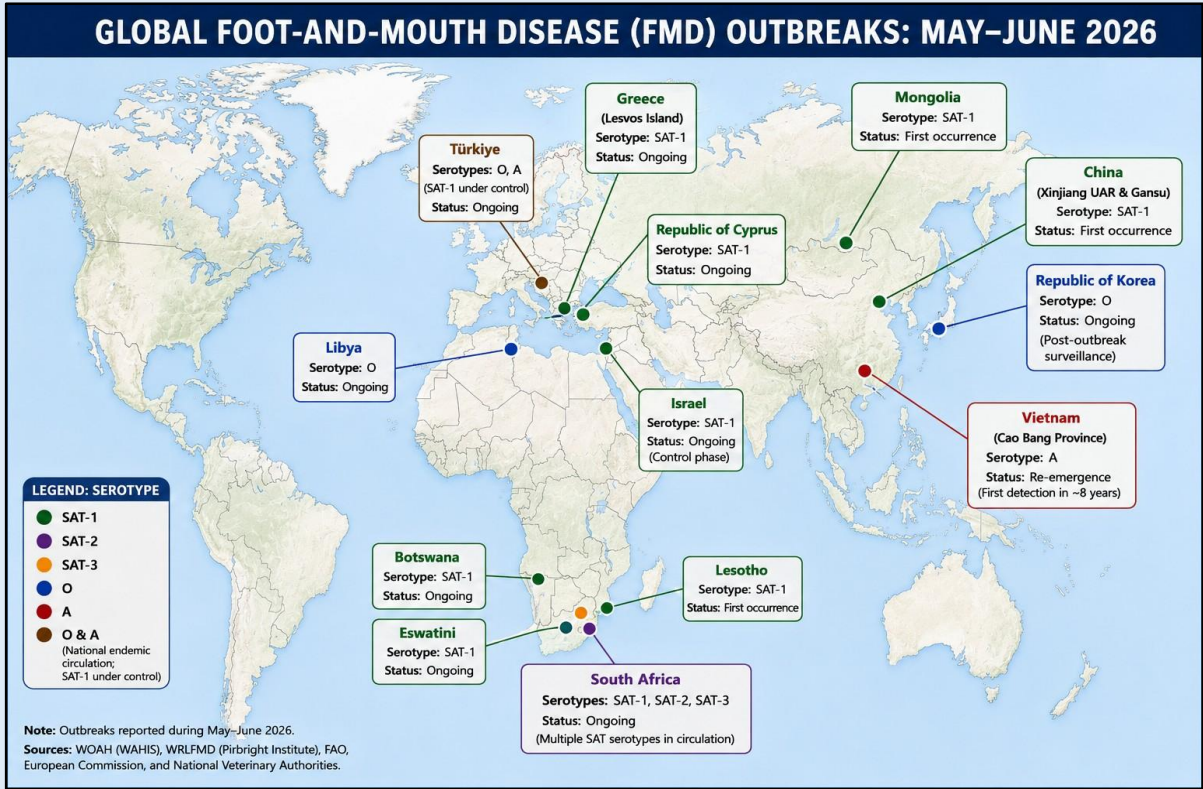
- FMDV serotype SAT-1 continued its unprecedented expansion beyond sub-Saharan Africa, with first documented national incursions into Mongolia, confirming the continued eastward spread of this traditionally African serotype.
- FAO recognized the growing regional threat by issuing a high-alert for Asia and including Pakistan among the priority countries supported through its Technical Cooperation Programme to strengthen surveillance, laboratory preparedness, and early warning systems.
- Transboundary livestock movements, informal animal trade, and interconnected regional production systems remained the principal drivers of virus dissemination, highlighting the importance of coordinated cross-border surveillance and international information sharing.
- Countries with immunologically naïve livestock populations experienced severe outbreaks requiring intensive emergency response. In Greece, implementation of the non-vaccination stamping-out policy resulted in the depopulation of more than 55,000 susceptible animals, while Cyprus combined emergency vaccination with other control measures following outbreaks necessitating the culling of more than 70,000 animals.
- The simultaneous circulation of SAT-1 alongside endemic serotypes O and A highlighted the increasing complexity of the global FMD epidemiological landscape and reinforced the need for preparedness against multiple serotypes.
- For India, the evolving regional epidemiological situation underscores the importance of sustained border and risk-based surveillance, laboratory preparedness, contingency planning, molecular characterization, vaccine matching, and preparedness for access to appropriate SAT-1 vaccine antigens to facilitate rapid detection and effective emergency response.

Mongolia reported its first-ever outbreak of FMDV serotype SAT-1 following confirmation of infection in cattle in **Khovd Province** on **21st May, 2026**, with official notification submitted on **28th May, 2026**. The detection further demonstrated the unprecedented eastward spread of SAT-1 beyond its historical range and underscored the growing transboundary threat posed by this exotic serotype to Central and East Asia. Vietnam experienced a significant outbreak of FMD serotype A during June 2026 in Cao Bang Province. By 29th June, outbreaks had been confirmed in five communes and wards—Dam Thuy, Trung Khanh, Thanh Long, Minh Khai, and Quang Trung, affecting a total of 79 animals comprising 49 buffaloes, 16 cattle, 11 goats, and three pigs. The detection was epidemiologically important because serotype A had not been reported in Vietnam for several years (approximately 8 years). Libya reported two separate FMD notifications during the review period, on 8th May, and 22nd June, 2026. According to WOA regional reporting, the May outbreak was attributed to FMDV serotype O, whereas the serotype associated with the June notification remained pending at the time of reporting. South Africa continued to report extensive endemic FMD activity throughout May and June 2026, with simultaneous circulation of SAT-1, SAT-2 and SAT-3. Outbreaks primarily affected cattle, while African buffalo continued to serve as the principal wildlife maintenance host for SAT viruses within designated conservation areas. Botswana continued to report FMD activity during May and June 2026 as part of the wider southern African SAT-1 epidemic. The continued circulation of SAT-1 in Botswana underscored the persistent challenge of controlling FMD at the wildlife–livestock interface. Eswatini continued to report FMDV serotype SAT-1 activity during May and June 2026.

Eswatini's close livestock movement links with neighbouring South Africa and Mozambique, further emphasized the challenges posed by the wildlife–livestock interface.

Global Foot-and-Mouth Disease (FMD) Situation Summary (May–June 2026)				
Country / Location	Serotype	Status	Principal References	Salient Features
 Libya	O (May); Pending (June)	 Ongoing	 WOA; WRLFMD	 Two notifications; continued FMD activity in North Africa.
 Republic of Cyprus	SAT-1	 Ongoing	 Veterinary Services; EC; WOAH	 ~117 holdings affected; EU emergency vaccination campaign.
 Greece (Lesvos Island)	SAT-1	 Ongoing	 Hellenic Ministry; WOAH; EC	 >118 infected holdings; stamping-out without vaccination.
 Israel	SAT-1	 Ongoing (control phase)	 Israel Veterinary Services	 Intensive surveillance and movement controls following outbreaks.
 Mongolia	SAT-1	 New	 WOA; WRLFMD	 First-ever SAT-1; rapid spread to multiple provinces.
 Vietnam (Cao Bang Province)	A	 New / Re-emergence	 Cao Bang Government; WOAH	 First serotype A outbreak after several years; emergency vaccination.
 South Africa	SAT-1, SAT-2, SAT-3	 Ongoing	 DALRRD; FAO	 Persistent endemic circulation; African buffalo reservoir.
 Botswana	SAT-1	 Ongoing	 WOA; FAO	 Continued outbreaks; partial suspension of FMD-free zone.
 Eswatini	SAT-1	 Ongoing	 Veterinary & Livestock Services; WOA; FAO	 Continued SAT-1 circulation; enhanced surveillance and movement controls.
 Lesotho	SAT-1	 New	 WOA; FAO	 First national occurrence during regional SAT-1 epidemic.
 Türkiye	O, A (SAT-1 under control)	 Ongoing	 Ministry of Agriculture	 Endemic O & A circulation; vigilance following recent SAT-1 incursion.
 China (Xinjiang & Gansu)	SAT-1	 Ongoing	 MARA China	 Continued response following first national SAT-1 incursion.
 Republic of Korea	O	 Ongoing (post-outbreak surveillance)	 MAFRA	 Enhanced surveillance; no new outbreaks reported.
Abbreviations: WOA – World Organisation for Animal Health; WRLFMD – The Pirbright Institute (FAO/WOA FMD reference laboratory); EC – European Commission; DALRRD – Department of Agriculture, Land Reform and Rural Development (South Africa); FAO – Food and Agriculture Organization of the United Nations; MARA – Ministry of Agriculture and Rural Affairs (China); MAFRA – Ministry of Agriculture, Food and Rural Affairs (Republic of Korea).				

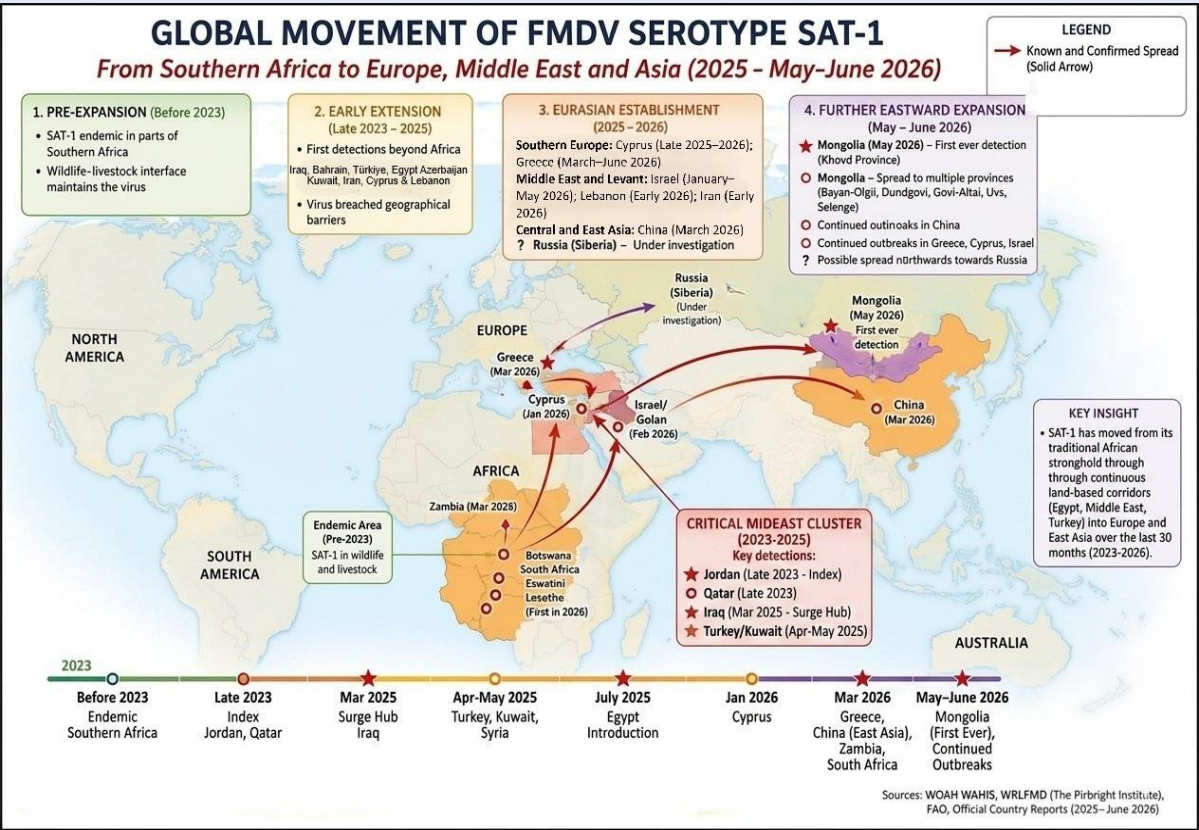
Lesotho continued response and containment activities during May–June 2026 following it's first-ever outbreak of FMDV serotype SAT-1 in February 2026 at Mahlasela in Butha-Buthe District near the South African border. Türkiye continued to experience endemic FMD during **May and June 2026**, with **serotypes O and A** remaining the predominant viruses circulating among susceptible livestock populations following the recent introduction of **FMDV serotype SAT-1**, which was first detected near the Iraqi border and represented the country's first SAT-1 incursion since 1965.



The Republic of Cyprus continued to experience a rapidly expanding epidemic of FMDV serotype SAT-1 throughout **May 2026**, with the disease spreading beyond the initially affected areas to additional administrative districts, including **Limassol**. By late May, the epidemic had reportedly affected **approximately 117 livestock holdings**. Unlike Greece, Cyprus adopted **emergency vaccination** as a key component of its outbreak response. To support containment efforts, the European Union supplied **more than one million doses of SAT-1 vaccine** from the EU antigen bank, complementing comprehensive control measures.

The FMD epidemic caused by serotype SAT-1 continued to affect **Lesvos Island, Greece**, throughout **May and June 2026**, with **more than 118 infected livestock holdings** reported by mid-June. The Greek veterinary authorities implemented a comprehensive eradication programme based on the European Union's **non-vaccination stamping-out policy**. Although livestock organizations on Lesvos repeatedly called for emergency vaccination to reduce further livestock losses. Israel and China continued intensive control operations against FMDV serotype SAT-1 throughout **May-June 2026**. The Republic of Korea remained on heightened alert during **May and June 2026** following recent outbreaks of **FMDV serotype O** earlier in the year.

FMDV SAT-1 Status in May-June 2026: Consolidation, Eastward Expansion and Intensified Regional Preparedness

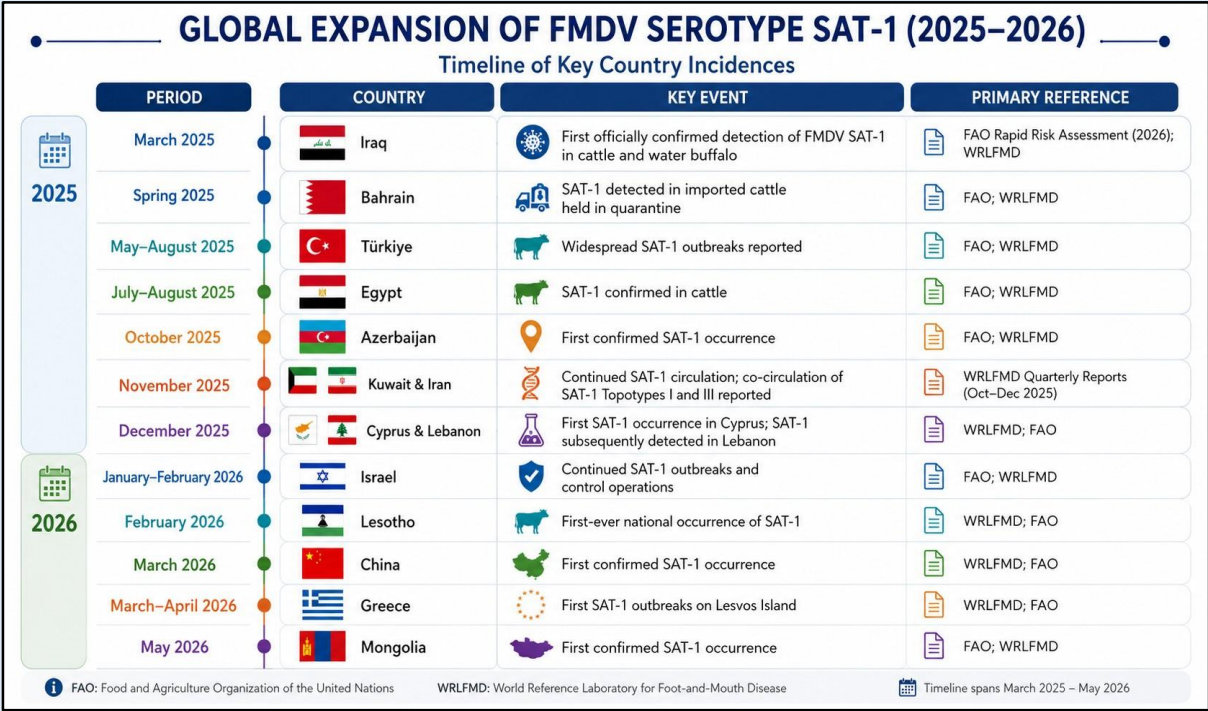


Overall, the global FMDV SAT-1 situation during May-June 2026 reflected a transition from rapid intercontinental emergence to sustained multi-regional circulation and continued geographic expansion. While March-April 2026 was characterized by the establishment of SAT-1 in several regions beyond its traditional African range, the subsequent period witnessed sustained transmission, further eastward spread, and increasingly coordinated regional preparedness and response efforts.

The first detection of SAT-1 FMDV in Mongolia in May 2026 represented the most significant new geographic development during the review period. This progressive spread across western, central and northern Mongolia demonstrated the capacity of SAT-1 to disseminate rapidly through susceptible livestock populations and livestock-movement

networks. The introduction of SAT-1 into China and Mongolia prompted a shift from country-level outbreak response to coordinated regional preparedness. Although SAT-1 remained the principal emerging concern, the global FMD situation continued to involve multiple serotypes. These developments demonstrate that the expanding SAT-1 epidemic is occurring within an already complex global FMD landscape in which endemic and emerging serotypes circulate simultaneously.

FAO Regional Alert, Risk Assessment and Implications for India Following the Introduction of SAT-1 into Asia



On 17th June, 2026, the Food and Agriculture Organization of the United Nations (FAO) issued a regional high-alert following the unprecedented introduction of SAT-1 FMDV into East Asia. Recognizing that conventional FMD vaccines routinely used in Southeast Asia do not provide cross-protection against SAT-1, FAO allocated **USD 400,000** through its Technical Cooperation Programme to strengthen preparedness across **Cambodia, Indonesia, Lao PDR, Pakistan, the Philippines, Thailand, and Viet Nam**. The emergency programme focused on strengthening early warning systems, laboratory diagnostic capacity, viral characterization and genome sequencing, vaccine matching, risk communication, and surveillance along major livestock movement corridors to reduce the risk of wider regional dissemination of this exotic serotype. FAO's regional rapid risk assessment identified several countries and territories—including Jordan, Saudi Arabia, Oman, Pakistan, Qatar, the Russian Federation, Turkmenistan, the United Arab Emirates, Yemen, and the West Bank and Gaza Strip—as being at risk of future SAT-1 introduction. The assessment noted that isolated SAT-1 detections were reported as early as late 2023 in Qatar and Jordan, indicating that the traditionally African serotype had breached its historical geographical range, although these events did not result in sustained regional transmission. A major epidemiological shift occurred in March 2025 following the first officially confirmed regional outbreaks in Iraq involving cattle and water buffaloes, which prompted FAO to issue a regional transboundary disease alert. Subsequently, SAT-1 was reported from Azerbaijan, Bahrain (quarantine station), Cyprus, Egypt, the Islamic Republic of Iran, Israel, Kuwait, Lebanon, and Türkiye, illustrating the unprecedented geographic expansion of this traditionally African serotype beyond its historical range into the Middle East and Asia. Major risk factors identified by FAO included transboundary livestock movements, informal animal trade, the potential role of subclinically infected small ruminants in virus dissemination, limited availability of SAT-1 vaccines in many at-risk countries, and variations in veterinary infrastructure and diagnostic capacity.

Consequently, FAO and WOAHA recommended strengthening risk-based and active surveillance, laboratory diagnostic capabilities, molecular characterization and sequencing, vaccine matching, contingency planning, rapid information sharing, and cross-border coordination to facilitate early detection and rapid containment of any further incursions.

For India, the evolving regional epidemiological situation warrants continued vigilance and preparedness. Although India has not reported FMDV serotype SAT-1 and was not specifically identified among the countries considered to be at immediate risk of introduction in FAO's regional assessment, the inclusion of **Pakistan** in FAO's preparedness programme, together with the emergence of SAT-1 in China and Mongolia and its continued spread across the Middle East, highlights the dynamic transboundary nature of the current epidemic. India's large susceptible livestock population, extensive international land borders, transboundary livestock movement corridors, informal animal trade, wildlife–livestock interfaces, and increasing regional connectivity underscore the importance of maintaining a high level of preparedness. Continued strengthening of risk-based surveillance, laboratory diagnostic capability, molecular characterization and sequencing, contingency planning, emergency response capacity, and international information sharing, together with preparedness for access to appropriate SAT-1 vaccine antigens and vaccine matching, would further enhance India's capacity for early detection, rapid containment, and mitigation of the potential consequences of an exotic SAT-1 incursion.

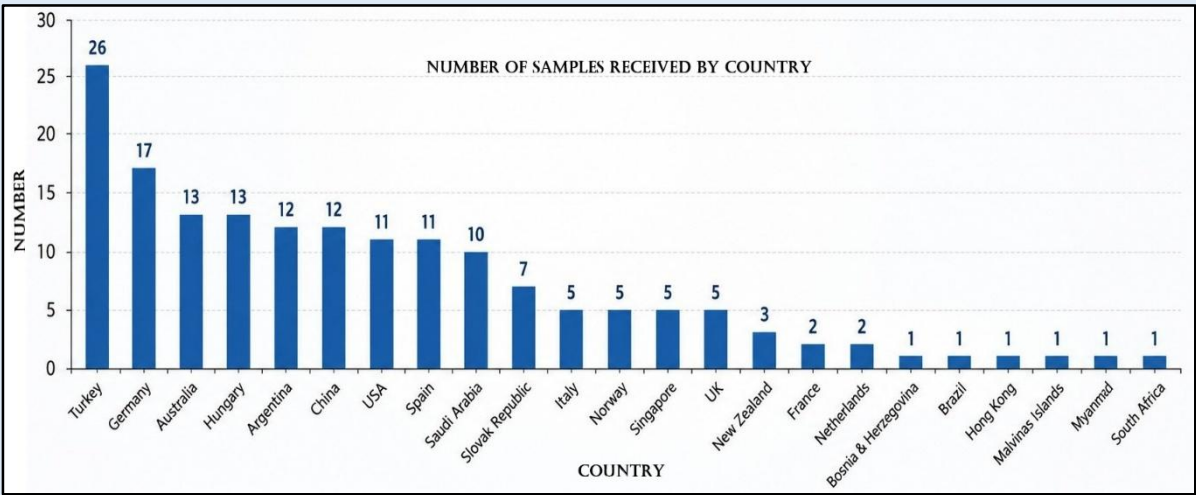
Diagnostic Support Services

Diagnostic Kit Supply

- In May 2026, SPCE kits for testing 9,500 serum samples and DIVA ELISA kits for testing 14,990 serum samples were supplied by ICAR-NIFMD to state FMD centres to carry out FMD testing.
- In June 2026, SPCE kits for testing 26,400 serum samples and DIVA ELISA kit for testing 11,010 serum samples were supplied by ICAR-NIFMD to state FMD centres to carry out FMD testing.

Testing of Trade Samples for import purpose

During the period spanning **May to June 2026**, ICAR–NIFMD received trade consignments from Animal Quarantine and Certification Services (AQCS) stations located at Chennai, New Delhi, Bengaluru, Mumbai and Delhi for laboratory screening under India's import biosecurity surveillance programme. The consignments represented a broad spectrum of animal-origin commodities originating from multiple countries and included raw, wet-salted, drum-salted, pickled and finished hides, skins, pelts, leather and fur products derived from cattle, buffaloes, sheep, goats, horses, camels and deer. A limited number of specialised animal-derived products, including wool, whey protein concentrate, bile concentrate and processed pet food, were also examined as part of the surveillance programme



The majority of submissions comprised bovine hides together with sheep and goat skins in various stages of processing, reflecting the predominant commodities involved in international trade requiring quarantine screening. Imported consignments originated from a diverse range of countries including Turkey, Australia, Argentina, Germany, China, Spain, Saudi Arabia, the United States, Hungary, the Slovak Republic, Italy, New Zealand, the United Kingdom, France, the Netherlands and several other trading partners. This geographical diversity emphasizes the importance of continuous laboratory surveillance to safeguard India's livestock sector against the introduction of transboundary animal diseases through international trade. Although many commodities had undergone preservation or processing, laboratory examination remains an essential component of India's border biosecurity framework because the survival of FMDV is influenced by the nature of the commodity and the processing conditions employed. Routine screening of imported consignments therefore provides an additional layer of assurance to the national animal quarantine system by facilitating early detection of potential disease risks associated with animal-origin products entering the country. The surveillance activities undertaken during the reporting period further reinforce the role of ICAR–NIFMD as the national reference laboratory supporting evidence-based import risk management and strengthening India's preparedness against FMD and other transboundary animal diseases.

Capacity Building

- Hands-on training programs of 5 days duration each on FMD Serotyping, Serosurveillance and Seromonitoring were organized in which 2 staff from VBRI, Labbipet, Vijayawada, Andhra Pradesh participated.
- Hands-on training programs of 5 days duration each on FMD Serotyping, Serosurveillance and Seromonitoring were organized in which 2 staff from FMD Network Unit, Ranchi, Jharkhand and Department of Animal Husbandry, Veterinary and dairy development, Nirjuli, Itanagar, Arunachal Pradesh participated.

Meetings/Workshops

ICAR-NIFMD conducts IRC Meeting

The Institute Research Council (IRC) Meeting of ICAR-NIFMD was held on 11th-12th May, 2026 and continued on 29th May, 2026 at the Institute campus under the chairmanship of Dr R P Singh, Director, ICAR-NIFMD.



The meeting was convened to review the recommendations of the Quinquennial Review Team (QRT), observations of the ICAR Council, and recommendations of the 14th Research Advisory Committee (RAC). The IRC also reviewed the progress and achievements of ongoing research and service projects during 2025-26 and discussed new project proposals submitted by the scientists. The scientists presented the status, major achievements, and future work plans of their respective projects.

ICAR-NIFMD Organizes Workshop on Harmonization of r3AB3 NSP Indirect ELISA for FMD Vaccine Purity Assessment



ICAR-NIFMD, Bhubaneswar, organized a three-day workshop (23rd-25th June, 2026) on the harmonization of the recombinant 3AB3 NSP-based indirect ELISA (r3AB3-PUR iELISA) for FMD vaccine purity assessment at the request of the Department of Animal Husbandry and Dairying (DAHD), Government of India. The workshop brought together 15 scientists and technical officers from four FMD vaccine manufacturers—Indian Immunologicals Limited (IIL), Biovet Pvt. Ltd., Brilliant Bio Pharma Ltd., and Reliance Life Sciences—and three designated testing laboratories: CCS NIAH, Baghpat; ICAR-IVRI, Bengaluru; and ICAR-NIFMD, Bhubaneswar. The inaugural session was presided over by Dr R P Singh, Director, ICAR-NIFMD, and attended virtually by senior officials of DAHD and representatives of the participating vaccine manufacturers.



The technical programme featured lectures by Dr J K Mohapatra, Principal Scientist, on the scientific basis and applications of the recombinant 3AB3 NSP-based indirect ELISA for DIVA surveillance and FMD vaccine purity assessment, and by Dr R P Singh on the importance of harmonizing NSP-based vaccine purity testing under the national FMD control programme. The workshop included assay demonstrations, testing of manufacturer samples, and inter-laboratory cross-validation exercises to standardize NSP-based vaccine purity testing across participating laboratories. The assay demonstrated excellent repeatability and reproducibility, while the introduction of additional quality control measures, including Weak Positive Control (WPC) and Borderline Control (BC), further strengthened assay harmonization.



The valedictory session was attended virtually by Shri R S Sinha, Additional Secretary (Livestock Health), DAHD ; Dr D Himadri, ADG (Animal Health), ICAR; Dr A Sanyal, Director, ICAR-NIHSAD; senior officials of DAHD; and representatives of the participating vaccine manufacturers. The dignitaries appreciated the initiative and emphasized its importance in ensuring standardized, reliable, and high-quality FMD vaccine purity testing under the national disease control programme.

Extension/Outreach and Social Development Activities

Various activities under DAPSC program

Under the DAPSC programme, various input distribution, FMD awareness and capacity-building activities were organized by ICAR-NIFMD during May-June, 2026. On 7th May, 2026, an Input Distribution-cum-FMD Awareness programme was conducted at the ICAR-NIFMD campus for Scheduled Cast (SC) beneficiaries representing Trilochanpur, Kadua, Gopinathpur, Badal, Dibyasinghpur, Dokanda, Badas, Garh Balabhadrapur, Gada Kharad, Sahupada, Baku, Deipur and Dochhian Gram Panchayats. Subsequently, on 8th May, 2026, another Input Distribution-cum-FMD Awareness programme was organized at the ICAR-NIFMD campus for beneficiaries from Gadasahi, Jamolgada, Chupring, Bindhana, Gadisagada, Alibada, Khandahata, Andarsingh, Bijipur and Trilochanpur Gram Panchayats.



On 22nd May, 2026, an Input Distribution-cum-FMD Awareness programme was organized at the ICAR-NIFMD campus for beneficiaries from Gada Kharad, Gadisagada, Kadua, Dibyasinghpur, Baku, Jamolgada, Andarsingh, Sahupada, Dochhian, Garh Balabhadrapur, Badas, Alibada and Kanas Gram Panchayats. On the same day, a Capacity Building Programme was also conducted at the institute.



Further, on 19th June, 2026, a large-scale Capacity Building Programme was organized at the Chupring Cyclone Center for the beneficiaries from Dokanda, Badas, Garh Balabhadrapur, Gadasahi, Bindhana, Chupring, Kadua, Gopinathpur, Dibyasinghpur, Gada Kharad, Dochhian, Sahupada, Baku, Badal, Jamolgada, Gadisagada, Alibada, Trilochanpur, Kanas, Khandahata, Bijipur, Deipur and Gadabadaput Gram Panchayats. Overall, five programmes comprising three Input Distribution-cum-FMD Awareness programmes and two Capacity Building Programmes were conducted during May-June, 2026, benefiting participants from a total of 24 Gram Panchayats under the DAPSC programme.

Various activities under DAPST program



Under the DAPST programme, various input distribution and awareness activities were organized by ICAR-NIFMD during May-June, 2026. On 14th May, 2026, an Input Distribution-cum-FMD and 'Balanced Fertilizer Use Awareness' programme was conducted at ICAR-NIFMD, Arugul, for beneficiaries from Palatotapada and Kuradhamammal Gram Panchayats, during which tarpaulins, farm tool kits, mineral mixture, Himax, and solar lamps were distributed to beneficiaries of scheduled tribes (ST). Subsequently, on 15th May, 2026, a similar programme was organized at Angarapada Gram Panchayat, Jatni block, where ST beneficiaries received tarpaulins, farm tool kits, and awareness leaflets. Further, on 12th June, 2026, an input distribution-cum-FMD and 'Balanced Fertilizer Use Awareness' programme was organized at Barasahi Gram Panchayat, Khordha block, for ST beneficiaries through distribution of tarpaulins and veterinary medicines.



In addition, on 19th June, 2026, an input distribution-cum-'Balanced Fertilizer Use Awareness' Programme was conducted at Mahula village under Angarapada Gram Panchayat, Jatni block, for ST beneficiaries who were provided slippers and antiseptic hand wash bottles to promote personal hygiene.

NEH (North Eastern Hill) Component

During May 2026, ICAR–NIFMD continued its extension and outreach programmes across the North Eastern Region under NER funding, with emphasis on livestock health management and FMD control. A one-day off-campus training programme on Management of Livestock Diseases was organized in Assam. The programme focused on the prevention, diagnosis and control of important livestock diseases to strengthen field-level animal health management practices. Field visits and awareness activities were conducted over four days in Tripura, during which training was imparted on the Standard Operating Procedure (SOP) for FMD vaccination and microplanning of vaccination campaigns to improve preparedness, vaccination coverage and disease surveillance. In addition, a two-day farmers' visit was organized in Chapikarong Village, Chandel District, Manipur for farmers, during which awareness on livestock disease prevention was imparted and FMD, Classical Swine Fever (CSF) and Anti-Rabies Vaccination (ARV) were carried out to improve animal health and support rural livelihoods.

During June 2026, ICAR–NIFMD continued its extension and capacity-building activities across the North Eastern Region under NER funding through a series of training, awareness, health care and input distribution programmes. A one-day off-campus training programme on Scientific Management of Pig Farming was organized in Assam. Field visits and awareness programmes were conducted over five days across Meghalaya, Tripura and Assam. These activities included presentations on the epidemiology, prevention and control of FMD with special emphasis on vaccination, sampling and the national FMD status at Pahamlapong, Ri-Bhoi District, Meghalaya; awareness programmes on FMD vaccination in Tripura; and selection of beneficiaries for a piglet distribution programme in Darrang District, Assam. A one-day livestock health camp was also organized in Meghalaya for farmers, during which farmers were sensitized on livestock and poultry health management, and deworming medicines, vitamin and mineral supplements, technical literature and awareness leaflets were distributed. In addition, three-day farmers' visits were conducted in Pahamlapong (Meghalaya) and Chapikarong Village, Chandel District (Manipur), during which awareness on livestock disease prevention was imparted and FMD, CSF and ARV vaccinations were carried out. To promote backyard poultry farming, a one-day input distribution programme was organized at Pahamlapong, Ri-Bhoi District, Meghalaya, where one-month-old Kuroiler birds along with starter feed were distributed to beneficiaries, followed by training on scientific poultry management.

Publications

Research Articles

- Das S, Barik B, Subramaniam S, Mohapatra JK and Singh RP (2026). Estimation of seroconversion and vaccination impact against FMD in India during 2006–2022 using survey sampling and Bayesian approaches. Scientific Reports (2026). <https://doi.org/10.1038/s41598-026-46432-x>
- Singh, R.P., Mohapatra, J.K (2026) Review and evaluation of data defining FMD vaccine potency standards for endemic countries. VirusDis. <https://doi.org/10.1007/s13337-026-00959-9>
- Ranjan R, Joshi HR, Pandey V, Biswal JK, Das S, Barik B, Mohapatra JK, Mallick S and Singh RP (2026) Kinetics of foot-and-mouth disease antibody response in cattle vaccinated with FMD-HS-BQ combined vaccine under field condition. Front. Microbiol. 17:1800886. <https://doi.org/10.3389/fmicb.2026.1800886>
- Rout M, Ralte EL, Neihthangpuui C, Mohapatra JK, Subramaniam S, and Singh RP(2026). A comprehensive serosurveillance of foot-and-mouth disease in pig population of Mizoram state in eastern Himalayan agro-climatic region in India. The Indian Journal of Animal Sciences, 95(12), 1149–1154.

- Das, S., Barik, B., Biswal, J.K., Ranjan, R., Mohapatra, J.K., Singh, R.P. (2026). FmdNspPred: A computational model for prediction of foot-and-mouth disease virus exposure of the susceptible animals using 2B NSP-ELISA data. *VirusDis*. <https://doi.org/10.1007/s13337-026-00970-0>
- Anusha BH, Mukhopadhyay HK, Mohapatra JK, Rout M, Vasu J, Srinivas MV, Abiramy A, Ramamurthy M, Singh RP. Serosurveillance of Foot and Mouth Disease (FMD) in cattle, buffalo and goat population in Union Territory of Puducherry, India. *Trop Anim Health Prod*. 2026 Jun 22;58(6):372. <https://doi.org/10.1007/s11250-026-05176-6>. PMID: 42329473.
- Kashyap G, Singh R, Sindhoora K, Gupta D, Singh S, Kamdi B, Agrawal R, Malik YS, Singh K, Singh V, Kerry RG, Sahoo NR, Sahoo M (2026). Efficacy of combination of *Lactocaseibacillus rhamnosus* and *Bifidobacterium bifidum* probiotic strains against mixed infections of bovine Rotavirus A and *Cryptosporidium parvum* induced diarrhea by modulating host immune response in mouse model. *Microb Pathog*. 22:108649. <https://doi.org/10.1016/j.micpath.2026.108649>.

Training Manual

- Mohapatra JK, Rout M, Sarangi LN, and Singh RP (2026). Instruction manual on Recombinant 3AB3 Nonstructural Protein (NSP) - based Indirect ELISA for Foot-and-mouth disease vaccine purity testing (Version 01). ICAR-National Institute on Foot-and-Mouth Disease (ICAR-NIFMD), Bhubaneswar-752050, Odisha, India.

Activities beyond Research

Participation in Workshop/ conferences and other programs

- Dr L N Sarangi, Senior Scientist, ICAR-NIFMD, served as a member of the expert team constituted by the Department of Animal Husbandry & Dairying (DAHD), Government of India, for a joint field assessment of human and livestock vaccination systems conducted in Alwar, Rajasthan, on 7th May, 2026. The assessment focused on a comparative evaluation of vaccination delivery systems under the Universal Immunization Programme (UIP) and the Livestock Health and Disease Control Programme (LHDCP), with emphasis on cold chain management, vaccine logistics, field vaccination practices, digital monitoring, and supportive supervision.
- Dr R S Arya participated in the workshop entitled "A Scenario-Based Workshop on Pandemic Preparedness of High-Consequence Pathogen Epidemics", organized by the ICMR–National Institute of Epidemiology (Chennai), from 26th to 27th May, 2026 at New Delhi.
- Dr J K Biswal, Senior Scientist, ICAR-NIFMD, participated in the ICAR CSR & Technology Portfolio Roadshow, organized by ICAR–National Academy of Agricultural Research Management (ICAR-NAARM), Hyderabad, in collaboration with AgIn, New Delhi, on 20th June, 2026.
- Dr M Rout, Dr L N Sarangi, Dr S Mallick, and Dr S Nautiyal attended the workshop on "Harmonization of r3AB3 NSP Indirect ELISA for FMD Vaccine Purity Assessment", held from 23rd to 25th June, 2026 at ICAR-NIFMD, Bhubaneswar.

Transfer, Relieving, and New Joining

- Shri S S Mohapatra, Senior Finance & Accounts Officer, joined ICAR-NIFMD as Head of Finance on transfer on 18th May, 2026. Prior to joining ICAR-NIFMD, he served as Senior Finance & Accounts Officer at ICAR–Central Institute for Subtropical Horticulture (ICAR-CISH), Lucknow, from January 2025.
- Shri T Singh, Finance & Accounts Officer, was relieved of his charge as Head of Finance on 29th May, 2026 upon his transfer to ICAR Headquarters, New Delhi.

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