



*Action areas for animal disease control and
regulatory services: Departmental Vision cum
Roadmap for Development of Animal
Husbandry and Veterinary Sector in the State
of Assam, India*

Excerpts of Final Report submitted to:

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By

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GOVERNMENT OF ASSAM

***Department of Animal Husbandry and Veterinary
Government of Assam***

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Action areas for animal disease control

Introduction

Assam is the prime state of the North Eastern Region (NER) of India that shares 98% of its borders with foreign countries. Act East Policy of India is likely to enhance livestock and livestock product trade and movement of people from bordering countries. Therefore, the risk of the spread of transboundary animal disease is very high. The state needs concerted efforts for enhanced internal bio-security management and border control programs to ensure disease-free status, which is essential to promote both domestic (to mainland India) and export trade of livestock products. Control of transboundary and other animal diseases also assumes significance in the state considering its vast wild animal population and their conservation.

20 point action areas for animal disease control

1. Augmentation of state-level stakeholder partnership for ‘One Health’ approach implementation on the ground
2. Improvement in animal and zoonotic disease reporting and data analysis facility for information technology / GIS supported risk mapping, disease forecast and planned, targeted preventive intervention.
3. Promotion of IT-based farm premise registration for bio-security enforcement, risk, and business continuity management support.
4. Sharing and monitoring of the implementation of updated Standard Operating Procedure (SOP) for targeted disease surveillance, investigation, and response.
5. Strengthening of border control infrastructures¹ at land customs stations, inter-state and inter-district borders and in other risky informal trade points, arrangements in airports, railway stations and known animal movement routes:
 - a) To prevent the smuggling or uncontrolled entry of animals, animal products, and other potentially dangerous goods.
 - b) To promote legal entry of live animals, animal products, etc. through sound animal health certification and pre- and post-quarantine measures.
 - c) To ensure safe disposal of waste / rejected products in border areas
 - d) To license known traders for inter-state / international trade data generation and effective monitoring thereof

¹ Laboratories, Fumigation / vehicle cleaning stations, data recording related etc.

6. Strengthening of District Disease Control Labs (e.g., physical facility up-gradation, the assortment of test, etc.) for services to field veterinarians and farmers (Productivity focused lab services for herd health monitoring)
7. Strengthening of Institute of Veterinary Biologicals on modern lines (as per the requirement of GMP certification agencies) to augment need-based quality vaccine production. Adherence to standard procedures for vaccine production, procurement (where required), storage, and last-mile delivery.
8. Notification of permitted non-state agency for the vaccination with earmarking of area, ensuring mandatory data sharing and accountability fixation.
9. Adherence to principles of vaccination and monitoring of herd immunity.
10. Engagement with forest authority for joint promotion of stall feeding of livestock in forest fringe areas
11. Identification of households rearing livestock in forest fringe areas and their priority vaccination on a mission mode.
12. Partnership for enforcement of public health and food safety-related regulations.
13. Mapping of urban livestock keeping (areas of concentration) and risky practices etc. and measures thereof for protection of public health²
14. Collaboration with social science research facilities for periodic studies related to socio-economic and trade linked risk assessment, the economic impact of animal diseases. (To justify funding for specific measures) and documentation of emerging issues at the interface of MAN (Man -Animal and Nature).
15. Continuous skill training of field veterinarians and para-veterinarians and farmer level awareness development for availing laboratory services.
16. Computerization and networking of laboratories to facilitate efficient client handling and sharing of reports.
17. Partnership with logistic service providers, e.g., India Post for lab sample dispatch from interior areas.
18. Engagement with drug authorities/pharmacy council & pharmacist associations to ensure availability and a good assortment of veterinary drugs, biologicals and diagnostics in remote areas and quality monitoring of illegally imported veterinary biological products
19. Mapping of physical livestock markets vis a vis feeding areas and assistance to market committees for installing bio-security measures.
20. Engagement with agencies for monitoring of disease risks to animal health from artificial insemination.

² Dense human population of urban areas, mixed with livestock, scavengers and vectors, provides optimal conditions for the emergence and spread of human diseases.

Besides the above action, it is imperative on the part of the department to ensure enforcement of rules pertaining to the Prevention and Control of Infectious and Contagious Diseases in Animals Act, 2009 as or when required.

Terms of Reference of understanding with the Department of Health

Strategic understanding through the state unit of the Integrated Disease Surveillance Program (IDSP) of the National Centre for Disease Control (NCDC) is already in place. The department will have to continuously collaborate for joint disease investigation, the rapid response of public health linked disease-related emergencies, and data gathering on animal and zoonotic diseases.

Strengthening of the regulatory system and delivery of public goods

Subject to the adoption of mandate indicated in section **Error! Reference source not found.**, the department of animal husbandry and veterinary needs to strengthen the capability of its manpower and build required new facility/upgrade existing facilities to undertake following regulatory functions and delivery of public goods. Many of these actions will have to be undertaken in collaborations with various other line departments as per the appropriate framework of resource sharing, joint field/laboratory investigations and enforcement operations.

1. Animal Disease Surveillance, disease risk mapping, animal quarantine, biosecurity, livestock trade and movement (including border) control
2. Joint investigation of zoonotic (including foodborne) diseases, environmental changes, vectors, and potential bio-threats
3. Monitoring of safety and quality of marketed livestock products (including those imported) as per prescribed standards
4. Regulation of service providers e.g. Veterinarians and Para vets for service adequacy and ethical practices, preventing drug resistance and anti-microbial resistance
5. Animal, farm, and enterprise premises identification and management of data thereof for the benefit of individual stakeholders and to advice for prudent public expenditure
6. Regulation of livestock breeding and promotion of conservation of animal resources and bio-diversity
7. Documentation of traditional knowledge and ethnoveterinary practices and protection of rights of owners of such knowledge and practices

8. Certification of the health status of animals (including a herd of animals), cause of death of animals and other jurisprudence related decisions
9. Certification of select products / raw materials when meant for use in veterinary and farm context, preventing their unauthorized alternative uses.
10. Inspection of production sites, slaughter and processing facilities related to livestock products for food hygiene and safety
11. Collection of data on Adverse Drug Reactions (ADR) on animals through ADR monitoring units at major district veterinary centers and reporting of same to designated authority within the health department
12. Regulation of Animal Feed Quality (individual ingredient and finished feed and additives)
13. Regulation and enforcement of law pertaining to animal welfare and mitigation of man-animal conflict.
14. Facilitation of trade, credit delivery, and regulation of livestock product market practices ensuring fair competition and prevention of exploitation of farmers and other value chain players.
15. Monitoring of urban livestock keeping in the context of vector control, regulation of farming system (including when the area is earmarked for organic farming), waste disposal and practices within the sector that have an environmental impact

The 7-point action areas for the strengthening of the regulatory system and delivery of public good:

1. Proactive engagement with related line departments and specialized agencies for agreement on a framework of joint operation (e.g., scope of joint action, resource sharing and participation in enforcement) for select functions to be approved by the competent authority
2. Publication of framework of operation for various regulatory functions and actions related to the delivery of public goods specifying responsibilities shared by the Department of Veterinary and Animal Husbandry with the name of responsible nodal officers
3. Setting up of Assam Animal Identification and Recording Authority (AARA) – an authority within the department for mandatory unique animal and farm/enterprise premises identification to ensure efficient delivery of herd health management service, disease reporting, breeding and genetic improvement (e.g., progeny testing, the capture of genomics big data) and livestock product trade facilitation.
4. Review of existing laws and initiative for required reforms

5. Joint initiative to develop a robust monitoring system supported by dynamic risk mapping of districts in the context of incidence of diseases, the incidence of drug residues in livestock products, observed incidence of adverse animal drug reaction
6. Skill mapping within the department for efficient delivery of regulatory functions. Training and engagement of officials (where required).
7. Outsourcing of services for data management, epidemiological, animal health economics, and other high-end social science research to inform policy decision

Action areas in the context of food safety of animal origin

The department needs to collaborate with the Food safety Commissionerate of the health department for regulatory activities, including enforcement of the law. Based on secondary data analysis and the consultations, the following can be suggested as specific intervention areas for the department in the context of food safety:

1. Publication of food safety-focused good farm practice guide (Specific to the farming system) in collaboration with farmer level institutions/knowledge partners with extension campaign to ensure awareness and adoption of suggested practices
2. Reorientation of veterinary service delivery to ensure continuous, adequate care and minimum use of drugs
3. Training of designated district veterinarian/dairy technologist in surveillance activities (Training on meat inspection and methods of detection of livestock product adulteration).
4. Infrastructure development to monitor and certify product safety and quality at identified farmer level aggregation points. Delivery of incentive to farmer institutions e.g., cooperatives, producer companies to set up food testing laboratories, or to hire services of such public / private laboratories where required. (This intervention should additionally support farmer organizations to build their brand).
5. Infrastructure development for testing of farm inputs e.g., feed, water, pesticide residue in fodder, etc
6. Promotion of quality-based procurement and certification system of traded livestock products ensuring incentive to farmers producing quality and safe products
7. Collaboration with food safety Commissionerate and sharing of production/farmers level lab-confirmed microbiological quality and risky value chain practice-related data (linked to livestock products) for risk mapping.
8. Participation in teams entrusted with law enforcement as or when suggested by the competent authority

Related flagship projects

Project name: Trade-Related Infrastructure and Capacity Building (TRICB) of Animal / Animal Product Sector in N E Region of India (With Assam as lead State)

Aligned Program Name: Utpadan

Functional area of department/account head:

A joint endeavor of the following functional areas:

1. Enterprise, value chain development, risk support, and facilitation of livestock/poultry product marketing and trade.
2. Epidemiology, disease control, and public health

Project justification: (1) N E region shares 98% of its international borders with the foreign neighbor, and informal trade of livestock and livestock product is ongoing in many border areas (2) International trade, and consequent in-country movement of livestock and livestock product is increasing the threat of transmission of animal diseases (3) Act East Policy of Government of India, Free Trade Agreement with ASEAN, Pan Asian Highway, Trans Asian Railway, etc. will increase formal trade of livestock products (4) Local enterprises are relatively non-competitive, there is a need to prepare for international trade challenges be it potential import surges (detrimental to local enterprises) or attaining export competitiveness. (5) India's international commitment to promote safe animal/animal product trade and control of transboundary animal diseases.

Justification of Assam as the lead state for the project:

(1) Guwahati is trade hub of the entire North Eastern Region (2) North Eastern Regional Disease Diagnostic Laboratory for animal disease is located at Guwahati, Assam

Project Location: Interstate (within NER) and International border areas.

Description: The project aims at in-country and international trade-related infrastructure and capacity building in the light of future border trade challenges (e.g. Surge in the import of livestock/livestock products, entry of animal diseases etc.) and sustainable future growth of safe and profitable animal product export trade. The project will help in creating a common trademark of livestock products originating in North Eastern Region India. It will also support India's commitment to OIE for promoting safe animal product trade and control of transboundary animal diseases.

Goal:

1. Safe and fair animal product trade that protects the interest of domestic enterprises
2. Facilitation for a regional trademark of animal products originating from enterprises within NER

3. Protection of Animal resources from diseases transmitted from foreign countries

Project implementation: Through a special project team constituted through deputed Veterinary and Animal Husbandry officials from 8 N E states

Program partner: Border Area Development / Security related Authorities in all the N E states, Ministry of Trade and Commerce, Government of India, Agricultural and Processed Food Products Export Development Authority (APEDA), Assam Agricultural University-Jorhat and Central Agricultural University -Imphal, ICAR Research Complex for NEH, Barapani.

The project to build on output of ongoing DBT funded NER Project on Advanced Animal Disease Diagnosis and Service Management Centre

Project component:

Phase -1

- (1) GIS-based risk mapping of production clusters, physical livestock markets (nearest to the border - interstate/international), and animal movement routes (Inter-state and with the international neighbor)
- (2) Socio-economic, value chain practices and lab data-based animal disease risk assessment of borders areas (with Formal and informal animal/animal product trade)
- (3) Stakeholder assessment in the context of interstate / international animal/animal product trade.
- (4) Review of border control related infrastructures and specific trade process-related regulations (India and neighboring countries) in the context of animal/animal product trade.
- (5) Trade volume assessment (formal/informal) and rapid livestock sector review of the bordering countries in the context of trade/export competitiveness.

Phase-2 (Based on risk-based prioritization of areas)

- (6) Establishment and formalization of project-level linkages with stakeholders' responsible for border area development, rapid disaster response, trade facilitation, and security
- (7) Formation and orientation of 'sentinel' farmer's and trader's organizations in border areas as project facilitators
- (8) Capacity building of border area para-vets on disease surveillance and biological threats and linking them to sentinel organizations.
- (9) Border control-related Infrastructure designing and commissioning through appropriate agencies
- (10) Farm premises registration in border areas for real-time mapping of farm growth and reporting of disease data

- (11) Establishment of institutional, incentive, process, regulatory and partnership framework for need-based response and sustainable growth of safe animal and animal product trade
- (12) Constitution of livestock and livestock product trade-related North East level advisory group for brand building and future trade monitoring and negotiations

Project Output:

For Phase_1:

A strategic framework for animal and animal product trade-related capacity building (TRCB) containing:

- Risk maps/map of the trade route with sensitive areas/production clusters
- Required institution/infrastructure list vis a vis projected trade growth with locations.
- Information on required trade regulation related process improvement
- Threat assessment of possible product-wise import surges
- Data gaps and measures to address the same
- Stakeholders and scope of partnerships.
- Investment needs with prioritization.

For Phase_2:

- Ground-level farmer's / trader's institutions facilitating activities like awareness generation on value chain related disease risk, farm premise registration, disease, and trade-related reporting, etc.
- Trained para vets.
- Developed infrastructures.
- Registered farm premises.
- Functioning system of animal/animal product trade data generation, disease / bio-safety monitoring, and response.

Project outcome:

- Functioning interstate / international border trade infrastructures and processes, ensuring safe, fair trade of livestock products.
- Control over the transmission of transboundary animal diseases
- Brand recognition and increased trade competitiveness of domestic enterprises

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Project name: Livestock based food safety for public health

Aligned Program Name: Pranali

Functional area of department/account head: Epidemiology, disease control, and Public Health

Project justification: Food safety and pharmacovigilance landscape and associated risk e.g., Drug and Anti-Microbial Resistance, bio-threat, etc

Project location: Production clusters and identified risky areas

Description: The program aims at ensuring the safety of livestock products.

Goal:

1. Prevention of production and sale of sub-standard milk and meat / value-added products thereof
2. Demand creation for safe branded livestock products

Project implementation: Through a team created based on the inter-agency framework agreement. The framework agreement will specify the role of partners, sharing of resources, the scope of joint field/laboratory investigations, and enforcement of regulations.

Program partner: Commissionerate of Food Safety, Dairy Development Department, Livestock Product Technology Department and Department of Pharmacology & Toxicology at of CVSc, AAU and relevant consulting firm

Project component:

1. Infrastructure and workforce assessment at identified partner laboratories and public investment mobilization for bridging the gap in infrastructure and workforce capacity (if any)
2. Commissioned studies to assess the average standards of indigenous and crossbred cattle milk in Assam along with a baseline study of the average microbiological quality of locally produced milk.
3. Development of a system for dynamic risk mapping (milk and meat) based on sample test data generated at State Public Health Laboratory, the laboratory at College of Veterinary Science, AAU and facility at NERDDL
4. Training of veterinary para-professionals (existing / newly recruited) for assistance to designated district veterinarian/dairy technologist in surveillance activities (e.g., Training on meat inspection and methods of livestock product adulteration, etc.)
5. Notification/strengthening of Veterinary hospitals for Adverse Drug Reaction (ADR) monitoring
6. Producer level awareness campaign at risky areas and distribution of subsidized food safety kits/laboratory set up grant to producer organization for food safety monitoring at their level.
7. Design and implementation of the surveillance program in identified risk areas and sharing of data with food safety Commissionerate
8. Enforcement of food safety law through designated food safety officers under Commissionerate of food safety
9. Promotion of livestock food certification system for private vendors and retail outlets

Project outcome:

- A functioning partnership and mechanism for public health risk mitigation
- Increase the income of vendors/retailers' form market-driven food certification service.