



PC-1

CM Punjab: Progressive Control of Foot and Mouth Disease (FMD) in Punjab

ORIGINAL APPROVED COST	PKR Million. 7,500.000/-
ORIGINAL APPROVED GESTATION	36 Months Till June 2027
APPROVAL FORUM	PDWP (PDWP)

1. NAME OF THE PROJECT

CM Punjab: Progressive Control of Foot and Mouth Disease (FMD) in Punjab

2. LOCATION OF THE PROJECT

Punjab

3. AUTHORITIES RESPONSIBLE FOR

3.1. SPONSORING AGENCY

- LIVESTOCK & DAIRY DEVELOPMENT DEPARTMENT

3.2. EXECUTION AGENCY

- LIVESTOCK & DAIRY DEVELOPMENT DEPARTMENT

3.3. OPERATIONS AND MAINTENANCE AGENCY

- LIVESTOCK

3.4. CONCERNED FEDERAL MINISTRY

4. PLAN PROVISION

Sr #	Description
1	Source of Funding: Scheme Listed in ADP CFY
2	GS No: 3309
3	Total Allocation: 4,000.000

Comments:

The scheme is included in ADP 2024-25 at GS No. 3309 with an allocation of Rs. 4000.000 million in CFY 2024-25

5. PROJECT OBJECTIVES

1. Export surplus through establishment of FMD Free Departments and FMD Free Zones.
2. To make Punjab ready to move from stage 2 to stage 3 under Progressive Control Pathway (PCP).
3. To make livestock sector sustainable through ensuring animals traceable, tagged and disease free.
4. The virus characterization of prevalent FMD serotypes

Theses Objectives will be achieved through following interventions: -

- Establishment of FMD compartments with the existing strength of L&DD Department.Establishment of Project Management Unit (PMU) by hiring staff on Project Pay Scale from the marketEstablishment of FMD free zone on the basis of feasibility reports

The component-wise detailed interventions are elaborated below:

1. A) Establishment of FMD Free Compartments in Punjab

The FMD Free Compartments will be established by L&DD Department under the Punjab Animal Health Act, 2019. The Director General (Ext.) / CVO Punjab through Director General (Res.), Director ADDRS, Divisional Directors Livestock, ADLs, DDLs, ADIOs will implement and monitor all the project interventions. The establishment of FMD Free Compartments will be achieved through the following interventions:

- Expression of interest will be invited for willing farmers having 300 or more than 300 animals. A maximum of **15 FMD free compartments** will be established under this project.
- Boundaries of compartments and buffer areas (3 km) will be defined.
- Control of animal movement and biosecurity measures will be implemented.
- Complete survey of the area will be performed for livestock population and relevant parameters as per Punjab Animal Health Rules, 2021.
- The CVO will submit complete case to the competent forum under the Punjab Animal health act 2019, for notification of the compartment.
- The required vaccination and tagging/registration on PAITS inside the compartment, check posts, boundary walls or fencing and quarantine stations will be established by the owner of the compartment.

- Vaccination, tagging and movement control in the buffer area will be undertaken by the department.
- Disease surveillance and monitoring of the compartment and buffer area will be conducted by the livestock department.
- Establishment of Rapid Response Units by the provision of customized vehicles for disease outbreak handling.
- All the data regarding vaccination, tagging, diseases surveillance, post vaccination monitoring, etc will be uploaded on relevant databases i.e PAITS, 9211.

A total budget amounting to Rs. = 461.000 million has been allocated for these interventions. The detailed cost breakup is attached as Annexure – A(a)

1. B) Establishment of Project Management Unit:

A **Project Management Unit (PMU)** will be established to implement and coordinate the project activities. The PMU will hire a consultant firm and other staff under this project to achieve the following interventions for the establishment of new FMD Free Zones in the Punjab.

- Conduct the feasibility study to identify areas for the establishment of FMD Free Zones in Punjab.
- Technical and financial assessment of potential areas for establishing FMD free zone in future along with operation and maintenance model.
- Preparation of PC-1 for the identified FMD Free zones according to WOAHA guidelines.
- Implementation and monitoring of all activities including biosecurity, animal identification and traceability, immunization, disease surveillance and emergency response in the proposed FMD Free Zones.
- Preparation of training modules for the field vets / para vets and laboratories staff
- Preparation of dossier for FMD free zones for submission to the concerned agencies for endorsement.
- Follow up of third party evaluation reports for corrective measures.
- Follow up for acknowledgments of the FMD Free-zone with the relevant agencies.

Composition of Project Management Unit with proposed salaries is attached as **Annexure-B**.

A total budget amounting to Rs. = 446.236 million has been allocated for these interventions. The detailed cost breakup is attached as Annexure– A(b)

The PMU will initially be stationed at the Directorate of Planning & Evaluation; however, a separate office will be established for the PMU at Livestock Complex, Cooper Road, Lahore later.

The Project Steering Committee will review and monitor the progress of PMU as well as the overall project activities.

1. C) Establishment of FMD Free Zone(s) in Punjab

After conducting the feasibility study, the PMU will submit the revised PC1 for the establishment of new FMD Free Zone(s) by the consultant. The FMD Free Zone(s) will be established under the Punjab Animal Health Act, 2019 and its subsequent rules. All the activities including demarcation of geographical boundaries, the establishment of check posts, quarantine units, animal vaccination, tagging and movement control will be outsourced and monitored by the PMU. The CVO Punjab will notify animal quarantine units, check posts and other legal provisions for FMD Free Zone(s) as proposed by the PMU under the Punjab Animal Health Act, 2019 and subsequent rules. The PMU will prepare dossier for notification and further evaluation of FMD Free Zone(s) from the national and international agencies through CVO Punjab.

The total tentative allocation of the budget for the establishment of FMD Free Zone(s) is Rs.= 6592.764 million. As the cost for the establishment of FMD Free Zone(s) depends upon the geographical area, animal population, natural boundaries, buffer area, animal movement, no. of check posts and quarantine units, type of vaccine and immunization strategy, therefore, the detailed breakup of cost will be provided in the revised PC-1 as proposed in the feasibility study.

6. DESCRIPTION AND JUSTIFICATION OF PROJECT

6.1 JUSTIFICATION OF PROJECT:

Description

Livestock plays an important role in the economy of Pakistan that contributes approximately 60.84 % to the agricultural value added and 14.63 % to National GDP (Economic Survey of Pakistan 2023-24). The overall livestock development strategy revolves around improving per unit animal productivity by improving health coverage, management practices, animal breeding practices, artificial insemination services, use of balanced ration for animal feeding, and controlling livestock diseases of trade and economic importance. The objective is to exploit the livestock sector and its potential for economic growth, food security and rural socioeconomic uplift.

Foot-and-mouth disease (FMD) is a trans-boundary viral disease affecting cloven footed animals in Asia, Africa, and the Middle East and sporadic in South America. FMD is a severe, highly contagious viral disease of livestock that has a significant economic impact. The disease affects cattle, buffalo, sheep, goats and other cloven-hoofed ruminants. FMD is an endemic disease in Punjab, previously 10 years data showed that three serotypes (O, A, Asia-1) are prevalent in the Punjab (Annexure-C).

Foot and mouth disease (FMD) is a highly contagious viral disease that can be spread in several ways:

- **Direct contact:** Touching an infected animal, or eating or coming into contact with an infected carcass
 - **Contaminated surfaces:** The virus can survive on surfaces and in water for up to a month, depending on the weather
 - **Contaminated clothing or footwear:** People can spread the disease by wearing contaminated clothing or footwear
 - **Contaminated equipment:** People can spread the disease by using contaminated equipment
 - **Aerosol transmission:** Infected animals release a large amount of aerosolized virus through breathing. These aerosols can infect other animals through their respiratory or oral systems. Airborne transmission of FMD is considered a low probability event, but when conditions are favorable, the virus can spread rapidly.
- Movement of animals, people, and vehicles:** The virus can spread when animals, people, and vehicles move around that have been contaminated with the virus

It is a trans boundary animal disease (TAD) that deeply affects the production of livestock and disrupting regional and international trade in animals and animal products. The disease is estimated to be circulated in 77% of the global livestock population in Africa, the Middle East and Asia, as well as in a limited area of South America (Prev Vet Med. 2013;112(3–4)). Countries that are currently free of FMD without vaccination remain under constant threat of an incursion. Seventy-five percent of the costs attributed to FMD prevention and control are incurred by low income and lower-middle income countries. Africa and Eurasia are the regions which incur the largest costs, accounting for 50% and 33% of the total costs respectively.

FMD is caused by an Aphthovirus of the family Picornaviridae, seven strains (A, O, C, SAT1, SAT2, SAT3, and Asia1) are endemic in different countries worldwide. Each strain requires a specific vaccine to provide immunity to a vaccinated animal. The disease is characterized by lameness, smacking of mouth, discharge from mouth and nasal, reduction in milk production, etc. It causes high morbidity and low mortality in bovines. There are lesions in the oral cavity (dorsum of tongue, soft palate, inner-side of the lips, dental pad etc) and nose and on skin of inter-digital space and teats of the infected animals. Its prevention is based on the presence of early detection and warning systems and the implementation of effective surveillance among other measures.

The Food and Agriculture Organization (FAO) and the World Organization for Animal Health (WOAH) developed a 15-year global control strategy in 2012 (Progressive control Pathway for Foot & Mouth Diseases) to reduce the burden of FMD in endemic regions and to maintain the status of FMD-free countries.

FMD has significant economic implications for the livestock industry and international trade. The FMD outbreak can lead to trade restrictions; hence many countries have strict regulations regarding the import/

export of animals and animal products. Apart from taking other measures to control FMD, vaccination of susceptible population is mandatory in countries like Pakistan.

The indigenous production of non-purified FMD vaccine is around 10.00million doses per year but this does not serve the purpose for exporting the meat and meat products as it does not differentiate between infected and vaccinated animals (DIVA). This calls the need for a purified vaccine to be inoculated in FMD Free Zone and FMD Free Compartments.

The role of a surveillance system in the attainment of disease control strategy is extremely important. Without a well-designed, practical, and effective surveillance system, it is difficult to achieve and document disease control progress. The surveillance helps in early detection of the disease. Early identification of FMD cases allows veterinary authorities to implement control measures promptly, reducing the spread of the virus to other animals. The Passive Disease surveillance along with patchy Active Disease surveillance system is in place for FMD in Punjab. However, the Livestock and Dairy Development Department is now focusing on coordinated and a more comprehensive approach for implementation of effective FMD monitoring and surveillance activities across the province through using ICT based ADRS Info system. But this system is mainly based on real time disease reporting, parking of data and lab performance management system. The post reporting response monitoring to control the outbreak, data analysis and reports / alerts generation using AI and IT tools are missing. The existing ADRS Info system needs up-gradation to AI and IT tools powered disease surveillance and information system (DSIS) for digital monitoring of FMD control program related interventions. Initially this system will be applied as a pilot in any of the FMD free compartment which will lead to effective risk-based vaccination approach in the province. This initiative in Pakistan would definitely pave the way for export of livestock and livestock products by fulfilling international trade requirements.

Justification of Project:

The livestock sector occupies a unique position in the National Agenda of economic development of the present government. The sector provides a source of foreign earnings. Historically livestock has been the subsistence sector of Agriculture dominated by small holders to meet their needs of milk, food security and daily cash income. Therefore, livestock is considered a more secure source of income for the small farmers and landless poor; and is also a source of employment generation at the rural level. It also helps to reduce income variability, especially in cases of crop failure due to many reasons. Livestock has a central role to the livelihood of the rural poor in the country and can play an important role in poverty alleviation. It can uplift the socioeconomic condition of Pakistan's rural masses.

More than 8.000 million rural families of Punjab are directly or indirectly involved in livestock production. The dairy farmers are facing problems like diseases, fodder/concentrate shortage, high prices of milk replacers, low production of local breeds and marketing issues. Animal diseases cause heavy economic losses to dairy industry. Sometime intensity of the loss is so irreparable that farmers become out of business. There are many livestock infectious diseases that badly affect the profitability of the dairy farming. One of the viral diseases is Foot and Mouth Disease (FMD) that is endemic in this country. The various implications presented by the disease are as following:-

Economic Implications:

There is a famous saying that FMD does not kill the animal but it always kills the farmer. It causes heavy economic losses to meat and dairy industry. The losses are measured in terms of calf mortality, reduction in milk production, abortion of pregnant animals, treatment cost, loss of working efficiency and weight loss. Generally, one third production potential of the affected animal is dropped. FMD is a major hurdle in development of the industry and in the export of livestock and foods of animal origin. A little data regarding economic implications caused by FMD, is available in Pakistan. However the global data indicates that this disease has severe consequences on the economy of the country for example in Latin America, it is estimated that from 1990 to 2004, this region lost exports worth over US \$ 50 Billion.

Financial Implications:

The disease has direct and indirect financial impacts. Among the direct impact there are visible losses which include loss of milk production, lower weight gains and rarely death of effected animals' especially young stock. The invisible losses include fertility problems, change in herd structure, and delay in the sale of

animals and livestock products. Among the indirect impact, additional cost and revenue forgone are significant. The additional cost includes movement control, diagnostic tests and culled animals. The revenue forgone includes denied access to international markets. The direct and indirect losses arising from FMD are very large, perhaps as much as US \$ 6 billion annually in Punjab (FMD vaccine facility feasibility study, USAID 2017)

Social Implications:

Most of the rural population depends upon livestock for their livelihoods. FMD is among the top threats which a farmer has to face while keeping animals. This disease affects the social well-being of the farmers and others who are directly or indirectly involved with the livestock business. The disease has an impact on education (inability of farmer to pay school fee), depriving of good nutrition and availing of a quality medical facility. FMD causes cessation of daily income for a family keeping livestock. The owner of affected herd may face a social setback due to this menace as he / she cannot pay attention to the education of their children as well as may not be able to avail better health facility for the family.

Pakistani rural women are equally involved in the livestock related business and their participation is about 60 %. They carry out a variety of livestock management tasks, such as cutting fodder, watering and feeding animals, cleaning animal pens, and milking (Asim Zubair et al. 2023). This project will help to empower and support women leading to their social uplift.

Globally the disease is being controlled by stamping out of infected animals, bio-security measures, and mass scale vaccination. Stamping out of infected animals is not possible due to high disease occurrence, poor economic status of the farmers and heavy compensation expenses for the Government. Strategic vaccination to animals in Pakistan can minimize the disease, increase the milk and meat production in the country and improve the export of the livestock and foods of animal origin and thus alleviate the poverty, improve the standard of living of the poor villagers.

6.2 SECTORAL SPECIFIC INFORMATION:

This project is in line with objectives of livestock sector. The main Sector Objectives are:

- To ensure the food security
- Productivity enhancement
- Disease control
- Poverty alleviation
- Export facilitation
- Economic growth

7. CAPITAL COST ESTIMATES:

Financial Components: Revenue
Cost Center:OTHERS- (OTHERS)
Fund Center (Controlling):LE4208

Grant Number:Development Revenue - (PC22036)
LO NO:LO24000210
A/C To be Credited:Account-I

PKR Million

Sr #	Object Code	2024-2025		2025-2026		2026-2027	
		Local	Foreign	Local	Foreign	Local	Foreign
1	A01106-Pay of Contract Staff	6.264	0.000	40.939	0.000	45.033	0.000
2	A01273-Honoraria	2.000	0.000	3.000	0.000	3.000	0.000
3	A03801-Training - Domestic	2.000	0.000	2.000	0.000	2.000	0.000
4	A03988-Purchase of Vaccine/Medicine for Animal Husbandry(Preventive)	34.000	0.000	68.000	0.000	102.000	0.000
5	A03807-P.O.L Charges A.Planes H.Coptors S.Car	8.000	0.000	10.000	0.000	10.000	0.000
6	A09701-Purchase of Furniture and Fixture	4.000	0.000	4.000	0.000	0.000	0.000
7	A09201-Purchase of Hardware	10.000	0.000	10.000	0.000	0.000	0.000
8	A03955-Computer Stationery	1.000	0.000	1.000	0.000	1.000	0.000
9	A09501-Purchase of Transport	62.000	0.000	0.000	0.000	0.000	0.000
10	A09601-Purchase of Plant and Machinery	18.000	0.000	18.000	0.000	0.000	0.000
11	A03907-Advertising and Publicity	2.000	0.000	6.000	0.000	6.000	0.000

12	A03919-Payments To Others For Service Rendere	0.000	0.000	200.000	0.000	60.000	0.000
13	A03970-Others	51.000	0.000	53.000	0.000	28.000	0.000
14	A13001-Transport	0.000	0.000	2.000	0.000	2.500	0.000
15	A03603-Registration	5.500	0.000	0.000	0.000	0.000	0.000
16	A09503-Others	8.000	0.000	0.000	0.000	0.000	0.000
17	A03942-Cost of Other Stores	6.000	0.000	6.000	0.000	4.000	0.000
Total		219.764	0.000	423.939	0.000	263.533	0.000

8. ANNUAL OPERATING COST (POST COMPLETION)

Financial Components: Revenue

Cost Center:OTHERS- (OTHERS)

Fund Center (Controlling):LE4208

Grant Number:Development Revenue - (PC22036)

LO NO:LO24000210

A/C To be Credited:Account-I

		PKR Million
Sr #	Object Code	
Total		

9. Demand and Supply Analysis:

FMD although very rarely kills infected animals, but it destroys farmers livelihoods and has a serious impact on the economy. The disease is endemic in Pakistan and the losses, direct and indirect, arising from it are very large, perhaps as much as US\$ 6 Billion annually in Punjab alone (FMD vaccine facility feasibility study, 2017). In developing countries like Pakistan use of effective vaccine is the most important tool to control the disease.

In Punjab population of cattle and buffalo is around 50 million heads This means that every year 100 M doses of FMD vaccine are required to give full coverage to susceptible bovine population. This much quantity of vaccine can neither be produced indigenously due to usage of old production technology, nor it can be imported due to heavy cost. On the basis of Livestock survey 2018, Directorate General Extension has calculated the actual demand of FMD vaccine as 58.134 million doses in a year for cattle and buffalo population of Punjab. Keeping in view this much figure there is still gap of 37.764 million doses of FMD vaccine in Punjab every year to vaccinate cattle and buffalo twice a year.

The solution is to devise a strategic and smart vaccine inoculation plan within the province. About 8.000 million doses of purified FMD vaccine will be procured and inoculated as per strategy mentioned above. This will not only help in the reduction of virus circulation but also leads to stage 3 of PCP and ultimately export of livestock and its made ups to international high end markets.

10. FINANCIAL PLAN AND MODE OF FINANCING

10.1 FINANCIAL PLAN EQUITY INFORMATION:

The funds will be provided by Government of the Punjab through ADP every year. The funds will be utilized mainly for the procurement of vaccine and other necessary items as per interventions planned.

10.2 FINANCIAL PLAN DEBT INFORMATION:

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10.3 FINANCIAL PLAN GRANT INFORMATION:

PC22036

10.4 WEIGHT COST OF CAPITAL INFORMATION:

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11. PROJECT BENIFITS AND ANALYSIS

11.1 PROJECT BENEFIT ANALYSIS INFORMATION:

FMD affects the social well-being of the farmers and others who are directly and indirectly involved with the animals in form of business. The disease has an impact on education (inability of farmer to pay school fee) and family nutrition. Livestock is owned by more than 5.5 million families in Punjab, mostly small and landless farmers living in rural areas. This sector offers chances of equitable rural development and a way out of poverty alleviation in Pakistan. In terms of causing highest economic losses, FMD is the most prevalent infectious disease of cattle and buffalo in Pakistan which causes loss of milk production, reduction in traction power of animals, loss in meat production and deterioration in quality of skin and hides, resulting in cessation of the daily income for the family.

Control of this menace will be a major step towards wellbeing of these livestock farmers. They will become more active socially e.g. they can pay more attention to the education of their children, can avail better health facilities for their family and can invest more and more in livestock business or in some other business. Consequently the literacy rate of the country will be improved. More money will be in circulation, more employments will be generated. The overall wellbeing of farmer will give a social uplift to his family and the persons become more responsible citizens. FMD control will not only improved the animal health

but it will uplift the social structure of the farmer

Indirect employment is expected through improved investment in livestock farming and livestock business enterprises as the disease will be contained through mass vaccination.

11.2 ENVIRONMENTAL IMPACT ANALYSIS:

The project will have no negative impact on environment.

11.3 ECONOMIC ANALYSIS:

This project will have pronounced impact on the economy of farmers as well as considerable contribution in the GDP of the country.

Most of the rural population depends up on cattle, buffalo, sheep and goats for their livelihoods. FMD is a pernicious disease that is endemic in Punjab, Pakistan and indeed in the entire Asia region. Although its health impact may be discounted because it does not kill the humans and animals, its economic impact is massive. The example of Latin America show the severe opportunity losses of potential exports of meat. It is estimated that from 1990 to 2004, this region lost exports worth over US\$ 50 billion. Similar risks of possible losses are found in Pakistan. A farmer can lose up to 50 % of milk from an infected animal and the animal will never recover its productivity; it can lose its calf and traction power of animals. In general, Pakistan underperforms in the livestock sector, probably as much as one third of its original potential. Much of this is due to FMD which is by far the most prevalent disease of livestock in Pakistan. The impact of FMD is disproportionally felt by the farmer. In this case, as is rightly said **“The disease kills the farmer, not the animal”**.

Control of FMD and reduction of outbreaks will have a positive impact on farm's income. Increased income will generate a “multiplier effect” where increased spending at the farm level will fuel an upturn in the non-documented rural economy.

Furthermore, while the commercial meat industry is relatively small at present, control of FMD will provide a significant boost to efforts to improve meat quality and increase exports to those countries requiring halal meat from buffalo. The buffalo steak industry is growing and is dominated by India (one reason is that Indian Government is attacking FMD so vigorously), but there is considerable opportunity also for Pakistan in this area.

11.4 FINANCIAL ANALYSIS:

Through the proposed project, FMD will be controlled in a strategic way and the virus circulation will be decreased. The laboratory network will be further strengthened for surveillance. The likely returns on control of FMD are highly variable and depend heavily on the context and the export potential. Nevertheless expected financial benefits as an outcome of this project would be;

- Avert direct impact of FMD which are visible and invisible losses. The visible losses include loss of Milk Production, loss of Draught Power, lower Weight Gains and rarely death of affected animal especially young stock. The invisible losses include fertility Problems, changes in Herd Structure, delay in the sale of animals and / or livestock products
- Avert indirect impact of FMD which are Additional cost and Revenue Foregone. The additional costs include movement Control, diagnostic Tests and culled Animals. The Revenue forgone includes denied access to International markets

12. IMPLEMENTATION SCHEDULE

12.1 IMPLEMENTATION SCHEDULE/GANTT CHART:

at Annex L

12.2 RESULT BASED MONITORING (RBM) INDICATORS:

NA

12.3 IMPLEMENTATION PLAN:

Project Management Unit (PMU):

The HR will be hired for the Project Management Unit (PMU). The hiring will be conducted by the committee notified by the Admin department. The eligibility and selection criteria along with salaries and justification of the posts of the PMU are attached as **Annexure-F**.

Establishment of FMD Free Compartments:

The countries from FMD free regions like European countries, Australia, Japan and America require certification of FMD free Zone recognized by WOA for livestock and livestock products export. However, South-east Asian countries and Arab countries' market do not require FMD free certifications so far. The meat is allowed to be exported from FMD endemic countries subject to acceptability of the importing country. The WOA does not restrict bilateral agreement for trade in livestock and livestock products between countries. As regards FMD, Pakistan can negotiate the trading conditions with the importing country. **(FAO report on FMD-Issues, Potential and Way Forward)**

To facilitate the export of the meat, the FMD free compartments will be established in Punjab by the Director General Extension office being the Chief Veterinary Officer Punjab. Following interventions will be carried out for the establishment of FMD free compartments;

- Identification of potential livestock farms to be declared as FMD free compartments.
- Expression of interest will be invited for willing farmers having 300 or more than 300 animals. A maximum of 15 FMD free compartments will be established under this project.
- Boundaries of compartments and buffer areas (3 km) will be defined.
- Complete survey of the area will be performed for livestock population and relevant parameters as per Punjab Animal Health Rules, 2021.
- The CVO will submit complete case to the competent forum under the Punjab Animal health act 2019, for notification of the compartment.
- The required vaccination inside the compartment, check posts, boundary walls or fencing and quarantine stations will be established by the owner of the compartment.
- Vaccination in the buffer area will be performed by the department.
- Establishment of Rapid Response Units by the provision of customized vehicles for disease outbreak handling.

Animal Identification & Traceability:

All the large animals (Cattle & Buffalo) in FMD free compartment including buffer area will be tagged and registered on Pakistan Animal Identification and Traceability System (PAITS). The tagging of animals in FMD free compartment will be performed by the owner of the compartment and department will tag animals in buffer area. (The detailed breakup of other tagging cost and other consumable items are attached as **Annexure-H**. The office of Director General (Ext) / Chief Veterinary Officer will be responsible to execute and maintain the PAITS under Punjab Animal Health Act 2019 and its subsequent Rules 2021 and relevant regulations made.

Animal Movement Control & Bio-Security:

The owner of the compartment will establish a check post at the entrance of compartment and quarantine unit. All the movements including animals, vehicles, staff, visitors will be subject to bio security measures before entry in the farm. Movement log record will be maintained by the farm owner. The CVO Punjab will nominate authorize officers to issue the certificate for newly introduced animals in the compartment after observing the quarantine period as per SOPs. The authorized officer of the concerned district will also monitor the animal movement in the buffer area through village committees. The department will also install warning road signs in the buffer area to restrict the animal movement.

Immunization of the Compartments and Buffer Area against FMD:

In this project, all the livestock population including cattle, buffalo, sheep, goat inside the compartment will be vaccinated with purified FMD trivalent vaccine containing prevalent type of virus by the owner of the compartment, and in the Buffer Area by the Department.

Table: Summary of the FMD vaccine requirements for FMD free compartments.

Sr. No	Key FMD control Intervention	Estimated Animal Population (in Million)	Required doses per year (in Million)
1	FMD free Compartments including buffer area (15 Nos) 1st year 2nd year 3rd Year	5 x 12000 =0.06 10x 12000=0.12 15 x 12000=0.18	1st year 0.12 2nd year 0.24 3rd year 0.36 Total 3 years=0.72

To ensure cold chain of vaccine, the vaccine storage in different locations will be strengthened with power generators, vaccine storage refrigerators and large cool boxes for vaccine transport in the field. The staff will also be equipped with small cool boxes.

The vaccine will be procured by the L&DD Department as per PPRA rules.

Active Surveillance for FMD:

The surveillance plan for sero-surveillance and post vaccination monitoring will be prepared by the office of Directorate of ADDRS and will be approved by the steering committee for sharing to field surveillance teams and laboratories. The samples will be collected by district diagnostic labs in collaboration with field staff of concerned district. Serum samples will be collected from Disease Free compartment and Buffer Area for sero prevalence of FMD and Post vaccination antibody titration as per plan. The list of relevant chemical and equipment is attached as (**Annexure-D**). The relevant surveillance data will be uploaded on ADRS-info system.

Passive Surveillance For FMD:

The passive disease surveillance of FMD will be carried out by different means. In case of disease outbreak the concerned ADIO along with field formation will take immediate action for the control and confinement of the disease by adopting all bio-security and sanitary measures as per SOPs already lay down for control of any outbreak.

Different sources of passive surveillance are as below:-

- 1. Clinical Observation at CVD/CVH.** Outdoor cases with the complaint of active FMD in the area. The concerned veterinary officer will be responsible for informing the relevant offices by the use of ADRS-Info system or directly for prompt response. The concerned officer will also take necessary measures related to bio-security to confine the disease and necessary ring vaccination of the risk animals in the epidemiological unit
- 2. ADRS-Info** disease intimation from the farmer / VA and the confirmed report by concerned VO of the area are an important source of information that requires rapid response to curtail the spread of the virus.
- 3. Village Committees:** It is useful source for prompt reporting of the disease. The Directorate General (Extension) will notify the village committees on request of Project team to participate in the passive surveillance for effective implementation. This committee will be given training on disease reporting, bio-security, disinfection and the movement control to stop the disease spread. The committee will

comprise minimum five members including concerned Lumberdar, Imam Masjid and progressive farmers. The committees will be given training on ADRS-farmer disease reporting software by the concerned veterinary officer for real time reporting of FMD.

4. **Helpline calls and direct farmer complaints** are also an important source of disease outbreak information.
5. **Diagnostic Labs:** Sometimes farmers submit disease sample or information directly to the lab. Such disease reports will also be included in the disease surveillance.
6. **Social Media Print and electronic media:** The information about any FMD outbreak will be verified and responded immediately by the concerned duty officer for immediate control measures.

The information received from passive disease surveillance system will be considered as emergency and the ADIO of the Lab will coordinate with the local CVH/CVD team for providing all necessary services to handle outbreak. The Rapid Response Units will coordinate all the activities.

Research and Development on FMD Virus.

The samples collected from outbreaks will be submitted to Directorate ADDRS Lahore, for isolation, characterization of the FMD virus.

Awareness and Trainings of Stakeholders:

One of the most important components of FMD control Program is awareness of stake holders. The different initiatives like farmer's gatherings/ meetings, livestock Baithak, school focus program will be conducted for trainings of livestock farmers to control FMD. Mobile Veterinary Dispensaries will be utilized for awareness regarding FMD preventive measures, bio-security/ disinfection, movement control, vaccination and timely disease reporting.

12.4 M&E PLAN:

The monitoring of physical activities, FMD free compartments and zone will be carried out by the following:-

1. Directorate of Planning & Evaluation L&DD Department
2. Director General (M&E), P&D Department
3. 3rd Party Validation for Technical Inspections / evaluation, if required

12.5 RISK MITIGATION PLAN:

NA

12.6 PROCUREMENT PLAN:

The vaccine will be procured by the L&DD Department as per PPRA rules

13. MANAGEMENT STRUCTURE AND MANPOWER REQUIREMENTS

The L&DD Department is capable of undertaking the activities that come under the ambit of the proposed project. The strengths of Department are;

- The department has a fully developed and functional cold chain supply system where the quality of vaccine is ensured through maintenance of required temperature up to the consumer level.
- The department has about 4900 sanctioned strength of Para-Vet staff working in field hospitals and dispensaries throughout the Punjab to work as vaccinators. The sanctioned strength of Veterinary officers, senior veterinary officer and Additional principal veterinary officer is 1592 for proper monitoring of vaccination. The same staff is available to provide health care services and disease control activities in the field.
- The Department has an institutionalized network of diagnostic laboratories throughout the Punjab. The

relevant personnel are skilled enough to undertake the surveillance and allied assignments. The provincial level laboratories are equipped with ELISA facilities, whereas the Provincial Laboratory at Lahore is also embarking on the molecular diagnostic work.

- The Government of the Punjab has recently notified Provincial diagnostic lab, Lahore and Foot and Mouth Disease Research Centre (FMDRC) Lahore as reference laboratories for FMD diagnosis, surveillance and post vaccination monitoring under the Punjab Animal Health Act, 2019.
- The L&DD Department has real time disease reporting and lab performance management system (ADRS-Info) which needs up-gradation to incorporate the IT and AI tools for disease monitoring, animal movement control, data base and data analysis for effective risk assessment, forecasting and control measures.
- However, being highly technical in nature, the project needs a specialized and dedicated team for smooth operations. The team proposed to work in the project management is as under:-

Project steering committee:

The proposed steering committee will be as under:-

- Secretary L&DD, Department Convener
- Special Secretary Livestock South Punjab Member
- Deputy Commissioner concerned Member
- Animal Husbandry Commissioner Member
- Representative from P&D Department Member
- Representative from PITB Member
- Representative of VC, UVAS Member
- Director General (Research) Member
- Director General (Extension) Member
- Director Planning & Evaluation Member
- Director ADDRS Member / Secretary

The proposed TORs for the committee are as following:-

- Review of overall Project activities
- Review of surveillance plan covering all the compartments and buffer area
- Review of plan for post vaccination monitoring
- Discharge of any other responsibility as deemed necessary by the Admin Department or as required
- To suggest any changes in scope of project if required, during execution phase

Role / Responsibility of the head of attached Department:

Director General (Ext) and Director General (South Punjab)

- Will coordinate with Project coordinator for overall monitoring of project activities.
- Director General (Ext) will notify monitoring teams of provincial directors for inspection of vaccine inoculation, cold chain maintenance, and data uploading on 9211/PIATS.
- On the basis of expression of interest, the DG Ext / CVO Punjab will fulfill all codal formalities for the establishment of FMD free compartment and submit case to competent forum for the notification.
- DG Ext / CVO Punjab will be responsible to accomplish all the requirements regarding FMD Free compartment
- establishment through its field formation; e.g. define boundaries and buffer areas, animal registration/tagging, animal movement control, vaccination etc.
- DG Ext will make arrangement for tagging of the cattle and Buffalo in the compartment through the successful supplier / bidder for the animals tags.

Director General (Research)

- Prepare and notify the SOPs for disease surveillance, post vaccination monitoring, virus circulation for FMD free compartments.
- Will notify research and development (R&D) committee for the isolation, characterization and allied research regarding the field viruses.

14. ADDITIONAL PROJECTS / DECISIONS REQUIRED

A comprehensive vaccine campaign with effective and measurable monitoring system is required throughout the province to maximize the socio-economic benefits from the proposed project.

15. CERTIFICATE

Focal Person Name:Dr. Muhammad Ashraf

Designation:DG (Ext)

Email:

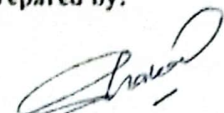
Tel. No.:


Fax No:

Address:L&DD Department, Punjab

15 Certified that the project proposal has been prepared on the basis of Instructions provided by the Planning Commission for the preparation of PC-I for production sector projects

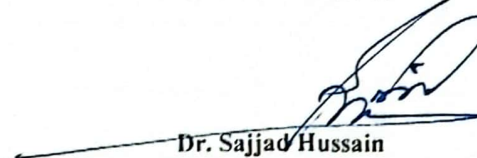
Prepared by:


Dr. Muhammad Shakeel Khaliq
Veterinary Officer, o/o DG (Ext.)



Dr. Syed Abdul Khaliq
Epidemiologist, Directorate of ADDRS, Lahore

Checked by:


Dr. Muhammad Ashraf
Director General (Extension) L&DD Department, Lahore
Phone # 042-9920117


Dr. Sajjad Hussain
Director General (Research), L&DD Department, Lahore
Phone # 042-99220143

Approved by:


Mr. Saqib Ali Ateel
Secretary to Government of Punjab, L&DD
Department, Lahore
Phone # 042-99206607

18. RELATION WITH OTHER PROJECTS

Scheme ID	Scheme Name
	ABC

20. FOCUS ON MARGINALISATION

SR.NO.	CRITERIA	YES/NO	ACTION	COMMENTS
Description & Objectives				
1	Do the description / Objectives of the PC-I specify link / alignment with provincial strategies and sectoral policies?	YES	SDGs, Punjab Growth Strategy, Sector Policy, Others (Please specify)	export surplus through establishment of fmd free departments and fmd free zones. to make punjab ready to move from stage 2 to stage 3 under progressive control pathway (pcp). to make livestock sector sustainable through ensuring animals traceable, tagged and disease free. the virus characterization of prevalent fmd serotypes
Use of Gender Disaggregated Data				
1	Was gender disaggregated data used to determine rationale / need of the project for select beneficiaries?	NO		export surplus through establishment of fmd free departments and fmd free zones. to make punjab ready to move from stage 2 to stage 3 under progressive control pathway (pcp). to make livestock sector sustainable through ensuring animals traceable, tagged and disease free. the virus characterization of prevalent fmd serotypes
Social Impact				

1	Do project objectives/justification include focus on marginalised groups (women, PWDs, minorities, transgender, poor etc.)?	NO		export surplus through establishment of fmd free departments and fmd free zones. to make punjab ready to move from stage 2 to stage 3 under progressive control pathway (pcp). to make livestock sector sustainable through ensuring animals traceable, tagged and disease free. the virus characterization of prevalent fmd serotypes
1a	Have marginalised groups (Women, PWDs, Minorities, Transgender Persons, Poor etc.) been included in project objectives / justification and / or as beneficiaries of the project?	NO		export surplus through establishment of fmd free departments and fmd free zones. to make punjab ready to move from stage 2 to stage 3 under progressive control pathway (pcp). to make livestock sector sustainable through ensuring animals traceable, tagged and disease free. the virus characterization of prevalent fmd serotypes
2	Does the PC-1 include specific provisions for capacity building / training of marginalised group (if applicable)?	NO		export surplus through establishment of fmd free departments and fmd free zones. to make punjab ready to move from stage 2 to stage 3 under progressive control pathway (pcp). to make livestock sector sustainable through ensuring animals traceable, tagged and disease free. the virus characterization of prevalent fmd serotypes
Results Based Monitoring				

1a	Does the PC-I include a Results Based Monitoring Framework (RBMF)/Logical Framework?	NO		export surplus through establishment of fmd free departments and fmd free zones. to make punjab ready to move from stage 2 to stage 3 under progressive control pathway (pcp). to make livestock sector sustainable through ensuring animals traceable, tagged and disease free. the virus characterization of prevalent fmd serotypes
2	Were SDG indicators used for determining targets included in the PC-I?	YES	1- No Poverty, 2- Zero Hunger	
Inclusion/Participation				
1	Did the Stakeholder consultation(s) held during ADP Formulation and / or PC-I development include experts and representatives of marginalised groups and CSOs?	NO		not applicable stakeholders consultation included all stakeholders irrespective of gender, race etc.
Monitoring & Evaluation				
1	Does the project provide a role to communities in project monitoring and/or implementation (if relevant)?	NO		not relevant the monitoring of physical activities, fmd free compartments and zone will be carried out by the following:- 1.directorate of planning & evaluation l&dd department 2.director general (m&e), p&d department 3.3rd party validation for technical inspections / evaluation, if required
2a	Does the project include formation of a Steering Committee and/or Project Implementation Committees?	YES		

2b	Is there a provision to ensure representation of women in these committees?	NO		<p>the proposed steering committee will be as under:-</p> <ul style="list-style-type: none"> •secretary l&dd, department convener •special secretary livestock south punjab member •deputy commissioner concerned member •animal husbandry commissioner member •representative from p&d department member •representative from pitb member •representative of vc, uvas member •director general (research) member •director general (extension) member •director planning & evaluation member •director addrs member / secretary
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STATEMENT OF COST (Rs. In Million)

Object Code	Object Classification	2024-25	2025-26	2026-27	Total
A01106	Pay of Project Staff (lump sum)	6.264	40.939	45.033	92.23632
A03988	Purchase of Vaccine (FMD)	34	68	102	204
A01273	Honoraria for the staff	2	3	3	8
A03807	P.O.L (for cold chain vehicle, project monitoring staff, MVLs rapid response, power generators etc)	8	10	10	28
A09701	Purchase of Furniture & Fixture (PMU, Check posts)	4	4	0	8
A09201	Purchase of Hardware (computers with Printers), laptops, Communication sensors cameras, Photocopier, etc.	10	10	0	20
A03955	Computer Stationary	1	1	1	3
A09501	Purchase of Transport (3 single cabin customized rapid response vehicles, three 1300 cc & one Hiace customized as monitoring unit vehicle)	62	0	0	62
A03603	Registration of vehicles, 7 vehicles	5.5	0	0	5.5
A09503	Others (Canopy conversion/ customization)	8	0	0	8
A013001	Repair of transport	0	2	2.5	4.5
A09601	Purchase of machinery & equipment (AC, fridge, generator, UPS)	18	18	0	36
A03919	Payment to Others for services rendered (consultancy, TPV, etc.)	0	200	60	260
A03942	Cost of other stores (LEDs, batteries, signboards, tagging machines, cool boxes etc.)	6	6	4	16
A03801	Training foreign / domestic	2	2	2	6
A03907	Advertisement / Publicity / Seminars / workshops/cost of branding	2	6	6	14
A03970-0017	Purchase of diagnostic kits, chemicals, glassware	10	12	12	34
A03970-001	Others (Tags, Ice Bag, Vacutainers, Syringes, Gloves, needles, etc.)	41	41	16	98
	Sub Total (Million) for DCC, PMU & feasibility study for FMD Free Zone	219.764	423.939	263.533	907.236
	Allocation for new FMD Free Zone(s)*				6592.764
	Grand Total (million)				7500.000

* **Note:** the detailed breakup of cost with regard to the establishment of FMD free zone will be provided in the revised PC-1 as proposed and prepared as a result of the feasibility study.

Annexure-A(a)

Object Code	Object Classification	2024-25	2025-26	2026-27	Total
A03988	Purchase of Vaccine (FMD)	34	68	102	204
A01273	Honoraria for the staff	2	3	3	8
A03807	P.O.L (for cold chain vehicle, project monitoring staff, MVLs rapid response, power generators etc)	4	5	5	14
A09701	Purchase of Furniture & Fixture (Check posts)	1	1	0	2
A09201	Purchase of Hardware (computers with Printers), Communication sensors cameras, etc.	5	5	0	10
A03955	Computer stationery	0.5	0.5	0.5	1.5
A09501	Purchase of Transport (3 single cabin customized rapid response vehicles)	24	0	0	24
A03603	Registration of vehicles, 3 vehicles	2	0	0	2
A09503	Others (Canopy conversion)	6	0	0	6
A013001	Repair of transport	0	1	1.5	2.5
A09601	Purchase of machinery & equipment (AC, fridge, generator)	12	12	0	24
A03919	Payment to Others for services rendered (TPV, etc.)	0	0	10	10
A03942	Cost of other stores (LEDs, signboards, tagging machines, cool boxes etc.)	4	4	2	10
A03801	Training foreign / domestic	2	2	2	6
A03907	Advertisement / Publicity / Seminars / workshops/cost of branding	2	3	3	8
A03970-0017	Purchase of diagnostic kits, chemiclases, glassware	10	12	12	34
A03970-001	Others (Tags, Ice Bag, Vacutainers, Syringes, Gloves, needles, etc.)	40	40	15	95
	Sub Total (Million) intervention (A)	148.5	156.5	156	461

Annexure-A(b)

Object Code	Object Classification	2024-25	2025-26	2026-27	Total
A01106	Pay of Project Staff (lump sum)	6.264	40.939	45.033	92.236
A03807	P.O.L (for cold chain vehicle, project monitoring staff, MVLs rapid response, power generators etc)	4	5	5	14.000
A09701	Purchase of Furniture & Fixture (PMU)	3	3	0	6.000
A09201	Purchase of Hardware (computers with Printers), laptops, Photocopier, etc.	5	5	0	10.000
A03955	Computer Stationary	0.5	0.5	0.5	1.500
A09501	Purchase of Transport (three 1300 cc & one Hiace customized as monitoring unit vehicle)	38	0	0	38.000
A03603	Registration of vehicles, 4 vehicles	3.5	0	0	3.500
A09503	Others (vehicle customization)	2	0	0	2.000
A013001	Repair of transport	0	1	1	2.000
A09601	Purchase of machinery & equipment (AC, fridge, generator, UPS)	6	6	0	12.000
A03919	Payment to Others for services rendered (consultancy, etc.)	0	200	50	250.000
A03942	Cost of other stores (LEDs, Display, Batteries etc.)	2	2	2	6.000
A03907	Advertisement / Publicity / Seminars / workshops/cost of branding	0	3	3	6.000
A03970-001	Others	1	1	1	3.000
	Sub Total (Million) intervention (B)	71.264	267.439	107.533	446.236

SALARIES OF THE STAFF (Rs. In Million)

Sr.#	Name of Post	PPS	No of posts	Monthly salary (M)	(2024-25)	(2025-26)	(2026-27)	Total
1	Project Coordinator	PPS-10	1	0.7	1.4	9.24	10.164	20.804
2	FMD Specialist	PPS-10	1	0.7	1.4	9.24	10.164	20.804
3	Epidemiologist	PPS-9	1	0.5	1	6.6	7.26	14.86
4	Data Scientist	PPS-7	1	0.25	0.5	3.3	3.63	7.43
5	Monitoring Officer	PPS-7	1	0.25	0.5	3.3	3.63	7.43
6	Data Base administrator	PPS-6	1	0.17	0.34	2.244	2.468	5.052
7	GIS Analyst	PPS-6	1	0.17	0.34	2.244	2.468	5.052
8	Driver	PPS-2	7	0.056	0.784	4.771	5.248	10.804
Total			14	2.796	6.264	40.939	45.033	92.236

FMD OUTBREAKS IN PUNJAB (2017 TO 2024)

Year	Total Outbreaks	Serotype O	Serotype A	Serotype Asia-1	Mixed Serotype	Negative
2017	569	330	20	22	4	193
2018	311	114	97	16	3	81
2019	702	180	29	180	34	266
2020	131	53	19	6	5	48
2021	1455	880	36	6	26	507
2022	230	30	54	38	1	107
2023	275	80	50	0	0	145
2024	72	24	15	0	0	23
Total	3745	1691	320	268	73	1370

Annexure-D

List of Chemicals/Kits

Sr. No	ITEM DESCRIPTION	Est. price/Unit (Million)	Quantity	Total Est. cost (Million)	Justification
1	ELISA kit for FMD for Detection of antibodies against O, A Asia 1, (5 Plates Kit)	0.4	50	20.000	To monitor the antibody level of vaccinated animals.
2	ELISA kit for FMD, NSP antibodies, 5 Plates Kit	0.4	15	6.000	To monitor virus circulation
3	FMD Antigen Detection and Serotyping ELISA (FMDV O, A Asia 1, C, SAT1, SAT2), 5 plates Kit	0.5	12	6.000	For surveillance of FMD virus
4	PBS tablets packof 100	0.01	15	0.150	sample collection
5	Glycerol 99% pure, 2.5lit	0.015	10	0.150	sample collection
6	Assorted	different	different	1.700	lab ware
Total (Million)				34.000	

List of Machinery/ Equipment

Sr. No	ITEM DESCRIPTION	Est. price/Unit	Quantity	Total Est. cost (In Million)	Justification
1	Electricity Generator 6KVA	0.600	15	9.000	Electric supply for cold chain of vaccine storage in vaccine monitoring centers in the field
2	Electricity Generator 15 KVA	1.500	1	1.500	Electric supply for PMU
3	Refrigerators for vaccine storage, Glass door, Large size	0.900	17	15.300	Vaccine storage in the CVD or CVH of the buffer area
5	UPS with backup	0.300	15	4.500	
6	Air Conditioner 1.5 ton inverter	0.300	19	5.700	15 AC for the vaccine storage room and 5 AC for
Total				36.000	

Composition of Project Management Unit (PMU)

Sr. No.	Name of Post	BPS/ PPS	No. of Post	Job description / Qualification	Method of recruit ment
1	Project Coordinator	PPS-10	01	<p>Qualification: PhD with 15 year experience in disease control activities including minimum 5 year experience in project management</p> <p>Job Description:</p> <ul style="list-style-type: none"> • Over all coordination with the stakeholders / executing and implementation agencies for smooth operations • Prepare and proposed necessary guidance / functions for implementation as per scope of the project 	Hiring from the market during project period on contract basis
2	FMD Specialist	PPS-10	01	<p>Qualification: DVM, PhD with 10-year experience in disease control activities including minimum 5-year experience with international agencies like FAO or WOAHA on FMD control.</p> <p>Job Description:</p> <ul style="list-style-type: none"> • Monitor project activities in line with WOAHA guidelines for FMD • Preparation of FMD dossier for submission to WOAHA. • Coordination with international agencies for FMD PCP stage 3 achievement 	Hiring from the market during project period on contract basis
3	Epidemiologist	PPS-09	01	<p>Qualification: DVM, PhD (Epidemiology / Public Health) with 5-year experience in disease control activities.</p> <p>Job Description:</p> <ul style="list-style-type: none"> • Preparation of disease surveillance plan • Epidemiological survey and studies • Assess the FMD risks • Overall assist to the team lead in implanting the project activities • Analysis of the surveillance and post vaccination data and to 	Hiring from the market during project period on contract basis

				<p>furnished recommendation</p> <ul style="list-style-type: none"> • Compilation and analysis of ADDRs info data and its submission 	
4	Data Scientist	PPS-07	01	<p>Qualification: BS in data science from HEC recognized university. Having minimum 05 years of relevant experience Having proficiency in statistical analysis, machine-learning algorithms etc.</p> <p>Job Description</p> <ul style="list-style-type: none"> • Devise mechanism for data sourcing, data analysis and reporting • Generate different data analysis reports by using IT and AI tools for reporting to the authorities • Identify the troubleshooting and their solution • Conduct regular audit of the data sets • Development of Machine-learning System 	Hiring from the market during project period on contract basis
5	Monitoring officer	PPS-07	01	<p>Qualification: DVM, MPhil in Epidemiology / Microbiology from reputed foreign or local HEC recognized university. Having minimum 05 years of relevant experience</p> <p>Job Description</p> <ul style="list-style-type: none"> • Monitoring of field activities under the project • Monitoring of uploading data on SPMS 9211 and PAITS • Collection of surveillance data from all sources of information and its consolidation- • Assist the project team in different assignments 	Hiring from the market during project period on contract basis
6	Database Administrator	PPS-06	01	<p>Qualification: BS in Computer Sciences / Data Science / Statistics from HEC recognized university. Having minimum 02 years of relevant experience</p> <p>Job Description</p> <ul style="list-style-type: none"> • Data managements related to project 	Hiring from the market during project period on contract basis

				<ul style="list-style-type: none"> • Maintenance of record project activities • Preparation of project reports • Prepare update on Communication and correspondence with other offices 	
7	GIS Analyst	PPS-06	01	<p>Qualification: BE in Geo-informatics / BS in remote Sensing & GIS from HEC recognized university. Having minimum 02 years of relevant experience</p> <p>Job Description</p> <ul style="list-style-type: none"> • Analysis of GIS data using GIS software to create maps, spatial analysis, and reports. • Explaining geographical trends of diseases • GIS survey for FMD free zones and compartments 	Hiring from the market during project period on contract basis
8	Driver	PPS-02	7	Have a valid driving license for LTV	Hiring from the market during project period on contract basis

Annexure-G

DETAIL OF VEHICLES

Sr. No.	Detail of Vehicles to be purchased	Total No. of Unit	Unit cost (Rs.) Million	Total Cost (Rs.) Million	Justification
1	Toyota Hiace	1	17.00	17.000	Toyota hiace has been proposed in the project for purpose build vehicle to move in the province for rapid response for epidemiology, disease surveillance on spot outbreak handling, sample collection by the project team for effective and smooth FMD control in the FMD free compartment and zone
2	Car 1300 CC	3	7.00	21.000	The instant project pertains different functions / activities related with the extension and research wings of the department, moreover the project is of high economic impact in nature. Thus for day to day meetings, coordination with the other stakeholders and field activities the vehicle is required for the project team.
4	Single cabin vehicle	3	8.00	24.000	Three Single Cabin customized to Rapid Response Unit vehicles will be deputed to work as rapid response unit in FMD free zone and the buffer area.
	Total (Million)	7		62.00	

DETAIL OF OTHER ITEMS

Sr. No	Item description	Est. price/Unit (Rs.)	Quantity Million	Total Est. cost millions	Justification
1	Tags	125	0.720	90.000	To identify the animal and registration on PAITS. It includes animal population of FMD free compartments buffer area.
2	Vacutainers (blood, serum) pack of 100	2000	0.0003	0.600	For sample collection for surveillance
3	Syringes 10 ml disposable pack of 100	2500	0.0003	0.750	For sample collection
4	Latex gloves pack of 50 pairs	1000	0.0002	0.200	Sample collection and disease handling
5	Vaccinator syringe BD	1000	0.0003	0.300	Vaccine inoculation
6	Ice packs	200	0.0005	0.100	Vaccine cold chain
7	Needles pack of 12, for cattle	100	0.030	3.000	Vaccine inoculation
8	PPEs kits	1000	0.0005	0.500	Disease outbreak handling
9	Hand sanitizer ,500 ml	1000	0.0005	0.500	For handling infectious material
10	Disinfectant Spray pack	1000	0.0003	0.300	For farm and vehicles disinfection
11	Soap and detergent	100	0.0005	0.050	For cleanliness
12	Face mask boxes	500	0.0005	0.250	Personnel protection
13	Lab coats	1000	0.0002	0.200	Personnel protection for work in lab and vaccination
14	Cotton rolls absorbent 300-400 g	500	0.0001	0.050	Surface cleaning in vaccination and lab work
15	Shoe covers disposable, pack of 50 pairs	500	0.0005	0.250	PPE for biosecurity
16	Safety goggles	500	0.0001	0.050	PPE for biosecurity
17	Head covers packs	500	0.0002	0.100	PPE for biosecurity
18	Sodium Hypochlorite 10% solution	1500	0.0002	0.300	For disinfection of disease farms
19	Assorted	Different	Different	0.500	Different items with different specifications
Total (Million)				98.000	

Annexure-I

COST OF OTHER STORE LIST

Sr. No	ITEM DESCRIPTION	Est. price/Unit (Million Rs.)	Quantity	Total Est. cost millions	Justification
1	Display screen 75 inch size	0.500	2	1.000	display of project activities in Project implementation unit Office
2	Cool boxes 90-100 L capacity, durable plastic, insulated	0.090	18	1.620	Vaccine transport in cold chain
3	Cool boxes small size insulated	0.006	75	0.450	Vaccine inoculation in field with cold chain
5	Instrument sterilizer	0.001	60	0.060	For sterilization of syringes and instruments
6	Tagging machines	0.005	300	1.500	Tagging of animals
7	sign boards Boards caution sign with pole	0.100	70	7.000	For public awareness in FMD free compartments
8	Infra red non touch medical thermometer	0.005	30	0.150	Clinical examination of animals at the checkpost, Quarantine units, FMD free compartments
9	Standee Display aluminum, Rollup	0.005	10	0.050	For Display of information
10	Water dispenser	0.075	4	0.300	For PIU offices, Quarantine stations
11	Batteries	0.100	30	3.000	
12	Assorted	different	Variable quantity	0.870	For FMD free compartments monitoring
Total (Million)				16.000	

Annexure -J

LIST OF FURNITURE

Sr. No.	Name of items	Quantity	Estimated Unit cost Rs.	Total Cost	Justification
1.	Executive chairs	5	0.045	0.225	Project management unit offices
2.	Executive table	4	0.1	0.400	Project management unit offices
3.	Chester Sofa Set with 2 + 1 + 1 Seatings	4	0.1	0.400	Project management unit offices, Meeting room
4.	Center Table Wooden frame with Glass	6	0.03	0.180	Project management unit
5.	Side racks	5	0.01	0.050	With office Tables
6.	Revolving chairs with rexin	40	0.03	1.200	Meeting room project management unit
7.	Conference room table	4	0.4	1.600	Meeting room
8.	Computer Chairs	20	0.025	0.500	Computer work PMU / check post
9.	Computer table	20	0.05	1.000	Computer work PMU / check post
10.	Office chairs	20	0.025	0.500	Use in PMU offices
11.	Office table	5	0.025	0.125	For PMU offices
12	Visitor chairs	20	0.025	0.500	For use in office
13	Three seater bench	2	0.05	0.100	For use in office
14	Steel Almirah	10	0.05	0.500	For use in office
14	Assorted	1.5	different	0.720	For use in office
	Grand Total=Million			8.000	

List of Computer Hardware

Sr No	Particulars	Approx. unit cost (Million Rupees)	Quantity	Total cost in Million rupees	Justification
1	Laptop computers	0.300	8	2.400	For Project Management Unit and field staff of Rapid response units and animal registration team
2	Desktop computers	0.200	15	3.000	Office work
3	Photocopier machine	0.300	1	0.300	Copy of record files
4	Printer Laser Jet	0.075	20	1.500	Office work and display of reports in PMU, main Check posts, Quarantine units
5	Colored printer	0.250	1	0.250	Office work
8	CCTV cameras set (10-12), night vision, high resolution, data backup and network infrastructure, display at site and control office complete installation	0.750	15	11.250	To be installed at Compartment, check post
9	Assorted	0.120	Assorted	1.300	required in the PMU, checkposts , quarantine unis
	Total (Million)			20.000	

Project Activity Chart

Annexure-L

Activity Schedule	2024-25												2025-26												2026-27												
	Jul y	A ug	Se pt	O ct	N ov	D ec	Ja n	Fe b	M ar	Ap ril	M ay	Jun e	Jul y	A ug	S e p	Oc t	N ov	D ec	Ja n	Fe b	M ar	A pr	M ay	Ju n	Jul y	A ug	Se p	O ct	N ov	D ec	Ja n	Fe b	M ar	A pr	M ay	J u n	
Approval of PCI/Final clearance																																					
Admin Approval /Release of Funds																																					
Hiring of project staff																																					
Vaccine Inoculation																																					
Initiation of process for FMD free Compartment																																					
Purchase of Machinery & Equipment																																					
Purchase of Vehicle																																					
Purchase of items for disease surveillance and post vaccination monitoring (Kits, glassware, chemicals, Tags etc)																																					
Purchase of Computer, stationary, furniture																																					
Disease Surveillance																																					
Advertisement /Publicity																																					
Farmer's Awareness / seminars																																					